

SPECIFICATIONS

**Exterior Restoration of the
Jefferson Cutter House
611 Massachusetts Avenue
Arlington, Mass. 02474**

Owner:

Town of Arlington
Ted Fields, Economic Development Planner
Town of Arlington
730 Massachusetts Avenue
Arlington, Mass. 02476
tfields@town.arlington.ma.us
781 . 316 . 3095

Contract Documents Prepared by:

Wendy Frontiero, Architect
32 Abbott Street
Beverly, Mass. 01915
wfrontiero@alum.mit.edu
617 . 290 . 8076

October 30, 2015

DIVISION 0

SECTION 00010

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DRAWINGS

<u>SHEET NO.</u>	<u>TITLE</u>	<u>SCALE</u>	<u>DATE</u>
1	South (Front) Elevation	No scale	30 October 2015
2	West (Side) Elevation	No scale	30 October 2015
3	North (Back) Elevation	No scale	30 October 2015
4	East (Side) Elevation	No scale	30 October 2015
5	Details	Varies	30 October 2015
6	Interior False Walls	1/8" = 1'-0"	30 October 2015
	Door and Window Inventory	NA	30 October 2015

END OF SECTION

TOWN OF ARLINGTON MASSACHUSETTS
INVITATION TO BID # 15 - 57
EXTERIOR RESTORATION/JEFFERSON CUTTER HOUSE

Sealed bids are invited and will be received by the Town Manager, Town of Arlington, Massachusetts, until **11:00 A.M., Tuesday, January 5, 2016** at the Office of the Purchasing Agent, Town Hall, Arlington, Massachusetts 02476, at which time and place they will be publicly opened and read.

A BID DEPOSIT IN THE FORM OF CASH, CERTIFIED CHECK, OR TREASURER'S CHECK, shall accompany every bid. The amount of such bid deposit shall be FIVE PERCENT (5%) of the value of the bid.

The Town of Arlington requests bid for exterior repair and restoration of its early 19th century property, the Jefferson Cutter House, located at 611 Massachusetts Avenue. The building is listed in the State and National Registers of Historic Places. Work will include stone re-pointing at foundations; repair and replacement of clapboard siding and trim; roof and downspout work; window sash restoration; and exterior painting.

The project is being partially funded with a grant from the Massachusetts Preservation Projects Fund through the Massachusetts Historical Commission. All work must be performed in accordance with the documents prepared by Wendy Frontiero, Architect, 32 Abbott St., Beverly, Massachusetts 01915 (Tel: 617-290-8076) and meet with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. State law prohibits discrimination. Awarding of this contract is subject to Affirmative Action and Equal Opportunity guidelines. Contractors must have DCAMM Certification in the categories of **Historical Building Restoration and Historical Roofing**.

A pre-bid meeting will be held at 611 Massachusetts Avenue, Arlington, Massachusetts, on Tuesday December 15, 2015 at 10:00 AM.

Bids shall be evaluated on the basis of price, previous experience with similar types of construction projects, ability to perform the work in a timely manner, and references.

All bids must be in sealed envelope plainly marked: **BID # 15 - 57, EXTERIOR RESTORATION/JEFFERSON CUTTER HOUSE TUESDAY, JANUARY 5, 2016, 11:00 A.M.**

All of the grant funded work must be completed by June 30, 2016.

The conditions of employment as set forth in Sections 26 to 27D and 27F of Chapter 149 of the General Laws, as amended, shall prevail in the execution of the work under this contract.

Attention is called to the fact that minimum wage rates and health and welfare and pension fund contributions are established for this contract and are a part of the specifications.

The conditions of employment as set forth in Federal Wage Determination MA150004 dated October 23, 2015, issued by the U.S. Department of Labor, shall prevail in the execution of the work under this contract. Attention is called to the fact that minimum wage rates and health and welfare and pension fund contributions are established for this contract and are part of the specifications.

Work under this contract shall be governed by M.G.L.Ch.149.

A Performance Bond in the amount of \$ 100% of the total dollar award is required.

A Payment Bond in the amount of \$ 100% of the total dollar award is required.

To receive consideration, bids must be in the hands of the Purchasing Agent or his authorized representative not later than the day and hour above mentioned. For further information relative to this bid, please confer with Domenic R. Lanzillotti, Director, Purchasing Department, Town Hall, Arlington, Massachusetts, 02476.

OSHA Construction Training Required: As of July 1, 2006, under M.G.L. – Chapter 30, Section 39s, any person, submitting a bid for, or signing a contract to work on, the construction, reconstruction, alteration, remodeling or repair of any public work by the Commonwealth of Massachusetts/Town of Arlington, and estimated by the awarding Authority to cost more than \$10,000, shall certify on the Bid or Contract, under penalty of perjury, that all employees to be employed at the work 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

The Town Manager reserves the right to cancel any invitation for bids, to reject in whole or in part any and all bids, when it is deemed in the best interest of the Town of Arlington to do so.

TOWN OF ARLINGTON

Adam W. Chapdelaine

Town Manager

December 8, 2015

BID FORM

Exterior Restoration of the Jefferson Cutter House
611 Massachusetts Avenue
Arlington, Mass. 02474

Owner:

Town of Arlington
Ted Fields, Economic Development Planner
Town of Arlington
730 Massachusetts Avenue
Arlington, Mass. 02474
781 . 316 . 3095

Architect:

Wendy Frontiero, Architect
32 Abbott Street
Beverly, MA 01915
617 . 290 . 8076

Bidders Name and Address (please print):

Stipulated Sum for work outlined in project documents dated October 30, 2015:

Numeric: \$ _____

Written: _____

(See also Schedule of Values below.)

ALTERNATES

Alternate #1 – Exterior Painting (Deduct Alternate)

Numeric: \$ _____

Written: _____

Alternate #2 – Interior False Walls (Deduct Alternate)

Numeric: \$ _____

Written: _____

UNIT PRICES

Item No. 1 – Repair/Replacement of Wood Sill

Numeric: \$ _____

Written: _____

Item No. 2 – Replacement of Wood Sheathing

Numeric: \$ _____

Written: _____

Item No. 3 – Replacement of Wood Wall Studs

Numeric: \$ _____

Written: _____

Item No. 4 – Replacement of Wood Corner Posts

Numeric: \$ _____

Written: _____

Item No. 5 – Removal/Replacement of Wood Clapboards

Numeric: \$ _____

Written: _____

Item No. 6 – Repair of Wood Trim

Numeric: \$ _____

Written: _____

Item No. 7 – New Wood Trim

Numeric: \$ _____

Written: _____

SCHEDULE OF VALUES FOR BASE BID

	Bid Price
<p>Division 1 – General Requirements Including but not limited to permit; demolition and disposal; scaffolding and hoisting; protection of existing surfaces; and miscellaneous labor and cleaning.</p>	
<p>Division 4 – Masonry Restoration Including but not limited to foundation re-pointing.</p>	
<p>Division 6 – Rough Carpentry Including but not limited to framing repairs and sheathing replacement; miscellaneous block, fire, and air sealing; cutting and patching.</p>	
<p>Division 6 – Finish Carpentry Including but not limited to corner board and sill board repair/restoration; door and window trim repair/restoration; roof eaves and fascia repair/restoration; temporary removal and re-installation of interior false walls.</p>	
<p>Division 7 – Thermal and Moisture Protection Including but not limited to clapboard repairs and replacement; house wrap, caulking, and sealing; roofing; flashing at walls, roofs, and chimneys; metal downspouts.</p>	
<p>Division 8 – Windows and Doors Including but not limited to repair/restoration of windows and doors.</p>	
<p>Division 9 – Exterior Paint Including but not limited to preparation and painting of entire building.</p>	
<p>TOTAL BASE BID</p>	

Bidders Signature _____ Title _____ Date _____

Print Name _____

CERTIFICATE OF NON-COLLUSION

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

(Signature of individual submitting bid or proposal)

(Name of individual submitting bid or proposal)

Name of Business

Date

Pursuant to M.G.L. Chapter 62C, Section 49A, I certify under the penalties of perjury that I have complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Social Security Number or
Federal Identification Number

Signature of Individual or Responsible
Corporate Officer and Title

**NON-COLLUSION FORMS
MUST BE SIGNED AND
SUBMITTED WITH BID**

OSHA TRAINING

The undersigned hereby certifies that it is able to furnish labor that can work in harmony with all 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 it will comply fully with all laws and regulations applicable to awards made subject to section forty-four A of Chapter 149 of the General Laws.

Signature: _____

Title: _____

Date: _____

**DIVISION 0
BIDDING AND CONTRACT REQUIREMENTS**

**SECTION 00400
CONTRACTOR QUALIFICATION STATEMENT**

The Jefferson Cutter House is listed in the National and State Registers of Historic Places, both individually and as part of the Arlington Multiple Resource Area. Due to these historic designations and partial funding of this project by the Massachusetts Historical Commission, the project will be reviewed for workmanship appropriate to an historic building. Applicable standards are the Secretary of the Interior's *Standards for the Treatment of Historic Properties*, which is part of these contract documents. Bidders should be familiar with these *Standards*.

Contractors must have DCAMM Certification in the categories of Historical Building Restoration and Historical Roofing. All bidders must demonstrate past successful experience in the last five years with at least three projects of similar scope and complexity on comparable historic buildings, with preference given to buildings listed in the State or National Registers of Historic Places. Provide information as requested below.

Submitted by: _____
Name of person preparing this statement (please print)

Company name

Company address

PROJECT ONE

Project Name, Address, and Year of Completion _____

Work Categories (CSI Categories) _____

Approximate Value of the Work _____

Property Owner (Name and Telephone) _____

Architect/Designer (Name and Telephone) _____

Brief Description of the Work _____

PROJECT TWO

Project Name, Address, and Year of Completion_____

Work Categories (CSI Categories)_____

Approximate Value of the Work_____

Property Owner (Name and Telephone)_____

Architect/Designer (Name and Telephone)_____

Brief Description of the Work_____

PROJECT THREE

Project Name, Address, and Year of Completion_____

Work Categories (CSI Categories)_____

Approximate Value of the Work_____

Property Owner (Name and Telephone)_____

Architect/Designer (Name and Telephone)_____

Brief Description of the Work_____

Only skilled workers who are familiar and experienced with the materials and methods specified and familiar with the design requirements shall be used.

Only skilled workers shall be present at all times during work.

Licensed Supervisor shall be on site at all times during the work and shall personally direct the work.

No allowance will be made for lack of skill on the part of the workers.

END OF SECTION

CONSOLIDATED GENERAL CONDITIONS
OF THE CONTRACT FOR CONSTRUCTION

ARTICLE 1

GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Agreement between Owner and Contractor (hereinafter the Agreement), the Consolidated General Conditions of the Contract for Construction, the Supplemental Statutory Conditions, Drawings, Specifications, including all numbered sections, Addenda issued prior to execution of the Contract, Instructions to Bidders and Proposal, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as bidding requirements (advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or portions of addenda relating to bidding requirements).

In the event of any conflict among the Contract Documents, the Documents shall be construed according to the following priorities:

Highest Priority:	Modifications
Second Priority:	Agreement
Third Priority:	Addenda—later date to take precedence
Fourth Priority:	Supplemental Statutory Conditions
Fifth Priority:	Consolidated General Conditions
Sixth Priority:	Specifications and Drawings
Seventh Priority:	Instructions to Bidders and Proposal

Any references throughout the contract documents (or any other project documents) to "General Conditions" or "Supplementary General Conditions" are deleted and "Consolidated General Conditions and Supplemental Statutory Conditions" is substituted therefor. All bidders and sub-bidders take note that the Town has consolidated and modified former versions of the standard form AIA Document A210 General Conditions of the Contract for Construction with the Town's desired Supplementary General Conditions into one document. The Supplemental Statutory Conditions remain intact and separate, and form a part of the Contract Documents.

1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. Except as provided in Paragraph 3.18, nothing contained in the Contract Documents shall be construed to create any contractual relationship (1) between the Architect and the Contractor, (2) between the Owner or the Architect and a Subcontractor or Sub-subcontractor, (3) between the Owner and the Architect, or (4) between any persons or entities other than the Owner and the Contractor. The Contract Documents shall comply with the requirements of Mass. Gen. Laws Chapter 44, Section 31C.

1.1.3 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 obligations. The Work may constitute the whole or a part of the Project.

1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

1.1.7 THE PROJECT MANUAL

The Project Manual is the volume usually assembled for the work which may include the bidding requirements, sample forms, Consolidated General Conditions of the Contract and Specifications.

1.2 EXECUTION, CORRELATION AND INTENT

1.2.1 The Contract Documents shall be signed by the Owner and Contractor as provided in the Agreement. A copy of the signed set shall be deposited with the Architect. If either the Owner or Contractor or both do not sign all the Contract Documents, the Architect shall identify such unsigned Documents upon request.

1.2.2 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents. By executing the Contract, the Contractor also certifies, under penalties of perjury, that to the best of his information, knowledge and belief he has complied with all laws of the Commonwealth of Massachusetts relating to taxes.

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. Performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results. All Work mentioned or indicated in the Contract Documents shall be performed by the Contractor as part of this Contract unless it is specifically indicated in the Contract Documents that such Work is to be done by others.

1.2.4 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

1.2.5 Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

1.2.6 Where codes, standards, requirements and publications of public and private bodies are referred to in the Specifications, references shall be understood to be to the latest revisions prior to the date of receiving bids, except where otherwise indicated.

1.2.7 Where no explicit quality or standards for materials or workmanship are established for Work, such Work or materials is to be of good, workmanlike quality for the intended use and consistent with the quality of the surrounding Work and of the construction of the Project generally.

1.2.8 All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's written or printed directions and instructions unless otherwise indicated in the Contract Documents.

1.2.9 The Mechanical, Electrical and Fire Protection Drawings are diagrammatic only, and are not intended to show the alignment, physical locations or configurations of such Work.

Such Work shall be installed without additional cost to the Owner to clear all obstructions, permit proper clearances for the Work of other trades, and present an orderly appearance where exposed. Prior to beginning such Work, the Contractor shall prepare coordination drawings showing the exact alignment, physical location and configuration of the Mechanical, Electrical and Fire Protection installations and demonstrating to the Contractor's satisfaction that the installations will comply with the preceding sentence.

1.2.10 Exact locations of fixtures and outlets shall be obtained from the Architect as provided in Subparagraph 3.2.5 before the Work is roughed in; Work installed without such information from the Architect shall be relocated at the Contractor's expense.

1.2.11 Test boring or soil test information included with the Contract Documents or otherwise made available to the Contractor was obtained by the Owner for use by the Architect in the design of the Project or Work. The Owner does not hold out such information to the Contractor as an accurate or approximate indication of subsurface conditions, and no claim for extra cost or extension of time resulting from a reliance by the Contractor on such information shall be allowed except as provided in Subparagraph 4.3.6.

1.3 OWNERSHIP AND USE OF ARCHITECT'S DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS

1.3.1 The Drawings, Specifications and other documents prepared by the Architect are instruments of the Architect's service through which the Work to be executed by the Contractor is described. The Contractor may retain one contract record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by the Architect, and, unless otherwise indicated, and except as provided in the Owner/Architect Agreement for the Project, the Architect shall be deemed the author of them and will retain all common law, statutory and other reserved rights, in addition to the copyright. All copies of them, except the Contractor's record set, shall be returned or suitably accounted for to the Architect, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Architect, and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner and Architect. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this license shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Architect. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's copyright or other reserved rights.

Notwithstanding anything herein to the contrary, as between the Owner and Architect, their rights and obligations with respect to the Architect's instruments of service are governed by the provisions of the Owner/Architect Agreement for the Project.

1.4 CAPITALIZATION

1.4.1 Terms capitalized in these General Conditions include those which are (1) specifically defined, (2) the titles of numbered articles and identified references to Paragraphs, Subparagraphs and Clauses in a document or (3) the titles of documents published by the American Institute of Architects.

1.5 INTERPRETATION

1.5.1 In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an" but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

ARTICLE 2

OWNER

2.1 DEFINITIONS

2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. From time to time herein the Owner is referred to as the Town.

2.1.2 The Project Manager is the person or entity identified as such in writing by the Owner, at the Owner's option. The Project Manager shall act as the Owner's representative with respect to all matters pertaining to the Project. The duties, responsibilities, and obligations of the Project Manager under this Contract may be modified from time to time by the Town, so long as such modifications do not interfere materially with the Contractor's performance of the Work hereunder, and so long as the Contractor is given notice of any such modifications that affect the Contractor's performance of the Work.

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.1 The Owner upon reasonable written request shall furnish to the Contractor in writing information which is necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein at the time of execution of the Agreement.

2.2.2 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site.

2.2.3 Except for permits and fees which are the responsibility of the Contractor under the Contract Documents, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures, or for permanent changes in existing facilities.

2.2.4 Information or services required of the Owner hereunder shall be furnished by the Owner with reasonable promptness after receipt from the Contractor of a written request for such information or services.

2.2.5 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, such copies of Drawings and Project Manuals as are reasonably necessary for execution of the Work.

2.2.6 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Article 6 (Construction by Owner or by Separate Contractors), Article 9 (Payments and Completion) and Article 11 (Insurance and Bonds).

2.3 OWNER'S RIGHT TO STOP THE WORK

2.3.1 If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Paragraph 12.2 or persistently fails to carry out Work in accordance with the Contract Documents, the Owner, by written order signed by the Project Manager, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

2.3.2 The Owner may order the Contractor in writing to suspend, delay or interrupt all or any part of the Work for such period of time as it may determine to be appropriate for the convenience of the Owner, provided however, that if there is a suspension, delay or interruption ordered by the Owner for fifteen days or more or due to a failure of the Owner to act within the time specified in this Contract, the Owner shall make an adjustment in the Contract Sum for any increase in the cost of performance of this Contract, but shall not include any profit to the Contractor on such increase; and provided further, that the Owner shall not make any adjustment in the Contract Sum under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this Contract provides for an equitable adjustment of the Contract Sum under any other contract provisions.

2.3.3 The Contractor must submit the amount of a claim under Subparagraph 2.3.2 to the Owner in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than 21 days after the end thereof. Except for costs due to a suspension order, the Owner shall not approve any costs in the claim incurred more than twenty days before the Contractor notified the Owner in writing of the act or failure to act involved in the claim.

2.4

OWNER'S RIGHT TO CARRY OUT THE WORK

2.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to begin and prosecute correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Construction Change Directive shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Architect's additional services and expenses made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3

CONTRACTOR

3.1

DEFINITION

3.1.1

The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative.

3.2

REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

3.2.1

Before starting the Work, and at frequent intervals during the progress thereof, the Contractor shall carefully study and compare the Contract Documents with each other and with any information furnished by the Owner pursuant to Subparagraph 2.2.2 and shall at once report to the Architect any error, inconsistency or omission the Contractor may discover. Any necessary changes shall be ordered as provided in Article 7, subject to the requirements of Paragraph 1.2 and other provisions of the Contract Documents. If the Contractor proceeds with the Work without such notice to the Architect, having discovered such errors, inconsistencies or omissions, or if by reasonable study of the Contract Documents the Contractor could have discovered such, the Contractor shall bear all costs arising therefrom.

3.2.2

The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Architect at once. Any necessary change shall be ordered as provided in Article 7, subject to the requirements of Paragraph 1.2 and other provisions of the Contract Documents. If the Contractor proceeds with the Work without such notice to the Architect, having discovered such errors, inconsistencies or omissions, the Contractor shall bear all costs arising therefrom.

3.2.3 The Contractor shall perform the Work in accordance with the Contract Documents and any submittals made in accordance with Paragraph 3.12.

3.2.4 The Contractor shall give the Architect timely notice of any additional Drawings, Specifications, or instructions required to define the Work in greater detail, or to permit the proper progress of the Work.

3.2.5 The Contractor shall not proceed with any Work not clearly and consistently defined in detail in the Contract Documents, but shall request additional drawings or instructions from the Architect as provided in Subparagraph 3.2.4. If the Contractor proceeds with such Work without obtaining further Drawings, Specifications or instructions, the Contractor shall correct Work incorrectly done at the Contractor's own expense.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

3.3.1 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. Where the Contract Documents refer to particular construction means, methods, techniques, sequences or procedures or indicate or imply that such are to be used in the Work, such mention is intended only to indicate that the operations of the Contractor shall be such as to produce at least the quality of work implied by the operations described, but the actual determination of whether or not the described operations may be safely and suitably employed on the Work shall be the responsibility of the Contractor, who shall notify the Architect in writing of the actual means, methods, techniques, sequences or procedures which will be employed on the Work, if these differ from those mentioned in the Contract Documents. All loss, damage, liability, or cost of correcting defective work arising from the employment of any construction means, methods, techniques, sequences or procedures shall be borne by the Contractor, notwithstanding that such construction means, methods, techniques, sequences or procedures are referred to, indicated or implied by the Contract Documents, unless the Contractor has given timely notice to the Owner and Architect in writing that such means, methods, techniques, sequences or procedures are not safe or suitable, and the Owner has then instructed the Contractor in writing to proceed at the Owner's risk.

3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor.

3.3.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

3.3.4 The Contractor shall be responsible for inspection of portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

3.4 LABOR AND MATERIALS

3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The word "provide" shall mean furnish and install completely, including connections, unless otherwise specified.

3.4.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

3.5 WARRANTY

3.5.1 The Contractor warrants to the Owner and Architect 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 with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect occurring after Substantial Completion and caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.

3.5.2 The Contractor shall be responsible for determining that all materials furnished for the Work meet all requirements of the Contract Documents. The Architect may require the Contractor to produce reasonable evidence that a material meets such requirements, such as certified reports of past tests by qualified testing laboratories, reports of studies by qualified experts, or other evidence which, in the opinion of the Architect, would lead to a reasonable certainty that any material used, or proposed to be used in the Work, meets the requirements of the Contract Documents. All such data shall be furnished at the Contractor's expense. This provision shall not require the Contractor to pay for periodic testing of different batches of the same material, unless such testing is specifically required by the Contract Documents to be performed at the Contractor's expense.

3.5.3 If the Contractor proposes to use a material which, while suitable for the intended use, deviates in any way from the detailed requirements of the Contract Documents, the Contractor shall inform the Architect in writing of the nature of such deviations at the time the material is submitted for approval, and shall request written approval of the deviation from the requirements of the Contract Documents, in accordance with the procedures set forth in Mass. Gen. Laws Chapter 30, Section 39I.

3.5.4 In requesting approval of deviations or substitutions, the Contractor shall provide, upon request, evidence leading to a reasonable certainty that the proposed substitution or

deviation meets or exceeds the requirements set forth in Mass. Gen. Laws Chapter 30, Section 39M(b). If, in the opinion of the Architect, the evidence presented by the Contractor does not provide a sufficient basis for such reasonable certainty, the Architect may reject such substitution or deviation.

3.5.5 The Contract Documents are intended to produce a building of consistent character and quality of design. All components of the building including visible items of mechanical and electrical equipment have been selected to have a coordinated design in relation to the overall appearance of the building. The Architect shall judge the design and appearance of proposed substitutes on the basis of their suitability in relation to the overall design of the Project, as well as for their intrinsic merits. The Architect will not approve as equal to materials specified proposed substitutes which, in the Architect's opinion, would be out of character, obtrusive, or otherwise inconsistent with the character or quality of design of the Project. In order to permit coordinated design of color and finishes the Contractor shall, if required by the Architect, furnish the substituted material in any color, finish, texture, or pattern which would have been available from the manufacturer originally specified, at no additional cost to the Owner.

3.5.6 Any additional cost, or any loss or damage arising from the substitution of any material or any method for those originally specified shall be borne by the Contractor, notwithstanding approval or acceptance of such substitution by the Owner or the Architect, unless such substitution was made at the written request or direction of the Owner or the Architect.

3.5.7 The warranty provided in this paragraph 3.5 shall be in addition to and not in limitation of any other warranty required by the Contract Documents or otherwise prescribed by law.

3.5.8 The Contractor shall procure and deliver to the Architect, no later than the date claimed by the Contractor as the date of Substantial Completion, all special warranties required by the Contract Documents. Delivery by the Contractor shall constitute the Contractor's guarantee to the Owner that the warranties shall be performed in accordance with their terms and conditions.

3.6 TAXES

3.6.1 The Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor which are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

3.7 PERMITS, FEES AND NOTICES

3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and other permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received or

negotiations concluded. Notwithstanding the foregoing, the Town hereby waives the fee for the Town's building permit for the Project.

3.7.2 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.

3.7.3 It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. However, if the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall promptly notify the Architect and Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

3.7.4 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 Architect and Owner, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs.

3.8 ALLOWANCES

3.8.1-3.8.2 OMITTED.

3.9 SUPERINTENDENCE

3.9.1 The Contractor shall employ a competent superintendent, acceptable to the Owner, and necessary assistants who shall be in attendance at the Project site full time during the progress of the Work until the date of Substantial Completion, and for such additional time thereafter as the Architect may determine to be necessary for the expeditious completion of the Work. The superintendent shall be licensed to act as superintendent in accordance with all applicable laws for projects of this type. The Contractor shall remove the superintendent if requested to do so in writing by the Owner, and shall promptly replace him with a competent person reasonably acceptable to the Owner. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

3.9.2 The Contractor shall retain a competent Registered Professional Engineer or Registered Land Surveyor, acceptable to the Architect, who shall establish the exterior lines and required elevations of all buildings and structures to be erected on the site and shall establish sufficient lines and grades for the construction of associated Work such as, but not limited to, roads, utilities and site grading. The Engineer or Land Surveyor shall certify as to the actual location of the constructed facilities in relation to property lines, building lines, easements, and other restrictive boundaries.

3.9.3 The Contractor shall establish the building grades, lines, levels, column, wall and partition lines required by the various Subcontractors in laying out their Work.

3.9.4 The Contractor shall coordinate and supervise the Work performed by Subcontractors to the end that the Work is carried out without conflict between trades and so that

no trade, at any time, causes delay to the general progress of the Work. If such delays occur, the Owner may deduct anticipated liquidated damages from the Progress Payments to the Contractor. The Contractor and all Subcontractors shall at all times afford each trade, any separate contractor, or the Owner, every reasonable opportunity for the installation of Work and the storage of materials.

3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

3.10.1 The Contractor shall prepare and submit to the Architect a progress schedule, and shall comply with such schedule, as described in Subparagraphs 8.2.4 through 8.2.8.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

3.11.1 The Contractor shall maintain at the site for the Owner one record copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record changes and selections made during construction, and in addition, approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the work.

3.12.3 Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Architect is subject to the limitations of this Paragraph 3.12 and Paragraph 4.2.

3.12.5 The Contractor shall review, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness, in accordance with the Contractor's progress schedule approved by the Architect, and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals made by the Contractor, which are not required by the Contract Documents may be returned without action.

3.12.6 The Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been reviewed by the Architect. Such Work shall be in accordance with reviewed and approved submittals.

3.12.7 By approving and submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor thereby represents that the Contractor has determined and verified all dimensions, quantities, field dimensions, relations to existing work, coordination with work to be installed later, coordination with information on previously accepted Shop Drawings, Product Data, Samples, or similar submittals and verification of compliance with all the requirements of the Contract Documents. The accuracy of all such information is the responsibility of the Contractor. In reviewing Shop Drawings, Product Data, Samples, and similar submittals the Architect shall be entitled to rely upon the Contractor's representation that such information is correct and accurate.

3.12.8 The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's review of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's review thereof.

3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. Unless such notice has been given, the Architect's review of a resubmitted Shop Drawing, Product Data, Sample, or similar submittal shall not constitute acceptance of any changes not requested on the prior submittal.

3.12.10 Informational submittals upon which the Architect is not expected to take responsible action may be so identified in the Contract Documents.

3.12.11 When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Owner shall be entitled to rely upon such certifications, and neither the Owner nor the Architect shall be expected to make any independent examination with respect thereto.

3.12.12 The Architect will not check dimensions or quantities on any Shop Drawings and will not assume any responsibility for any errors in dimensions or quantities on Shop Drawings.

3.13 USE OF SITE

3.13.1 The right of possession of the premises and the improvements made thereon by the Contractor shall remain at all times in the Owner. The Contractor's right to entry and use thereof arises solely from the permission granted by the Owner under the Contract Documents. The Contractor shall confine the Contractor's apparatus, the storage of materials and the

operations of the Contractor's workers to limits indicated by law, ordinances, the Contract Documents and permits and/or directions of the Architect, and shall not unreasonably encumber the premises with the Contractor's materials. The Owner shall not be liable to the Contractor, the Subcontractors, their employees or anyone else with respect to the conditions of the premises, except only for a condition caused directly and solely by the negligence of the Owner.

3.14 CUTTING AND PATCHING

3.14.1 The Contractor and its Subcontractors shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly, all to be performed in accordance with the requirements of the Contract Documents.

3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

3.15 CLEANING UP

3.15.1 The Contractor daily shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. Immediately prior to the Architect's inspection for Substantial Completion, the Contractor shall completely clean the premises. Concrete and ceramic surfaces shall be cleaned and washed. Resilient coverings shall be cleaned, waxed and buffed. Woodwork shall be dusted and cleaned. Sash, fixtures and equipment shall be thoroughly cleaned. Stains, spots, dust, marks and smears shall be removed from all surfaces. Hardware and all metal surfaces shall be cleaned and polished. Glass and plastic surfaces shall be thoroughly cleaned by professional window cleaners. All damaged, broken or scratched glass or plastic shall be replaced by the Contractor at the Contractor's expense.

3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

3.15.3 The provisions of paragraphs 3.15.1 and 3.15.2 shall apply equally to all subcontractors at the project insofar as each subcontractor's work is concerned.

3.16 ACCESS TO WORK

3.16.1 The Contractor shall provide the Owner and Architect access to the work in preparation and progress wherever located.

3.17 ROYALTIES AND PATENTS

3.17.1 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

3.18 INDEMNIFICATION

3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expense, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, caused in whole or in part by negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Paragraph 3.18.

3.18.2 In claims against any person or entity indemnified under this Paragraph 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Paragraph 3.18 shall not be limited by a limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts.

3.18.3 The obligations of the Contractor under this Paragraph 3.18 shall not extend to the liability of the Architect, the Architect's consultants, and agents and employees of any of them arising out of (1) the preparation of maps, Drawings, opinions, reports, surveys, Change Orders, designs or Specifications, or (2) directions or instructions given by the Architect, the Architect's consultants, and agents or employees of any of them.

3.19 COVENANT NOT TO SUE

3.19.1 In consideration of the Contractor's undertaking to indemnify and hold harmless the Architect, the Architect's consultants and agents or employees of any of them, in accordance with Paragraph 3.18, agree that the Architect will not bring any civil suit, action or other proceeding in law, equity or arbitration against the Contractor, or the officers, employees, agents and servants of the Contractor, for or on account of any action which the Architect may have arising out of or in any manner connected with the Work, except to enforce the provisions of

Paragraph 3.18 and this Paragraph 3.19; and the Contractor, or any successor, assign or subrogee of the Contractor, agrees not to bring any civil suit, action or other proceeding in law, equity or arbitration against the Architect, or the officers, employees, agents and servants of the Architect, for the enforcement of any action which the Contractor may have arising out of or in any manner connected with the Work.

3:20 RECORD KEEPING REQUIREMENTS

3.20.1 The Contractor shall comply with all applicable requirements of Mass. Gen. Laws Chapter 30, Section 39R.

ARTICLE 4

ADMINISTRATION OF THE CONTRACT

4.1 ARCHITECT

4.1.1 The Architect is the person lawfully licensed to practice architecture or an entity lawfully practicing architecture identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative.

4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld. To the extent inconsistent herewith, the rights and responsibilities of the Architect shall be governed by the Owner/Architect Agreement for the Project.

4.1.3 In case of termination of employment of the Architect, the Owner shall appoint an architect whose status under the Contract Documents shall be that of the former architect.

4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents. The Architect will advise and consult with the Owner. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument in accordance with other provisions of the Contract.

4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine in general if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. The Architect will visit the site at least once per week during periods of active construction. The Architect will not be required to make exhaustive or continuous on-site inspections to check quality or quantity of the Work. On the basis of on-site observations as an architect, the Architect will keep the Owner informed

of progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work.

4.2.3 The Architect will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility as provided in Paragraph 3.3. The Architect will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Architect will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

4.2.4 Communications Facilitating Contract Administration. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate through the Project Manager. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers generally shall be through the Contractor, although the Owner and Project Manager may have direct communications with subcontractors and suppliers intended to facilitate or expedite construction. Communications by and with separate contractors shall be through the Owner.

As to any written communications between two of the three of the Owner, Architect, and Contractor, a concurrent copy shall be sent to the third.

4.2.5 The Architect will have authority to reject Work which does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable for implementation of the intent of the Contract Documents, the Architect will have authority to require additional inspection or testing of the Work in accordance with Subparagraphs 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

4.2.6 In accordance with generally accepted standards of professional practice the Architect will review, approve, and take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, for the purpose of checking for conformance with the Contract Documents. The Architect's action will be taken with reasonable promptness, while allowing sufficient time in the Architect's professional judgment to permit adequate review, and in any event shall take no longer than the time permitted by law. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of obligations set forth in Paragraphs 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods,

techniques, sequences or procedures. The Architect's action with respect to any specific item shall not indicate approval of an assembly of which the item is a component.

4.2.7 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Paragraph 7.4.

4.2.8 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion, will receive and forward to the Owner for the Owner's review and records written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents.

4.2.9 If the Owner and Architect agree in writing, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents. If no such exhibit has been so incorporated, the duties, responsibilities, and limitations of authority of such project representatives shall be as set forth in the edition of AIA Document B352 current as of the date of the Agreement.

4.2.10 The Architect will interpret and decide matters concerning performance under and requirements of the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made with reasonable promptness and within any time limits agreed upon. The Architect may, as the Architect judges desirable, issue additional drawings or instructions indicating in greater detail the construction or design of the various parts of the Work; such drawings or instructions may be effected by field order or other notice to the Contractor, and provided such drawings or instructions are reasonably consistent with the previously existing Contract Documents, the Work shall be executed in accordance with such additional drawings or instructions without additional cost or extension of the Contract Time. If the Contractor claims additional cost or time on account of such additional drawings or instructions, the Contractor shall give the notice provided in Subparagraph 4.3.7.

4.2.11 Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by the Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions so rendered in good faith.

4.2.12 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

4.3 CLAIMS AND DISPUTES

4.3.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" includes Change

Order requests by the Contractor as well as other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be made by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

4.3.2 Decision of Architect. Claims arising prior to final payment or the earlier termination of the Contract shall be referred initially to the Architect for action as provided in Paragraph 4.4. Action by the Architect, as provided in Paragraph 4.4, shall be required as a condition precedent to arbitration of a Claim between the Contractor and Owner as to all such matters arising prior to the date final payment is due. Action by the Architect in response to a Claim shall not be a condition precedent to arbitration in the event (1) the position of Architect is vacant; (2) the Architect has failed to take action as required under Subparagraph 4.4.1 within 15 days after the Claim is made; (3) the Architect has failed to take action required under Subparagraph 4.4.4 within 30 days after the Claim is made, unless the Architect has notified the parties in writing of the reasons why action could not be taken within 30 days, and of the date by which action will be taken; or (4) the Claim relates to a mechanic's lien.

4.3.3 Time Limits on Claim. Claims by either party must be made within 35 days after occurrence of the event giving rise to such Claim or within 35 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be made by written notice. Any change or addition to a previously made Claim shall be made by timely written notice in accordance with this Subparagraph 4.3.3.

4.3.4 Continuing Contract Performance. Pending final resolution of a Claim including arbitration, unless otherwise agreed in writing the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

4.3.5 Waiver of Claims: Final Payment. The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:

1. liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
2. failure of the Work to comply with the requirements of the Contract Documents; or
3. terms of special warranties required by the Contract Documents.

Any Claim which has not been waived in accordance with this Subparagraph shall be deemed to have accrued upon discovery by the Owner of the condition or breach upon which such Claim is based, for the purpose of any applicable statute of limitation.

4.3.6 Claims for Differing Subsurface or Latent Physical Conditions. If, during the progress of the Work, the Contractor or the Owner discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the Contract Documents, either the Contractor or the Owner may request

an equitable adjustment in the Contract Sum applying to Work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a Contractor, or upon its own initiative, the Owner shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the Contract Documents or from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the plans and Contract Documents and are of such a nature as to cause an increase or decrease in the cost of performance of the Work or a change in the construction methods required for the performance of the Work which results in an increase or decrease in the cost of the Work, the Owner shall make an equitable adjustment in the Contract Sum and the Contract shall be modified in writing accordingly.

4.3.6.1 Should conditions encountered below the surface of the ground require that footings, foundations or other parts of the building or other structure be raised, lowered or changed, or if additional depth of excavation below the levels shown on the Drawings is required in order to provide proper bearing for the building or other structure or for any permanent utilities on the site or for permanent grading or other permanent site work, any change in the amount of excavation, dewatering, sheeting, protection, rock excavation, backfill, concrete or other structural work, or any other work permanently incorporated in the building shall be considered a change in the Work, and the Contract Sum shall be adjusted as provided in this Article, provided that the Work has been ordered in writing as provided in 7.1.1.

4.3.7 **Claims for Additional Cost or Time.** If the Contractor claims that any acts or omissions of the Owner or the Architect, including any instructions or orders, whether oral, written, by Drawings, or otherwise, involve extra cost or time, and the Contractor has not received a written acknowledgment by the Owner or Architect that extra payment will be made or time extended on account thereof, the Contractor shall promptly so notify the Architect in writing of such Claim and shall not proceed with the Work relating to such Claim until the Contractor has received a further written order to proceed except, as provided in Paragraph 10.3, in the case of an emergency affecting life or property. No Claim by the Contractor on account of such acts, omissions, instructions or orders shall be valid unless the Contractor has so notified the Architect before proceeding, and has received the further written order to proceed.

4.3.7.1 OMITTED.

4.3.7.2 - The Contractor shall have the burden of demonstrating the effect of the claimed act or omission on the Contract Sum or Contract Time, and shall furnish the Architect with such documentation relating thereto as the Architect may reasonably require. In the case of a continuing act or omission only one Claim is necessary.

4.3.7.3 Adverse weather conditions shall not be the basis for a Claim for additional time or cost.

4.3.8 **Injury or Damage to Person or Property.** If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, of any of

the other party's employees or agents, or of others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a Claim for additional cost or time related to this Claim is to be asserted, it shall be filed as provided in Subparagraph 4.3.7.

4.4 REVIEW OF CLAIMS BY ARCHITECT

4.4.1 The Architect shall take one or more of the following actions within ten days of receipt of a Claim: (1) defer any action with respect to all or any part of a Claim and request additional information from either party; (2) decline to render a decision for any reason which he deems appropriate, (including but not limited to the fact that the Claim involves allegations of fault on the part of the Architect); (3) render a decision on all or a part of the Claim, or (4) submit a schedule to the parties indicating when the Architect expects to take action. The Architect shall notify the parties in writing of any action taken with respect to such Claim. If the Architect renders a decision or declines to render a decision, either party may proceed in accordance with Paragraph 4.5. If the Architect decides that the Work relating to such Claim should proceed regardless of his disposition of such Claim, the Architect shall issue to the Contractor a written order to proceed. The Contractor shall proceed as instructed, and all rights of both parties with respect to such Claim shall be deemed to have been reserved.

4.4.2 If a Claim is resolved by agreement of the parties, the Architect will prepare or obtain appropriate documentation indicating the parties' agreement to the resolution. In the absence thereof, the Claim shall be treated as not resolved.

4.4.3 If a Claim has not been resolved, the party making the Claim shall, within ten days after the Architect's request, take one or more of the following actions: (1) submit additional supporting data requested by the Architect; (2) modify the initial Claim; (3) respond to the Architect's action under paragraph 4.4.1; or (4) notify the Architect that the initial Claim stands. Upon receipt of the response or supporting data, the Architect will either reject or approve the claim in whole or in part.

4.5 ARBITRATION

4.5.1 **Controversies and Claims Subject to Arbitration.** Any Claim arising out of or related to the Contract, or the breach thereof, except claims relating to aesthetic effect, shall be settled by arbitration, subject to the foregoing provisions of paragraph 4.4 and the provisions of Subparagraph 4.5.7. Arbitration will be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association and judgment upon the award rendered by the Arbitrator or Arbitrators may be entered in any Court having jurisdiction thereof. In any such arbitration in which the amount stated in the demand is \$100,000 or less, a single arbitrator shall be appointed in accordance with the procedures set forth in the American Arbitration Association Construction Industry Arbitration Rules. In any such arbitration in which the amount stated in the demand is in excess of \$100,000, a panel of three arbitrators shall be appointed in accordance with the procedures set forth in the American Arbitration Association Construction Industry Arbitration Rules.

4.5.2- Rules For Arbitration. The parties may agree to any arbitration forum. If unable to agree, by default the forum shall be the American Arbitration Association. If the neutral arbitrator(s) is/are appointed by the American Arbitration Association, the said Association shall administer the arbitration and its Construction Industry Arbitration Rules shall govern all aspects of the proceeding including the enforcement of any award. If the neutral arbitrator(s) is/are not appointed by the American Arbitration Association, then the arbitrator(s) shall act as the administrator of the arbitration but the Construction Industry Arbitration Rules of the Association shall nonetheless govern all aspects of the proceeding, including the enforcement of any award. The arbitration panel shall have all of the powers and duties conferred on the Association pursuant to said rules.

In addition, the following rules shall govern the selection of arbitrators and the proceedings:

4.5.2.1 Neither party may appoint as arbitrator an employee or an owner of that party, nor the parent, spouse or child of an employee or owner of that party.

4.5.2.2 After the neutral arbitrator has been appointed, neither party may engage in ex parte communication with the arbitrator appointed by that party.

4.5.3 Contract Performance During Arbitration. During arbitration proceedings, the Owner and Contractor shall comply with Subparagraph 4.3.4.

4.5.4 When a written decision of the Architect states that the decision is final, any demand for arbitration of the matter covered by such decision must be made within two months after substantial completion of the project, as determined by the Architect in accordance with paragraph 9.8.2 hereof. The failure to demand arbitration within said two month period will result in the Architect's decision becoming final and binding upon the Owner and the Contractor.

4.5.4.1 A demand for arbitration shall be made within the time limits specified in Subparagraph 4.5.4, and in no event shall be made after the date when the institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations.

4.5.5 Claims and Timely Assertion of Claims. A party who files a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded. When a party fails to include a Claim through oversight, inadvertence or excusable neglect, or when a Claim has matured or been acquired subsequently, the arbitrator or arbitrators may permit amendment.

4.5.6 Judgment on Final Award. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

4.5.7 Notwithstanding any provision contained in this Paragraph 4.5 or elsewhere in the Contract Documents, the Owner reserves the following rights in connection with Claims and disputes between the Owner and the Contractor:

- .1 the right to institute legal action against the Contractor in any court of competent jurisdiction in lieu of demanding arbitration pursuant to this Paragraph 4.5, in which case the dispute or disputes which are the subject of such action shall be decided by such court, and not by arbitration;
- .2 the right to obtain from any court of competent jurisdiction a stay of any arbitration instituted by the Contractor, provided that the application for such stay is made before the appointment of the neutral arbitrator in such arbitration, in which case the dispute or disputes which are the subject of such arbitration shall be decided by such court, and not by arbitration;
- .3 the right to require the Contractor to join as a party in any arbitration between the Owner and the Architect relating to the Project, in which case the Contractor agrees to be bound by the decision of the arbitrator or arbitrators in such arbitration.

In case the Owner elects to proceed in accordance with 4.5.7.1 or 4.5.7.2 above, the word "litigation" shall be deemed to replace the word "arbitration" wherever the latter word appears in the Contract Documents.

ARTICLE 5

SUBCONTRACTORS

5.1 DEFINITIONS

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or Subcontractors of a separate contractor.

5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the

Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly shall constitute notice of no reasonable objection.

5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection, unless otherwise required by law to do so.

5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. The Contract Sum shall be increased or decreased by the difference in cost occasioned by such change and an appropriate Change Order shall be issued. However, no increase in the Contract Sum shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

5.2.4 The Contractor shall not change a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such change.

5.2.5 The form of each filed Subcontract shall be submitted to the Owner for its acceptance, which shall not be unreasonably withheld or delayed. The form of subcontract shall be that set forth in Mass. Gen. Laws Chapter 149, Section 44F. Each Subcontract shall expressly provide for the contingent assignment referred to in Paragraph 5.4.

5.3 SUBCONTRACTUAL RELATIONS

5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Contract Documents, assumes toward the Owner and Architect, including without limitation the obligations set forth in Paragraph 3.18. Each Subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that Subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the Subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the Subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed Subcontract agreement which may be at

variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

5.4.1 Each Subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner provided that:

1. assignment is effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 14.2 and only for those Subcontract agreements which the Owner accepts by notifying the Subcontractor in writing; and
2. assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

ARTICLE 6

CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these, including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided elsewhere in the Contract Documents.

6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their progress schedules when directed to do so. The Contractor shall make any revisions to the progress schedules and Contract Sum deemed necessary after a joint review and mutual agreement. The progress schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgement that the Owner's or separate contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

6.2.3 Costs caused by delays or by improperly timed activities or defective construction shall be borne by the party responsible therefor.

6.2.4 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Subparagraph 10.2.5. If such separate contractor sues or initiates an arbitration proceeding against the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor, who shall defend such proceedings at the Contractor's expense, and if any judgment or award against the Owner arises therefrom the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorneys' fees and court or arbitration costs which the Owner has incurred.

6.2.5 Claims and other disputes and matters in question between the Contractor and a separate contractor shall be subject to the provisions of Paragraph 4.3 provided the separate contractor has reciprocal obligations.

6.2.6 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Paragraph 3.14.

6.3 OWNER'S RIGHT TO CLEAN UP

6.3.1 If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Paragraph 3.15, the Owner may clean up and allocate the cost among those responsible as the Architect determines to be just.

ARTICLE 7

CHANGES IN THE WORK

7.1 CHANGES

7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

7.1.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are so changed in a proposed Change Order or Construction Change Directive that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

7.2 CHANGE ORDERS

7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect, stating their agreement upon all of the following:

- 1 a change in the Work;
- 2 the amount of the adjustment in the Contract Sum, if any; and
- 3 the extent of the adjustment in the Contract Time, if any.

7.3 CONSTRUCTION CHANGE DIRECTIVES

7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

7.3.3 Upon request of the Owner or the Architect, the Contractor shall without cost to the Owner submit to the Architect, in such form as the Architect may require, an accurate written estimate of the cost of any proposed extra Work or change contemplated by a Construction Change Directive. The estimate shall indicate the quantity and unit cost of each item of materials, and the number of hours of work and hourly rate for each class of labor, as well as the description and amounts of all other costs chargeable under the terms of this Article. Unit labor costs for the installation of each item of materials shall be shown if required by the Architect. The Contractor shall promptly revise and resubmit such estimate if the Architect determines that it is not in compliance with the requirements of this Article, or that it contains errors of fact or mathematical errors. If required by the Architect, in order to establish the exact cost of new Work added or of previously required Work omitted, the Contractor shall obtain and furnish to the Architect bona fide proposals from recognized suppliers for furnishing any material included in such Work. Such estimates shall be furnished promptly so as to occasion no delay in the Work, and shall be furnished at the Contractor's expense. The Contractor shall state in the estimate any extension of time required for the completion of the Work if the change or extra work is ordered.

7.3.3.1 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods, as selected by the Owner:

- (a) By unit prices stated in the Contract Documents or otherwise mutually agreed upon.
- (b) By Cost and Percentages (as defined below) estimated by the Contractor as provided in Subparagraph 7.3.3 and accepted by the Owner; the Contractor's estimate shall become a fixed price which shall not be changed by any variation in the actual cost of executing the Work covered by the change.
- (c) By actual Cost determined after the Work covered by the change is completed, plus Percentage.
- (d) By use of the dispute resolution procedures set forth in Paragraph 4.3.

As used in this Paragraph 7.3, "Cost" shall mean the estimated or actual net increase or decrease in cost to the Contractor, Subcontractor, or Sub-subcontractor for performing the Work covered by the change, including actual payments for materials, equipment, rentals, expendable items, wages and associated benefits to workmen and to supervisors employed full time at the site, insurance, bonds and other provable direct costs, but not including any administrative, accounting or expediting costs, or other indirect or overhead costs, or any wages or benefits of supervisory personnel not assigned full time to the site, or any amount for profit or fee to the Contractor, Subcontractor or Sub-subcontractor.

"Percentage" shall mean an allowance to be added to or subtracted from the Cost in lieu of overhead and profit and of any other expense which is not included in the Cost of the Work

covered by the change, as defined above. Percentage for a Sub-subcontractor shall be 10% of any net increase or decrease of Cost of any Work performed by the Sub-subcontractor's own forces plus 5% of any aggregate net increase in Cost of any Work performed for the Sub-subcontractor by other contractors. Percentage for a Subcontractor shall be such percentage allowances for overhead and profit as are set forth in the Subcontract between such Subcontractor and the Contractor. Percentage for the Contractor shall be 9 1/2% of any net increase or decrease of Cost of any Work performed by the Contractor's own forces plus 4 1/2% of any net increase or decrease in the Cost for all other Work covered by the change.

When in the reasonable judgment of the Architect a series of Construction Change Directives or Change Orders effect a single change, Percentage shall be calculated on the cumulative net increase or decrease in Cost, if any.

7.3.3.2 If the Owner elects to determine the cost of the Work as provided in method (a) of sub-Subparagraph 7.3.3.1, the unit prices shall be subject to Subparagraph 7.1.4. Notwithstanding the inclusion of unit prices in the Contract Documents, it shall be the Owner's option to require the Cost of any given change to be determined by one of the other methods stated in 7.3.3.1. If the Owner elects to determine the Cost of the change by unit prices and the nature of the work is such that its extent cannot readily be measured after the completion of such work or any subsequent work, the Contractor shall keep daily records, available at all times to the Architect for inspection, of the actual quantities of such work put in place, and delivery receipts or other adequate evidence, acceptable to the Architect, indicating the quantities of materials delivered to the site for use in such unit price work, and distinguishing such other similar material delivered for use in work included in the base Contract Sum. If so required by the Architect, materials for use in unit price work shall be stored apart from all other materials on the Project.

7.3.3.3 If the Owner elects to determine the cost of the Work as provided in methods (c) or (d) of sub-Subparagraph 7.3.3.1 or if the method of determining the cost has not been established before the Work is begun, the Contractor shall keep detailed daily records of labor and materials costs applicable to the Work.

7.3.4 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

7.3.5 A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

7.3.6 If the Owner and Contractor do not agree with the adjustment in Contract Sum or Contract Time or the method for determining the adjustment, the dispute shall be governed by the procedures set forth in Paragraph 4.3.

7.4 MINOR CHANGES IN THE WORK

7.4.1 The Architect will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 8

TIME

8.1 DEFINITIONS

8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

8.1.2 The date of commencement of the Work is the date established in the Agreement. The date shall not be postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible.

8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Paragraph 9.8.

8.1.4 The term "day" as used in the Contract Documents shall mean calendar day, unless otherwise specifically defined.

8.2 PROGRESS AND COMPLETION

8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by a notice to proceed given by the Owner, the Contractor shall notify the Owner in writing, not less than five days or other agreed period before commencing the Work to permit the timely filing of mortgages, mechanic's liens and other security interests.

8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.2.4 Within two weeks after award of the Contract, the Contractor shall submit to the Architect a Progress Schedule showing for each class of work the percentage completion to be obtained and the total dollar value of work to be completed as of the first of each month until Substantial Completion.

8.2.5 The Progress Schedule shall be based on an orderly progression of the Work, allowing adequate time for each operation (including adequate time for submission and review of submittals), and leading to a reasonable certainty of Substantial Completion by the date established in the Agreement. The Progress Schedule will be reviewed by the Architect for compliance with the requirements of this Article and will be accepted by the Architect or returned to the Contractor for revision and resubmittal. Unless specifically required by law, no payment under this Contract shall be due until the Progress Schedule has been approved by the Architect.

8.2.6 If in any application for payment as provided for in Paragraph 9.2, the total value of the completed Work in place, as certified by the Architect, is less than 90% of the total value of the Work in place estimated in the Progress Schedule, the Owner may, at the Owner's option, require the Contractor to accelerate the progress of the Work without cost to the Owner by increasing the work force or hours of work, or by other reasonable means approved by the Architect.

8.2.7 If each of three successive applications for payment indicate that the actual Work completed, as certified by the Architect, is less than 90% of the values estimated in the Progress Schedule to be completed by the respective dates, the Owner may at the Owner's option, treat the Contractor's delinquency as a default justifying the action permitted under Paragraph 14.2.

8.2.8 If the Architect has determined that the Contractor should be permitted to extend the time for completion as provided in Paragraph 8.3, the calendar dates in the Progress Schedule shall be adjusted accordingly to retain their same relationship to the adjusted date of Substantial Completion, and the dollar value of Work to be completed as of the first of each month shall be adjusted pro rata.

8.2.9 If the Contractor fails to submit any application for payment in any month, the Architect shall, for the purpose of this evaluation of progress, certify separately to the actual value of the Work in place completed as of the first of the month and to the best of the Architect's knowledge.

8.2.10 Nothing herein shall limit the Owner's right to liquidated or other damages for delays by the Contractor or to any other remedy which the Owner may possess under other provisions of the Contract Documents or by law.

8.2.11 The Progress Schedule required hereunder shall be a CPM Schedule in accordance with the Project Specifications and shall be updated in accordance therewith.

8.3 DELAYS AND EXTENSION OF TIME

8.3.1 If the Contractor is delayed at any time in progress of the Work by an act or neglect of the Owner or Architect, of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes (except weather) beyond the Contractor's control, or by delay authorized by the Owner, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Paragraph 4.3.

8.3.3 The Contractor hereby agrees that the Contractor shall have no claim for damages of any kind against the Owner or the Architect on account of any delay in the commencement of the Work and/or any delay or suspension of any portion of the Work, whether such delay is caused by the Owner, the Architect, or otherwise, except as specifically provided in Subparagraphs 2.3.2 and 2.3.3. The Contractor acknowledges that, except as provided therein, the Contractor's sole remedy for any such delay and/or suspension will be an extension of time as provided in this Article.

8.3.4 No claim for delay shall be allowed on account of failure of the Architect to furnish Drawings, Specifications or instructions or to return Shop Drawings or Samples until the expiration of the applicable time period referred to in Mass. Gen. Laws Chapter 30, Section 39P, and not then unless such claim be reasonable.

8.3.5 No extension of time shall be granted because of seasonal or abnormal variations in temperature, humidity or precipitation, which conditions shall be wholly at the risk of the Contractor, whether occurring within the time originally scheduled for completion or within the period of any extension granted. There shall be no increase in the Contract Sum on account of any additional costs of operations or conditions resulting therefrom.

ARTICLE 9

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the maximum amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents, or in equity, should the Contractor assert a quantum meruit claim for the fair value of Contractor's Work, regardless of whether the Contractor is terminated hereunder.

APPLICATIONS FOR PAYMENT

9.2.1 Within fifteen days after receipt from the Contractor, at the place designated by the Owner if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the Owner will make a periodic payment to the Contractor for the Work performed during the preceding month and for the materials not incorporated in the Work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the Contractor has title or to which a Subcontractor has title and has authorized the Contractor to transfer title to the Owner, less (1) retention based on the Owner's estimate of the fair value of its claims against the Contractor and less (2) a retention for direct payments to Subcontractors based on demands for same in accordance with the provisions of Subparagraph 9.6.2, and less (3) a retention not exceeding five percent of the approved amount of the periodic payment.

9.2.2 After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the Contractor fully completes the Work or substantially completes the Work so that the value of the Work remaining to be done is, in the estimate of the Owner, less than one percent of the original Contract Sum, or (b) the Contractor substantially completes the work and the Owner takes possession for occupancy, whichever occurs first, the Owner shall pay the Contractor the entire balance due on the Contract less (1) a retention based on its estimate of the fair value of its claims against the Contractor and the cost of completing the incomplete and unsatisfactory items of Work and less (2) a retention for direct payments to Subcontractors based on demands for same in accordance with the provisions of Subparagraph 9.6.2, or based on the record of payments by the Contractor to the Subcontractors under this Contract if such record of payment indicates that the Contractor has not paid Subcontractors as provided in Subparagraph 9.6.2. If the Owner fails to make payment as herein provided, there shall be added to each such payment daily interest at the discount rate then charged by the Federal Reserve Bank of Boston, commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the Contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days after receipt of such a periodic estimate from the Contractor, at the place designated by the Owner if such a place is so designated. The Contractor agrees to pay to each Subcontractor a portion of any such interest paid in accordance with the amount due each Subcontractor.

9.2.3 The Owner may make changes in any periodic estimate submitted by the Contractor, and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the Owner may, within seven days after receipt, return to the Contractor for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday, Sunday, or holiday shall be the first working day thereafter.

9.2.4 All periodic estimates shall be submitted to the Owner, or to the Owner's representative, and the date of receipt by the Owner or its representative shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed subtrade and each sub-subtrade listed in sub-bid form as required by the Specifications and a column listing the amount paid to each Subcontractor and Sub-subcontractor as of the date the periodic estimate is filed. The person making payment for the Owner shall add the daily interest provided for herein to each payment for each day beyond the due date based on the date of receipt marked on the estimate.

9.2.5 The format and number of copies of applications for payment shall be as directed by the Architect. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage if provided for elsewhere in the Contract Documents.

9.2.5.1 Such applications may include requests for payment on account of changes in the Work which have been properly authorized by Construction Change Directives but not yet included in Change Orders when such Construction Change Directives have set forth an adjustment to the Contract Sum.

9.2.5.2 Such applications may not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor or material supplier because of a dispute or other reason.

9.2.6 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

9.3 The Contractor warrants that title to all Work covered by an application for payment will pass to the Owner either by incorporation in the construction or upon receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests, or encumbrances, hereinafter referred to in this Article 9 as "liens."

9.4 CERTIFICATES FOR PAYMENT

9.4.1 The Architect will, within seven days after receipt of the Contractor's application for payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Subparagraph 9.5.1.

9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's observations at the site and the data comprising the application for payment, that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion, and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

9.5.1 The Architect may decide not to certify payment and may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Subparagraph 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Subparagraph 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also decide not to certify payment or, because of subsequently discovered evidence or subsequent observations, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss because of:

1. defective Work not remedied;
2. third party claims filed or reasonable evidence indicating probable filing of such claims;
3. failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
4. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
5. damage to the Owner or another contractor;

- 6 reasonable evidence that the Work will not be completed within the Contract Time, and that the retainage currently held by the Owner would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- 7 persistent failure to carry out the Work in accordance with the Contract Documents.

9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

9.6 PROGRESS PAYMENTS

9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

9.6.2 Payments to Subcontractors

9.6.2.1 Forthwith after the Contractor receives payment on account of a periodic estimate, the Contractor shall pay to each Subcontractor the amount paid for the labor performed and the materials furnished by that Subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the Subcontractor by the Contractor.

9.6.2.2 Not later than the sixty-fifth day after each Subcontractor substantially completes his work in accordance with the plans and Specifications, the entire balance due under the Subcontract less amounts retained by the Owner as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the Subcontractor, and the Owner shall pay that amount to the Contractor. The Contractor shall forthwith pay to the Subcontractor the full amount received from the Owner less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the Subcontractor by the Contractor.

9.6.2.3 Each payment made by the Owner to the Contractor pursuant to Subparagraphs 9.6.2.1 and 9.6.2.2 of this paragraph for the labor performed and the materials furnished by a Subcontractor shall be made to the Contractor for the account of that Subcontractor, and the Owner shall take reasonable steps to compel the Contractor to make each such payment to each such Subcontractor. If the Owner has received a demand for direct payment from a Subcontractor for any amount which has already been included in a payment to the Contractor or which is to be included in a payment to the Contractor for payment to the Subcontractor as provided in Subparagraphs 9.6.2.1 and 9.6.2.2, the Owner shall act upon the demand as provided in this section.

9.6.2.4 If, within seventy days after the Subcontractor has substantially completed the Subcontract work, the Subcontractor has not received from the Contractor the balance due under the Subcontract including any amount due for extra labor and materials furnished to the

Contractor, less any amount retained by the Owner as the estimated cost of completing the incomplete and unsatisfactory items of Work, the Subcontractor may demand direct payment of that balance from the Owner. The demand shall be by a sworn statement delivered to or sent by certified mail to the Owner, and a copy shall be delivered to or sent by certified mail to the Contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the Subcontract and also a statement of the status of completion of the Subcontract work. Any demand made after substantial completion of the Subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the Subcontractor has substantially completed the Subcontract work. Within ten days after the Subcontractor has delivered or so mailed the demand to the Owner and delivered or so mailed a copy to the Contractor, the Contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the Owner and a copy shall be delivered to or sent by certified mail to the Subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the Subcontract including any amount due for extra labor and materials furnished to the Contractor and of the amount due for each claim made by the Contractor against the Subcontractor.

9.6.2.5 Within fifteen days after receipt of the demand by the Owner, but in no event prior to the seventieth day after substantial completion of the Subcontract work, the Owner shall make direct payment to the Subcontractor of the balance due under the Subcontract including any amount due for extra labor and materials furnished to the Contractor, less any amount (i) retained by the Owner as the estimated cost of completing the incomplete or unsatisfactory items of Work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the Contractor in the sworn reply; provided, that the Owner shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by Subparagraph 9.6.2.4. The Owner shall make further direct payments to the Subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this Subparagraph.

9.6.2.6 The Owner shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of Subparagraph 9.6.2.5 in an interest-bearing joint account in the names of the Contractor and the Subcontractor in a bank in Massachusetts selected by the Owner or agreed upon by the Contractor and the Subcontractor and shall notify the Contractor and the Subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the Contractor and the Subcontractor or as determined by decree of a court of competent jurisdiction.

9.6.2.7 All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to Subparagraph 9.6.2.6 shall be made out of amounts payable to the Contractor at the time of receipt of demand for direct payment from a Subcontractor and out of amounts which later become payable to the Contractor and in the order of receipt of such demands from Subcontractors. All direct payments shall discharge the obligation of the Owner to the Contractor to the extent of such payment.

9.6.2.8 The Owner shall deduct from payments to the Contractor amounts which, together with the deposits in interest-bearing accounts pursuant to Subparagraph 9.6.2.6, are sufficient to

satisfy all unpaid balances of demands for direct payment received from Subcontractors. All such amounts shall be earmarked for such direct payments, and the Subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the Contractor.

9.6.2.9 If the Subcontractor does not receive payments as provided in Subparagraph 9.6.2.1 or if the Contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the Subcontractor and the Subcontractor does not receive payment for same when due less the deductions provided for in Subparagraph 9.6.2.1, the Subcontractor may demand direct payment by following the procedure in Subparagraph 9.6.2.4 and the Contractor may file a sworn reply as provided in that same Subparagraph. A demand made after the first day of the month following that for which the Subcontractor performed or furnished the labor and materials for which the Subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the Contractor. Thereafter the Owner shall proceed as provided in Subparagraphs 9.6.2.5, 9.6.2.6, 9.6.2.7 and 9.6.2.8.

9.6.3 Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, Sub-subcontractor or material supplier, except as provided in Subparagraph 9.6.2, or otherwise as provided by law.

9.6.4 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

9.6.5 "Subcontractor" as used in Sub-paragraphs 9.6.2.1 through 9.6.2.9 shall mean a person who files a sub-bid and receives a subcontract as a result of that filed sub-bid or who is approved by the awarding authority in writing as a person performing labor on both performing labor and furnishing materials pursuant to a contract with the Contractor. "Subcontractor" as used in other provisions of the Contract Documents shall, except as otherwise expressly provided, have the meaning set forth in Subparagraph 5.1.1.

9.7 FAILURE OF PAYMENT

9.7.1 If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's application for payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended as provided in Article 7.

9.8 SUBSTANTIAL COMPLETION

9.8.1 Substantial Completion is the stage in the progress of the Work when the Work is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use and only minor items which can be corrected or completed

without any material interference with the Owner's use of the Work remain to be corrected or completed.

9.8.2 When the Contractor considers that the Work, or a portion thereof designated in the Contract Documents for separate completion, is substantially complete and the premises comply with Subparagraph 3.15.1, the Contractor shall submit to the Architect (1) a list of items to be completed or corrected, (2) all special warranties required by the Contract Documents, endorsed by the Contractor and in a form reasonably acceptable to the Architect and (3) the permits and certificates referred to in Subparagraph 13.5.4. The failure to include any items on the list mentioned in the preceding sentence does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the Architect on the basis of an inspection determines that the Work or designated portion thereof is substantially complete and the other conditions have been met, the Architect will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall commence on the date of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.

9.8.3 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof as provided in the Contract Documents.

9.9 PARTIAL OCCUPANCY OR USE

9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage. Such partial occupancy or use may begin whether or not the portion is substantially complete, provided that the respective responsibilities of the Owner and Contractor with respect to payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work, insurance, correction of the Work, and warranties shall be established by agreement of the Owner and Contractor or, absent such agreement, shall be determined by the Architect subject to the right of either party to contest such determination as provided in Paragraph 4.5.

9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.10 FINAL COMPLETION AND FINAL PAYMENT

9.10.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final application for payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's observations and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Subparagraph 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims. The making of final payment shall constitute a waiver of claims by the Owner to the extent provided in Subparagraph 4.3.5.

9.10.4 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing

and identified by that payee as unsettled at the time of final application for payment. Such waivers shall be in addition to the waiver described in Subparagraph 4.3.5.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

- 1 employees performing the Work and other persons who may be affected thereby;
- 2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors;
- 3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction; and
- 4 any other property of the Owner, whether or not forming part of the Work, located at the site or adjacent thereto in areas to which the Contractor has access.

10.2.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

10.2.4 When use or storage of explosives or other hazardous materials or equipment of unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

10.2.5 The Contractor shall promptly remedy damage and loss to property referred to in Clauses 10.2.1.2, 10.2.1.3 and 10.2.1.4. If the damage or loss is due in whole or in part to the Contractor's failure to take the precautions required by this Paragraph 10.2, the Contractor shall, subject to any reimbursement to which the Contractor is entitled under the property insurance required by the Contract Documents, bear the cost.

10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

10.2.8 The Contractor shall provide and maintain in good operating condition suitable and adequate fire protection equipment and services, and shall comply with all reasonable recommendations regarding fire protection made by the representatives of the fire insurance company carrying insurance on the Work or by the local fire chief or fire marshal. The area within the site limits shall be kept orderly and clean, and all combustible rubbish shall be promptly removed from the site.

10.2.9 The Contractor shall at all time protect excavations, trenches, buildings and materials, from rain water, ground water, backup or leakage of sewers, drains and other piping, and from water of any other origin and shall remove promptly any accumulation of water. The Contractor shall provide and operate all pumps, piping and other equipment necessary to this end.

10.2.10 The Contractor shall remove snow and ice which might result in damage or delay.

10.2.11 During the progress of the Work and at all times prior to the date of Substantial Completion or occupancy of the Work by the Owner, whichever is earlier, the Contractor shall provide temporary heat, ventilation, and enclosure, as required by Mass. Gen. Laws Chapter 149, Section 44F(1). The permanent heating and ventilation systems may be used for these purposes when available unless otherwise provided in the Contract Documents.

10.3 EMERGENCIES

10.3.1 In an emergency affecting safety of persons or property, the Contractor shall act at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Paragraph 4.3 and Article 7.

10.4 VANDALISM

10.4.1 The Contractor shall be responsible for protecting the work, the work site, materials, and equipment stored at the site (or incorporated in the work), other property at the

site, or other property of the Owner, against vandalism by known or unknown persons. In discharging this obligation the Contractor shall utilize security personnel, measures, procedures, and equipment or materials necessary to prevent vandalism.

10.4.2 In the event of any damage caused by vandalism to the property/materials/equipment/items referenced in the preceding Article 10.4.1, and regardless of whether the Contractor has exercised due care in avoiding same, the Contractor shall be financially responsible therefor to whatever extent said damage is not indemnified by insurance coverage available to either the Contractor or Owner. The Contractor's obligation hereunder shall include payment of damages to whatever extent insurance coverage is unavailable due to self-insurance, a deductible, or a self-insured retention.

10.4.3 Any monies owed by the Contractor to the Owner on account of damages referenced in the preceding Article 10.4.2 may be offset by the Owner against any periodic payments made under the Contract.

ARTICLE 11

INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located and to which the Owner has no reasonable objection such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

1. claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
4. claims for damages insured by usual personal injury liability coverage which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (2) by another person;

- 5 claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- 6 claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and
- 7 claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18.

11.1.2 The insurance required by Subparagraph 11.1.1 shall include all major divisions of coverage, and shall be on a comprehensive general basis including Premises and Operations (including X-C-U), Owner's and Contractor's Protective, Products and Completed Operations, and Owned, Nonowned, and Hired Motor Vehicles. Such insurance shall be written for not less than any limits of liability required by law or those set forth in the Contract Documents, whichever is greater.

All insurance shall be written on an occurrence basis, unless the Owner approves in writing coverage on a claims-made basis. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment. The Owner shall be added as an Additional Insured on all policies, which shall constitute primary insurance for the Owner in relation to any similar or concurrent insurance independently maintained by the Owner.

11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These certificates and the insurance policies required by this Paragraph 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. These certificates shall set forth evidence of all coverage required by 11.1.1 and 11.1.2. The form of certificate shall be AIA Document G705. The Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending limits of coverage. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final application for payment as required by Subparagraph 9.10.2.

11.1.4 In addition to Statutory Workers' Compensation Coverage, the Contractor shall provide Employers Liability Coverage at the following limits of liability:

Each accident - \$500,000;

Disease - policy limit \$500,000;

Disease - each employee \$500,000.

11.1.5 The liability insurance coverage purchased by the Contractor in order to comply with Section 11.1.1 (1-7) above shall contain the following limits of liability:

- \$3,000,000 - general aggregate;
- \$3,000,000 - products/completed operations aggregate;
- \$1,000,000 - personal injury and advertising;
- \$1,000,000 - each occurrence;
- \$1,000,000 - auto liability including hired and non-owned;
- \$2,000,000 - umbrella.

11.2 OWNER'S LIABILITY INSURANCE

11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance. Optionally, the Owner may purchase and maintain other insurance for self-protection against claims which may arise from operations under the Contract. The Contractor shall not be responsible for purchasing and maintaining this optional Owner's liability insurance unless specifically required by the Contract Documents.

11.3 PROPERTY INSURANCE BUILDERS RISK POLICY

11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance in the amount of the initial Contract Sum as well as subsequent modifications thereto for the entire Work at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Paragraph 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Paragraph 11.3 to be covered, whichever is earlier. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work.

11.3.1.1 Property insurance shall be on an all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, false-work, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's services and expenses required as a result of such insured loss. Coverage for other perils shall not be required unless otherwise provided in the Contract Documents. The form of policy for this coverage shall provide for coverage in the event of a loss up to the contemplated value of the property following completion of all Work required under the Contract.

11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance which will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor, then the Owner shall bear all reasonable costs properly attributable thereto.

11.3.1.3 The property insurance maintained hereunder by the Owner has a deductible of \$100,000 applicable to each/any claim thereunder. In the event of any property damage arising from any occurrence prior to the Architect's issuance of a final Certificate for Payment under Section 9.10.1, including but not limited to property damage arising from vandalism or casualty of any kind, the Contractor shall be responsible for the cost of said property damage: (a) to the extent not indemnified by the Owner's insurance policy because of said deductible; or (b) to the extent not indemnified by the Owner's insurance policy for any other reason.

11.3.1.4 Property insurance for portions of the Work stored off site and in transit shall be procured and the cost borne by the Contractor, unless otherwise provided in the Contract Documents.

11.3.2 Boiler and Machinery Insurance. The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

11.3.3 Loss of Use Insurance. The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused, to the extent covered and paid by insurance under this Subparagraph 11.3.3.

11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or for other special hazards be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be borne by the Contractor.

11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, adjoining or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Subparagraph 11.3.7 for damages caused by fire or other perils covered by this separate property

insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Paragraph 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Contractor.

11.3.7 Waivers of Subrogation. INTENTIONALLY OMITTED.

11.3.8 A loss insured under Owner's property insurance shall be adjusted by the Owner and made payable to the Owner on its behalf and on behalf of the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Subparagraph 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Subcontractors in similar manner.

11.3.9 If required in writing by a party in interest, the Owner shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties all subject to the requirements, if any, of the Owner's construction and/or permanent lender. The cost of required bonds shall be charged against proceeds received by Owner. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or in accordance with an arbitration award in which case the procedure shall be as provided in Paragraph 4.5.

11.3.10 The Owner shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection be made, arbitrators shall be chosen as provided in Paragraph 4.5. The Owner shall, in that case, make settlement with insurers in accordance with directions of such arbitrators. If distribution of insurance proceeds by arbitration is required, the arbitrators will direct such distribution.

11.4 PERFORMANCE BOND AND PAYMENT BOND

11.4.1 The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract. Said bonds shall satisfy the applicable statutory requirements of the place in which the Work is to be performed.

11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

ARTICLE 12

UNCOVERING AND CORRECTION OF WORK

12.1 UNCOVERING OF WORK

12.1.1 If a portion of the Work is covered, contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect, be uncovered for the Architect's observation and be replaced at the Contractor's expense without change in the Contract Time.

12.1.2 If a portion of the Work has been covered in accordance with the requirements specifically expressed in the contract documents, and which the Architect has not specifically requested to observe prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work is not in accordance with the Contract Documents, the Contractor shall pay such costs unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

12.2 CORRECTION OF WORK

12.2.1 The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear costs of correcting such rejected work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby and any cost, loss, or damages to the Owner resulting from such failure or defect.

12.2.2 If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Subparagraph 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. This period of one year shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work. This obligation under this Subparagraph 12.2.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

12.2.3 The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

12.2.4 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Paragraph 2.4. If the Contractor does not proceed with correction of such nonconforming Work within a reasonable time fixed by written notice from the Architect, the Owner may remove it and store the salvable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten days after written notice, the Owner may upon ten additional days' written notice sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation for the Architect's services and expenses made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contract Sum shall be reduced by the deficiency. If payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

12.2.5 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

12.2.6 Nothing contained in this Paragraph 12.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the time period of one year as described in Subparagraph 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

12.3 ACCEPTANCE OF NONCONFORMING WORK

12.3.1 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13

MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

13.1.1 The Contract shall be governed by the law of the place where the Project is located.

13.2 SUCCESSORS AND ASSIGNS

13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Except as hereinafter provided, neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the previous written consent of the Owner. The Owner may assign the Contract to any institutional lender providing construction or permanent financing for the Project or to any person acquiring the Owner's interest in the Project, and the Contractor agrees to execute all consents, certificates, and other documents required by such lender or other person in connection with such assignment.

13.2.2 If the Owner conveys its interest in the Project to a third party, any rights which the Owner may have against the Contractor arising from this Agreement shall automatically transfer to such third party.

13.3 WRITTEN NOTICE

13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

13.4 RIGHTS AND REMEDIES

13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

13.5 TESTS AND INSPECTIONS

13.5.1 Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so the Architect may

observe such procedures. The Owner shall bear costs of tests, inspections or approvals which do not become requirements until after bids are received or negotiations concluded.

13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Subparagraph 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so the Architect may observe such procedures. The Owner shall bear such costs except as provided in Subparagraph 13.5.3.

13.5.3 If such procedures for testing, inspection or approval under Subparagraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses.

13.5.4 The Contractor shall obtain and deliver promptly to the Architect any occupancy permit and any certificates of final inspection of any part of the Contractor's work and operating permits for any mechanical apparatus, such as elevators, escalators, boilers, air compressors, etc. which may be required by law to permit full use and occupancy of the premises by the Owner. Receipt of such permits or certificates by the Architect shall be a condition precedent to Substantial Completion of the Work.

13.5.5 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.6 LIMITATION OF LIABILITY

13.6.1 The Owner shall be liable only to the extent of its interest in the Project, and no officer, director, partner, agent or employee of the Owner (or any partner of a partner or any agent or employee of a partner) shall ever be personally or individually liable with respect to this Contract or the Work. Each Subcontract shall include the foregoing limitation, which shall be effective if the Owner ever succeeds to the Contractor's rights and obligations under a Subcontract.

13.7 The Contractor shall comply with any decisions of the Arlington Redevelopment Board applicable to the Project, and with any other Laws, By-Laws, Rules, and Regulations or Ordinances within the Town of Arlington.

ARTICLE 14

TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor, for any of the following reasons:

1. issuance of an order of a court or other public authority having jurisdiction, or
2. an act of government, such as declaration of national emergency, making material unavailable.

14.1.2 If one of the above reasons exists, the Contractor may, upon seven additional days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead, profit and damages.

14.1.3 If the Work is stopped for a period of 60 days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Subparagraph 14.1.2.

14.2 TERMINATION BY THE OWNER

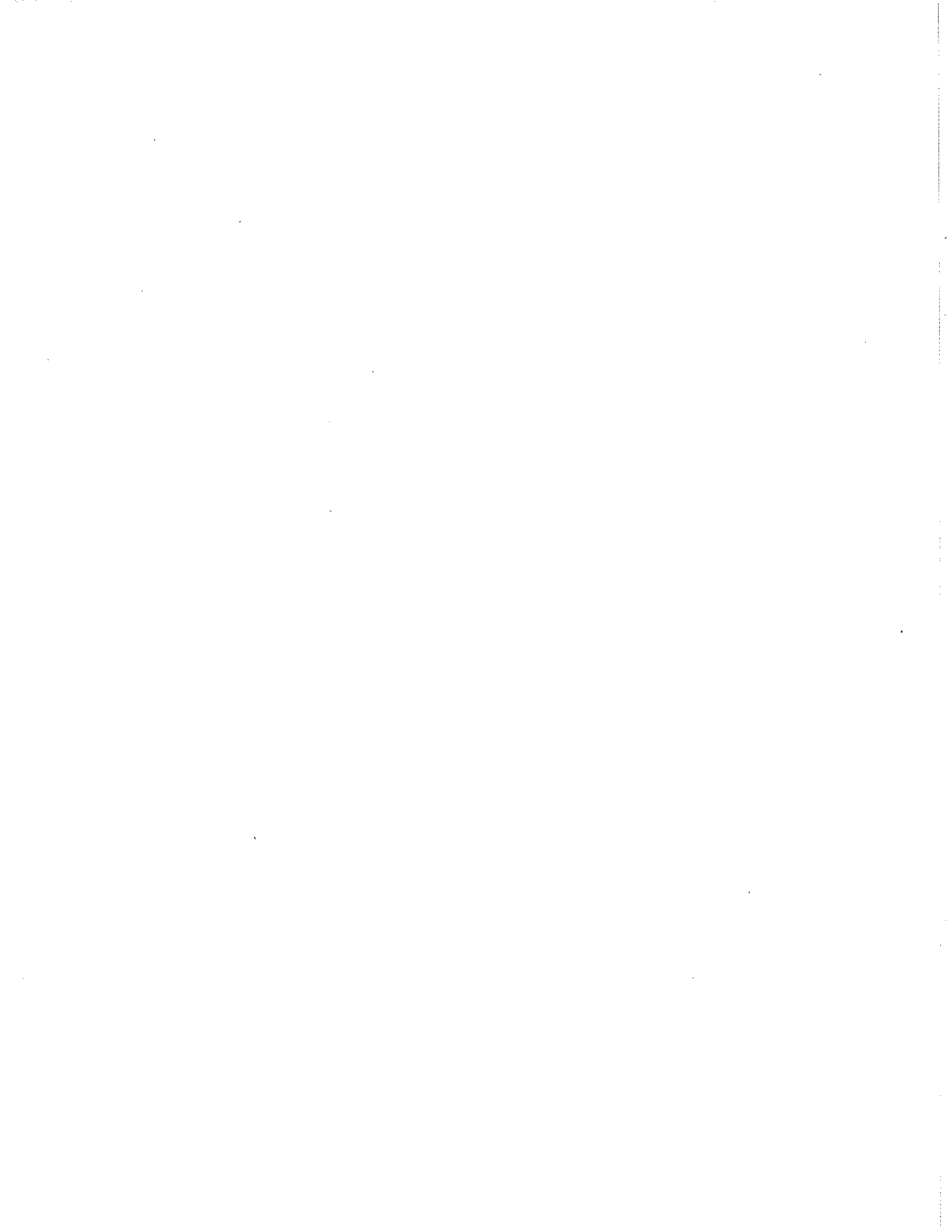
14.2.1 If the Contractor is adjudged a bankrupt, or if the Contractor makes a general assignment for the benefit of the Contractor's creditors, or if a receiver is appointed on account of the Contractor's insolvency, or if the Contractor persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if the Contractor fails to make prompt payment to Subcontractors for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a significant violation of any provision of the Contract, including the failure to perform the Work in Accordance With the Contract, then the Contractor shall be in default, and the Owner may, without prejudice to any other right or remedy, and upon seven days' written notice to the Contractor, take possession of all materials, tools, appliances, equipment, construction equipment and machinery and vehicles, offices and other facilities on the Project site, and all

materials intended for the Work, wherever stored, and may terminate the employment of the Contractor, accept assignment of any or all Subcontracts pursuant to Paragraph 5.4, and finish the Work by whatever method the Owner may deem expedient. The Owner shall be entitled to collect from the Contractor all direct, indirect, liquidated, and consequential damages suffered by the Owner on account of the Contractor's default, including without limitation additional services and expenses of the Architect made necessary thereby. The Owner shall be entitled to hold all amounts due the Contractor at the date of termination until all of the Owner's damages have been established, and to apply such amounts to such damages.

14.2.2 When the Owner terminates the Contract for one of the reasons stated in Subparagraph 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished. Any payment to the Contractor in quantum meruit shall be capped at the amount due under this Contract, including any adjustments, regardless of whether said termination by the Owner is deemed rightful or wrongful.

14.2.3 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

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SUPPLEMENTAL STATUTORY CONDITIONS

ARTICLE I - WAGES AND EMPLOYMENT PRACTICES

- 1.1 Preference To Veterans and Citizens In Public Work; Rate of Wages. (Statutory reference: Mass. Gen. Laws Chapter 149, Section 26) This Paragraph applies to every contract or subcontract for the construction of public works by the Commonwealth or by a county, town or district, or by persons contracting or subcontracting for such works.
- 1.1.1 In the employment of mechanics and apprentices, teamsters, chauffeurs and laborers, preference shall first be given to citizens of the Commonwealth who have been residents of the Commonwealth for at least six months at the commencement of their employment, who are veterans as defined in Mass. Gen. Laws Chapter 4, Section 7, clause 43, and who are qualified to perform the work to which the employment relates, and secondly, to citizens of the Commonwealth generally who have been residents of the Commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, and every contract for such work shall contain a provision to this effect. Each county, town or district in the construction of public works, or persons contracting or subcontracting for such works, shall give preference to veterans and citizens who are residents of such county, town or district.
- 1.1.2 The rate per hour of the wages paid to said mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works shall not be less than the rate or rates of wages to be determined by the Commissioner of Labor and Industries as hereinafter provided; provided, that the wages paid to laborers employed on said works shall not be less than those paid to laborers in the municipal service of the town or towns where said works are being constructed; provided, further, that where the same public work is to be constructed in two or more towns, the wages paid to laborers shall not be less than those paid to laborers in the municipal service of the town paying the highest rate; provided, further, that if, in any of the towns where the works are to be constructed, a wage rate or wage rates have been established in certain trades and occupations by collective agreements or understandings in the private construction industry between organized labor and employers, the rate or rates to be paid on said works shall not be less than the rates so established; provided, further, that in towns where no such rate or rates have been so established, the wages paid to mechanics and apprentices, teamsters, chauffeurs and laborers on public works, shall not be less than the wages paid to the employees in the same trades and occupations by private employers engaged in the construction industry. This section shall also apply to regular employees of the Commonwealth or of a county, town or district, when such employees are employed in the construction, addition to or alteration of public buildings for which special appropriations of more than one thousand

dollars are provided. Payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans under collective bargaining agreements or understandings between organized labor and employers shall be included for the purpose of establishing minimum wage rates as herein provided.

1.2

List of Jobs; Classifications; Determination of Rate of Wages; Schedule.
(Statutory reference; Mass. Gen. Laws Chapter 149, Section 27) This Paragraph applies to every contract or subcontract for the construction of public works by the Commonwealth, or by a county, town or district.

The Commissioner of Labor and Industries shall prepare, for the use of such public officials or public bodies whose duty it shall be to cause public works to be constructed, a list of the several jobs usually performed on various types of public works upon which mechanics and apprentices, teamsters, chauffeurs and laborers are employed. The Commissioner shall classify said jobs, and he may revise such classifications from time to time, as he may deem advisable. Prior to awarding a contract for the construction of public works, said public official or public body shall submit to the Commissioner a list of the jobs upon which mechanics and apprentices, teamsters, chauffeurs and laborers are to be employed, and shall request the Commissioner to determine the rate of wages to be paid on each job. Said rates shall apply to all persons engaged in transporting gravel or fill to the site of said public works or removing gravel or fill from such site, regardless of whether such persons are employed by a contractor or subcontractor or are independent contractors or owner-operators. The Commissioner, subject to the provisions of Paragraph 1.1 of these Supplementary Statutory Conditions, shall proceed forthwith to determine the same; and shall furnish said official or public body with a schedule of such rate or rates of wages as soon as said determination shall have been made. In advertising or calling for bids for said works, the awarding official or public body shall incorporate said schedule in the advertisement or call for bids by an appropriate reference thereto, and shall furnish a copy of said schedule without cost, to any person requesting the same. Said schedule shall be made a part of the contract for said works and shall continue to the minimum rate or rates of wages for said employees during the life of the contract. Any person engaged in the construction of said works shall cause a legible copy of said schedule to be kept posted in a conspicuous place at the site of said works during the life of the contract. The aforesaid rates of wages in the schedule of wage rates shall include payment by employers to health and welfare plans, pension plans, and supplementary unemployment benefit plans, and such payments shall be considered as payments to persons under this section performing work as herein provided. Any employer engaged in the construction of such works who does not make payments to a health and welfare plan, a pension plan and a supplementary unemployment benefit plan, where such payments are included in said rates of wages, shall pay the amount of said payments directly to each employee engaged in said construction. Note: The awarding authority does not guarantee the accuracy of any schedule of wage rates

furnished to the Contractor hereunder, and the Contractor shall be responsible for ascertaining the prevailing wages in the area where the work will be performed.

1.3

Employment Records To Be Kept By Contractor, Subcontractor, Statement of Compliance. (Statutory reference; Mass. Gen. Laws Chapter 149, Section 27B)
This Paragraph applies to every contract or subcontract for the construction of public works by the Commonwealth, or by a county, town or district.

Every Contractor, Subcontractor or public body engaged in said public works to which Paragraph 1.2 of these Supplementary Statutory Conditions applies shall keep a true and accurate record of all mechanics and apprentices, teamsters, chauffeurs and laborers employed thereon, showing the name, address and occupational classification of each such employee on said works, and the hours worked by, and the wages paid to, each such employee, and shall furnish to the Commissioner of Labor and Industries, upon his request, a copy of said record, signed by the employer or his authorized agent under the penalties of perjury. Such records shall be open to inspection by any authorized representative of the Department of Labor and Industries at any reasonable time, and as often as may be necessary.

Each such Contractor, Subcontractor or public body shall preserve its payroll records for a period of three years from the date of completion of the contract.

Each such Contractor, Subcontractor or public body shall furnish to the Commissioner of Labor and Industries within fifteen days after completion of its portion of the work a statement, executed by the Contractor, Subcontractor, or public body or by any authorized officer or employee of the Contractor, Subcontractor or public body who supervises the payment of wages in the following form:

STATEMENT OF COMPLIANCE _____, 2004

I, _____ do hereby state:
(Name of signatory party) (Title)

That I pay or supervise the payment of the persons employed by (Contractor, Subcontractor or public body) _____ on the _____ and that all mechanics (building or project) and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty-nine of the General Laws.

Signature

Title

The above mentioned copies of payroll records and statements of compliance shall be available for inspection by any interested party filing a written request to the Commissioner for such inspection.

- 1.4 Wages Paid to Operators of Trucks and Other Equipment. (Statutory reference: Mass. Gen. Laws Chapter 149, Section 27F) This Paragraph applies to every contract for the construction of public works by the Commonwealth, or by a county, city, town or district.

Prescribed rates of wages, as determined by the Commissioner of Labor and Industries, shall be paid to the operators of all trucks, vehicles or equipment employed on the Project. Said rates of wages shall be requested of said Commissioner by the awarding authority and shall be furnished by the Commissioner in a schedule containing the classification of jobs, and the rate of wages to be paid for each job. Said rates of wages shall include payments to health and welfare plans, or, if no such plan is in effect between employer and employees, the amount of such payments shall be paid directly to said operators.

- 1.5 Reserve Police Officers (Statutory reference: Mass. Gen. Laws Chapter 149, Section 27B) This Paragraph 1.5 applies to every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public works for the Commonwealth or any political subdivision thereof.

The Contractor shall pay to any reserve police officer employed by him in any city or town the prevailing rate of wage paid to regular police officers in such city or town.

- 1.6 Eight-Hour Day, etc. This Paragraph 1.6 applies only to contracts which are subject to the provisions of Mass. Gen. Laws Chapter 149, Sections 30 and 34.

No laborer, worker, mechanic, foreman or inspector working within this Commonwealth in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or part of the work contemplated by the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of emergency.

- 1.7 Lodging, etc. (Statutory reference: Mass. Gen. Laws Chapter 149, Section 25) This Paragraph applies to every contract with the Commonwealth, a county, city or town, or with a department, board, commission, or officer acting therefor, for the doing of public work.

Every employee under this contract shall lodge, board and trade where and with whom he elects, and neither the Contractor nor his agents or employees shall, either directly or indirectly, require as a condition of the employment of any

person that the employee shall lodge, board or trade at a particular place or with a particular person.

1.8 Access to Contractor's Records (Executive Order No. 195) This paragraph applies to every contract for the purchase of services or material by any agency, bureau, board, commission, institution, or department of the Commonwealth.

The Governor or his designee, the secretary of administration and finance, and the state auditor or his designee shall have the right at reasonable times and upon reasonable notice to examine the books, records, and other compilations of data of the Contractor which pertain to the performance and requirements of this contract.

1.9 Worker's Compensation Insurance (Statutory reference: Mass. Gen. Laws Chapter 149, Section 34A) This Paragraph 1.9 applies to every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or other public works for the Commonwealth or any political subdivision thereof.

The Contractor shall, before commencing performance of the contract, provide by insurance for the payment of compensation and the furnishing of other benefits under Mass. Gen. Laws Chapter 152 to all persons to be employed under the contract, and the Contractor shall continue such insurance in full force and effect during the term of the contract. Sufficient proof of compliance with this Paragraph 1.9 must be furnished at the time of execution of this contract. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall operate as an immediate termination thereof. No cancellation of such insurance, whether by the insurer or by the insured, shall be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the awarding authority at least fifteen days prior to the intended effective date thereof, which date shall be expressed in full notice.

ARTICLE 2 - EQUAL EMPLOYMENT OPPORTUNITY AND AFFIRMATIVE ACTION

(Statutory reference: Mass. Gen. Laws Chapter 151B; Executive Orders No. 74, No. 116 and No. 246). The provisions of this Article 2 are intended to comply with the Commonwealth's Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program, referred to in Executive Order No. 116 and administered by the Massachusetts Commission Against Discrimination. If no specific percentage has been inserted in Subparagraph 2.2, 3 below, the applicable minimum percentage provided for in such Supplemental Program shall be deemed to have been so inserted.

2.1 Definitions. For purposes of this Contract, "minority" refers to Asian-Americans, Blacks, Spanish-Surnamed Americans, North American Indians, and Cape Verdeans. "Commission" refers to the Massachusetts Commission Against Discrimination.

2.2 Non-Discrimination and Affirmative Action Requirements. During the performance of this Contract, the Contractor and all of his Subcontractors (hereinafter "Contractor"), for himself, his assignees and successors in interest, agree to comply with Subparagraphs 2.2.1 through 2.2.11.

2.2.1 In connection with the performance of Work under this Contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age 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. The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Commission setting forth the provisions of the Fair Employment Practices Law of the Commonwealth.

2.2.2 In connection with the performance of Work under this Contract, 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 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. A purpose of this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future Commonwealth public construction projects.

2.2.3 As part of his obligation of remedial action under the foregoing Subparagraph 2.2.2, the Contractor shall maintain on this project a not less than ten percent (10%) ratio of minority employee-man hours to total man-hours in each job category including but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those "classes of work" enumerated in Mass. Gen. Laws Chapter 149, Section 44F.

2.2.4 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 the Commission; traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the Liaison Committee (described in Subparagraph 2.2.5 below) or the Commission.

- 2.2.5 At the discretion of the Commission there may be established for the life of this Contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one representative each from the agency or agencies administering this project, hereinafter called the administering agency, the Commission and such other representatives as may be designated by the Commission in conjunction with the administering agency.
- 2.2.6 The Contractor (or his agent, if any, designated by him as the on-site equal employment opportunity officer) shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.
- 2.2.7 The Contractor shall prepare projected manning tables on a quarterly basis. These shall be broken down into projections, by week, of workers required in each trade. Copies shall be furnished one week in advance of the commencement of the period covered, and also when updated, to the Commission and Liaison Committee.
- 2.2.8 Records of employment referral orders, prepared by the Contractor, shall be made available to the Commission and to the Liaison Committee on request.
- 2.2.9 The Contractor shall prepare weekly reports in a form approved by the Commission of hours worked in each trade by each employee, identified as a minority or non-minority. Copies of these shall be provided at the end of each week to the Commission and to the Liaison Committee.
- If the Contractor shall use any Subcontractor on any work performed under this Contract, he shall take affirmative action to negotiate with qualified minority Subcontractors. This affirmative action shall cover both pre-bid and post-bid periods. It shall include notification to the Office of Minority Business Assistance (within the Executive Office of Communities and Development) or its designee, while bids are in preparation, of all products, work or services for which the Contractor intends to negotiate bids.
- In the employment of journeymen, apprentices, trainees and advanced trainees, the Contractor shall give preference, first, to citizens of the Commonwealth who have served in the armed forces of the United States in time of war and have been honorably discharged therefrom or released from active duty therein, and who are qualified to perform the work to which the employment relates, and, secondly, to citizens of the Commonwealth generally, and, if such cannot be obtained in sufficient numbers, then to citizens of the United States.
- A designee of the Commission and a designee of the Liaison Committee shall each have right of access to the construction site.

2.2.10 The Contractor shall maintain as a goal on this project a not less than five percent ratio of women work force to total project hours in both the general contract and each individual filed sub-bid contract.

A Labor Scheduling Table will be used as a tool for achieving a range of women work force participation for the entire project in both the general contract and each individual filed sub-bid contract. Said Labor Scheduling Table shall be in a form acceptable to the Town.

2.2.11 Before starting work, the Contractors (includes the General Contractor, for itself and its Subcontractors, as well as all filed sub-bid Contractors) will submit plans for achievement of the equal opportunity goals of the contract. All Contractors will be required to make a good faith effort to achieve these goals. The plan will indicate if the Contractors expect to achieve the requirements during the first quarter. If there are reasons why the Contractors do not expect to achieve the requirements during the first quarter year of the contract construction phase, then the Contractors shall provide a plan calculated to address, to the extent reasonably possible, these obstacles to a good faith effort to achieve such goals.

Not more than ten days following the end of each work quarter, the Contractors will report on the achievement of the goals, detailing the good faith efforts that have been made and will continue to be made and any other appropriate efforts not yet undertaken.

All reports will be signed by an officer or principal of the company who has the authority to contractually obligate the company.

2.3 The Contractor shall comply with the provisions of Executive Order No. 74, as amended by Executive Order No. 166, dated May 1, 1975, and of Mass. Gen. Laws Chapter 151B, both of which are herein incorporated by reference and made a part of this Contract.

2.4 The Contractor, in the performance of all Work, and prior to completion of the Work, will not discriminate on grounds of race, color, religious creed, national origin, age or sex in employment practices, in the selection or retention of Subcontractors, or in the procurement of materials and rentals of equipment.

2.5 In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential Subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this Contract relative to non-discrimination and affirmative action.

2.6 The Contractor hereby certifies that he shall comply with the minority manpower ratio and specific action steps contained herein. The Contractor shall be required to obtain from each of its Subcontractors and submit to the administering agency

prior to the performance of any work under the Contract a certification by said Subcontractor, regardless of tier, that it will comply with the minority manpower ration and specific affirmative action steps contained herein. Such certification shall be provided on forms furnished by the administering agency or, in the absence thereof, on forms prescribed by the Commission.

2.7 The Contractor's certification form must be signed by all successful low bidder(s) prior to award by the administering agency.

2.8 Compliance Information, Reports and Sanctions.

2.8.1 The Contractor will provide all information and reports required by the administering agency or the Commission on instructions issued by either of them and will permit access to its facilities and books, records, accounts and other sources of information which may be determined by the Commission to affect the employment of personnel. This provision shall apply only to information pertinent to the Commonwealth's supplementary affirmative action contract requirements. 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 administering agency or the Commission as appropriate and shall set forth what efforts he has made to obtain the information.

2.8.2 Whenever the administering agency, the Commission or the Liaison Committee believes the Contractor or any Subcontractor may not be operating in compliance with the terms of this Paragraph 2.8, the Commission directly, or through its designated agent, shall conduct an appropriate investigation, and may confer with the parties, to determine if such Contractor is operating in compliance with the terms of this Paragraph 2.8. If the Commission or its agent finds the Contractor or any Subcontractor not in compliance, it shall make a preliminary report on non-compliance, and notify such Contractor in writing of such steps as will in the judgment of the Commission or its agent bring such Contractor into compliance. In the event that such Contractor fails or refuses to fully perform such steps, the Commission shall make a final report of non-compliance, and recommend to the administering agency the imposition of one or more of the sanctions listed below. If, however, the Commission believes the Contractor or any Subcontractor has taken or is taking every possible measure to achieve compliance, it shall not make a final report of non-compliance. Within fourteen days of the receipt of the recommendations of the Commission, the administering agency shall move to impose one or more of the following sanctions, as it may deem appropriate to attain full and effective enforcement:

- (i) The recovery by the administering agency from the Contractor of 1/100 of 1% of the contract award price or \$1,000, whichever sum is greater, in the nature of liquidated damages or, if a Subcontractor is in non-compliance, the recovery by the administering agency from the Contractor, to be assessed by the Contractor as a back charge against

the Subcontractor, of 1/10 or 1% of the subcontract price, or \$400, whichever sum is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply,

(ii) The suspension of any payment or part thereof due under the Contract until such time as the Contractor or any Subcontractor is able to demonstrate his compliance with the terms of the contract;

(iii) The termination, or cancellation, of the Contract, in whole or in part, unless the Contractor or any subcontractor is able to demonstrate within a specified time his compliance with the terms of the Contract;

(iv) The denial to the Contractor or any Subcontractor of the right to participate in any future contracts awarded by the administering agency for a period of up to three years.

If at any time after the imposition of one or more of the above sanctions a Contractor is able to demonstrate that he is in compliance with this Paragraph 2.8, he may request that the administering agency, in consultation with the Commission, suspend the sanctions conditionally, pending a final determination by the Commission as to whether the Contractor is in compliance. Upon final determination of the Commission, the administering agency, based on the recommendation of the Commission, shall either lift the sanctions or reimpose them.

Sanctions enumerated under Subparagraph 2.8.2 of this Paragraph 2.8 shall not be imposed by the administering agency except after an adjudicatory proceeding as that term is used in Mass. Gen. Laws Chapter 30A, has been conducted. No investigation by the Commission or its agent shall be initiated without prior notice to the Contractor.

2.9

Severability. The provisions of this Article 2 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.

2.10

The Contractor shall comply with the provisions of Executive Order No. 246, relating to discrimination against and equal employment opportunity for the handicapped, which is herein incorporated by reference and made a part of this Contract. In connection with the performance of work under this Contract, the Contractor, Subcontractors and suppliers of goods and services shall not discriminate against the handicapped. Furthermore, Contractors, Subcontractors and suppliers of goods and services must give written notice of their commitments under this Paragraph 2.10 to any labor union, association or brotherhood with which they have a collective bargaining contract or other agreement, and must give such notice to handicapped contractors and to handicapped contractor

associations. A copy of such notice must be furnished to the awarding authority at the time of the signing of the contract.

2.11 Suspension of Payments.

2.11.1 If the awarding authority determines after investigation that the Contractor or any Subcontractor is not in compliance with the terms of Article 2, it may suspend any payment or portion thereof due under the Contract until the Contractor demonstrates compliance with the terms of Article 2.

2.11.2 Payment shall not be suspended if the awarding authority finds that the Contractor made his best efforts to comply with Article 2, or that some other justifiable reason exists for waiving the provisions of Article 2 in whole or in part.

2.11.3 Payment may be suspended only after the Contractor and any other interested party shall have been given the opportunity to present evidence in support of its position at an informal hearing held by the awarding authority and the awarding authority has concluded upon review of all the evidence that such penalty is justified.

2.11.4 This temporary suspension of payments by the awarding authority is separate from the sanctions set forth in Paragraph 2.8 above, which are determined by the Commission and recommended to the awarding authority.

ARTICLE 3 -- MASSACHUSETTS PUBLIC CONSTRUCTION STATUTES

3.1 To whatever extent Massachusetts statutory laws regarding public construction apply to this project, said laws specifically are incorporated herein as if re-stated herein.

ARTICLE 4 - TITLE I GENERAL GOVERNMENT, ARTICLE 16 CONSTRUCTION PROJECTS; § 1-3 OF THE TOWN OF ARLINGTON GENERAL BY-LAWS

4.1 Women Work Force Participation:

4.1.1 The contractor shall maintain as a goal on this project a not less than five percent ratio of women work force to total project hours in both the general contract and each individual filed sub-bid contract, if applicable. The preceding sentence shall be included in all construction contracts whether entered into by the Town pursuant to the provisions of M.G.L. c. 149 or M.G.L. c. 30, § 39M et. seq. provided however, that if entered into under Chapter 30 same shall not be deemed to apply where the projected bid price as determined by the Director of Public Works is not likely to exceed \$200,000.

4.1.2 A Labor Scheduling Table which will be used as a tool for achieving a range of women work force participation for the entire project in both the general contract and each individual filed sub-bid contract.

4.2 Equal Opportunity Goal Compliance.

4.2.1 Before starting work, the contractors (includes the general contractor, for itself and its subcontractors, as well as all filed sub-bid contractors, if applicable) will submit plans for achievement of the equal opportunity goals of the contract. All contractors will be required to make a good faith effort to achieve these goals. The plan will indicate if the contractors expect to achieve the requirements during the first quarter. If there are reasons why the contractors do not expect to achieve the requirements during the first quarter year of the contract construction phase, then the contractors shall provide a plan calculated to address, to the extent reasonably possible, these obstacles to a good faith effort to achieve such goals.

4.2.2 Not more than ten days following the end of each work quarter, the contractors will report on the achievement of the goals, detailing the good faith efforts that have been made and will continue to be made and any other appropriate efforts not yet undertaken.

4.2.3 All reports will be signed by an officer or principal of the company who has the authority to contractually obligate the company.

4.3 Recruitment and Training

4.3.1 Any board, officer, committee, or other agency of the Town, which acts on behalf of the Town in making or supervising any contract, in any amount exceeding the sum of \$100,000 for the purchase of goods or services or for the construction, renovation, or repair of buildings or other improvement of real estate, may make arrangements with contractors and other interested agencies for special programs of recruitment and training in connection with the work to be performed on such contract, with the objective of promoting equal employment opportunity for members of minority groups protected by the fair employment laws of the Commonwealth and the United States. Any board, officer, committee or other Town agency may expend Town funds in carrying them out provided that appropriations specifically designed for such purposes have been voted by the Town Meeting.

TOWN OF ARLINGTON

GENERAL CONTRACT

THE TOWN OF ARLINGTON, a municipal corporation of the Commonwealth of Massachusetts, acting through its Town Manager, and

(The Contractor) hereby mutually agree as follows:

ARTICLE I - THE CONTRACT DOCUMENTS

The Contract Documents, as defined in the CONSOLIDATED GENERAL CONDITIONS and SUPPLEMENTAL STATUTORY CONDITIONS, including said CONSOLIDATED GENERAL CONDITIONS and SUPPLEMENTAL STATUTORY CONDITIONS are hereby incorporated by reference and made a part hereof, and shall include Addenda and Alternates, if any.

ARTICLE II - GENERAL DESCRIPTION OF THE WORK

The Contractor shall furnish all of the materials and perform all of the Work required by the Contract Documents entitled _____, dated _____, prepared by [_____], acting as, and in these Contract Documents entitled, the Architect.

ARTICLE III - COMMENCEMENT AND COMPLETION OF WORK AND LIQUIDATED DAMAGES

It is agreed that time is of the essence of this Contract.

The Contractor shall commence work only upon the execution of this Contract by the Town of Arlington by its Town Manager, the certification of the availability of the appropriation by the Town Comptroller, approval as to form by the Town Counsel, and upon issuance of a Notice to Proceed, and shall bring the Work to Substantial Completion by [DATE], and to Final Completion within 15 calendar days thereafter. Liquidated damages in the amount of [\$___] per calendar day will be applicable after the date of Substantial Completion for which the project is not substantially complete, and for each day after the date of Final Completion for which the project is not finally complete, and otherwise in accordance with the provisions of the CONSOLIDATED GENERAL CONDITIONS and SUPPLEMENTAL STATUTORY CONDITIONS. The liquidated damages amount per calendar day is a minimum damage figure to compensate the Owner for administrative costs and loss or delay of its use of the building and site, and does not limit in any way the liability of the Contractor for damages in excess of the specified liquidated damages amount for other damages, for example, damages for breach of Contract, and added architect and consultant fees. It is expressly understood that such liquidated

damages do not constitute a penalty. All work shall be phased (if applicable) in accordance with the Contract Documents.

NOTE: NOTWITHSTANDING ANYTHING TO THE CONTRARY, THE TIME OF COMMENCEMENT SHALL ONLY BE BY WRITTEN NOTICE TO PROCEED WITH THE WORK AS DATED AND ISSUED TO THE CONTRACTOR BY THE TOWN OF ARLINGTON. NOTICE TO PROCEED MAY BE GIVEN ANYTIME AFTER THE AWARD OF THE CONTRACT, BUT NOT LATER THAN 14 DAYS AFTER THE EXECUTION OF THE CONTRACT.

ARTICLE IV - COMPENSATION TO BE PAID BY TOWN

The Town shall pay and the Contractor shall accept, as full compensation for everything furnished, done by or resulting to the Contractor in carrying out this Contract, subject to additions and deductions in the Contract Documents in the sum of:

ARTICLE V - AVAILABILITY OF APPROPRIATION

This Contract is subject to an appropriation being available therefor.

This Contract is executed by the Town of Arlington and by the Contractor as of this _____ day of _____, 2004.

TOWN OF ARLINGTON

BY: _____
Town Manager

Approved as to Availability
of Appropriation

Town Comptroller

CONTRACTOR:

(Name)

(Address)

Approved as to Form:

BY: _____
(Name)

Town Counsel

(Title)

(Affix Corporate Seal Here)

PAYMENT BOND

Bond No. _____

KNOW ALL MEN BY THESE PRESENT, that we _____ with a place of business at _____ as principal (the "Principal"), and _____ a corporation qualified to do business in the Commonwealth of Massachusetts, with a place of business at _____ as Surety (the "Surety"), are held and firmly bound unto Town of Arlington as Obligee (the "Obligee"), in the sum of

_____ lawful money of the United States of America, to be paid to the Obligee, for which payment, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these present.

WHEREAS, the Principal has assumed and made a contract with the Obligee, bearing the date of _____ for the _____

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, the provisions of Massachusetts General Laws, Chapter 30, Section 39A, and Chapter 149, Section 29, as amended then this obligation shall become null and void; otherwise, it shall remain in full force and virtue.

IN WITNESS WHEREFORE, the Principal and Surety have hereto set their hands and seals this _____ day of _____, 2004.

PRINCIPAL

SURETY

[Name and Seal]

[Attorney-In-Fact][Seal]

[Title]

[Address]

[Phone]

Attest: _____

Attest: _____

The rate for this Bond is _____ % of the first \$ _____ and _____ % for the next \$ _____.

The total premium for this Bond is \$ _____.

END OF PAYMENT BOND

The Secretary of the Interior's Standards for the Treatment of Historic Properties 1995

Four Treatment Approaches

There are Standards for four distinct, but interrelated, approaches to the treatment of historic properties-- preservation, rehabilitation, restoration, and reconstruction. **Preservation** focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time. (Protection and Stabilization have now been consolidated under this treatment.) **Rehabilitation** acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character. **Restoration** depicts a property at a particular period of time in its history, while removing evidence of other periods. **Reconstruction** re-creates vanished or non-surviving portions of a property for interpretive purposes.

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Standards for Preservation

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

Standards for Rehabilitation

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in a such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Standards for Restoration

1. A property will be used as it was historically or be given a new use which reflects the property's restoration period.
2. Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.
6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.
7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.
8. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
9. Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
10. Designs that were never executed historically will not be constructed.

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

Standards for Reconstruction

1. Reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the property.
2. Reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archeological investigation to identify and evaluate those features and artifacts which are essential to an accurate reconstruction. If such resources must be disturbed, mitigation measures will be under-taken.
3. Reconstruction will include measures to preserve any remaining historic materials, features, and spatial relationships.
4. Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed property will re-create the appearance of the non-surviving historic property in materials, design, color, and texture.
5. A reconstruction will be clearly identified as a contemporary re-creation.
6. Designs that were never executed historically will not be constructed.

Preservation as a Treatment. *When the property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without extensive repair or replacement; when depiction at a particular period of time is not appropriate; and when a continuing or new use does not require additions or extensive alterations, Preservation may be considered as a treatment. Prior to undertaking work, a documentation plan for Preservation should be developed.*

Rehabilitation as a Treatment *When repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular time is not appropriate, Rehabilitation may be considered as a treatment. Prior to undertaking work, a documentation plan for Rehabilitation should be developed.*

Restoration as a Treatment. *When the property's design, architectural, or historical significance during a particular period of time outweighs the potential loss of extant materials, features, spaces, and finishes that characterize other historical periods; when there is substantial physical and documentary evidence for the work; and when contemporary alterations and additions are not planned, Restoration may be considered as a treatment. Prior to undertaking work, a particular period of time, i.e., the restoration period, should be selected and justified, and a documentation plan for Restoration developed.*

Reconstruction as a Treatment. *When a contemporary depiction is required to understand and interpret a property's historic value (including the re-creation of missing components in a historic district or site); when no other property with the same associative value has survived; and when sufficient historical documentation exists to ensure an accurate reproduction, Reconstruction may be considered as a treatment. Prior to undertaking work, a documentation plan for Reconstruction should be developed.*

The Secretary of the Interior's Standards for the Treatment of Historic Properties may be applied to one historic resource type or a variety of historic resource types; for example, a project may include a complex of buildings such as a house, garage, and barn; the site, with a designed landscape, natural features, and archeological components; structures such as a system of roadways and paths or a bridge; and objects such as fountains and statuary.

Historic Resource Types & Examples

Building: houses, barns, stables, sheds, garages, court-houses, city halls, social halls, commercial buildings, libraries, factories, mills, train depots, hotels, theaters, stationary mobile homes, schools, stores, and churches.

Site: habitation sites, funerary sites, rock shelters, village sites, hunting and fishing sites, ceremonial sites, petroglyphs, rock carvings, ruins, gardens, grounds, battlefields, campsites, sites of treaty signings, trails, areas of land, shipwrecks, cemeteries, designed landscapes, and natural features, such as springs and rock formations, and land areas having cultural significance.

Structure: bridges, tunnels, gold dredges, firetowers, canals, turbines, dams, power plants, corn-cribs, silos, roadways, shot towers, windmills, grain elevators, kilns, mounds, cairns, palisade fortifications, earthworks, rail-road grades, systems of roadways and paths, boats and ships, railroad locomotives and cars, telescopes, carousels, bandstands, gazebos, and aircraft.

Object: sculpture, monuments, boundary markers, statuary, and fountains.

District: college campuses, central business districts, residential areas, commercial areas, large forts, industrial complexes, civic centers, rural villages, canal systems, collections of habitation and limited activity sites, irrigation systems, large farms, ranches, estates, or plantations, transportation networks, and large landscaped parks.

Adapted from:

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Illustrated Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Kay D. Weeks and Anne E. Grimmer. The 1995 Standards for the Treatment of Historic Properties are regulations (36 CFR 68) used within the HPF grant-in-aid program to States, tribes, and local governments. They are also used by federal agencies, and have been adopted by many local historic district commissions nationwide. Updated Guidelines in a recommended/not recommended format address all four work options offered in the Standards, as applied to historic buildings. They are useful to anyone undertaking a historic preservation project on a historic building. 196 pages; illustrated. *GPO stock number: 024-005-01157-9. \$29.50 per copy.*

Please see:

<http://bookstore.gpo.gov/actions/GetPublication.do?stocknumber=024-005-01157-9>

http://www.nps.gov/history/hps/tps/standards_guidelines.htm

**DIVISION 1
GENERAL REQUIREMENTS**

**SECTION 01010
SUMMARY OF WORK**

PROJECT DESCRIPTION

The Project consists of exterior restoration of the Jefferson Cutter House, 611 Massachusetts Avenue, Arlington, Mass., as shown on Contract Documents prepared by Wendy Frontiero, Architect.

The Work consists generally of replacement of roof shingles and flashing; repair of roof drainage systems; repairs to exterior siding and trim; repair/restoration of historic windows and doors; and exterior painting.

The intent of this Project is to make the building envelope sound and weathertight, while retaining as much as possible of the existing original or early building elements.

MASONRY

Re-pointing of limited sections of granite foundation.

Installation of cement wash on top of each chimney.

CARPENTRY

Repair/replacement of sections of wood framing and trim at walls, windows, doors, and roof edges, to match existing.

Temporary removal and re-installation of three false walls on interior to permit access to window sash for repairs.

THERMAL AND MOISTURE PROTECTION

Replacement of wood roofing system.

Repair/replacement of defective clapboards and sill boards throughout building.

Repair/replacement of metal downspouts.

New flashing at sill boards, window and door heads, eaves, raking roof edges, and chimneys.

DOORS AND WINDOWS

Repair of exterior doors; repair of all double-hung windows and re-puttying of all muntins; replacement of selected double-hung windows.

New weather-stripping at all doors and windows.

FINISHES

Preparation, priming, and painting of all new and repaired elements, and of existing clapboards, shutters, and trim.

END OF SECTION

**DIVISION 1
GENERAL REQUIREMENTS**

**SECTION 01030
SPECIAL CONDITIONS**

GENERAL PROVISIONS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specifications Sections, apply to this Section.

HISTORIC DESIGNATIONS

This property is listed in both the State and National Registers of Historic Places. All work performed for this project must comply with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. Contractors are cautioned to exercise all possible care in handling historic portions of the building fabric.

OCCUPANCY BY THE OWNER

The building will continue to be occupied during the course of this Contract. Coordinate the Work with the Owner to provide the least disruption possible to the Owner's operations.

Maintain access and egress to the building during hours of operation. Hours of operation are generally, but not limited to, Monday through Thursday, 9 am to 1.30 pm; and Friday, 12 pm to 4 pm.

PRE-CONSTRUCTION MEETING

A Pre-Construction Meeting with the Contractor and Owner shall be held on-site within one week of signing the contract.

PROJECT SIGN

A free-standing project sign provided by the Owner shall be installed within two weeks of the start of the project; location to be determined by the Project Manager. Project sign must remain in place until the project is closed out.

Sign requirements are as follows:
SIZE: 4 feet by 4 feet (minimum)

MATERIAL: ½ inch or ¾ inch exterior plywood.

CONTRACTOR USE OF PREMISES

General: Limit use of the premises to construction activities in areas indicated. Work hours on-site are limited to 8 am to 5 pm. Toilet facilities are available on the property within the building's hours of operation.

Confine operations to areas immediately around the house. Portions of the site beyond areas on which work is indicated shall not be disturbed. Do not encumber the site with materials or equipment. Limit stockpiling of materials at the site. Coordinate locations of lay down area and waste container locations with Project Manager.

Use of the existing building: Maintain the existing building in a safe and weathertight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building during the construction period.

Submit a work plan detailing the schedule proposed to accomplish the work, including the order in which specific elevations and work items will be worked on; protection of entry ways and paths used by employees and the general public; and protection of museum property within the building from inclement weather, dust and construction debris, and theft and vandalism. Designate key personnel to coordinate work and schedule with museum staff.

UTILITIES

The Owner shall pay for water and electricity usage during construction.

Contact DigSafe (888-344-7233) 72 hours prior to commencing any excavation.

COORDINATION OF INSURANCE COVERAGE

The Contractor and the Owner shall have insurers coordinate Construction and Owner's insurance plans to avoid gaps and overlaps in coverage during construction.

Contractor's required insurance shall include all major divisions of coverage, and shall be on a comprehensive general basis, including Premises and Operations (including X-C-U), and Owned, Non-owned, and Hired Motor Vehicles. Such insurance shall be written for not less than any limits of liability required by law or those set forth below. Coverage(s), whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment.

1. Workmen's Compensation: Statutory. Employers Liability, \$500,000.
2. Public Liability – Per Person/Per Occurrence.
Bodily and Personal Injury \$1,000,000/\$2,000,000.
Property Damage \$1,000,000/\$2,000,000 Aggregate.
3. Automobile Liability – Per Person/Per Occurrence.
Bodily Injury \$500,000/\$1,000,000.
Property Damage \$500,000 Per Occurrence.
4. Independent Contractors – Same limits as above.
5. Products and Completed Operations – Same limits as above, maintained for an additional one year after Final Completion.
6. Contractual Liability – Same limits as above.

REGULATIONS AND GENERAL REQUIREMENTS

All materials and operations shall be strictly in accordance with the Massachusetts State Building Code, current edition, as amended; the requirements of the Massachusetts Department of Public Safety Codes and Regulations; the American Society of Testing Materials; the Federal Standards; applicable public agencies or authorities, including all rules, regulations, laws, and ordinances of the Town of Arlington; other standards hereinafter indicated; and the current rules, standards, and specifications of the trade or materials or safety organization that normally has jurisdiction over the respective material, operation, or class of work. The most stringent requirements or conditions applicable shall apply to this project.

The Contractor shall, at his or her own expense, secure and pay for all permits, inspections, and fees, and give all legal notices that may be required in connection with his or her work, including the notification of local utility companies regarding location of subsurface water, gas, electric, and other utility lines.

MANUFACTURER'S SPECIFICATIONS

All manufactured products and materials shall be installed in strict accordance with manufacturers' installation specifications. It is the Contractor's responsibility to be fully familiar with the manufacturers' installation specifications regardless of whether the specifications were shipped with the product or material.

STORAGE OF MATERIALS AND EQUIPMENT

Materials and equipment may be stored on the site as allowed by the Owner.

All material stored on site shall be protected from weather or damage as per manufacturers' recommendations and good construction practices. Materials shall be stored in an orderly fashion.

TEMPORARY FACILITIES

Provide all required staging, lifts, lulls, and other means of access to the work.

Provide temporary construction fencing.

HANDLING OF MATERIALS

All materials shall be handled, stored, and protected as per the manufacturers' recommendations.

FIELD CONDITIONS

Verify all conditions in the field before proceeding with the Work. Notify the Project Manager immediately of any discrepancies between the plans, specifications, and site conditions.

NEW AND EXISTING WORK AND CONDITIONS

All details and characteristics of new and/or modified work (conditions and materials) shall match all details and characteristics of adjacent or similar existing work unless indicated otherwise.

Existing conditions and materials that are defective, or those that have materials or equipment or devices removed or that are modified in this work shall be repaired, patched, and refinished to a smooth, even plane to match the adjacent surfaces or class of work.

All materials shall be new unless otherwise specified and shall conform to standards specified herein. All manufactured articles, materials, and equipment shall be fabricated, assembled, shaped, finished, applied, installed, connected, erected, used, cleaned, and conditioned in accordance with manufacturers' printed directions or specifications, from which the most stringent conditions shall apply, unless herein specified to the contrary. Submit two copies of such directions to the Project Manager.

BROKEN GLASS

The Contractor shall be held responsible at all times prior to acceptance of the Work as completed, for all broken or scratched glass that has been damaged as a result of the work of this Contract. When so directed by the Project Manager, prior to completion of the whole project, the Contractor shall replace, at his or her own expense, all such glass broken, missing, or damaged.

DEMOLITION

Remove and properly dispose of all construction waste generated by the Work.

All materials and finishes to be retained shall be protected from damage during demolition and construction. Should any damage occur, the Contractor shall be responsible for repairing or replacing materials and finishes to their original condition.

RUBBISH REMOVAL AND FIRE PROTECTION AND PREVENTION

Keep the building and build site free of rubbish and debris at all times. Thoroughly clean the work areas and premises of rubbish and debris of any nature, and remove such material from the premises at the end of each work day.

Remove all rubbish, waste, tools, equipment, and appurtenances caused by and used in the execution of the Work; maintain the building and site clean and free of debris, leaving all work in a clean condition every day.

A waste container shall be kept on the site at all times during construction. Size of container shall be as required by the work. The container shall be emptied on a regular basis. The Contractor shall be responsible for all container and disposal fees.

HAZARDOUS WASTE AND MATERIALS

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Notify the Owner and Project Manager promptly if hazardous material is discovered on site during construction. The Contractor shall not be responsible for the removal or correction of any hazardous waste conditions unless otherwise indicated.

END OF SECTION

**DIVISION 1
GENERAL REQUIREMENTS**

**SECTION 01036
UNIT PRICES**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

SUMMARY

This Section specifies administrative and procedural requirements for unit prices.

A unit price is an amount proposed by Bidders and stated on the Bid Form as a price per unit of measurement for materials or services that will be added to or deducted from the Contract Sum by Change Order in the event the estimated quantities of Work required by the Contract Documents are increased or decreased. Additions and deletions from the "base bid" quantities contained in the Contract Documents shall be executed under Unit Prices.

Unit prices include all necessary material, overhead, profit, and applicable taxes.

Refer to individual Specification Sections for construction activities requiring the establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

Schedule: A "Unit Price Schedule" is included at the end of this Section. Specification sections referenced in the Schedule contain requirements for materials and methods described under each unit price.

The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this Work measured by an independent surveyor acceptable to the Contractor at the Owner's expense.

PART 2 – PRODUCTS

Not applicable.

PART 3 - EXECUTION

UNIT PRICE SCHEDULE

Item No. 1 – Repair/Replacement of Wood Sill

Description: Repair of existing wood wall sills in accordance with Section 06100, Rough Carpentry.

Unit of Measurement: Linear foot.

Item No. 2 – Replacement of Wood Sheathing

Description: Replacement of defective or deteriorated wood wall and roof sheathing in accordance with Section 06100, Rough Carpentry.

Unit of Measurement: Square foot.

Item No. 3 – Replacement of Wood Wall Studs

Description: Replacement of defective or deteriorated wood wall studs in accordance with Section 06100, Rough Carpentry.

Unit of Measurement: Linear foot.

Item No. 4 – Replacement of Wood Corner Posts

Description: Replacement of defective or deteriorated wood corner posts in accordance with Section 06100, Rough Carpentry.

Unit of Measurement: Linear foot.

Item No. 5 – Removal/Replacement of Wood Clapboards

Description: Replacement of defective wood clapboards in accordance with Section 07460, Clapboard Siding. Base bid shall anticipate replacement of up to 10% of existing clapboards.

Unit of Measurement: Linear foot.

Item No. 6 – Repair of Wood Trim

Description: Repair of existing wood trim in accordance with Section 06200, Finish Carpentry and Woodwork Conservation:

- Corner boards
- Fascia boards
- Cornice molding
- Wood gutters
- Window and door trim
- Sill board trim

Unit of Measurement: Linear foot.

Item No. 7: New Wood Trim

Description: Removal and replacement of wood trim in accordance with Section 06200, Finish Carpentry and Woodwork Conservation:

- Corner boards
- Fascia boards
- Cornice molding

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Wood gutters
Window and door trim
Sill board trim

Unit of Measurement: Linear foot.

END OF SECTION

**DIVISION 1
GENERAL REQUIREMENTS**

**SECTION 01100
ALTERNATES**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to the Work of this Section.

SUMMARY

This Section specifies administrative and procedural requirements for Alternates.

Definition: An Alternate is an amount proposed by Bidders and stated on the Bid Form for certain construction activities defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

The cost or credit for each Alternate is the net addition to or deduction from the Contract Sum to incorporate Alternate into the Work. No other adjustments are made to the Contract Sum.

Coordination: Coordinate related Work and modify or adjust adjacent Work as necessary to ensure that Work affected by each accepted Alternate is complete and fully integrated into the project.

Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

Notification: Immediately following the award of the Contract, notify each party involved, notification of the status of each Alternate, including which Alternates have been accepted, rejected, or deferred for consideration at a later date. Include a complete description of any modifications to alternates.

Execute accepted Alternates under the same conditions as other Work of the Contract.

Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials and methods necessary to achieve the Work described under each Alternate.

PART 3 – EXECUTION

SCHEDULE OF ALTERNATES

Alternate No. 1: DEDUCT full painting of all existing painted wood at clapboards, doors, exterior trim, shutters, and gutters, and painting of existing painted downspouts. (Painting of all new and repaired wood at clapboards, doors, window frames and sash [including jambs and sills], exterior trim, and gutters will remain. Painting of all new and repaired downspouts will remain.) This alternate affects the following documents:

Section 09900, Painting
Drawing Sheet Nos. 1 through 4

Alternate No. 2: DEDUCT temporary removal and re-installation of three false walls on interior of building. This alternate affects the following documents:

Section 06200, Finish Carpentry and Wood Conservation
Section 09900, Painting
Drawing Sheet No. 6

END OF SECTION

**DIVISION 1
GENERAL REQUIREMENTS**

**SECTION 01400
CUTTING AND PATCHING**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including Special Conditions and Division 1 Specifications Sections, apply to this Section.

SUMMARY

This section specifies administrative and procedural requirements for cutting, fitting, and patching required to complete the Work as described in these Specifications and as indicated on the Drawings, including but not limited to:

Make its several parts fit together properly.

Remove and replace defective work.

Remove and replace work not conforming to requirements of Contract Documents.

Remove samples of installed work as specified for testing.

Provide routine penetrations of non-structural surfaces for installation of piping and related work.

RELATED WORK SPECIFIED ELSEWHERE

Carefully examine all of the Contract Documents for requirements that affect the work of this Section, including but not limited to the following:

Section 04900, Masonry

Section 06100, Rough Carpentry

Section 06200, Finish Carpentry

Section 07400, Clapboard Siding

Section 08600, Wood Doors and Windows and Glazing

Section 09900, Painting

QUALITY ASSURANCE

Work shall be performed under the direction of a firm having not less than five years of successful experience in comparable work, utilizing sufficient workmen and supervisors who shall be thoroughly familiar with the type of construction represented in this Project and the materials and techniques specified. The Contractor also shall have experience working on at least three properties listed in the State or National Registers of Historic Places within the past five years.

Materials used in connection with this Work shall conform in all respects to that required by the applicable Building Codes and ASTM Designations and Standards.

Project Manager's approval to proceed with cutting and patching does not waive the right to later require removal/replacement of work found to be performed in an unsatisfactory manner, as judged by the Project Manager.

Requirements for Structural Work: Do not cut-and-patch structural work in a manner resulting in a reduction of load-carrying capacity or load/deflection ratio.

Operational and Safety Limitations: Do not cut-and-patch operational elements and safety components in a manner resulting in decreased performance, shortened useful life, or increased maintenance.

Visual Requirements: Do not cut-and-patch work that is exposed on the exterior in a manner resulting in reduction of visual qualities or resulting in substantial evidence of cut-and-patch work, both as judged solely by the Project Manager. Remove and replace work judged by the Project Manager to be visually unsatisfactory.

SUBMITTALS

The Contractor shall submit a proposal and request and obtain the Project Manager's approval well in advance of executing any cutting or alteration that affects:

The structural value or integrity of any element of the Project

The integrity or effectiveness of weather-exposed or moisture-resistant elements or systems

Efficiency, operational life, maintenance, or safety of operational elements

PART 2 - MATERIALS

GENERAL

Use materials for cutting and patching that are identical to existing materials. If identical materials are not available, or cannot be used, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials for cutting and patching that will result in equal-or-better performance characteristics.

PART 3 - EXECUTION

INSPECTION AND ACCEPTANCE

Before cutting, examine surfaces to be cut and patched and conditions under which the Work is to be performed. Report unsafe or otherwise unsatisfactory conditions to Project Manager in writing; do not proceed with corrective work until Project Manager has provided further instructions.

PREPARATION

Temporary Support: To prevent failure, provide support of work to be cut.

Protection: Protect other work during cutting and patching to prevent damage. Provide protection from adverse weather conditions for that part of the Project that may be exposed during cutting and patching operations.

Take precautions not to cut existing pipe, conduit, or ducts serving the building but scheduled to be relocated until provisions have been made to bypass them.

INSTALLATION

Cutting: Cut the work using methods that are least likely to damage work to be retained or adjoining work. Where possible, review proposed procedures with the original installer; comply with original installer's recommendations.

Where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut through concrete and masonry using a cutting machine such as a carborundum saw or core drill. Cut holes and slots neatly to size required with minimum disturbance of adjacent work. To avoid marring existing finished surfaces, cut and drill from the exposed or finished side into concealed surfaces. Temporarily cover openings when not in use.

Patching: Patch with seams that are durable and as invisible as possible. Comply with specified tolerances for the Work.

Restore exposed finishes of patched areas and where necessary extend finish restoration into retained adjoining work in a manner that will eliminate evidence of patching and refinishing.

END OF SECTION

**DIVISION 4
MASONRY**

**SECTION 04900
MASONRY RESTORATION**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to the Work of this Section.

The extent of work is shown on the Drawings, and as scheduled herein.

SUMMARY

Provide all materials, labor, and equipment necessary and/or required for the complete execution of this work of this Section and as indicated on the Drawings, including, but not limited to:

Repointing selected mortar joints on foundation.

Installation of cement wash on top of both chimneys.

RELATED WORK SPECIFIED ELSEWHERE

Carefully examine all of the Contract Documents for requirements that affect the work of this Section, including but not limited to the following:

Section 01400, Cutting and Patching

Section 06200, Finish Carpentry

Section 07900, Sealants

QUALITY ASSURANCE

Work shall be performed under the direction of a firm having not less than five years of successful experience in comparable work, utilizing sufficient workmen and supervisors who shall be thoroughly familiar with the type of construction represented in this Project and the materials and techniques specified. The Contractor also shall have experience working on at least three properties listed in the State or National Registers of Historic Places within the past five years.

Materials used in connection with this Work shall conform in all respects to that required by the applicable Building Codes and ASTM Designations and Standards.

Source of Materials: Obtain materials for masonry restoration from a single source for each type of material required (cement, sand, etc.) to ensure match of quality, color, pattern, and texture.

Field Mock-Ups: Prior to start of general masonry restoration, prepare the following sample panels on building where directed by the Project Manager. Obtain Project Manager's acceptance of visual qualities before proceeding with the Work. Representatives of the Massachusetts Historical Commission will also review and approve masonry sample panels. Retain acceptable panels in undisturbed condition, suitably marked, during construction as a standard for judging completed Work.

Repointing: Prepare 2 separate sample areas approximately 6 inches high by 12 inches wide for each type of repointing required, one for demonstrating methods and quality of workmanship expected in removal of mortar from joints, and the other for demonstrating quality of materials and workmanship expected in pointing mortar joints.

Contractor shall match existing joint profile, as well as existing mortar type, texture, and color.

Scaffold work required to accomplish restoration work shall be the responsibility of this Specialty Contractor and shall be adequately and safely maintained.

All scaffolding, staging, and appurtenances thereto shall comply, in total, to the requirements of Safety and Health Regulations for Construction, Chapter XVII of OSHA, Part 1926 and all related amendments and all other government agencies having jurisdiction. The most stringent requirements shall govern.

SUBMITTALS

Product Data: Submit manufacturers' technical data for each product indicated, including recommendations for their application and use. Include test reports and certifications substantiating that products comply with requirements.

Submit manufacturers' literature for each product proposed for use, including recommendations for their application and use.

Provide manufacturers' certification that the product is compatible with all other materials used in this Project.

Samples: For verification purposes, submit prior to mock-up erection, samples of the following:

Each type of mortar for pointing and masonry rebuilding and repair, in form of 6 inch long by ½ inch wide sample strips of mortar set in aluminum or plastic channels.

Each type of adhesive.

PRODUCT DELIVERY, STORAGE, AND HANDLING

Carefully pack, handle, and ship masonry accessories strapped together in suitable packs or pallets or in heavy cartons. Unload and handle to prevent chipping and breakage.

Deliver all materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers.

Protect masonry restoration materials during storage and construction from wetting by rain, snow, or ground water, and from staining or intermixture with earth or other types of materials.

Protect grout, mortar, and other materials from deterioration by moisture and temperature. Store in a dry location or in waterproof containers. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturers' recommendations for minimum and maximum temperature requirements for storage.

Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

PROJECT CONDITIONS

Cold-Weather Construction: Comply with the following:

Do not undertake masonry projects when the temperature is below 40 degrees F. No types of antifreeze compounds or air entraining agents will be introduced into the mortar.

Do not repoint mortar joints or repair masonry unless air temperatures are between 40 degrees F and 90 degrees F and will remain so for at least 72 hours after completion of Work.

Protect masonry from freezing when the temperature of the surrounding air is 40 degrees F and falling. Heat materials and provide temporary protection of completed portions of masonry Work. Comply with governing codes and with the "Construction and Protection Recommendations for Cold Weather Masonry Construction" of the Technical Notes on Brick and Tile Construction by the Brick Institute of America (BIA).

Do not use frozen materials or materials mixed or coated with ice or frost. For masonry that is to be wetted, comply with BIA recommendations.

Do not build on frozen Work. Remove and replace masonry Work damaged by freezing conditions.

Prevent grout or mortar used in repointing and repair work from staining face of surrounding masonry, roofs, sidewalks, and other surfaces. Remove immediately grout and mortar in contact with exposed masonry, roofs, and other surfaces.

Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at the end of each day's work. Cover partially completed masonry when construction is not in progress.

Extend cover a minimum of 24 inches beyond side of wall and hold cover securely in place.

Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed. Remove immediately any grout, mortar, and soil that come in contact with such masonry.

Protect base of walls from rain-splashed mud and mortar splatter by means of coverings spread on ground and over wall surface.

Protect sills, ledges, and projections from mortar droppings.

Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.

Protect adjacent roof surfaces from mortar splatter.

SEQUENCING/SCHEDULING

Perform masonry restoration work in the following sequence:

Repair of existing masonry, including existing masonry with new masonry materials. Where areas of existing stone, because of deteriorated mortar, must be repaired, the existing stone shall be reused in place. Replacement stones shall be used only if the existing stones are badly deteriorated and shall match the existing stones in type, size, color, and texture.

Rake-out existing mortar from joints indicated to be repointed.

Repoint existing mortar joints of masonry indicated to be restored.

PART 2: MATERIALS

STONE FOUNDATION WALLS

Measurement and Mixing: Measure cementitious and aggregate material in a dry condition by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean mechanical batch mixer.

Colored Mortar: Produce mortar of color required by use of selected ingredients. Do not adjust proportions without Project Manager's written approval.

Color Mortar Pigments: Where colored mortar pigments are indicated, do not exceed pigment-to-cement ratio of 1-to-10, by weight.

Do not use admixtures of any kind in mortar, unless otherwise directed.

Mortar Mix: New Type N mortar to match existing in color, composition, and texture. For exterior Work, use the following mortar mix, by volume: 1 part Portland cement, 1 part lime, and 6 parts aggregate and pigment as necessary, or other mix as determined by mortar analysis provided by the Project Manager.

Portland Cement: ASTM C150, Type I, not having more than 0.60% alkali (expressed as sodium oxide) or not more than 0.15% water soluble alkali by weight (in the combination of lime and cement), non-staining without air entrainment. Provide natural color, light grey, or white cement as required to produce required mortar color.

Hydrated Lime: ASTM C 207, Type S.

Aggregate for Mortar (Sand): ASTM C 144. Color, size, and texture should match the original as closely as possible. Except for joints less than ¼ inch, use aggregate graded with 100% passing the No. 16 sieve.

Colored Mortar Pigments: Natural and synthetic iron oxides, compounded for use in mortar mixes. Use only pigments with record of satisfactory performance in masonry mortars.

Water: Clean and potable, free from deleterious amounts of acids, alkalies, or organic materials that would impair strength of bond.

Formulation of mortar color and texture: Prior to beginning work, the Project Manager will select several samples of the existing historic mortar to be provided to the Contractor for matching. Samples will consist of freshly broken, unweathered sections of old mortar to be used as a guide for matching the color and texture of the new mortar.

Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include but are not limited to the following:

Colored Iron Oxide Pigments: SGS Concentrated A, H, and X Series Mortar Colors by Solomon Colors, Springfield, Illinois, www.solomoncolors.com; Lansco masonry pigments; or mortar pigments of equal quality. Colors and proportions to be as approved by the Project Manager.

CHIMNEY CEMENT WASH

Type S masonry cement mortar. Mortar color and texture to match existing chimney pointing mortar.

PART 3: EXECUTION

INSPECTION AND ACCEPTANCE

Examine the areas and conditions under which Work is to be installed. Notify the Project Manager in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.

Prior to beginning Work, inspect all existing active boiler and fireplace flues and chimneys. Provide written report outlining any structural or safety deficiencies if observed.

REFERENCE STANDARDS

ASTM Standards:

- ASTM C 5 - Quicklime for Structural Purposes
- ASTM C 91 - Masonry Cement
- ASTM C 144 - Aggregate for Masonry Mortar
- ASTM C 150 - Portland Cement
- ASTM C 207 - Hydrated Lime for Masonry Purposes
- ASTM C 270 - Mortar for Unit Masonry
- ASTM C 387 - Packaged, Dry, Combined Materials for Mortar and Concrete
- ASTM C 476 - Grout for Reinforced masonry
- ASTM C 595 - Blended Hydraulic Cements

ASTM C 1142 – Specification for Ready Mixed Mortar for Unit Masonry

Mortar shall meet the requirements of the local governing codes unless directed to the contrary by the Project Manager.

PREPARATION

Protect persons, surfaces of building surrounding masonry being restored, and building site from injury and damage resulting from masonry restoration work.

Erect temporary protection covers over pedestrian walkways and at points of building entrance and exit that must remain in operation during course of masonry restoration work.

Staging and scaffolding shall be erected so as to prevent any possible damage or defacement to the building in general. Under no circumstances shall tie backs be made to the masonry wall.

REPOINTING EXISTING STONE FOUNDATION

Mortar Preparation:

Thoroughly mix dry ingredients, including mortar pigments, prior to the addition of water. The mortar shall contain the largest possible proportion of sand that does not excessively reduce plasticity.

To prevent shrinkage upon drying and to insure a good bond to the existing mortar, hydrate the mortar as follows: Add sufficient liquid to the dry mix to produce a damp, stiff mortar. Allow to rest a minimum of one hour. With additional water, remix to workable consistency.

Do not use mortar that has begun to set or if more than 2 ½ hours has elapsed since initial mixing. Retemper mortar during the 2 ½ hour period only as required to restore workability.

Joint Raking:

Rake out mortar from joints to depths equal to 2 ½ times their widths, but not less than ½ inch nor less than that required to expose sound, unweathered mortar.

Remove mortar from masonry surfaces within raked-out joints to prove reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.

Do not spall edges of masonry units or widen joints. Replace any masonry units that become damaged.

Cut out old mortar by hand with chisel and mallet.

Power operated rotary hand saws and grinders may be permitted only for raking joints repointed in a cement mortar and only with specific prior written approval of the Project Manager based on submission by the Contractor of a satisfactory quality control program and demonstrated ability of operators to use such tools without damage to masonry. Use of a rotary hand saw is limited to a single pass at horizontal joints only. Quality control program shall include provisions for supervising

performance and preventing damage due to worker fatigue. The Contractor will execute a test section using a power grinder, to be approved by the Project Manager.

Joint Pointing:

Rinse masonry joint surfaces with water to remove any dust and mortar particles. Time application of rinsing so that, at time of pointing, excess water has evaporated or run off, and joint surfaces are damp but free of standing water.

Apply first layer of pointing mortar to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch until a uniform depth is formed. Compact each layer thoroughly and allow to become thumbprint-hard before applying next layer.

After joints have been filled to a uniform depth, place remaining point mortar in 3 layers with each of first and second layers filling approximately 2/5 of joint depth and third layer the remaining 1/5. Fully compact each layer and allow to become thumbprint-hard before applying next layer.

Where existing stones have rounded edges, recess final layer slightly from face. Take care not to spread mortar over edges onto exposed masonry surfaces, nor to featheredge mortar. Match joint profile of existing mortar.

When mortar is thumbprint-hard, tool joints to match original appearance of joints, unless otherwise indicated or directed. Remove excess mortar from edge of joint by brushing. Allow the mortar to dry but not harden prior to brushing.

Cure mortar by maintaining in a damp condition for not less than 72 hours.

CEMENT CHIMNEY WASH

The top surface of the cement wash shall slope away from the flue liner at a minimum 3:12 pitch to provide proper slope for drainage/weatherproofing.

There shall be a gap between the cement wash and the flue liner to allow for liner expansion. The gap shall be filled with flexible sealant.

FINAL CLEANING

After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter using soft fiber bristle brushes and clean water, spray-applied at low pressure. If necessary, scrub with a solution of ½ cup trisodium phosphate and ½ cup household detergent dissolved in one gallon of water; rinse with clean water.

Use of metal scrapers or brushes will not be permitted.

Use of acid or alkali cleaning agents will not be permitted.

END OF SECTION

**DIVISION 6
WOOD**

**SECTION 06100
ROUGH CARPENTRY**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

SUMMARY

Provide all materials, labor, and equipment necessary and/or required for the complete execution of this work of this Section and as indicated on the Drawings, including but not limited to:

Removal of existing roofing system, including wood shingles, underlayments down to original sheathing boards, flashing (except for chimney counterflashing), and accessories.

Plywood sheathing and underlayment at walls and roof, as indicated on Drawings.

Repair/replacement of damaged sections of existing wood wall sills, as required.

Rough hardware, inserts, and related metal components for work of this Section, except those items specifically specified to be provided by other trades.

Wood blocking, grounds, nailers, furring, strapping, sheathing, underlayment, etc., required for all trades.

Wood preservative treatments and applications.

Building felts and air infiltration barriers for work of this Section.

Other usual items of normal rough carpentry work indicated on the Drawings or necessary for the proper completion of the Project, even if not specifically mentioned herein.

Unit Prices: Additions and deletions from the "base bid" quantities listed below and as shown on the Drawings shall be executed under Unit Prices, see Section 01036.

RELATED WORK SPECIFIED ELSEWHERE

Carefully examine all of the Contract Documents for requirements that affect the work of this Section, including but not limited to the following:

Section 01036, Unit Prices

Section 01400, Cutting and Patching

Section 06200, Finish Carpentry

Section 07400, Clapboard Siding

Section 07300, Roof Shingles and Coverings

Section 07600, Flashing, Sheet Metal, Gutters, and Downspouts

QUALITY ASSURANCE

Work shall be performed under the direction of a firm having not less than five years of successful experience in comparable work, utilizing sufficient workmen and supervisors who shall be thoroughly familiar with the type of construction represented in this project and the materials and techniques specified. The Contractor also shall have experience working on at least three properties listed in the State or National Registers of Historic Places within the past five years.

Materials used in connection with this Work shall conform in all respects to that required by the applicable Building Codes and ASTM Designations and Standards. Timber construction shall conform to "National Design Specification for Wood Construction", latest edition.

Lumber and plywood shall bear the grade-trademark of the association under the rules or standards of which they were produced. Grade-trademarks shall conform to the rule or standard under which the material is produced, including requirements for qualifications and authority of the inspection organization, usage of authorized identifications, and information included in the identification.

Grades specified are the minimum acceptable. Lumber grades shall be determined in accordance with ASTM D 245.

Lumber shall bear the grade mark of an American Lumber Standards Committee, Board of Review-approved agency. Lumber shall conform to USDC PS 20.

Lumber shall bear a mark of mill identification.

Plywood shall comply with APA Ref. 1 grading requirements, USDC PS1, and ANSI 199.1.

SUBMITTALS

Product Data: Submit manufacturer's printed product data, specifications, standard details, installation instructions, use limitations, and recommendations for each material used.

Provide manufacturers' certification that the product is compatible with all other materials used in this Project.

Shop Drawings:

Where repairs to wood wall framing are required, the Contractor shall submit complete shop drawings to the Project Manager for approval. Drawings shall include dimensioned elevations and sections as well as

details of all typical members and joinery, types of materials, and hardware, and shall show methods of securing and fastening members to adjacent work.

Shop drawings shall clearly indicate any deviation from the design or detailing of existing conditions.

PRODUCT DELIVERY, STORAGE, AND HANDLING

Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings, including polyethylene and similar materials.

Do not leave any newly installed wood exposed. Cover and protect all new wood daily with suitable covering approved by the Project Manager.

PART 2 - MATERIALS

LUMBER, GENERAL

All sheathing and sill repairs, if required, shall match adjacent existing sheathing and sill materials in species, thickness, and nominal dimensions unless otherwise indicated.

Lumber Standards: Furnish lumber manufactured to comply with PS 20 "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's (ALSC) Board of Review.

Lumber shall be of sound stock, new, straight, of consistent size, free of stains and mildew, and kiln dried to a moisture content of not more than 19% by weight. Lumber shall be surfaced four sides (S4S).

Lumber shall be furnished in longest practical lengths with respect to each intended use, and single length pieces shall be used wherever possible. Splices shall occur only over bearing points. No framing shall be notched or drilled with holes without proper reinforcement.

Lumber shall be Spruce, Hem-Fir, or Southern Yellow Pine, with flexural strength of 1200 psi.

Plywood shall conform to the requirements of APA Rev. 1, and shall be CDX plywood, 1/2 inch for wall sheathing and 5/8 inch for roof sheathing, or dimensions required to match existing work. All wall and roof sheathing shall be APA rated.

PRESSURE-TREATED WOOD

General: Where lumber or plywood is indicated as preservative-treated wood or is specified herein to be treated, comply with applicable requirements of AWPA Standards C2 (Lumber) and C9 (Plywood). Mark each treated item with the AWPA or SPIB Quality Mark Requirements.

All elements in contact with roofing, flashing, vapor barriers, waterproofing, masonry, concrete, or the ground shall be pressure-treated lumber or plywood. Pressure-treat above-ground items with water-borne preservatives to a minimum retention of 0.25 pcf. Treat indicated items and the following:

Wood cants, nailers, curbs, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.

Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.

Wood framing members less than 18 inches above grade.

Complete fabrication of treated items prior to treatment where possible. If cut after treatment, coat cut surfaces to comply with AWWPA M4. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.

WOOD PRESERVATIVE

Wood preservative shall be oil-based wood preservative such as Olympic Wood Protector, manufactured by PPG, Pittsburgh, PA; Woodlife 111, manufactured by Kop-Coat, Inc., Pittsburgh, PA; or approved equal. Wood preservative must be compatible with primer and paint finishes.

ROUGH HARDWARE

Provide all rough hardware required to complete this Work and to attach this Work in a secure and rigid manner to Work of this and other trades, including all inserts, anchors, anchor bolts, lag bolts, screws, washers, nuts, nails, and other rough hardware. Assist other trades as necessary in the placement of inserts and anchor bolts in concrete and masonry and furnish full instructions regarding locations, sizes, and other requirements of the items in order that they may properly prepare their work to receive the same. Rough hardware shall comply in all respects with requirements of the governing laws and codes.

All rough hardware, wood connectors, and fasteners shall be galvanized steel. Rough hardware items shall be of appropriate type and of proper capacity and size as required for each specific application.

WEATHER BARRIER SYSTEM

Textured, spunbonded, nonwoven polyolefin sheet weather barrier system with all required accessories, including seam tape, adhesive, sealants, flashing, and fasteners, as recommended by weather barrier manufacturer. Tyvek DrainWrap by DuPont, Wilmington, Del., or approved equal.

PART 3 - EXECUTION

GENERAL

No attempt is made in this specification to list the various elements of rough carpentry work, as the major part of the work to be done is shown on or reasonably inferred from the Drawings. The rough carpentry work required shall include all such work, regardless of whether or not each and every item is specifically called for. Refer to Drawings to determine the major extent of the rough carpentry work required.

Before cutting and patching, examine surfaces and conditions under which Work is to be performed. Correct unsafe and unsatisfactory conditions prior to proceeding.

The Contractor shall be responsible for structural integrity, connections, and anchorage of all rough carpentry work.

Dismantle wood elements as required to carry out rough carpentry repairs and replacement with care to not damage sound elements or components to be conserved or replaced. All salvageable pieces shall be carefully numbered as to original location to facilitate reinstallation.

Sheathing temporarily removed for framing inspection shall be reinstalled in its existing location and orientation. Wall framing components—including sheathing, studs, and corner posts—that are found during the course of the Work to be damaged shall be repaired/replaced to match existing, after receiving approval from the Project Manager.

Provide replacement elements for missing or severely deteriorated elements. Match species, thickness, and nominal dimensions of material being replaced.

Back prime all new and existing exterior wood components on all concealed surfaces, including end grain cuts, before re-assembly.

Caulk all exposed joints between dissimilar materials and wood to wood joints as required to protect joints from water penetration while still allowing normal movement of separate pieces.

Any questions concerning whether a specific item is to be replaced, treated with epoxy, or filled with putty shall be referred to the Project Manager for resolution.

The Contractor shall exercise care to not damage plaster and other finishes outside the specific areas of authorized removals, such as interior plaster walls. Any such damage is the sole responsibility of the Contractor and shall be repaired to match adjacent finishes at no additional cost to the Owner.

Construct all rough carpentry work plumb, level, and true, with tight, close fitting joints, securely attached and braced to surrounding construction, all in a first class workmanlike manner. Counterbore for bolt heads, nuts, and washers where required, to avoid interference with other materials.

Structural members shall be full-length without splices, and spaced not farther than 16 inches on center, except as may be otherwise specifically indicated on the Drawings.

Wood framing members shall be one-piece full length for maximum strength. Wood blocks, edging, nails, etc., shall be installed as indicated or specified and shall be furnished in lengths not less than 12 feet, except where shorter lengths are required.

Nailing of rough carpentry work shall conform to requirements of the governing laws and codes.

Upon completion of rough carpentry work in any given area, remove all rubbish and debris from the work area and leave in broom-clean condition.

FASTENING OF WOODWORK

Wood shall be secured to wood substrates and other wood to wood connection with nails spaced 12 inches on center maximum, staggered along the centerline of the member being installed. All nail heads must be flush with the top surface.

Wood to masonry connections shall be completed using hammer driven anchors through predrilled holes spaced 8 inches on center maximum. Predrill the hole, insert fastener sleeve, and secure in place with nail.

Installation and nailing of plywood sheathing shall be in strict accordance with the published specifications and recommendations of the American Plywood Association (APA), including APA Ref. 1. Maintain 1/8 inch space at end and edge joints.

ROOF DECK

Remove all existing roof shingles, flashing materials (except existing chimney counterflashing, to be reused), underlayment, and sheathing as indicated on Drawings, down to original layer of sheathing boards. Dispose of debris in accordance with all applicable laws and regulations. Disconnect and make safe all existing electrical connections.

Inspect all sheathing indicated to remain for rot, splits, or cracks that may impair the structural capacity of the roof. Review extent of any necessary replacement with the Project Manager and obtain concurrence before proceeding with the work. Do not proceed with shingling work until unsatisfactory conditions have been corrected. Replace any defective sheathing boards with stock matching thickness and width of boards being replaced.

Protect roof areas as they are exposed by removal of roof finishes and repairs to the substrate from weather and physical damage to the surfaces below. Fully protect by securely attached waterproof tarpaulins, plastic sheeting, or roofing felts all areas where roofing materials have been removed to perform the Work.

Install new plywood sheathing on top of original roof boards. Install with long dimension across supports; stagger vertical joints. Install new plywood base form for crickets at both chimneys; shape to shed snow and water from backside.

WEATHER BARRIER SYSTEM

Verify substrate and surface conditions are in accordance with weather barrier manufacturer's recommended tolerances prior to installation of weather barrier and accessories.

Install weather barrier over exterior face of exterior wall substrate in accordance with manufacturer's recommendations.

Start weather barrier installation at a building corner, leaving 6 – 12 inches of weather barrier extended beyond corner to overlap.

Apply wrap with grooved surface pattern in vertical direction.

Install weather barrier in a horizontal manner, starting at the lower portion of the wall surface with grooved surface pattern in vertical position. Maintain weather barrier plumb and level.

Extend bottom roll edge over sill plate 2" to 3". Seal weather barrier with sealant or tape. Shingle weather barrier over back edge of weep screed. Seal weather barrier with sealant or tape to weep screed. Ensure weeps are not blocked.

Subsequent layers shall overlap lower layers a minimum of 6 inches horizontally in a shingling manner.

Follow manufacturer's recommendations for attachment to wood framing, window and door openings, seaming, and flashing.

REPAIR/REPLACEMENT OF WOOD WALL SILLS

Sections of existing sills to be repaired/replaced shall be as shown on Drawings and approved by the Project Manager (See Cutting and Patching, Section 01045).

Use materials for cutting and patching that are identical to existing materials, or to match existing adjacent surfaces as much as possible. Use hand or smallpower tools designed for sawing or grinding, not hammering and chopping, with minimal disturbance of adjacent work. Patch and restore finishes to eliminate evidence of patching and refinishing.

For sections of existing wood sills to be repaired where pressure-treated wood is not required, flood coat new sections with wood preservative by brush before cutting and patching. When absorption stops, let dry for a full 72 hours in warm weather.

END OF SECTION

**DIVISION 6
WOOD**

**SECTION 06200
FINISH CARPENTRY AND WOODWORK CONSERVATION**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

SUMMARY

Provide all materials, labor, and equipment necessary and/or required for the complete execution of this work of this Section and as indicated on the Drawings, including but not limited to:

Repair and woodwork conservation of designated exterior trim and moldings, including sill boards, corner boards, window and door trim, cornice molding, gutters, and fascia boards.

Temporary removal and re-installation of three false walls on interior to permit access to window sash for repairs.

All areas to be modified, patched, or repaired as indicated the Construction Documents shall match existing building elements in design, materials, size, and detail, unless otherwise indicated.

Unit Prices: Additions and deletions from the "base bid" quantities listed below and as shown on the Drawings shall be executed under Unit Prices, see Section 01036.

Alternates: The work of this Section is subject to a Bid Alternate.

If Alternate #2 is accepted by the Owner, the scope of finish carpentry (by this Section) will be decreased.

Refer to Drawing Sheet No. 6 for locations affected by Alternate 2.

Refer to Section 01100 – Alternates, for requirements.

RELATED WORK SPECIFIED ELSEWHERE

Carefully examine all of the Contract Documents for requirements that affect the work of this Section, including but not limited to the following:

Section 01036, Unit Prices

Section 01400, Cutting and Patching

Section 06100, Rough Carpentry

Section 07400, Clapboard Siding

Section 07600, Sheet Metal, Flashings, and Downspouts

Section 07900, Sealants

Section 08600, Wood Doors and Windows

Section 09900, Painting and Glazing

QUALITY ASSURANCE

Work shall be performed under the direction of a firm having not less than five years of successful experience in comparable work, utilizing sufficient workmen and supervisors who shall be thoroughly familiar with the type of construction represented in this project and the materials and techniques specified. The Contractor also shall have experience working on at least three properties listed in the State or National Registers of Historic Places within the past five years.

Employ only tradesmen experienced in the preservation, restoration, and reproduction of historically significant architectural woodwork.

The Contractor shall take all necessary field measurements prior to fabrication and installation of work and shall assume complete responsibility for accuracy of same.

Materials used in connection with this Work shall conform in all respects to that required by the applicable Building Codes and ASTM Designations and Standards.

Factory-mark each piece of lumber and plywood with type, grade, mill, and grading agency identification, and submit mill certificate that material has been inspected and graded in accordance with requirements if it cannot be marked on a concealed surface.

Comply with AWI Section 300, custom grade, of the Architectural Woodwork Institute (AWI) "Quality Standards," current edition, except as otherwise shown or specified.

SUBMITTALS

Samples:

Submit 12 inch long and full width sample of each reproduction of existing trim and gutter elements for Project Manager's approval prior to beginning full production run.

Provide samples of each type of wood, hardware, fasteners, paints, epoxies, fillers, adhesives, and other materials proposed for use. Provide unopened container of each material with manufacturer's original labelling.

Product Data:

Submit manufacturer's technical data, Materials Safety Data Sheets, and instructions for handling, storage, installation, and finishing for each product specified or proposed for use including recommendations for their application and use.

Work Plan:

Submit work plan detailing schedule proposed to accomplish the Work, including the order in which specific elevations and work items will be worked on, protection of entry ways and paths used by employees and the general public, and protection of property within the building from inclement weather, dust, and construction debris.

Shop Drawings:

Drawings at full scale showing exact profiles and dimensions of all shaped elements (including cornice molding and door and window trim) to be replicated. Profiles for shop drawings shall be taken from actual elements to be replicated, with any paint build-up removed to fully reveal the original profiles. Any questions as to the extent that weathering and other surface damage has changed the original profile shall be brought to the attention of the Project Manager for resolution.

Field Mock-Ups:

Prior to start of production and conservation work, provide full size mock-ups for each of the items listed below in locations designated by the Project Manager. Mock-ups will be used to measure standards of workmanship, finish, texture, material, and detail, and qualifications of workmen with regard to requirements set forth in the Contract Documents. Obtain written acceptance of Mock-ups from Project Manager before proceeding with the Work. Retain approved mock-ups in undisturbed condition during construction to be used as a standard for acceptance of completed work. Unless otherwise indicated, accepted mock-ups may be incorporated into final work.

Epoxy consolidation and filling and installation of wood Dutchman insert if required for repair of defective woodwork. Mock-up shall be in two stages, the first demonstrating completed consolidation, and the second demonstrating completed filling, ready to receive finishes.

PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers. Store materials only in designated areas.

Do not deliver finish carpentry materials until painting, wet work, grinding, and similar operations that could damage, soil, or deteriorate woodwork have been completed in installation areas. If, due to unforeseen circumstances, finish carpentry materials must be stored in other than installation areas, store only in areas meeting requirements specified for installation areas.

Keep materials under cover and dry. Protect against exposure to weather, contact with damp or wet surfaces, and soiling.

Protect materials during storage and construction. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturer's recommendations for minimum and maximum temperatures.

PROJECT CONDITIONS

Environmental requirements: Epoxies, adhesives, paints, putty, and sealants may only be applied to surfaces when air, surface, and materials temperatures and moisture content are within the range approved by the manufacturers.

Field measure all dimensions before preparing shop drawings or beginning work. Contractor is responsible for all dimensions.

Coordinate finish carpentry with adjacent construction, including but not limited to rough carpentry, wood windows, and gutters and downspouts to ensure proper completion of the Work.

Weather: Proceed with finish carpentry only when existing and forecasted weather conditions permit work to be performed in dry weather. Do not apply epoxy or preservatives to damp substrates.

Temperature and Humidity: Perform work only when temperature of products being used, temperatures of existing and new materials, and air temperature and humidity comply with manufacturer's requirements and requirements of this Section. In case of conflict, the most stringent requirements shall govern.

Use of Epoxy Resins: Mix and apply epoxy resins only when temperatures are between 50 degrees and 80 degrees F.

Protect adjacent surfaces prior to commencing epoxy conservation. Work to prevent epoxies, adhesives, paints, and sealants from staining surrounding building materials and objects. Clean up spills and drips immediately.

Protect property, employees, and visitors from possible injury or damage by construction activities.

Existing paint is likely to contain lead. The Contractor shall take all necessary and appropriate precautions, including but not limited to complying with OSHA 1926.62 construction standard for treatment of lead-contaminated material.

GUARANTEE

Provide written warranty ensuring that all replacement and/or conserved wood elements, patching materials, adhesives, and sealant joints shall remain sound and free of defects, cracks, deterioration, and discoloration for a period of two (2) years from the date of substantial completion, and that any such defects occurring within the warranty period will be repaired or replaced in a manner conforming with the requirements of these Contract Documents.

PART 2 - MATERIALS

MATERIALS, GENERAL

Before proceeding with woodwork required to be fitted to other construction, obtain measurements of existing elements and verify dimensions as required for accurate fit.

Millwork shall be accurately run, true to size and detail; corners and profiles shall be clean cut with surfaces unmarred and free from chatter, torn grain, or other machine marks. Flat surfaces shall be machine-sanded and moulded surfaces hand-sanded.

Unless otherwise indicated, materials used in repairing, replacing, or reproducing existing finish carpentry shall match existing materials in the same assembly but shall not be lower in quality than materials specified for new work. Reuse existing finish carpentry elements wherever feasible. Unless detailed otherwise, size and profile of components used to repair, extend, or reproduce existing finish carpentry shall exactly match the existing.

Moisture content: For all dressed dimensional lumber, 15%-19% maximum at installation and at time of dressing and complying with the dry size requirements of PS20.

FINISH TRIM AND MOLDINGS

All exterior trim to be replaced shall be clear Western red cedar (or better), with a moisture content of not more than 19%, or as otherwise recommended by applicable Quality Standards for the regional climatic conditions involved. No finger-jointed wood shall be used.

GUTTERS

Clear Western red cedar (or better) to match dimensions and profile of existing gutters to remain. No finger-jointed wood shall be used.

MISCELLANEOUS LUMBER

Provide wood for support and attachment other work such as cant strips, sheathing, nailers, blocking, grounds, and similar items.

Construction grade Eastern white pine, spruce, southern yellow pine, or Douglas fir.

Moisture content: 15% - 19% maximum at time of dressing and at installation.

ANCHORAGE AND FASTENING MATERIALS

Provide nails, screws, and other anchoring devices of the type size, material, and finish required for application indicated to provide secure attachment, concealed where possible, and complying with applicable Federal Specifications. Use stainless steel fasteners for all exterior woodwork.

Comply with the following:

- Nails and Staples: FS FF-N-105
- Wood Screws: FS FF-S-111
- Bolts and Studs: FS FF-B-575
- Nuts: FS FF-W-92
- Washers: FS FF-W-92
- Lag Screws or Lag Bolts: FS FF-B-561

Use finish nails on exposed trim elements. The use of nail guns is prohibited except for specific applications where usage is approved in writing by the Project Manager. Do not use dry wall or Phillips head screws where heads will be exposed to view. Use stainless steel box nails for clapboards of sufficient length to hold in sheathing.

WOOD PRESERVATIVES AND PAINT

Wood preservative shall be oil-based wood preservative such as Olympic Wood Protector, manufactured by PPG, Pittsburgh, PA; Woodlife 111, manufactured by Kop-Coat, Inc., Pittsburgh, PA; or approved equal. Wood preservative must be compatible with primer and paint finishes.

All new finish wood elements shall be back-primed prior to installation with the priming paint specified in Section 09900, Painting. Note that caulking does not take the place of backpriming. All other primer and finish coats shall be provided in accordance with Section 09900, Painting.

WOOD CONSERVATION MATERIALS

Epoxy Wood Consolidant/Filler: Solvent free and consisting of low-viscosity long-chain aliphatic amine. LiquidWood for consolidation, and WoodEpoxy for filler, both by Abatron Inc., Gilberts, Illinois, or West System Brand epoxy, #105 Resin, #205 and #206 Hardeners, and filler #403, 406, and 407, all by Gougeon Brothers, Inc., Bay City, Michigan, or approved equal.

Epoxy Patching Compound: Anamine-cured-biphenol-A type epoxy resin, modified with long-chain aliphatic epoxy or curing agent to increase flexibility and filled with phenolic microballoons and thixotropic silicates, manufactured by Abatron Inc., Gilberts, Illinois, or approved equal.

Wood Dutchmen Inserts: Match existing species, and direction and structure of grain of wood being repaired, unless otherwise indicated.

Wood Glue for Installing Inserts: Arcon E-152 (2-part epoxy resin adhesive) by Allied Resin, Weymouth, Mass., West System Brand Epoxy with #403 and/or #406 fillers, or approved equal.

Sealant/Caulking Compounds for wood to wood joints: Paintable, polysulphide or polyurethane based, one part elastomeric sealant complying with FS-TT-S-00230, Class A, Type II (non-sag). Provide Hornflex caulking compound as manufactured by the Grace Co., or Sonolastic NPI by Sonnoborn Construction Systems, Minneapolis, Minnesota, or approved equal.

Putty for Nail Holes: Oil-based elastic glazing compound.

Water Repellent Treatment for Gutter Troughs: Boiled linseed oil cut 1:1 with turpentine or approved proprietary equivalent.

PART 3 - EXECUTION

INSPECTION AND ACCEPTANCE

Before beginning fabrication of woodwork required to be fitted to other construction, obtain field measurements and verify dimensions and shop drawing details for accurate fit.

Contractor shall report all concealed rotted or damaged materials to Project Manager prior to making any repairs. All rot repairs in concealed areas shall be billed over and above the contract amount as per established unit prices.

GENERAL

Repair/replace all rotted or damaged siding, trim, gutters, and other wood elements on entire exterior envelope of building as required to create a weather-tight shell. All areas to be modified, patched, or repaired as indicated by the Construction Documents shall match existing building elements in design, materials, size, profile, and detail. All existing exterior trim shall be retained and protected during construction except where removal is required by the Work.

The intent of this Work is to preserve as much existing wood trim as possible. Only irreparable wood shall be replaced with newly milled pieces, except where new construction requires new woodwork. Irreparable is defined as wood containing areas of loss greater than 2" by 2" by 1", or wood that is severely cracked, split, or deteriorated beyond repair. Irreparable elements shall be removed and replicated to exactly match existing elements in material, profiles, dimensions, texture, and configuration.

The Project Manager shall approve actual field conditions of all areas proposed for repair by epoxy filling, wood Dutchmen inserts, and replacement.

No repair work shall commence until existing paint has been removed to acceptable levels. Repairs shall be made to wood elements prior to any painting.

Use hand or small power tools designed for sawing or grinding, not hammering and chopping, with minimal disturbance of adjacent work. Patch and restore finishes to eliminate evidence of patching and refinishing; see Section 09900 for painting specifications.

Dismantle wood elements as required to carry out repairs, taking care not to damage sound elements or components to be conserved. All woodwork removed and required to be reinstalled shall be labeled and documented as to location, to enable the pieces of wood trim to be reinstalled in their exact location following repair/restoration.

Refasten all loose elements that do not require removal. All exposed nail and screw heads shall be countersunk and filled with putty.

Fabricate new woodwork to dimensions, profiles, and details of similar existing woodwork elements. Rout or groove reverse side (backed-out) of trim members to be applied to flat surfaces, except for members with ends exposed in the finished work. Provide samples of each piece for approval.

Millwork shall be accurately run, true to size and detail; corners and profiles shall be clean cut with surfaces unmarred and free from chatter, torn grain, or other machine marks. Flat surfaces shall be machine sanded and moulded surfaces hand sanded. All finished woodwork shall be neatly and accurately constructed with joint work true, square, and tight, as nearly invisible as possible.

All wood joints shall be closed and tight. No finger-jointed wood shall be used.

Small holes and cracks shall be filled with epoxy patching compound.

Wood inserts (Dutchmen) shall be used to fill any voids in excess of 2 cubic inches in volume, using epoxy adhesive.

Re-assemble dismantled components on building incorporating pieces that have been conserved or replaced with new wood. All exposed modern nail and screw heads shall be countersunk and filled with putty.

Caulk all exposed joints between dissimilar materials and wood to wood joints as required to protect joints from water penetration, while still allowing for normal movement of separate pieces. All excess caulk shall be trimmed off neatly.

All backpriming, whether shop applied or field applied during installation, is to be performed under this Section. All other priming and all finish painting is to be performed under Section 09900, Painting. Note that caulking does not take the place of backpriming.

PREPARATION

Condition wood materials to average prevailing humidity conditions in installation areas prior to installing.

CONSERVATION TREATMENTS, GENERAL

Remove all paint and existing fillers from entire area to be treated with epoxy conservation. Paint removal from pieces that have been removed from the building may be accomplished with heat and/or solvent based chemicals. Only solvent based chemicals shall be used on elements attached to the building. The use of alkaline chemical strippers is strictly prohibited. Exercise care to avoid gouging wood surface or damaging molding profiles.

Existing paint has not been tested for lead; the Contractor shall assume that lead-containing paint layers exist on all painted wood and shall comply with all applicable local, state, and federal regulations and take appropriate measures to protect the work force, employees, and the public during paint removal procedures.

Prepare surface by cleaning dirt and debris from all cracks and fissures, and remove all caulking and severely rotted, loose, flaking, and deeply punky wood from area to be treated.

Fully saturate area with consolidant, allow to soak in for approximately five minutes, and reapply in successive timed applications until wood no longer absorbs additional consolidant. Drill holes to inject consolidant in areas requiring deep consolidation. Full saturation of the treated area is critical to producing a long-lasting repair. If using West system, use resin and hardener mixture without fillers as consolidant.

Use epoxy adhesive to glue in place any loose pieces and slivers, to repair splits, to install wood Dutchmen inserts to fill any voids in excess of 2 cubic inches in volume, and to piece out severely deteriorated or missing ends of elements with new wood. Glue joints for piecing-in shall generally be angled and beveled to minimize end-grain to end-grain joints and to shed water.

Fill consolidated voids, cracks, fissures, and cavities with epoxy filler, molding to conform to existing surface as much as possible. Additional applications of filler may be required to adequately fill voids and fissures. If using West system, add #406 filler for deep fills, but finish using #407 filler to produce a sandable surface. Use #407 filler for shallow fills.

Dress any sand dried surface of epoxy so that existing surface of original wood and its profile is maintained. Epoxy should not form a skin over the entire wood surface.

Use care to make sure epoxy does not adhere separate components to each other, such as at corner joints.

Piece out damaged ends and sections in excess of 2 cubic inches with wood Dutchmen inserts, secured with epoxy adhesive and dressed or molded to match the profile of the remaining sound sections.

Where practicable and necessary, repair deteriorated, split, or missing wood with Dutchmen insert repairs. All Dutchmen inserts shall match the species, grain structure, and grain orientation of the piece it is let into, as much as possible.

Inserts are to be installed with a shape as visibly unobtrusive as possible, preferably with angled and beveled side edges. New inserts to match existing profile or shape in every respect.

Preservative Treatment:

Flood coat all new wood trim and inserts and all bare wood areas with wood preservative until saturation is reached. Liberally brush-apply two (2) coats of preservative to all wood surfaces. Spray-treat any concealed areas. Repeat application until preservative remains on the surface, then wipe off excess. (Saturate wood but do not create a surface coating.)

Allow 24 hours between coats and 72 hours prior to painting. Lightly sand prior to painting.

Backprime all new exterior woodwork on all surfaces that will be concealed, including all cut ends, before installation. Schedule delivery to allow time for application and drying of backprime coat before installation of woodwork, where it is not practical to backprime at the shop.

WOOD TRIM

Re-nail all loose trim. Badly split or otherwise damaged trim shall be replaced with new trim to match existing in material, profile, and dimensions.

Install finished woodwork plumb, level, true, and straight, with no distortions. Shim as required, using concealed shims.

Install new trim with minimum number of joints possible, using full-length pieces (from maximum lengths of lumber available) to the greatest extent possible. Cope at returns and miter at corners to produce tight-fitting joints, as nearly invisible as possible, with full surface contact throughout length of joint. Use scarf joints for end-to-end joints.

Anchor finish carpentry work to anchorage devices or blocking built-in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation. Except where prefinished matching fasteners heads are required, use fine finishing nails for exposed nailings, countersunk and filled flush with finished surface.

Repair/replacement of sections of existing trim: Use materials for cutting and patching that are identical to existing materials, or to match existing adjacent surfaces as much as possible.

Caulk all gaps or openings in all elements. All trim and siding joints shall be back caulked with paintable polyurethane caulk. All excess caulk shall be trimmed off neatly.

All joints between trim and between trim and dissimilar materials shall be caulked with paintable polyurethane caulk. All excess caulk shall be trimmed off neatly.

Sandpaper smooth existing wood threshold. Feather all rough edges.

Apply wood preservative to all bare wood.

GUTTERS

Clear all gutters of debris and inspect for cracks, holes, gaps, or other defects.

Treat all existing open wood joints and new wood joints with epoxy wood consolidant/filler or epoxy patching compound, as required. For deep cracks, holes, and gaps, where gutter repair will not ensure a durable watertight surface, replace entire length of gutter to match existing exactly.

Any existing wood gutters that are removed and replaced, and any new gutters provided, shall be installed to slope towards downspouts, 1/16 inch per foot of run. Ensure that all gutters are placed below slope line of roof.

Upon completion of repair/replacement, apply water repellent treatment for gutter troughs to interior of all gutters.

INTERIOR FALSE WALLS

Carefully remove existing interior false walls in locations shown on Drawings, protecting false wall structure, finishes, and trim and also protecting materials and finishes of adjacent primary (exterior) walls, floors, and ceilings. Store false wall panels in location identified by Project Manager until window repair work in their respective spaces is complete. Re-install false walls to match existing conditions; patch/repair in-kind any damage to false walls and adjacent surfaces; touch-up paint finishes on false walls and adjacent surfaces to match existing conditions.

ADJUSTMENT, CLEANING, FINISHING, AND PROTECTION

Repair damaged and defective finish carpentry work wherever possible to eliminate defects functionally and visually; where not possible to repair properly, replace woodwork. Adjust joinery for uniform appearance.

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

END OF SECTION

**DIVISION 7
THERMAL AND MOISTURE PROTECTION**

**SECTION 07300
ROOF SHINGLES AND COVERINGS**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

Examine all Drawings and all Sections of the Specifications for requirements and provisions affecting the work of this Section.

SUMMARY

Provide all materials, labor, and equipment necessary and/or required for the complete execution of this work of this Section and as indicated on the Drawings, including but not limited to:

Installation of a new wood shingle roofing system, including plywood sheathing, underlayment, and shingles.

Coordinate roofing removals and installation to maintain full protection against leaks.

RELATED WORK SPECIFIED ELSEWHERE

Carefully examine all of the Contract Documents for requirements that affect the work of this Section, including but not limited to the following:

Section 01400, Cutting and Patching

Section 06100, Rough Carpentry

Section 06200, Finish Carpentry and Woodwork Conservation

Section 07600, Flashing, Sheet Metal, Gutters, and Downspouts

Section 07900, Sealants

This Section also includes the following roofing-related work:

Sealants.

Fasteners, adhesives, and other accessories required for complete roof installation.

Warranty.

REFERENCE STANDARDS

ASTM International (ASTM):

- ASTM D 1970 – Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
- ASTM D 6757 - Standard Specification for Underlayment Felt Containing Inorganic Fibers.
- ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings.
- ASTM F 1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples.

Underwriters Laboratories (UL):

- UL 790 - Standard Test Methods for Fire Test of Roof Coverings.
- UL 2218 - Impact Resistance of Prepared Roof Covering Materials.
- UL 2390 - Test Method for Wind Resistant Asphalt Shingles with Sealed Tabs.

PERFORMANCE REQUIREMENTS

General: Provide installed roofing materials and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.

Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.

Thermal Movement: Provide exterior assemblies capable of withstanding up to 180 degrees F thermal movement without buckling, imposing stress on fasteners or anchors, loss of weathertightness, or other reduction in performance.

SUBMITTALS

Product Data: Submit technical product data, installation instructions, and recommendations for each product specified or proposed for use, including data that materials comply with requirements.

Samples for Verification:

Provide 6 samples of wood shingles proposed for use.

Provide samples of each type of wood, hardware, fasteners, paints, underlayments, adhesives, and other materials proposed for use. Provide unopened container of each material with manufacturer's original labeling.

Maintenance Stock: 2% of each type/color/texture shingle used in the Work.

Field Mock-Ups of removal of existing roof and preparation of existing roof, installation of underlayments and mesh ventilation, and installation of wood shingles.

Sample of warranties to be executed at Substantial Completion and prior to Final Completion, as detailed in the Warranty article.

QUALITY ASSURANCE

UL Listing: Provide labeled materials that have been tested and listed by UL for Class and Rating indicated for each shingle type required.

Warranty: Provide written warranty ensuring that all roofing materials shall remain sound, fully watertight, and free of cracks and defects, for a period of five years from the date of substantial completion, and that any such defects occurring within the warranty period will be repaired or replaced in a manner conforming with the requirements of these Contract Documents.

Employ only tradesman experienced in the application of wood shingles.

DELIVERY, STORAGE, AND HANDLING

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

Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.

Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

Protect employees, users of the building, and the general public from possible injury by construction debris.

PROJECT CONDITIONS

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

Substrate: Proceed with shingle work only after substrate construction and penetrating work have been completed and substrate is completely dry.

Protection of Roof Sheathing: During construction, cover exposed wood sheathing with waterproof sheeting at the end of each day's work. Cover partially completed shingling when construction is not in progress. Extend cover a minimum of 24 inches beyond side of roof and hold cover securely in place.

PART 2 – MATERIALS

WATERPROOF MEMBRANE FLASHING

Self-adhering rubberized asphalt membrane, 40 mils thick, 36" wide, with skid-resistant surface, comply-

ing with ASTM D 1970 and UL Listed. Membrane must be compatible with roofing shingles and felt underlayment. Acceptable products include: W.R. Grace Ice and Water Shield; CertainTeed Winter Guard; GAF Storm Guard; or approved equal.

ASPHALT-SATURATED ROOFING FELT

Provide 30 lb., unperforated, asphalt-saturated organic felt, complying with ASTM D 226 Type I, 36 inches wide.

ROOF SHINGLE VENTILATION

Roll-type mesh ventilation layer, Cedar Breather mesh and Rapid Ridge 7 continuous ridge vent by Benjamin Obdyke, Inc., or equal as approved by Project Manager.

WOOD SHINGLES

No. 1 Blue Label sawn and kiln-dried Alaskan yellow cedar shingles, 18" length, Perfection Class C fire retardant treated for all exposed applications and starter courses.

RIDGE BOARDS

1 inch by 8 inch clear Alaskan yellow cedar ridge boards. 15% maximum moisture content at time of dressing and at installation.

NAILS

Roofing Nails: Aluminum or hot-dip galvanized 11 or 12-gage, sharp-pointed, conventional roofing nails with barbed shanks, minimum 3/8 inch diameter head, and of sufficient length to penetrate at least 3/4 inch into solid decking or to penetrate through plywood sheathing.

Roof Ventilation Underlayment: Blunt-tipped, ring shank stainless steel nails or as recommended by manufacturer.

ASPHALT PLASTIC CEMENT

Rubber reinforced asphalt cement with mineral fibers complying with ASTM D 4586 Type I or II, ASTM D 3409, and federal Spec SS-C-153 Type 1 (Asbestos-Free) designed for trowel application. Material shall be Karnak #19 Ultra Rubberized Flashing Cement or equal.

PART 3 - EXECUTION

GENERAL INSTALLATION REQUIREMENTS

Provide necessary protection to the roofing system to maintain water-tightness during the project duration. Do not allow water to enter roofing system.

Protect existing property and other work from spillage of roofing materials, and prevent liquid materials from entering or clogging drains and conductors.

Replace or restore to the satisfaction of the Project Manager existing property and other work damaged by the Contractor's operations or lack of diligence under the provisions of this Contract.

Comply with instructions and recommendations of shingle manufacturer and of Wood Shingle and Wood Shake Roofing section of "The NRCA Roofing and Waterproofing Manual," except to extent more stringent requirements are indicated.

Coordinate installation of shingles with new plywood sheathing, flashing, and other adjoining work to ensure proper sequencing. Protect existing counterflashing at chimneys, to remain in place. Include all necessary items as shown and as required to make a complete installation of wood shingle roofing, including flashings integrated with the shingle work.

EXAMINATION AND PREPARATION

Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections. Remove all protruding nails and/or pound in so that heads are flush with sheathing surface.

Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

INSTALLATION

GENERAL

Metal details, fabrication practices, and installation methods shall conform to the applicable requirements of the following:

Factory Mutual Loss Prevention Data Sheet 1-49.

Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA).

All flashings shall be installed concurrently with the roofing shingles as the job progresses. Complete all metal work in conjunction with roofing and flashing so that a watertight condition exists daily; do not install temporary flashing without approval of manufacturer's technical representative.

If any water enters the roofing system due to incomplete flashings, the affected area shall be removed and replaced at no additional cost to the Owner.

WATERPROOF MEMBRANE

Apply waterproof membrane flashing at all horizontal and raking roof eaves, valleys, ridges, and around all roof penetrations in accordance with manufacturer's instructions. At roof eaves, extend membrane a

minimum of 36 inches up roof slope beyond the interior face of exterior walls. Lap joints minimum of 6 inches. Follow instructions of shingle and waterproofing membrane manufacturer.

ROOFING FELT

Apply one layer of felt horizontally over remaining roof surface, lapping 4 inches over waterproof membrane and lapping succeeding courses 3 inches minimum and fastening with sufficient nails to hold in place until shingle application.

ROOF SHINGLE VENTILATION LAYER

Apply roof ventilation layer over entire roof deck and fasten to substrate as recommended by manufacturer. Install pre-manufactured ridge cap as recommended by manufacturer.

ROOF SHINGLES

Begin at lower end of roof with a double layer starter course, projecting shingles 1-1/2 inch beyond sheathing at eaves and rake edges. Space adjoining shingles 1/8 inch apart (side to side) if dry and lightly touching (less than 1/16 inch gap) if wet or damp; nail each shingle with two nails spaced 1 inch from edge of shingle and 1-1/2 to 2 inches above butt line of subsequent course. Nails shall be driven flush, but nail heads shall not crush the wood. Stagger edge joints a minimum of 1-1/2 inch in succeeding courses.

Install shingles to provide weather exposure that matches existing roof. Cut with a saw any shingles wider than 9 inches and use any shingles less than 4 inches wide as shims or undercourses. Cut and fit shingles at ridges and edges to provide maximum weather protection.

RIDGE CAPS

Install continuous cedar boards as ridge caps at gable peak and along upper edge of Beverly jogs; bevel cut the joint between ridge boards. Cedar ridge cap must overhang pre-manufactured ridge vent that accompanies roof ventilation layer by 1 inch minimum at each gable end, or as recommended by manufacturer. Fold roofing felt back over last course of shingles; install ridge vent layer as recommended by manufacturer; install metal flashing under ridge caps, lapping ends.

ROOF PENETRATIONS

General: Weather-lap and seal watertight with asphalt roofing cement items projecting through or mounted on roof. Avoid contact of solvent-based cements with rubber membrane.

Vent Pipes: Apply 24 inch square piece of waterproof membrane lapping over roofing felt; seal tightly to pipe. Lay flange for sleeve flashing over roof shingles on down side of stack, and apply roof shingles over flange above stack.

Chimneys: Install waterproof membrane around entire chimney, extending at least 6 inches up the wall and 36 inches onto the roof surface. Lap the membrane over roofing felt. Install base and cap flashings.

PROTECTION AND CLEANING

Do not permit traffic over finished roof surface.

Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION

**DIVISION 7
THERMAL AND MOISTURE PROTECTION**

**SECTION 07400
CLAPBOARD SIDING**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

SUMMARY

Provide all materials, labor, and equipment necessary and/or required for the complete execution of this work of this Section and as indicated on the Drawings, including but not limited to:

Repair and replacement of defective clapboards.

Unit Prices: Additions and deletions from the "base bid" quantities listed below and as shown on the Drawings shall be executed under Unit Prices, see Section 01036. Base bid shall anticipate replacement of up to 10% of existing clapboards.

RELATED WORK SPECIFIED ELSEWHERE

Carefully examine all of the Contract Documents for requirements that affect the work of this Section, including but not limited to the following:

Section 01036, Unit Prices

Section 01400, Cutting and Patching

Section 06100, Rough Carpentry

Section 06200, Finish Carpentry

Section 07900, Sealants

Section 09900, Painting

QUALITY ASSURANCE

Work shall be performed under the direction of a firm having not less than five years of successful experience in comparable work, utilizing sufficient workmen and supervisors who shall be thoroughly familiar with the type of construction represented in this project and the materials and techniques

specified. The Contractor also shall have experience working on at least three properties listed in the State or National Registers of Historic Places within the past five years.

Materials and installations used in connection with this Work shall conform in all respects to that required by the applicable Building Codes and ASTM Designations and Standards.

Lumber Standard: Comply with PS 20, American Softwood Lumber Standard.

SUBMITTALS

Product Data: Submit manufacturer's printed product data, specifications, standard details, installation instructions, use limitations, and recommendations for each material used.

PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials in manufacturer's unopened, labeled bundles or containers.

Store wood clapboards at site to prevent warping and weather damage, elevating above ground on level blocking and materials to avoid water damage and to permit adequate ventilation within bundles.

Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings, including polyethylene and similar materials.

PROJECT CONDITIONS

Weather Conditions: Proceed with siding work only when weather conditions are in compliance with manufacturer's recommendations and when substrate is completely dry.

Protection of Wall Sheathing: During construction, cover exposed wood sheathing with waterproof sheeting at the end of each day's work. Cover partially completed siding when construction is not in progress.

Extend cover a minimum of 24 inches beyond side of wall and hold cover securely in place.

PART 2 - MATERIALS

CLAPBOARDS

Radially-sawn vertical grained red extra clear Western red cedar to match exposure, texture, and dimensions of existing clapboards and ventilation shims being replaced. Stock shall be free of sap stains and blue and/or red fungal stains.

Select siding boards of longest possible lengths; minimum length 48 inches. No finger-jointed wood shall be used. Discard boards that are warped twisted, bowed, crooked, or otherwise defective.

Ventilation shims shall match existing in shape, dimension, and material.

ANCHORAGE AND FASTENING MATERIALS

Provide nails, screws, and other anchoring devices of the type size, material, and finish required for application indicated to provide secure attachment, concealed where possible, and complying with applicable Federal Specifications. Use stainless steel fasteners for all exterior woodwork.

Comply with the following:

- Nails and Staples: FS FF-N-105
- Wood Screws: FS FF-S-111
- Bolts and Studs: FS FF-B-575
- Nuts: FS FF-W-92
- Washers: FS FF-W-92
- Lag Screws or Lag Bolts: FS FF-B-561

Use stainless steel box nails of sufficient length to hold in sheathing.

PART 3 - EXECUTION

INSPECTION AND ACCEPTANCE

Contractor shall report all concealed rotted or damaged materials to Project Manager prior to making repairs. All repairs in addition to what is shown in the Contract Documents shall be billed according to established Unit Prices.

PREPARATION

Back prime all new clapboards, including all cut ends, prior to installation with the priming paint specified in Section 09900, Painting.

INSTALLATION, GENERAL

Re-nail all loose clapboards. Badly split or otherwise damaged or deteriorated clapboards shall be replaced in full with new clapboards to match existing in dimension, texture, profile, and exposure. In areas noted on Drawings, new clapboard siding shall be installed over continuous sheet weather barrier.

Boards in the following condition shall be replaced in full:

- Boards that are rotted.
- Boards that are out of alignment with adjacent pieces.
- Boards that are split over more than 6 inches of exposed area.
- Boards that are split at the overlap with the covering board.
- Boards that are damaged in the course of the Work.
- Boards that are rotted at ends or at penetrations for fasteners or at other locations.

Install new clapboards plumb, level, true, and straight, with no distortions. Stagger joints in adjacent courses. Leave slight gap at trim and corners. End joints shall match those of the clapboards to be replaced, whether skived or butted ends. Reuse or replace existing ventilation shims to match existing.

Install and restore all components so that they are plumb, level, true, and straight; scribe and cut for accurate fit. All exposed modern nail and screw heads shall be countersunk and filled with putty.

Caulk all gaps or openings in all elements. All trim and siding joints shall be back caulked with paintable polyurethane caulk. All excess caulk shall be trimmed off neatly.

END OF SECTION

**DIVISION 7
THERMAL AND MOISTURE PROTECTION**

**SECTION 07600
FLASHING, SHEET METAL, GUTTERS, AND DOWNSPOUTS**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

SUMMARY

Provide all materials, labor, and equipment necessary and/or required for the complete execution of this work of this Section and as indicated on the Drawings, including but not limited to:

Repair and/or replacement of downspouts and elbows as required and as indicated on Drawings.

New flashing at all existing roof penetrations, intersections with chimneys, horizontal eaves, raking roof edges, ridge boards, and as indicated on Drawings.

Metal flashing over existing door and window heads where trim or adjacent siding is replaced, where found to be missing, and as indicated on Drawings.

Metal flashing between clapboards and sill boards, as indicated on Drawings.

RELATED WORK SPECIFIED ELSEWHERE

Carefully examine all of the Contract Documents for requirements that affect the work of this Section, including but not limited to the following:

Section 01036, Unit Prices

Section 01400, Cutting and Patching

Section 06200, Finish Carpentry

Section 07300, Roof Shingles and Coverings

Section 07400, Clapboard Siding

QUALITY ASSURANCE

Work shall be performed under the direction of a firm having not less than five years of successful experience in comparable work, utilizing sufficient workmen and supervisors who shall be thoroughly familiar with the type of construction represented in this project and the materials and techniques specified.

Materials used in connection with this Work shall conform in all respects to that required by the applicable Building Codes and ASTM Designations and Standards.

Comply with applicable requirements of the following standards, unless more stringent requirements are indicated:

Sheet Metal and Air Conditioning Contractors National Association (SMACNA) Manual, current edition

"Copper in Architecture Handbook" by the Copper Development Association

"Copper and Common Sense" by Revere Copper and Brass Co., Inc.

Cedar Shake and Shingle Bureau

Wood Shingle and Wood Shake section of "The NRCA Roofing and Waterproofing Manual."

"The NRCA Roofing and Waterproofing Manual"

Manufacturer's instructions

SUBMITTALS

Product Data: Submit manufacturer's printed product data, specifications, standard details, installation instructions, use limitations, and recommendations for each material used.

Provide manufacturers' certification that the product is compatible with all other materials used in this Project.

Samples: Submit 12 inch long sample of downspouts and elbows for Project Manager's approval; to match existing.

PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver, store, and handle materials in manufacturer's sealed containers or packages.

Store indoors or under cover, on raised platforms, fully protected from damage.

PART 2 - MATERIALS

ROOF FLASHING, GENERAL

Copper for flashings: ASTM B 101 cold rolled copper sheet metal flashing, 16 oz. except as otherwise noted. Re-use existing chimney counterflashings.

Solder: ASTM Specification B 32, composition 50% tin and 50% lead.

Flux: Rosin core or muriatic acid killed with zinc. All acid is to be completely washed off after completion of soldering.

Sealant: Low modulus, one part, silicone sealant, No. 795 by Dow Corning company. Color to match adjacent mortar joints in chimney.

Slip Sheets: 6 lb rosin sized building paper.

CHIMNEYS

Provide 16 oz. copper base flashings and 20 oz. copper cricket with either one or two pieces with locked seams. Existing counter-flashings are to be reused; confirm new and existing materials are compatible.

RIDGE BOARDS

Provide 16 oz. rolled copper sheet metal flashing. Furnish in 8 ft or 10 ft. lengths.

ROOF PENETRATIONS

Vent Pipes: One-piece sleeve flashing, extended 6 inches along roof slope.

DRIP EDGES

16 oz. cold rolled copper sheet metal flashing, brake-formed to provide min. 3 inch roof deck flange, and 1-1/2 inch fascia flange with 3/8 inch kickout drip at lower edge, or as indicated on Drawings. Furnish in 8 ft. or 10 ft. lengths.

GUTTER LINING

3 lb rolled lead sheet flashing at joints in gutters, attached with one-part neutral-cure, silicone-based lead sheet sealant or as recommended by sheet flashing manufacturer.

DOWNSPOUTS

Downspout: 16 oz cold rolled copper; rectangular leader in dimensions to match existing along walls and smooth round elbows at roof edge as required.

Strainer: Metal mesh; one per downspout and one per leader head.

Provide nails, screws, and other anchoring devices of the type size, material, and finish required for application indicated to provide secure attachment, concealed where possible, and complying with applicable Federal Specifications. Use stainless steel fasteners for all exterior elements, unless otherwise noted or recommended by the manufacturer.

Comply with the following:

Nails and Staples: FS FF-N-105

Wood Screws: FS FF-S-111

Bolts and Studs: FS FF-B-575

Nuts: FS FF-W-92

Washers: FS FF-W-92

Lag Screws or Lag Bolts: FS FF-B-561

FLASHING OVER DOOR AND WINDOW HEADS

Sheet Flashing: ASTM B 209; 0.019 thick aluminum unless otherwise specified, mill finish, alloy and temper recommended by manufacturer for use and structural performance indicated.

SILL BOARD FLASHING

16 oz. cold rolled copper sheet metal flashing, brake-formed to provide min. 4 inch vertical flange, and 1-1/2 inch fascia flange. Furnish in 8 ft. or 10 ft. lengths.

NAILS

Hot-dip galvanized 11 or 12-gage, sharp-pointed, conventional roofing nails with barbed shanks, minimum 3/8 inch diameter head, and of sufficient length to penetrate at least 1/2 inch into solid decking or to penetrate through plywood sheathing. Provide nails, screws, bolts, and other accessories of same materials and finish as sheet metal with which used, or of a compatible material as recommended by the sheet metal manufacturer.

PART 3 - EXECUTION

INSPECTION

Carefully inspect surfaces to receive downspouts and flashing for all conditions affecting application and performance. Carefully check wood blocks, inserts, nailers, etc., for adequate anchorage. Defects shall be reported in writing to the Project Manager and work shall not proceed until defects have been corrected.

Beginning of work constitutes acceptance of conditions of surfaces to which this Work is to be applied.

INSTALLATION

SHEET METAL, GENERAL

Provide accessory items essential to the completeness of each sheet metal installation, whether or not specifically shown or specified.

Clean surfaces to be covered with sheet metal of dirt and other foreign matter before sheet metal work is started. Take extreme care to prevent direct contact of dissimilar metals.

Except as otherwise shown on the approved shop drawings or specified herein, the workmanship of sheet metal work, method of forming joints, anchoring, cleating, provisions for thermal movement, etc., shall conform to the standard details and recommendations of the sheet metal producer and those of producer organizations and research institutions and associations governing the sheet metal used, in addition to the standards and details set forth in the SMACNA Manual.

To the greatest extent applicable, fabricate sheet metal components in shop, and thoroughly clean joints on both sides of the sheet metal work.

Provide flat-locked seams at copings, etc., except where expansion provisions are required or where otherwise specified or detailed. Finish seams at least ½ inch in width.

Anchor units of work securely by methods indicated; conceal fasteners where possible using 2 inch wide copper cleats located 12 inches o.c. and nailed with two nails. Do not face nail. Install work with laps, joints, and seams that will be permanently watertight and weatherproof, and without waves, buckles, or distortion.

Tinning: Pre-tin edges of all plain copper sheets to be soldered for a width of ½ inch on both sides with solder.

Double back exposed edges ½ inch to provide stiffness.

Seal all working-joints in sheet metal work with low modulus sealant to assure positively weathertight conditions throughout, using materials as specified and with workmanship as specified under Section 07900, Sealants.

Soldering: Perform slowly with well-heated copper, so as to heat thoroughly the seam and sweat the solder through the full width.

Separate and protect dissimilar metals as recommended by manufacturers.

Metal shall be installed to provide adequate resistance to bending and allow for normal thermal expansion and contraction.

Metal joints shall be watertight.

CHIMNEYS

Install waterproof membrane around entire chimney extending at least 6 inches up the brick surface and 36 inches onto the roof surface.

Base flashing for chimneys to have continuous apron flashing at base of chimney. Sides of chimney shall be flashed using pieces of base flashing installed with each course of shingles. The upper edge of each piece of flashing shall extend 2 inches above each course of shingles; the lower edge should be ½ inch above the butts of the shingles forming the next course. Base flashing shall extend out on roof 6 inches and up chimney wall 4 inches minimum. Lower edge shall be ½ inch above the butts of the shingles forming the next course. Base flashings at corners shall be properly formed and soldered so as to be fully watertight. Each piece shall lap the adjoining piece in the direction of flow, not less than 3 inches. Counter-flashing shall overlap base flashings at least 4 inches.

Flash entire surface of chimney crickets.

Do not puncture flashings with shingle or clapboard nails. Reuse existing counter-flashings to overlap base flashing 4 inches. Provide new sealant at reglet if installation disturbs existing sealant.

RIDGE BOARDS

Install copper sheet flashing between ridge vent layer and ridge boards. Weather-lap joints minimum 2 inches.

ROOF PENETRATIONS

General: Form flashings for roof penetrations as recommended in reference standards.

Vent Pipes: Apply 24 inch square piece of waterproof membrane lapping over roofing felt; seal tightly to pipe. Lay flange for sleeve flashing over roof shingles on down side of stack, and apply roof shingles over flange above stack. Use cleats to hold base at top and sides to roof sheathings. Form flashings as recommended in reference standards.

DRIP EDGE AT EAVES

Install drip edge tight with fascia boards directly to wood deck at horizontal roof eaves and over underlayment on raking edges, and in compliance with details and recommendations of the NRCA Steep Roofing Manual. Weather-lap joints minimum 2 inches. Secure flange with nails spaced 8 inches on center.

FLASHING AT GUTTERS

Install copper sheet flashing over fascia and back edge of wood gutters as indicated on Drawings.

GUTTER LINING

Install continuous lead sheet metal flashing extending six inches to each side of all joints in gutters, including scarf joints and mitred corners. Solder at corner if required for weathertight seal.

DOWNSPOUTS

Clean all elbows, leader heads, and downspouts and inspect for cracks, holes, gaps, or other defects.

Replace damaged sections of downspouts and elbows to match existing in shape, material, and dimension. Connect base of downspouts with existing perimeter drain pipe system.

FLASHING OVER DOOR AND WINDOW HEADS

Carefully remove and reinstall adjacent siding as required. Extend sheet metal flashing for door and window heads 8 inches beyond opening on each side.

SILL BOARD FLASHING

Install cap flashing under bottom clapboard, behind air barrier wrap, if any, and over top of sill board trim, as indicated on Drawings. Follow the profile of the sill board. Use a 3/8-inch kickout drip and continuous cleat at upper edge of sill board.

END OF SECTION

**DIVISION 7
THERMAL AND MOISTURE PROTECTION**

**SECTION 07900
SEALANTS**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

SUMMARY

Provide all materials, labor, and equipment necessary and/or required for the complete execution of this work of this Section and as indicated on the Drawings, including but not limited to:

Perimeter joints between siding and frames of doors and windows.

Joints between all dissimilar building materials.

Vertical joints where elements are not woven together.

RELATED WORK SPECIFIED ELSEWHERE

Carefully examine all of the Contract Documents for requirements that affect the work of this Section, including but not limited to the following:

Section 04500, Masonry Restoration

Section 06100, Rough Carpentry

Section 06200, Finish Carpentry

Section 07400, Clapboard Siding

Section 07600, Flashing, Sheet Metal, and Downspouts

Section 08600, Wood Windows and Glazing

Section 09900, Painting

QUALITY ASSURANCE

Work shall be performed under the direction of a firm having not less than five years of successful experience in comparable work, utilizing sufficient workmen and supervisors who shall be thoroughly familiar with the type of construction represented in this project and the materials and techniques specified.

Materials used in connection with this Work shall conform in all respects to that required by the applicable Building Codes and ASTM Designations and Standards.

Provide joint sealers that have been produced and installed to establish and maintain watertight and airtight continuous seals.

SUBMITTALS

Product Data: Submit manufacturer's printed product data, specifications, standard details, installation instructions, use limitations, and recommendations for each material used.

Provide manufacturer's certification that the product is compatible with all other materials used in this Project.

PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials to Project site in original unopened containers or bundles with labels informing about manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multicomponent materials.

Store and handle materials in compliance with manufacturers' recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

PROJECT CONDITIONS

Environmental Conditions: Do not proceed with installation of joint sealers under the following conditions:

When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturers or below 40 degrees F.

When joint substrates are wet due to rain, frost, condensation, or other causes.

Joint Width Conditions: Do not proceed with installation of joint sealers where joint widths are less than allowed by joint sealer manufacturer for application indicated.

Joint Substrate Conditions: Do not proceed with installation of joint sealers until contaminants capable of interfering with the adhesion are removed from joint substrates.

PART 2 - MATERIALS

GENERAL

Compatibility: Provide joint sealers, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

Colors: Provide color of exposed joint sealers as selected by Project Manager from manufacturer's standard colors.

ELASTOMERIC JOINT SEALANT (for masonry)

Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated that complies with ASTM C 920 requirements, including those referenced for Type, Grade, Class, and Uses.

One-Component Polyurethane Sealant complying with FS TT-S-00230, Class A, Type II (non-sag). MasterSeal NP1 by BASF Construction Chemicals, or approved equal.

CAULKING COMPOUNDS (for wood trim)

Caulking compound to be one of two types, depending on application:

For those areas that will receive paint, use a one-component elastomeric polyurethane sealant complying with FS-TT-S-00230 Class A, Type II (non-sag). Hornflex caulking compound, manufactured by Grace Co., or MasterSeal NP1 as manufactured by BASF Construction Chemicals, or approved equal.

For areas that will not be painted, use a silicone based sealant, Dow Corning 790 Building Sealant, manufactured by the Dow Corning Corporation, or approved equal.

BACKER ROD

Compressible foam rod stock of flexible, permanent, durable, and non-absorptive material as recommended for compatibility with sealant by the sealant manufacturer.

Provide size and shape of rod that will control the joint depth for sealant placement, break bond of sealant at bottom of joint, form optimum shape of sealant bead on back side, and provide a highly compressible backer to minimize the possibility of sealant extrusion when joint is compressed.

PART 3 - EXECUTION

PREPARATION

Contractor shall inspect entire building for open woodwork joints and open joints between dissimilar materials. It is the intent of the Work to caulk and seal all open joints in woodwork and between dissimilar materials.

All bare wood shall be scraped and primed as specified in Section 09900, Painting. All caulkable joints greater than ¼ inch in width shall be filled with a backer rod prior to caulking. Note that caulking does not take the place of backpriming.

Clean joint surfaces immediately before installation of sealant or caulking compound. Remove dirt, insecure coatings, moisture, and other substances that would interfere with bond of sealant or caulking compound.

INSTALLATION

Joint Sealants:

Comply with sealant manufacturer's printed instructions.

Prime or seal the joint surfaces wherever shown or recommended by the sealant manufacturer. Do not allow primer/sealer to spill or migrate onto adjoining surfaces.

Employ only proven installation techniques that will ensure that sealants will be deposited in uniform, continuous ribbons without gaps or air pockets, with complete "wetting" of the joint bond surfaces equally on opposite sides.

Spillage: Do not allow sealants or compounds to overflow or spill onto adjoining surfaces.

Remove excess and spillage of compounds promptly as the work progresses. Clean the adjoining surfaces as recommended by sealant manufacturer to eliminate evidence of spillage, without damage to the adjoining surfaces or finishes.

Caulking: Caulk all joints between trim, between wood materials, and between trim and dissimilar materials with paintable polyurethane caulk before applying finish coat of paint.

CURING AND PROTECTION

Cure sealants and caulking compounds in compliance with manufacturer's instructions and recommendations, to obtain high early bond strength, internal cohesive strength, and surface durability.

END OF SECTION

**DIVISION 8
DOORS AND WINDOWS**

**SECTION 08600
WOOD DOORS AND WINDOWS**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

SUMMARY

Provide all materials, labor, and equipment necessary and/or required for the complete execution of this Section and as indicated on the Drawings, including but not limited to:

Repair and/or restore all existing double-hung windows, including sash and jambs, to make sound, weathertight, and fully operable.

Removal and replacement with new glazing putty of all putty on all double-hung window sash, exterior and interior.

Replacement of all cracked, broken, missing, or defective glass.

Replacement of selected window sash, where existing components are irreparable.

Repair and/or restore all existing exterior doors, including jambs and thresholds, to make sound, weathertight, and fully operable.

It is the intent of this work to make the existing doors and windows sound, tight, and fully operable, while retaining as much of the existing original or early wood elements as possible.

RELATED WORK SPECIFIED ELSEWHERE

Carefully examine all of the Contract Documents for requirements that affect the work of this Section, including but not limited to the following:

Section 01400, Cutting and Patching

Section 06100, Rough Carpentry

Section 06200, Finish Carpentry and Woodwork Conservation

Section 07600, Flashing, Sheet Metal, and Downspouts

Section 09900, Painting

Door and Window Schedule

QUALITY ASSURANCE

Work shall be performed under the direction of a firm having not less than five years of successful experience in comparable work, utilizing sufficient workmen and supervisors who shall be thoroughly familiar with the type of construction represented in this project and the materials and techniques specified. The Contractor also shall have experience working on at least three properties listed in the State or National Registers of Historic Places within the past five years.

Materials used in connection with this Work shall conform in all respects to that required by the applicable Building Codes and ASTM Designations and Standards.

Mock-Up of Window Restoration:

Prior to work being undertaken, a representative of the Mass. Historical Commission will review and approve a field mock-up representative of paint removal, epoxy or Dutchman repairs, re-glazing, surface preparation, painting, weatherstripping, hardware replacement/refurbishment, and new sash.

Mock-Up of Door Restoration:

Prior to work being undertaken, a representative of the Mass. Historical Commission will review and approve a field mock-up representative of paint removal, epoxy or Dutchman repairs, surface preparation, painting, weatherstripping, hardware replacement/refurbishment, and new sash.

SUBMITTALS

Product Data: Submit manufacturer's printed product data, specifications, standard details, installation instructions, use limitations, and recommendations for each material used.

Provide manufacturers' certification that the product is compatible with all other materials used in this Project.

Shop Drawings:

Where new window sash or repairs to the wood portions of the sash are required, the Contractor shall submit complete shop drawings to the Project Manager for approval. Drawings shall include dimensioned elevations and sections as well as full size details of all typical members and joinery, types of materials, and hardware, and shall show methods of securing and fastening members to adjacent work.

Shop drawings shall clearly indicate any deviation from the design or detailing of existing conditions.

Samples:

New Window Sample: The Contractor shall replicate one window sash according to the requirements outlined in this Section. Following any revisions requested by the Project Manager, the approved window sash shall set a quality standard for all of the replacement window sash.

PRODUCT DELIVERY, STORAGE, AND HANDLING

Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings, including polyethylene and similar materials.

WINDOW AND DOOR REMOVAL

All windows and doors indicated for repair shall be removed from the opening and repaired in a shop. Openings shall be covered with minimum $\frac{3}{4}$ inch thick exterior plywood, or other covering approved by the Project Manager. If all sash in a room are removed at one time, one protective panel shall be transparent. The Contractor shall coordinate removal of sash with the Project Manager to protect the contents of the building and the operations of occupants.

Any existing jamb casings and interior wood trim on windows and doors to be removed shall be carefully removed and labeled. Contractor shall be responsible for the safe removal and storage of all interior wood trim. All lost or damaged material shall be replaced by the Contractor at no cost to the Owner.

PROJECT CONDITIONS

Environmental requirements: Epoxies, adhesives, paints, putty, and sealants may only be applied to surfaces when air, surface, and materials temperatures and moisture content are within the range approved by the manufacturers.

Field measure all dimensions before preparing shop drawings or beginning work. Contractor is responsible for all dimensions.

Coordinate finish carpentry with adjacent construction, including but not limited to rough carpentry, wood windows, and gutters and downspouts to ensure proper completion of the Work.

Weather: Proceed with window repairs only when existing and forecasted weather conditions permit work to be performed in dry weather. Do not apply epoxy or preservatives to damp substrates.

Temperature and Humidity: Perform work only when temperature of products being used, temperatures of existing and new materials, and air temperature and humidity comply with manufacturer's requirements and requirements of this Section. In case of conflict, the most stringent requirements shall govern.

Use of Epoxy Resins: Mix and apply epoxy resins only when temperatures are between 50 degrees and 80 degrees F.

Prevent epoxies, adhesives, paints, and sealants from staining surrounding building materials and objects. Clean up spills and drips immediately.

Protect property, employees, and visitors from possible injury or damage by construction activities.

Existing paint is likely to contain lead. The Contractor shall take all necessary and appropriate precautions, including but not limited to complying with OSHA 1926.62 construction standard for treatment of lead-contaminated material.

GUARANTEE

Provide written warranty ensuring that all replacement and/or conserved wood elements, patching materials, adhesives, and sealant joints shall remain sound and free of defects, cracks, deterioration, and discoloration for a period of two (2) years from the date of substantial completion, and that any such defects occurring within the warranty period will be repaired or replaced in a manner conforming with the requirements of these Contract Documents.

PART 2 - MATERIALS

WOOD CONSERVATION MATERIALS

Epoxy Wood Consolidant/Filler: Solvent free and consisting of low-viscosity long-chain aliphatic amine. LiquidWood for consolidation, and WoodEpoxy for filler, both by Abatron Inc., Gilberts, Illinois, or West System Brand epoxy, #105 Resin, #205 and #206 Hardeners, and filler #403, 406, and 407, all by Gougeon Brothers, Inc., Bay City, Michigan, or approved equal.

Epoxy Patching Compound: Anamine-cured-biphenol-A type epoxy resin, modified with long-chain aliphatic epoxy or curing agent to increase flexibility and filled with phenolic microballoons and thixotropic silicates, manufactured by Abatron Inc., Gilberts, Illinois, or approved equal.

Wood Dutchmen Inserts: Match existing species, and direction and structure of grain of wood being repaired, unless otherwise indicated.

Wood Glue for installing inserts: Arcon E-152 (2-part epoxy resin adhesive) by Allied Resin, Weymouth, Mass., West System Brand Eoxy with #403 and/or #406 fillers, or approved equal.

Sealant/Caulking Compounds for wood to wood joints: Paintable, polysulphide or polyurethane based, one part elastomeric sealant complying with FS-TT-S-00230, Class A, Type II (non-sag). Provide Hornflex caulking compound as manufactured by the Grace Co., or Sonolastic NPI by Sonnoborn Construction Systems, Minneapolis, Minnesota, or approved equal.

Putty for Nail Holes: Oil-based elastic glazing compound.

WOOD PRESERVATIVES AND PAINT

Wood preservative shall be oil-based wood preservative such as Olympic Wood Protector, manufactured by PPG, Pittsburgh, PA; Woodlife 111, manufactured by Kop-Coat, Inc., Pittsburgh, PA; or approved equal. Wood preservative must be compatible with primer and paint finishes.

All new finish wood elements shall be back-primed prior to installation with the priming paint specified in Section 09900, Painting, as a preservative treatment. All other primer and finish coats shall be provided in accordance with Section 09900, Painting.

GLAZING MATERIALS

Glazing putty: DAP "33" Glazing by DAP, Inc., Dayton, Ohio; Sarco Seal Elastic Glazing compound by Abatron, Kenosha, Wisconsin; or approved equal.

Glazing points: Standard manufacture, copper or zinc coated metal in size suitable for the installation. Points shall not protrude through the putty.

Primer for putty: "Kyanoil" by Kyanize Paint Col, Everett, Mass; oil based primer by PPG; or approved equal.

Replacement glass for sash: Salvaged historic glass to match existing; where feasible, salvage panes from existing sash to be replaced by new window sash.

NEW WINDOW SASH

Wood:

Wood for new sash shall be clear kiln-dried eastern white pine, Grade B or better, free from blemishes and knots. Profiles, dimensions, and joinery shall exactly match those of existing elements to be replaced. Remove coatings from profiles of existing elements before recording profiles to produce molding cutters to match existing profiles.

Lumber shall be of sound stock, solid wood without finger joints or other joints within members, thoroughly seasoned, and kiln-dried to a moisture content not exceeding 8 per cent. Materials for millwork shall conform to or exceed the requirements of "Custom Grade" as established by Quality Standards of the Architectural Woodwork Institute. Lumber shall bear the grade and trademark of the association and under whose rules it is produced, and a mark of mill identification.

Wood shall be free from defect or blemishes on surfaces exposed to view that will show after paints and finishes have been applied. Materials that do not comply with specifications for quality and grade, are in any way defective, or are otherwise not in proper condition will be rejected.

All work shall be fabricated to designs, dimensions, and details shown on the approved shop drawings and shall replicate existing profiles.

Preservative treatment shall be used for new wood after machining.

Fasteners: All fasteners for construction of new sash shall be stainless steel or nonferrous metal of appropriate size and configuration for use intended and approved by Project Manager.

Fabrication:

Coordinate dimensions with actual measurements of window openings and adjacent construction to match in kind.

Fabricate components to match originals in kind. Cut custom blades as required to match original muntin profiles.

Join moldings to match construction of original sash exactly.

Machine sash elements to receive glazing panels. Machine sash elements of movable sash to receive weatherstripping, if appropriate, and hardware.

WEATHER-STRIPPING

Windows:

Metal Weather Strips, Series 6, 9 gauge bronze by Zero International or approved equal. All weather stripping shall be installed as per manufacturer's instructions.

Head: #1B
Upper Sash/Jamb: #4B
Lower Sash/Jamb: #5B
Meeting Rail: #2B, 3B
Sill: #1B

Doors:

For in- and out-swinging doors:

Metal Weather Strips, Series 10F, 25 B.&.S. Gauge Bronze, by Zero International or approved equal. All weather stripping shall be installed as per manufacturer's instructions.

Head and Lock-side Jamb: Series 10F, #12
Hinge-side Jamb, Series 10F, #12
Sill Protection Sweep: #8193AA

PART 3 - EXECUTION

INSPECTION AND ACCEPTANCE

Prior to beginning work, openings shall be inspected and surfaces shall be dry.

Inspect all door and window openings, using the Door and Window Inventory in these Contract Documents as a guide, to identify all door and window elements requiring consolidation, patching, repair, rebuilding, or replacement prior to commencing the Work.

Before beginning fabrication of woodwork required to be fitted to other construction, obtain field measurements and verify dimensions and shop drawing details for accurate fit.

All unforeseen repairs to existing window members shall be identified and all additional costs approved by Project Manager prior to beginning repairs.

GENERAL

Repair/replace all defective, damaged, or missing door and window components. Adjust all operating sash and hardware to provide a tight fit at contact points and weatherstripping, and to provide smooth operation and a weathertight closure. Lubricate hardware and moving wood parts.

All areas to be modified, patched, or repaired as indicated by the Construction Documents shall match existing door and window elements in design, materials, size, profile, and detail. All existing exterior and interior trim shall be retained and protected during construction except where removal is required by the Work.

The intent of this Work is to preserve as much existing door and window material as possible. Only irreparable wood shall be replaced with newly milled pieces, except where new construction requires new woodwork. Irreparable is defined as wood containing areas of loss greater than 2" by 2" x 1", or wood

that is severely cracked, split, or deteriorated beyond repair. Irreparable elements shall be removed and replicated to exactly match existing elements in material, profiles, dimensions, texture, and configuration.

The Project Manager shall approve actual field conditions of all areas proposed for repair by epoxy filling, wood Dutchmen inserts, and replacement.

No repair work shall commence until existing paint has been removed to acceptable levels. Paint on Main Entrance Door (Door 1; South Elevation) shall be removed to bare wood; see Section 09900, Painting. A sample area of size determined by the Project Manager shall be left in situ without stripping for future color research. Repairs shall be made to wood elements prior to any painting.

Use hand or small power tools designed for sawing or grinding, not hammering and chopping, with minimal disturbance of adjacent work. **Use of power tools on the Main Entrance Door (Door 1) is prohibited.**

Dismantle wood elements as required to carry out repairs, taking care not to damage sound elements or components to be conserved. All woodwork removed and required to be reinstalled shall be labeled and documented as to location, to enable the pieces of wood trim to be reinstalled in their exact location following repair/restoration.

Refasten all loose elements that do not require removal. All exposed nail and screw heads shall be countersunk and filled with putty.

Fabricate new door and sash components to dimensions, profiles, and details of similar existing elements.

All wood joints shall be closed and tight. No finger-jointed wood shall be used.

Small hole and cracks shall be filled with epoxy patching compound.

Wood inserts (Dutchmen) shall be used to fill any voids in excess of 2 cubic inches in volume, using epoxy adhesive.

Re-assemble dismantled components of doors and window sash incorporating pieces that have been conserved or replaced with new wood. All exposed modern nail and screw heads shall be countersunk and filled with putty.

Caulk all exposed joints between dissimilar materials and wood to wood joints as required to protect joints from water penetration, while still allowing for normal movement of separate pieces. All excess caulk shall be trimmed off neatly.

All backpriming, whether shop applied or field applied during installation, is to be performed under this Section. All other priming and all finish painting is to be performed under Section 09900, painting and glazing.

DOOR AND WINDOW REPAIR/RESTORATION, GENERAL

Remove and retain all existing shutter catches on window sills and conserve sills; convey all salvaged catches to Project Manager.

Remove any existing metal angles on window rails and stiles. Repair joints to be solid and sound.

Inoperable sash are to be carefully freed, and stops and parting beads cleaned of paint residue to insure their smooth and easy operation. All sash are to be freely operable.

Repair exterior and interior glazing points on all windows with elastic glazing compound, matching existing profiles.

Repair of existing doors and window sash: Repair, reglue, and/or replace deteriorated sections to match existing. Obtain Project Manager's written approval of any replacements before beginning Work. All new work shall match existing.

Consolidation: Exterior elements containing rotted or deteriorated areas will require the drilling of closely spaced holes to ensure proper penetration of Epoxy Wood Consolidant/Filler.

Patching: Small holes and cracks shall be filled with Epoxy Patching Compound.

Wood Inserts: Where areas are identified as requiring wood inserts, inserts are to be installed with a shape as visibly unobtrusive as possible, preferably with side edges cut at a 45 degree angle. New inserts to match existing profile or shape in every respect.

Flood coat all new wood inserts and all bare wood areas with wood preservative until saturation is reached. Allow to dry for a full 72 hours.

Caulk all gaps or openings in all elements, using a polysulfide caulking compound.

DOOR AND WINDOW REPAIR/RESTORATION TREATMENTS

For wood deterioration less than $\frac{3}{4}$ inch deep (considered punkiness and not loss of wood), brush-apply Epoxy Wood Consolidant/Filler onto clean wood surfaces.

Follow manufacturer's instructions for mixing of components, application temperatures, and material handling.

Apply heavy coat of epoxy resin and allow to soak into wood. Apply additional coat while previous coat is uncured, to completely saturate deteriorated areas of wood.

For wood deterioration greater than $\frac{3}{4}$ inch deep (considered punkiness and not loss of wood):

Drill $\frac{3}{8}$ inch diameter holes through approximately 90% of thickness of wood. Stagger holes on approximately 2" centers.

Apply heavy coat of epoxy resin and allow to soak into wood. Apply additional coat while previous coat is uncured to completely saturate deteriorated areas of wood.

Pour low modulus, low viscosity epoxy resin into each hole until hole has been filled. As epoxy is absorbed into the wood, top off holes with epoxy as required until all holes will accept no more, but without allowing epoxy to pool on surface.

Brush remaining weathered portions with epoxy. Repeat brush application until all surfaces being treated are saturated with epoxy but there is no pooling of epoxy on the surface. Excess epoxy may be removed with an alcohol-soaked rag.

Thoroughly sand epoxy-treated wood to provide proper surface for bond of paint. Curing time varies with ambient temperature and product used. Prime paint shall be applied within 48 hours after cure.

For losses, holes, cracks, and gouges:

Fill with epoxy wood filler; mix and apply filler in accordance with manufacturer's recommendations. Fill flush with surface of wood, matching profile of historic wood.

Sand to smooth finish and tool to match existing wood after filler is completely cured.

Where practicable and necessary, repair deteriorated, split, or missing wood with wood Dutchmen insert repairs. Dutchmen repairs shall be performed in the following manner:

Neatly cut out defective materials and enough sound wood to bond insert to sound substrate. Form a prismatic void in existing wood with square corners and edges. Cut insert to exactly fit void, with exposed portion matching historic profile of woodwork, and grain of insert parallel to historic wood grain direction.

Secure insert with waterproof adhesive and clamp (or, for frames, nail) in place until glue is set.

For insert repairs of stiles and rails, join insert to existing wood using interlocking diagonal scarf joints or interlocking joints (such as open mortise and tenon joints) or both to increase bonding surface of the joint and the structural strength of completed assembly.

NEW WINDOW SASH

Fabricate new components for any components which are deteriorated in their entirety and cannot be repaired with Dutchmen and epoxy. See Door and Window Inventory.

In-kind replacement: Except as specifically indicated otherwise, provide replacement elements of same configurations, profiles, dimensions, and joiner exactly matching those of existing elements to be replaced.

Profiles: Remove coatings from profiles of existing elements before recording profiles to produce molding cutters to match existing profiles.

Molding Cutters: Cut custom blades as required to match original profiles.

Machining and Surfacing: Machine and surface all new and replacement wood elements to provide smooth even surfaces without saw marks or plane marks. Wood with surface irregularities, including but not limited to scratches, saw marks, and planeknife marks, visible after finish has been applied will be rejected and shall be replaced with properly finished wood elements at no additional cost.

Install any hardware, including sash locks, on new sash in the same locations as originally. Adjust sash locks for smooth, easy operation and firm, secure locking.

WOOD PRESERVATIVE

Treat all exterior bare wood surfaces with wood preservative, according to manufacturer's instructions. Liberally apply two coats to all exterior surfaces. Allow 24 hours between coats and three (3) days prior to painting.

EXTERIOR FINISH

All new finish wood elements shall be back-primed prior to installation with the priming paint specified in Section 09900, Painting.

All backpriming, whether shop applied or field applied during installation, is to be performed under this Section. All other primer and finish coats shall be provided in accordance with Section 09900, Painting.

INTERIOR FINISH

Remove all excess sealant and repair any damage to interior finishes.

WINDOW GLAZING

All glazing work shall be performed in accordance with the standards of the "FGMA Glazing Manuals," and the specific printed specifications, instructions, and recommendations of each manufacturer.

Undertake glazing only when ambient temperatures are greater than 40 degrees F.

Joints and spaces to be sealed shall be thoroughly dry and free from dust, oil, and other foreign materials before glazing. All wood surfaces to receive glazing compounds shall be primed or sealed prior to application of glazing materials. Allow 24 hours drying time prior to installing new glazing compound. Do not use a shellac-based primer sealer.

Remove all glazing compound, exterior and interior, and install new glazing compound after prime coat has been applied, matching existing profiles.

Replace all missing, cracked, or defective window panes. Secure with glazier's points. Bed all new or reinstalled glass panes in thin layer of glazing compound.

WINDOW BALANCE COMPONENTS AND HARDWARE

Remove and replace any broken or deteriorated sash cords, chains, tapes, weights, tube or spring balances, and latches to match existing. Replace any missing elements to match existing, including sash locks on all windows and non-functioning springs on spring balances where present. Clean and lubricate window hardware.

Replace existing parting strips if missing or damaged. Adjust all stops for minimum clearance and free operation.

Remove all excess paint from jamb tracks and other working parts. Lubricate contact surfaces of moving parts at sash edges and jamb tracks with wax.

WEATHERSTRIPPING

Install new weatherstripping at jambs, head, meeting rail, and sill of all double hung windows as per manufacturer's instructions. Install new sill protection sweep and new weatherstripping at jambs and heads of all doors for a weather tight assembly, as per manufacturer's instructions. Ensure good contact between door threshold and bottom rail of doors without binding, to eliminate air infiltration.

WOOD DOORS

All doors indicated for repair shall be removed from the opening and repaired in a shop. Split panels shall be repaired by disassembling the stile and rail doors, dowling and gluing the panels to repair, and reassembling the door. Where threshold and bottom rail of door are not parallel, carefully scribe weatherstripping for good contact along the length of the threshold without binding. Clean and lubricate all door hardware.

Main Entrance Door (Door 1, South Elevation):

No repair work shall commence until existing paint has been removed to acceptable levels. Paint on Main Entrance Door shall be removed to bare wood; see Section 09900, Painting. Repairs shall be made to wood elements prior to any painting. **Use of power tools on the Main Entrance Door is prohibited.**

Repair decorative carvings on door panels to match existing exactly. Modern insert repairs (e.g., plaster Dutchmen components) shall be replaced with wood to match original material, design, and appearance exactly.

Carefully inspect existing jamb and head conditions with Project Manager before commencing work. All possible care shall be taken to avoid damage to existing door, door trim, and sidelights.

Repair and adjust existing main entrance door and door frame so that the door fits squarely in the opening without binding or gaps. Adjust existing hinges and lockset if necessary to allow for full functioning of door.

Align and fit existing door in frame with uniform clearances and bevels as indicated below. Re-hang door plumb, level, and true, and able to swing and operate freely.

Fitting Clearances: Provide 1/8 inch at jambs and heads, and 1/8 inch from bottom of door to top of threshold.

Bevel 1/8 inch in 2 inches at lock and hinge edges.

Sandpaper smooth existing wood threshold. Feather all rough edges.

Apply wood preservative to all bare wood.

ADJUST AND CLEAN

Adjust and check each operating item of hardware and each door and window to ensure proper operation and function of every unit.

Clean all glass, using minimum pressure.

END OF SECTION

**DIVISION 9
FINISHES**

**SECTION 09900
PAINTING**

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

SUMMARY

Provide all materials, labor, and equipment necessary and/or required for the complete execution of this work of this Section and as indicated on the Drawings, including but not limited to:

Removal of paint from Main Entrance Door.

Painting of all new and repaired exterior wood at clapboards, doors, window sash, trim, and gutters.

Painting of all existing painted exterior wood at clapboards, doors, window sash, exterior trim, shutters, and gutters.

Painting of all double hung window sash, exterior and interior, and of all exterior trim and window jambs on all double hung windows. Painting of interior door and window trim is not part of this Project unless damaged during the course of the Work.

Priming and finish painting of all downspouts.

Touch-up painting of removed and re-installed false walls on interior of building.

Definitions:

The term "paint" is defined as all coating systems materials, including primers, emulsions, epoxy, enamels, sealers, fillers, and other applied materials, whether used as prime, intermediate, or finish coats.

Alternates: The work of this Section is subject to two Bid Alternates.

If Alternate #1 is accepted by the Owner, the scope of painting (by this Section) will be decreased.

If Alternate #2 is accepted by the owner, the scope of painting (by this Section) will be decreased.

Refer to Drawing Sheet Nos. 1, 2, 3, 4, and 6 for locations affected by Alternate 1.

Refer to Section 01100 – Alternates, for requirements.

RELATED WORK SPECIFIED ELSEWHERE

Carefully examine all of the Contract Documents for requirements that affect the work of this Section, including but not limited to the following:

Section 06200, Finish Carpentry

Section 07460, Clapboard Siding

Section 07600, Flashing

Section 07900, Sealants

Section 08600, Wood Windows and Glazing

QUALITY ASSURANCE

Work shall be performed under the direction of a firm having not less than five years of successful experience in comparable work, utilizing sufficient workmen and supervisors who shall be thoroughly familiar with the type of construction represented in this project and the materials and techniques specified.

Materials used in connection with this Work shall conform in all respects to that required by the applicable Building Codes and ASTM Designations and Standards.

Provide finish coats that are compatible with prime paint coats used. Provide barrier coats over incompatible primers where required. Notify Project Manager in writing of anticipated problems using coatings with substrates provided by others.

SUBMITTALS

Product Data: Submit manufacturer's printed product data, specifications, standard details, installation instructions, use limitations, and recommendations for each material used.

Provide manufacturers' certification that the product is compatible with all other materials used in this Project.

After Project Manager's approval of paint manufacturer, submit color sample on a 6" by 6" hardboard.

Field Mock-up: Prepare a test panel of paint removal methods, including chemical paint strippers and power tools, on an area designated by the Project Manager, for review and approval by Project Manager.

PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers. Store materials only in designated areas and in strict compliance with manufacturers' instructions and recommendations. Protect from freezing and damage.

Provide suitable spaces for mixing and storing paint. Oil- or solvent-soaked rags, waste, or other potentially combustible materials shall be placed in sealed metal containers and be removed from the premises daily. Every precaution shall be taken to prevent damage by fire.

PROJECT CONDITIONS

Weather, Temperature, and Humidity: Perform work only when existing and forecasted conditions are within the limits established by manufacturers of the materials and products used.

Water-Based Paints: Apply only when temperature of surfaces to be painted and surrounding air temperatures are between 50 degrees F and 90 degrees F, unless otherwise permitted by manufacturer's printed instructions.

Solvent-Thinned Paints: Apply only when temperature of surfaces to be painted and surrounding air temperatures are between 45 degrees F and 95 degrees F, unless otherwise permitted by paint manufacturer's printed instructions.

Conditions: Do not apply paint in snow, rain, fog, or mist, or when relative humidity exceeds 85%, to damp or wet surfaces, or when the moisture content of the substrate is in excess of 15% as measured by an electronic moisture meter, unless otherwise permitted by paint manufacturer's printed instructions.

Prevent paints and sealants from damaging surrounding building materials and objects. Clean up spills and drips immediately.

Proceed with Work only when substrate construction and preparation work is complete. Do not apply finish in area where dust is being generated.

Comply with manufacturer's requirements and recommendations for ventilation.

Protect property, employees, and occupants from possible injury or damage by construction activities.

Provide tarpaulins or other covers on the outside of staging and on the ground at all active work areas during preparation as required to contain dust and debris.

Existing paint is likely to contain lead. The Contractor shall take all necessary and appropriate precautions, including but not limited to complying with OSHA 1926.62 construction standard for treatment of lead-contaminated material.

PART 2 - MATERIALS

GENERAL

Materials shall conform to the latest edition of reference specifications applicable and specified herein and to applicable codes and requirements of local and state authorities having jurisdiction.

Materials shall conform to governing regulations regarding the content of volatile organic compounds (VOC).

Follow manufacturer's instructions regarding preparation of surfaces, mixing, applying, and drying.

WOOD PRESERVATIVES

Wood preservative shall be oil-based wood preservative such as OlympicWood Protector, manufactured by PPG, Pittsburgh, PA; Woodlife 111, manufactured by Kop-Coat, Inc., Pittsburgh, PA; or approved equal. Wood preservative must be compatible with primer and paint finishes.

All new finish wood elements shall be back-primed prior to installation with the priming paint specified in this Section, as a preservative treatment.

PAINT REMOVERS

Paint Stripper: Standard thixotropic, solvent-based or methylene chloride-based paint stripper such as: Peel-Away 7 and Peel-Away Smart Strip by Dumond Chemicals, Inc., Malvern, Penn., or approved equal. Alkaline-based chemical paint removers are not allowed.

Tools for Removing Paint and Chemical Strippers: Plastic scrapers and putty knives with edges that will not scratch substrate.

Solvent for Rinsing Stripper: Isopropyl alcohol.

The use of heat including heat guns and heat plates to remove paint on the building is not permitted. Preparation and removal methods using heat may only be used on elements that have been removed from the building.

Handheld power tools used for the removal of paint shall be equipped with vacuum attachments that control air-borne lead dust. Acceptable manufacturers include: Desco Manufacturing Co., Long Beach, Cal.; The Marindus Company, Englewood, New Hampshire; or approved equal. Power sanding and grinding tools are permitted only where individual workmen can adequately demonstrate that their usage will not result in damage to the substrate. **Use of power tools on the Main Entrance Door (Door 1) is prohibited.**

PAINT COLORS AND GLOSS

Finish paint color(s) and gloss to be provided by Project Manager after a professional paint analysis to establish historic colors. Assume four finish colors: Siding, trim, sash, and doors.

Prime coats and undercoats shall be tinted approximately to the shade of the final coat.

PAINT FOR EXTERIOR CLAPBOARDS, SHINGLES, WOOD TRIM, DOORS, AND WINDOWS

All exterior clapboards, trim, and window sash shall receive 2 finish coats exterior acrylic over oil-based primer.

Prime Coat: Benjamin Moore Alkyd Primer or approved equal.

First and Second Finish Coats: Benjamin Moore MoorGlo 100% Acrylic House and Trim Paint 096 or approved equal. Colors to be selected by Project Manager from full line of manufacturer's color chips.

Exterior doors and shutters shall receive 2 finish coats exterior acrylic enamel over oil-based primer. Colors to be selected by Project Manager from full line of manufacturer's color chips.

PAINT FOR METAL DOWNSPOUTS

All metal downspouts shall receive 2 finish coats exterior acrylic over oil-based primer; color to be selected by Project Manager from full line of manufacturer's color chips.

Prime Coat: Benjamin Moore Alkyd Metal Primer or approved equal.

First and Second Finish Coats: Benjamin Moore MoorGlo 100% Acrylic House and Trim Paint 096 or approved equal. Colors to be selected by Project Manager from full line of manufacturer's color chips.

OIL FOR DOOR THRESHOLDS AND GUTTER TROUGHS

Boiled linseed oil cut 1:1 with turpentine or approved proprietary equivalent.

SEALANT/CAULKING COMPOUNDS

Sealant/caulking compounds for wood elements shall be paintable, polysulphide or polyurethane based, one part elastomeric sealant complying with FS-TT-S-00230, Class A, Type II (non-sag).

Hornflex, by the Grace Co.; Sonolastic NPI, by Sonnoborn Construction Systems, Minneapolis, Minn.; or approved equal.

PART 3: EXECUTION

INSPECTION AND ACCEPTANCE

Examine the areas and conditions under which painting work is to be applied. Notify Project Manager in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.

Starting of painting work will be construed as the Contractor's acceptance of the surfaces and conditions of the Work.

GENERAL

All new and repaired exterior wood at clapboards, doors, window sash and frames (including jambs and sills), trim, shutters, and outside of gutters shall be painted. All existing painted exterior wood at

clapboards, doors, window sash and frames (including jambs and sills), trim, shutters, and outside of gutters shall be painted.

Painting of interior door and window trim is not part of this Project, unless damaged during the course of the Work. Touch-up paint as required to match existing on trim and surface of interior false walls after their temporary removal and re-installation.

No painting or finishing shall be done when the air is dust-laden nor when weather and temperature conditions are unsuitable based upon product manufacturer's recommendations.

All paint shall be brush-applied, unless otherwise noted. Brush out primer and finish paint onto surfaces in an even film with parallel brush strokes. On wood, leave final paint film with brush strokes parallel to the grain.

Prime all exposed surfaces of window components with one coat of specified undercoat. Wood surfaces at contact points of moving parts shall be sanded and oiled only, not primed or painted.

PAINT REMOVAL

Provide adequate protection to adjacent work and materials.

On Main Entrance Door (Door 1, South Elevation), leave a 4 inch by 6 inch area of paint undisturbed by paint removal for future reference on historic paint color sequence; location to be determined by Project Manager.

Apply stripper according to manufacturer's instructions and using procedures developed during testing and mock-ups.

Manually scrape off stripper and softened finishes to greatest extent possible, using plastic tools or cotton cloths that will not mar substrate.

Contain, collect, and legally dispose of stripper and residue.

Do not use abrasive products or tools such as Scotch Brite, scouring pads, or metal tools.

Rinse surfaces using solvents as specified, and as recommended by manufacturer of paint stripper, to remove all paint and stripper residue to bare wood. Do not soak substrate or apply excess solvent at one time. Prevent drips, runs, and flooding of surfaces.

Contain, collect, and legally dispose of solvent and residue.

METAL DOWNSPOUTS

Clean surfaces to be painted before applying paint or surface treatments.

Remove dust, dirt, oil, grease, and fingerprints with mineral spirits.

Do not allow contaminants from the cleaning process to fall onto wet, newly-painted surfaces.

On new downspouts, sand lightly with emery paper.

Paint outside only of downspouts. Paint all downspouts, elbows, and downspout fasteners.

EXTERIOR CLAPBOARDS, WOOD TRIM, DOORS, AND WINDOWS

PREPARATION

Perform preparation and cleaning procedures in strict accordance with the paint manufacturer's instructions and as herein specified for each particular substrate condition.

Clean surfaces to be painted before applying paint or surface treatments.

Remove dirt, oil, and grease with mineral spirits prior to mechanical cleaning.

Remove any mildew with a solution of 2/3 cup trisodium phosphate, 1/3 cup household detergent, 1 quart household bleach, and 3 quarts warm water.

Do not allow contaminants from the cleaning process to fall onto wet, newly-painted surfaces.

Sand and scrape with hand tools all surfaces exhibiting areas of loose paint or poor adhesion. Feather all rough edges with sandpaper to provide smooth transition between paint layers of substrate. Remove all excess paint from jamb tracks and other working parts of windows.

Provide a sample of the desired quality level of scraping, sanding, and feathering for Project Manager's approval prior to proceeding with this Work.

Contractor shall sand, fill, and caulk all exposed exterior clapboards, woodwork, and trim prior to applying finish coats of paint to eliminate splinters, rough areas, cracks, and checks.

Proposals for the use of machine sanders, such as a lightweight belt sander, will be reviewed by the Project Manager based on a sample provided by the contractor. Sanding marks on the wood substrate must be avoided, and disc sanders will therefore not be considered.

Sandpaper smooth those finished surfaces exposed to view and adjacent to new or repaired elements to be painted. Feather all rough edges with sandpaper to provide smooth transition between new paint and adjacent existing paint.

Fill small holes and cracks with wood filler. Holes shall not exceed 1 inch in diameter.

Filling of small defects: Fill small, shallow fissures less than 1/16 inch wide and 1/8 inch deep in wood surfaces with specified putty or sealant to produce a smooth, uniform surface that will not trap water. Putty filling is to be executed after application of prime coat of paint, and is to be carried out only in locations scheduled to receive finish painting.

Set all exposed or rusting nailheads and fill holes with putty.

INSTALLATION

Apply painting and finishing materials in accordance with manufacturer's directions. Use applicators and techniques best suited for materials and surfaces to which applied.

For all exposed wooden elements treated with wood preservative, lightly sand wood prior to painting.

Apply prime coat to unpainted material that is required to be painted or finished, and that has not been prime coated or back primed by others.

Brush-apply primer followed by two finish coats on a thoroughly cleaned surface. Allow primer to dry thoroughly prior to application of finish coat.

Brush out primer and finish paint onto surfaces in an even film with parallel brush strokes. On wood, leave final paint film with brush strokes parallel to the grain.

Completely cover wood surfaces to provide an opaque, smooth surface of uniform finish color, appearance, and coverage. Cloudiness, spotting, laps, brush marks, runs, sages, ropiness, or other surface imperfections will not be acceptable.

Apply additional coats when undercoats, stains, or other conditions show through final paint coat, until paint film is of uniform finish, color, and appearance.

Apply each material at not less than manufacturer's recommended spreading rate to provide a total dry film to thickness of not less than 4.0 mils for entire coating system of prime and finish coats for 3-coat work.

On wood window sash, extend paint film approximately 1/16 inch onto window glass.

Upon completion of repairs, apply oil treatment on all door thresholds and gutter troughs.

CLEANING

During the progress of the Work, remove from the Project daily all discarded paint materials, debris, cans, and rags.

Upon completion of the Work, clean all window glass and other paint-spattered surfaces. Remove spattered paint with paint thinner and rags, using minimum pressure. All staging, scaffolding, and containers shall be removed from the site. All spillage on adjacent surfaces shall be removed and the entire job site left clean.

Provide adequate protection and other precautions required for the remainder of the construction period to ensure that painted work will not be damaged at the time of Substantial Completion.

END OF SECTION

Federal Labor Standards Provisions

U.S. Department of Housing
and Urban Development
Office of Labor Relations

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) **Minimum Wages.** All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein. Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and his subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where

appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. **Withholding.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract, in the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part

of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (f) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR 5.5 (a)(3)(i) and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll

period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the

journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 of this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration . . . makes, utters or publishes any statement knowing the same to be false . . . shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable only where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subpara-

graph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in sub paragraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable only where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, 40 USC 3701 et seq.

(3) The Contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

Section 3 Clause

A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

C. The contractor agrees to send to each labor organization or representative or workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.

F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

G. With respect to work performed in connection with Section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

General Decision Number: MA150004 10/23/2015 MA4

Superseded General Decision Number: MA20140004

State: Massachusetts

Construction Type: Residential

Counties: Barnstable, Berkshire, Bristol, Essex, Hampden, Hampshire, Middlesex, Norfolk, Plymouth, Suffolk and Worcester Counties in Massachusetts.

RESIDENTIAL CONSTRUCTION PROJECTS (including single family homes and apartments up to and including 4 stories)

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015
1	01/09/2015
2	01/30/2015
3	02/13/2015
4	03/06/2015
5	03/20/2015
6	03/27/2015
7	04/17/2015
8	05/01/2015
9	07/03/2015
10	07/17/2015
11	08/21/2015
12	08/28/2015
13	09/04/2015
14	09/25/2015
15	10/09/2015
16	10/23/2015

BRMA0001-026 09/01/2015

LOWELL CHAPTER

MIDDLESEX COUNTY (Acton, Asby, Ashland, Ayer, Bedford, Billerica, Boxboro, Carlisle, Chemsford, Dracut, Dunstable, Framingham, Ft. Devens, Groton, Holliston, Hopkinton, Hudson, Littleton, Lowell, Maynard, Natick, North Acton, Pepperell, Sherborn, Shirley, South Acton, Stow, Tewksbury, Townsend, Tyngsboro, West Acton, Westford, Wilmington) NORFOLK (Medfield, Medway, Mills) WORCESTER (Ashburnham, Athol, Fitchburg, Gardner,

Harvard, Hopedale, Hubbardston, Lancaster, Leominster,
 Lunenburg, Milford, Petersham, Phillipston, Princeton,
 Royalston, Southboro, Sterling, Templeton, Westminster,
 Winchendon)

	Rates	Fringes
Bricklayer, Plasterer, Stonemason.....	\$ 47.76	28.25

 BRMA0001-027 08/31/2015

SPRINGFIELD/PITTSFIELD CHAPTER
 BERKSHIRE, HAMPDEN, HAMPSHIRE, WORCESTER (Warren) COUNTIES

	Rates	Fringes
Bricklayer, Plasterers, Stonemasons, Tile Layers.....	\$ 38.36	27.01

 BRMA0001-028 09/01/2015

FOXBORO CHAPTER
 BRISTOL (Attleboro, Berkley, Dighton, Mansfield, North
 Attleboro, Norton, Raynham, Rehoboth, Seekonk, Taunton) NORFOLK
 (Bellingham, Canton, Dedham, Foxboro, Franklin, Norfolk,
 Norwood, Plainville, Sharon, Walpole, Westwood, Wrentham)
 PLYMOUTH (Lakeville)

	Rates	Fringes
BRICKLAYER.....	\$ 47.76	28.25

 BRMA0001-029 09/01/2015

WORCESTER CHAPTER
 (Auburn, Barre, Blackstone, Berlin, Bolton, Boylston,
 Brookfield, Charlton, Clinton, Douglas, Dudley, Grafton,
 hardwick, Holden, Leicester, Mendon, Millbury, Millville, New
 Braintree, Northboro, Northbridge, Oakham, Oxford, Paxton,
 Rutland, Shrewbury, Southbridge, Spencer, Sturbridge, Sutton,
 Upton, Uxbridge, Webster, Westboro, West Boylston, Worcester)

	Rates	Fringes
Bricklayer, Plasterer, Stonemason.....	\$ 47.76	28.25

 BRMA0003-026 08/01/2015

BOSTON CHAPTER
 MIDDLESEX (Arlington, Cambridge, Everett, Malden, Medford,
 Melrose, Somerville) NORFOLK (Brookline, Milton) SUFFOLK

Rates	Fringes
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BRICKLAYER.....\$ 49.86 29.12

BRMA0003-027 08/01/2015

LYNN CHAPTER

ESSEX (Amesbury, Andover, Beverly, Boxford, Danvers, Essex, Georgetown, Gloucester, Groveland, Hamilton, Haverhill, Ipswich, Lawrence, Lynn, Lynnfield, Manchester, Nahant, Newbury, Newburyport, North Andover, Peabody, Rockport, Rowley, Salisbury, Salem, Saugus, Swampscott, Topsfield, Wakefield, Wenham, West Newbury) MIDDLESEX (Reading, North Reading, Wakefield)

Rates Fringes

Bricklayer, Plasterer.....\$ 49.86 29.12

BRMA0003-028 08/01/2015

NEWTON CHAPTER

MIDDLESEX (Newton); NORFOLK (Dover, Needham, Wellesley)

Rates Fringes

Bricklayer, Plasterer.....\$ 49.86 29.12

BRMA0003-029 08/01/2015

NEW BEDFORD CHAPTER

BARNSTABLE, BRISTOL (Acushnet, Darmouth, Fairhave, Fall River, Freetown, New Bedford, Somerset, Swansea, Westport) PLYMOUTH (Marion, Mattapoissett, Rochester, Wareham)

Rates Fringes

BRICKLAYER.....\$ 49.86 29.12

BRMA0003-030 08/01/2015

QUINCY CHAPTER

NORFOLK (Avon, Braintree, Cohasset, Holbrook, Quincy, Randolph, Stoughton, Weymouth) PLYMOUTH (Abington, Bridgewater, Brockton, Carver, Duxbury, East Bridgewater, Halifax, Hanover, Hanson, Hingham, Hull, Kingston, Marshfield, Middleboro, Norwell, Pembroke, Plymouth, Rockland, Scituate, West Bridgewater, Whitman)

Rates Fringes

Bricklayer, Plasterer.....\$ 49.86 29.12

BRMA0003-031 08/01/2015

WALTHAM CHAPTER

MIDDLESEX (Belmont, Burlington, Concord, Lixington, Lincoln,

Stoneham, Sudbury, Waltham, Watertown, Wayland, Weston,
Winchester, Woburn)

	Rates	Fringes
Bricklayer, Plasterer.....	\$ 49.86	29.12

BRMA0003-032 08/01/2015

BARNSTABLE, BRISTOL, SUFFOLK AND WORCESTER

	Rates	Fringes
Tile Layer.....	\$ 38.08	27.55

CARP0026-007 03/01/2015

BRISTOL (Attleborough, North Attleborough) ESSEX, MIDDLESEX
(Except Belmont, Cambridge, Everett, Malden, Medford,
Somerville) NORFOLK (Bellingham, Canton, Foxboro, Franklin,
Medfield, Medway, Millis, Needham, Norfolk, Norwood,
Plainville, Quincy, Sharon, Walpole, Wellesley, Westwood,
Wrentham) and PLYMOUTH (Duxbury, Hanover, Hingham, Hull,
Marshfield, Norwell, Pembroke, Rockland and Scituate)

	Rates	Fringes
Carpenters (Including Drywall Hanging & Acoustical Ceiling Installation).....	\$ 35.75	26.88

CARP0033-006 03/01/2015

MIDDLESEX (Belmont, Cambridge, Everett, Malden, Medford,
Somerville) NORFOLK (Brookline, Dedham, Milton) and SUFFOLK

	Rates	Fringes
Carpenters (Including Drywall Hanging & Acoustical Ceiling Installation).....	\$ 42.30	27.38

CARP0107-011 03/01/2015

WORCESTER COUNTY
(except Gilbertville, Hardwick, Warren, West Brookfield)

	Rates	Fringes
Carpenters (Including Drywall Hanging & Acoustical Ceiling Installation).....	\$ 35.75	26.88

CARP0108-012 08/31/2015

BERKSHIRE, HAMPDEN, HAMPSHIRE AND WORCESTER (Gilbertville,

Hardwick, Warren, West Brookfield)

	Rates	Fringes
Carpenters (Including Drywall Hanging & Acoustical Ceiling Installation).....	\$ 32.39	23.43

CARP0624-008 03/01/2015

BARNSTABLE, BRISTOL (Except Attleboro and North Attleboro) AND
PLYMOUTH (Bridgewater, Brockton, Kingston, Lakeville,
Middleboro, Plymouth, South Hanover, Whitman)

	Rates	Fringes
Carpenters (Including Drywall Hanging & Acoustical Ceiling Installation).....	\$ 35.75	26.88

CARP0723-001 04/01/2015

ZONE 2: BARNSTABLE, BERKSHIRE, BRISTOL, ESSEX, HAMPDEN,
HAMPSHIRE, PLYMOUTH, WORCESTER COUNTIES AND PART OF MIDDLESEX,
NORFOLK AND SUFFOLK COUNTIES
(All other cities and towns in Massachusetts + Chelsea &
Winthrop)

	Rates	Fringes
CARPENTER (New Wood Frame Construction not exceeding 4 stories including basement)		
Wood framing, siding and exterior trim work.....	\$ 25.00	14.11
All other carpentry work on wood frame projects.....	\$ 25.00	14.11

CARP0723-002 04/01/2015

ZONE 1: MIDDLESEX, NORFOLK AND SUFFOLK COUNTIES (Consists of
Boston, Islands of Boston Harbor, Brookline, Cambridge,
Dedham, Malden, Medford and Somerville)

	Rates	Fringes
Carpenters (New Wood Frame Construction not exceeding 4 stories including basement)		
Wood framing, siding and exterior trim work.....	\$ 29.50	14.11
All other carpentry work on wood frame projects.....	\$ 29.50	14.11

ELEC0007-008 06/28/2015

HAMPDEN (Except Chester and Holyoke); HAMPSHIRE (Belchertown, Ware); WORCESTER (Warren)

	Rates	Fringes
ELECTRICIAN.....	\$ 38.06	19.54

 ELEC0007-009 06/28/2015

BERKSHIRE; HAMPDEN (Chester, Holyoke); HAMPSHIRE (Except Belchertown, Ware)

	Rates	Fringes
ELECTRICIAN.....	\$ 38.06	19.54
Teledata System Installer (Berkshire County).....	\$ 37.71	19.08

 ELEC0096-004 06/01/2015

MIDDLESEX (Ashby, Ashland, Ayer, Ft. Devens, Groton, Hopkinton, Hudson, Marlboro, Pepperell, Shirley, Stow, Townsend); WORCESTER (Except Warren)

	Rates	Fringes
ELECTRICIAN.....	\$ 38.87	14%+16.83
Teledata System Installer.....	\$ 26.25	3%+19.87

 ELEC0099-005 06/01/2015

BRISTOL (North & South Attleboro, Seekonk)

	Rates	Fringes
ELECTRICIAN.....	\$ 26.87	13.72%+13.57

 ELEC0103-002 09/01/2015

ESSEX (Amesbury, Andover, Boxford, Georgetown, Groveland, Haverhill, Lawrence, Merrimac, Methuen, Newbury, Newburyport, North Andover, Rowley, Salisbury, West Newbury); MIDDLESEX (Bedford, Billerica, Boxboro, Burlington, Carlisle, Chelmsford, Dracut, Dunstable littleton, Lowell, North Reading, Tewksbury, Tyngsboro, Westford, Wilmington)

	Rates	Fringes
ELECTRICIAN.....	\$ 45.67	29.58

 ELEC0103-004 09/01/2015

ESSEX (Beverly, Danvers, Essex, Gloucester, Hamilton, Ipswich, Manchester, Marblehead, Middleton, Peabody, Rockport, Salem, Topsfield, Wenham)

	Rates	Fringes
ELECTRICIAN.....	\$ 45.67	29.58

 ELEC0103-010 09/01/2015

ESSEX (Lynn, Lynnfield, Nahant, Saugus, Swampscott); MIDDLESEX (Acton, Arlington, Belmont, Cambridge, Concord, Everett, Framingham, Holliston, Lexington, Lincoln, Malden, Maynard, Medford, Melrose, Natick, Newton, Reading, Sherborn, Somerville, Stoneham, Sudbury, Wakefield, Waltham, Watertown, Weyland, Weston, Winchester, Woburn); NORFOLK (Bellingham, Braintree, Brookline, Canton, Coahasset, Dedham, Dover, Foxboro, Franklin, Medfield, Medway, Millis, Milton, Needham, Norfolk, Norwood, Quincy, Sharon, Walpole, Wellesley, Westwood, Weymouth, Wrentham); PLYMOUTH (Hingham and Hull); SUFFOLK

	Rates	Fringes
ELECTRICIAN.....	\$ 45.67	29.58
Teledata System Installer (ESSEX; MIDDLESEX {Excluding Ashby, Ashland, Ayer, Ft. Devens, Groton, Hokinton, Hudson, Marlboro, Pepperell, Shirley, Stow, Townsend; NORFOLK {Excluding Avon, Holbrook, Plainville, Randolph, Stoughton; SUFFOLK)...	\$ 34.25	27.57

 ELEC0223-011 09/01/2015

BARNSTABLE, BRISTOL (Except Attleboro, North Attleboro, Seekonk); NORFOLK (Avon, Halbrook, Randolph, Sloughton); PLYMOUTH (Except Hingham and Hull Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 36.41	27.75%+9.70
Teledata System Installer (PLYMOUTH COUNTY (except Townships of Hingham and Hull)).....	\$ 32.56	27.75%+9.85

 ELEV0004-003 01/01/2015

BARNSTABLE, BRISTOL, ESSEX, MIDDLESEX, NORFOLK AND SUFFOLK

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 53.30	28.385+a+b

FOOTNOTE FOR ELEVATOR MECHANICS

a. Vacation: 6%/under 5 years based on regular hourly rate for all hours worked. 8%/over 5 years based on regular hourly rate for all hours worked.

b. PAID HOLIDAYS: New Year's Day; Memorial Day; Independence

Day; Labor Day; Veterans' Day; Thanksgiving Day; the Friday after Thanksgiving Day; and Christmas Day.

 ELEVO041-007 01/01/2015

BERKSHIRE, HAMPDEN AND HAMPSHIRE

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 47.73	28.385+a+b

FOOTNOTE:

- a. Vacation: 6%/under 5 years based on regular hourly rate for all hours worked. 8%/over 5 years based on regular hourly rate for all hours worked.
- b. PAID HOLIDAYS: New Year's Day; Memorial Day; Independence Day; Labor Day; Veterans' Day; Thanksgiving Day; the Friday after Thanksgiving Day; and Christmas Day.

 ENGI0004-017 06/01/2015

BARNSTABLE; BRISTOL; ESSEX; MIDDLESEX, NORFOLK; PLYMOUTH; SUFFOLK; and WORCESTER (Remainder of County)

	Rates	Fringes
Power Equipment Operator: Excavators & Loaders.....	\$ 42.83	25.45+A

FOOTNOTE:

- a. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Labor Day, Memorial day, Independence Day, Patriot's Day, Columbus Day, Veteran's Day, Thanksgiving Day and Christmas Day.

 ENGI0004-018 06/01/2015

WORCESTER (Athol, Barre, Brookfield, East Brookfield, hardwick, New Braintree, North Brookfield, Oakham, Petersham, Phillipston, Royalston, Struthbridge, Templeton, Warren, West Brookfield, Winchendon)

	Rates	Fringes
Power Equipment Operator: Excavators & Loaders.....	\$ 42.83	25.45+A

FOOTNOTES:

- a. New Year's Day, Washington's Birthday, Memborial Day, Independence Day, Labor Day, Patriots Day, Columbus Day, Veteran's Day, Thanksgiving Day and Christmas Day.

ENGI0098-012 06/01/2014

BERKSHIRE; HAMPDEN and HAMPSHIRE COUNTIES

	Rates	Fringes
Power Equipment Operator: Excavators & Loaders.....	\$ 31.17	21.43+A

FOOTNOTE:

- a. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day and Christmas Day

* LABO0022-014 06/01/2015

	Rates	Fringes
Laborers: Mason Tender, Stone/Stucco.....	\$ 31.15	20.30

* LABO0473-003 06/01/2015

BERKSHIRE, HAMPSHIRE (Chesterfield, Cummington, Goshen, Middlefield, Plainfield and Worthington)

	Rates	Fringes
Laborers: Mason Tender, Stone/Stucco.....	\$ 24.50	18.15

* LABO0596-007 06/01/2015

HAMPDEN, HAMPSHIRE (except Chesterfield, Cummington, Goshen, Middlefield, Plainfield and Worthington)

	Rates	Fringes
Laborers: Mason Tender, Stone/Stucco.....	\$ 29.75	19.58

PAIN0035-016 01/01/2015

BERKSHIRE, HAMPDEN, AND HAMPSHIRE COUNTIES

	Rates	Fringes
PAINTER (DRYWALL FINISHING ONLY).....	\$ 29.03	22.05

PAIN0035-017 01/01/2015

BARNSTABLE, BRISTOL, ESSEX, MIDDLESEX, NORFOLK, PLYMOUTH, SUFFOLK, AND WORCESTER COUNTIES

	Rates	Fringes
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PAINTER (DRYWALL FINISHING ONLY).....\$ 36.26 25.95

 PLAS0534-006 07/01/2014

MIDDLESEX; NORFOLK AND SUFFOLK COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 37.25	32.26

 PLUM0004-006 09/01/2014

MIDDLESEX (Ashby, Ayer-West of Greenville branch of Boston and Maine Railroad, Ft. Devens, Groton, Shirley, Townsend)
 WORCESTER (except Hopedale and Southboro)

	Rates	Fringes
Plumbers, Pipefitters (including HVAC work).....	\$ 41.11	24.71

 PLUM0012-008 09/01/2013

ESSEX (Ames, Andover, Beverly, Boxford, Byfield, Danvers, Essex, Georgetown, Gloucester, Groveland, Hamilton, Haverhill, Ipswich, Lawrence, Manchester, Marblehead, Merrimac, Methuen, Middleton, Newbury, Newburyport, North Andover, Peabody, Rockport, Rowley, Salem, Salisbury, Topsfield, Wenham, West Newbury)

	Rates	Fringes
PLUMBER.....	\$ 44.98	24.56

 PLUM0012-009 09/01/2013

ESSEX (Lynn, Lynnfield, Nahant, Saugus, and Swampscott);
 MIDDLESEX (Acton, Arlington, Ashland, Ayer-except west of Greenville Branch of Boston & Maine Rail Road, Bedford, Belmont, Billerica, Boxboro, Burlington, Cambridge, Carlisle, Chelmsford, Concord, Dracut, Dunstable, Everett, Framingham, Hudson, Holliston, Hopkinton, Lexington, Lincoln, Littleton, Lowell, Malden, Marlboro, Maynard, Medford, Melrose, Natick, Newton, North Reading, Pepperell, Reading, Sherborn, Somerville, Stoneham, Stow, Sudbury, Tewksbury, Tyngsboro, Wakefield, Waltham, Watertown, Wayland, Westford, Wilmington, Winchester, Woburn); NORFOLK (Bellingham, Braintree, Brookline, Canton, Cohasset, Dedham, Dover, Foxboro, Franklin, Medfield, Medway, Millis, Milton, Needham, Norfolk, Norwood, Plainville, Quincy, Sharon, Walpole, Wellesley, Westwood, Weymouth, Wrentham); PLYMOUTH (Hingham, Hull, Scituate); SUFFOLK;
 WORCESTER (Hopedale and Southboro)

	Rates	Fringes
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PLUMBER.....\$ 49.06 24.56

 PLUM0051-006 03/01/2014

BARNABLE; BRISTOL; PLYMOUTH (Except Hingham, Hull, Scituate)

	Rates	Fringes
Plumbers, Pipefitters (including HVAC work).....	\$ 35.51	27.32

 PLUM0104-005 03/17/2015

BERKSHIRE (Becket, Otis, Sandisfield); HAMPDEN; HAMPSHIRE

	Rates	Fringes
Plumbers, Pipefitters (including HVAC work).....	\$ 37.41	23.45+a

FOOTNOTE FOR PLUMBERS & STEAMFITTERS:

A. Paid holidays: Independence Day and Labor Day, provided the employee has been employed seven days prior to the holiday by the same employer.

 PLUM0104-011 03/17/2015

BERKSHIRE (Except Becket, Otis, Sandisfield)

	Rates	Fringes
Plumbers, Pipefitters (including HVAC work).....	\$ 35.88	23.45+a

FOOTNOTE FOR PLUMBERS & STEAMFITTERS:

A. Paid holidays: Independence Day and Labor Day, provided the employee has been employed seven days prior to the holiday by the same employer.

 PLUM0537-006 09/01/2015

ESSEX (Ames, Andover, Beverly, Boxford, Byfield, Danvers, Essex, Georgetown, Gloucester, Groveland, Hamilton, Haverhill, Ipswich, Lawrence, Lynn, Lynnfield, Manchester, Marblehead, Merrimac, Methuen, Middleton, Nahant, Newbury, Newburyport, North Andover, Peabody, Rockport, Rowley, Salem, Salisbury, Saugus, Swampscott, Topsfield, Wenham, West Newbury); MIDDLESEX (Acton, Arlington, Ashford, Ayer-except west of Greenville Branch of Boston & Maine Rail Road, Bedford, Belmont, Billerica, Boxboro, Burlington, Cambridge, Carlise, Chelmsford, Concord, Dracut, Dunstable, Everett, Framingham, Hudson, Holliston, Hopkinton, Lexington, Lincoln, Littleton, Lowell, Malden, Marlboro, Maynard, Medford, Melrose, Natick, Newton, North Reading, Pepperell, Reading, Sherborn, Somerville, Stoneham, Stow, Sudbury, Tewksbury, Tyngsboro, Wakefield, Watham, Watertown, Wayland, Westford, Wilmington, Winchester and Woburn), NORFOLK (Bellingham, Braintree, Brookline, Canton, Cohasset, Dedham, Dover, Foxboro, Franklin,

Medford, Medway, Millis, Milton, Needham, Norfolk, Norwood, Plainville, Quincy, Sharon, Walpole, Wellesley, Westwood, Weymouth and Wrentham); PLYMOUTH (Hingham, Hull, Scituate); SUFFOLK; WORCHESTER (Hopedale and Southboro)

	Rates	Fringes
Pipefitter including HVAC work...	\$ 50.69	27.76

 ROOF0033-006 08/01/2014

BARNSTABLE, BRISTOL, ESSEX, MIDDLESEX, NORFOLK, SUFFOLK, WORCESTER

	Rates	Fringes
Rofer, Waterproofers/Caulkers...	\$ 39.21	22.92

 ROOF0248-004 07/16/2015

BERKSHIRE, HAMPDEN, HAMPSHIRE

	Rates	Fringes
Rofer, Waterproofers/Caulkers...	\$ 29.25	22.00
ROOFER: Slate & Tile Roof.....	\$ 29.75	22.50

 * SHEE0017-004 10/01/2015

WORCESTER (Harvard, Lancaster)

	Rates	Fringes
Sheet metal worker.....	\$ 35.60	30.05

 * SHEE0017-010 10/01/2015

BARNSTABLE, BRISTOL (Acushnet, Dartmouth, Dighton, Fairhaven, Fall River, Freetown, New Bedford, Rehoboth, Seekonk, Somerset, Swansea, Westport); PLYMOUTH (Marion, Mattapoisett, Rochester, Wareham)

	Rates	Fringes
Sheet Metal Worker.....	\$ 35.60	30.05

 * SHEE0017-011 10/01/2015

BRISTOL (Attleboro, Berkley, Easton, Mansfield, North Attleboro, Norton, Raynham, Taunton); ESSEX; MIDDLESEX; NORFOLK; PLYMOUTH (Except Marion Mattapoisett, Rochester, Wareham); SUFFOLK

	Rates	Fringes
Sheet Metal Worker.....	\$ 35.60	30.05

 SHEE0063-002 07/01/2012

WORCESTER (Except Harvard & Lancaster)

	Rates	Fringes
Sheet metal worker.....	\$ 31.23	23.69

 SHEE0063-004 07/01/2012

BERKSHIRE, HAMPDEN AND HAMPSHIRE COUNTIES

	Rates	Fringes
Sheet metal worker.....	\$ 31.23	23.69

 SUMA2003-001 01/08/2003

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 39.38	
FLOOR LAYER: Carpet.....	\$ 31.96	
LABORER		
Unskilled.....	\$ 18.73	6.33
PAINTER		
Brush & Roller, excluding drywall finishing.....	\$ 30.86	

 WELDERS - Receive rate prescribed for craft performing
 operation to which welding is incidental.
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Unlisted classifications needed for work not included within
 the scope of the classifications listed may be added after
 award only as provided in the labor standards contract clauses
 (29CFR 5.5 (a) (1) (ii)).

 The body of each wage determination lists the classification
 and wage rates that have been found to be prevailing for the
 cited type(s) of construction in the area covered by the wage
 determination. The classifications are listed in alphabetical
 order of "identifiers" that indicate whether the particular
 rate is a union rate (current union negotiated rate for local),
 a survey rate (weighted average rate) or a union average rate
 (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed

in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

From: "MA Prevailing Wage" <prevailingwages@state.ma.us>
To: dlanzillotti@town.arlington.ma.us
Date: 12/02/2015 10:11 AM
Subject: Prevailing wage schedule for Wage Request number :20151201-034

To view and print Weekly Payroll & Statement of Compliance Forms, click on www.mass.gov/dols/pw.

PLEASE NOTE: The attached Prevailing Wage Schedule is valid for 90 days. An Awarding Authority should re-request an up to date Prevailing Wage Schedule if it has NOT opened bids or selected a contractor within 90 days of the issuance date of the attached prevailing wage schedule.

*For MULTI-YEAR projects bid on or after 8/8/08, Awarding Authorities must request an Annual Update to this Prevailing Wage Schedule each year for the duration of the project, no later than two weeks before the anniversary date of the execution of the general contract. Annual updates are not required for projects that last LESS THAN ONE YEAR.

*For CM AT RISK projects (bid pursuant to GL c.149A), Awarding Authorities must request a Prevailing Wage Schedule NOT sooner than 90-days before the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work.

*For MULTI-YEAR CM AT RISK projects, Awarding Authorities must request an Annual Update to this Prevailing Wage Schedule each year for the duration of the project, no later than two weeks before the anniversary date, which is the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to procure construction scopes of work.

Apprentice wages (expressed as dollar figures) and the required benefits are listed on the Prevailing Wage Schedule. For further details, please see opinion letter PW-2010-03-03.16.10 (dated March 18, 2010) at www.mass.gov/dols/pw.

Request Prevailing Wage Rates online at: www.mass.gov/dols/pw.

THIS IS A SYSTEM-GENERATED EMAIL. PLEASE DO NOT REPLY TO THIS EMAIL.
TO CONTACT DLS REGARDING PREVAILING WAGE MATTERS, CALL 617-626-6953.

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Attachments:

File: 20151201-034.pdf Size: 165k Content Type: application/pdf



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

Prevailing Wage Rates

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

CHARLES D. BAKER
Governor

KARYN E. POLITO
Lt. Governor

RONALD L. WALKER, II
Secretary

WILLIAM D MCKINNEY
Director

Awarding Authority: Town of Arlington
Contract Number: 15-57 **City/Town:** ARLINGTON
Description of Work: Jefferson Cutter House Restoration to include but not limited to Roofing and repair of roof drainage system, repair of exterior woodwork, window restoration and exterior painting
Job Location: 611 Mass Ave., Arlington, MA

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$32.75	\$10.41	\$10.08	\$0.00	\$53.24
	06/01/2016	\$33.25	\$10.41	\$10.08	\$0.00	\$53.74
	08/01/2016	\$33.25	\$10.91	\$10.08	\$0.00	\$54.24
	12/01/2016	\$33.25	\$10.91	\$10.89	\$0.00	\$55.05
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$32.82	\$10.41	\$10.08	\$0.00	\$53.31
	06/01/2016	\$33.32	\$10.41	\$10.08	\$0.00	\$53.81
	08/01/2016	\$33.32	\$10.91	\$10.08	\$0.00	\$54.31
	12/01/2016	\$33.32	\$10.91	\$10.89	\$0.00	\$55.12
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$32.94	\$10.41	\$10.08	\$0.00	\$53.43
	06/01/2016	\$33.44	\$10.41	\$10.08	\$0.00	\$53.93
	08/01/2016	\$33.44	\$10.91	\$10.08	\$0.00	\$54.43
	12/01/2016	\$33.44	\$10.91	\$10.89	\$0.00	\$55.24
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$88.29	\$9.80	\$19.23	\$0.00	\$117.32
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	06/01/2016	\$37.35	\$7.30	\$13.20	\$0.00	\$57.85
	12/01/2016	\$38.35	\$7.30	\$13.20	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2015	\$34.38	\$10.40	\$5.95	\$0.00	\$50.73
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	06/01/2016	\$37.35	\$7.30	\$13.20	\$0.00	\$57.85
	12/01/2016	\$38.35	\$7.30	\$13.20	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BOILER MAKER	01/01/2015	\$40.32	\$6.97	\$16.21	\$0.00	\$63.50
BOILERMAKERS LOCAL 29	01/01/2016	\$41.62	\$6.97	\$16.21	\$0.00	\$64.80
	01/01/2017	\$42.92	\$6.97	\$16.21	\$0.00	\$66.10

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$26.21	\$6.97	\$10.54	\$0.00	\$43.72
2	65	\$26.21	\$6.97	\$10.54	\$0.00	\$43.72
3	70	\$28.22	\$6.97	\$11.35	\$0.00	\$46.54
4	75	\$30.24	\$6.97	\$12.16	\$0.00	\$49.37
5	80	\$32.26	\$6.97	\$12.97	\$0.00	\$52.20
6	85	\$34.27	\$6.97	\$13.78	\$0.00	\$55.02
7	90	\$36.29	\$6.97	\$14.59	\$0.00	\$57.85
8	95	\$38.30	\$6.97	\$15.40	\$0.00	\$60.67

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$27.05	\$6.97	\$10.54	\$0.00	\$44.56
2	65	\$27.05	\$6.97	\$10.54	\$0.00	\$44.56
3	70	\$29.13	\$6.97	\$11.35	\$0.00	\$47.45
4	75	\$31.22	\$6.97	\$12.16	\$0.00	\$50.35
5	80	\$33.30	\$6.97	\$12.97	\$0.00	\$53.24
6	85	\$35.38	\$6.97	\$13.78	\$0.00	\$56.13
7	90	\$37.46	\$6.97	\$14.59	\$0.00	\$59.02
8	95	\$39.54	\$6.97	\$15.40	\$0.00	\$61.91

Notes:

Apprentice to Journeyworker Ratio:1:5

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	08/01/2015	\$49.86	\$10.18	\$18.57	\$0.00	\$78.61
BRICKLAYERS LOCAL 3 (BOSTON)	02/01/2016	\$50.43	\$10.18	\$18.57	\$0.00	\$79.18
	08/01/2016	\$51.33	\$10.18	\$18.65	\$0.00	\$80.16
	02/01/2017	\$51.90	\$10.18	\$18.65	\$0.00	\$80.73

Classification Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 08/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.93	\$10.18	\$18.57	\$0.00	\$53.68
2	60	\$29.92	\$10.18	\$18.57	\$0.00	\$58.67
3	70	\$34.90	\$10.18	\$18.57	\$0.00	\$63.65
4	80	\$39.89	\$10.18	\$18.57	\$0.00	\$68.64
5	90	\$44.87	\$10.18	\$18.57	\$0.00	\$73.62

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.22	\$10.18	\$18.57	\$0.00	\$53.97
2	60	\$30.26	\$10.18	\$18.57	\$0.00	\$59.01
3	70	\$35.30	\$10.18	\$18.57	\$0.00	\$64.05
4	80	\$40.34	\$10.18	\$18.57	\$0.00	\$69.09
5	90	\$45.39	\$10.18	\$18.57	\$0.00	\$74.14

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER OPERATING ENGINEERS LOCAL 4	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
CAISSON & UNDERPINNING BOTTOM MAN LABORERS - FOUNDATION AND MARINE	12/01/2015	\$36.95	\$7.30	\$13.40	\$0.00	\$57.65
	06/01/2016	\$37.70	\$7.30	\$13.40	\$0.00	\$58.40
	12/01/2016	\$38.70	\$7.30	\$13.40	\$0.00	\$59.40
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING LABORER LABORERS - FOUNDATION AND MARINE	12/01/2015	\$35.80	\$7.30	\$13.40	\$0.00	\$56.50
	06/01/2016	\$36.55	\$7.30	\$13.40	\$0.00	\$57.25
	12/01/2016	\$37.55	\$7.30	\$13.40	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING TOP MAN LABORERS - FOUNDATION AND MARINE	12/01/2015	\$35.80	\$7.30	\$13.40	\$0.00	\$56.50
	06/01/2016	\$36.55	\$7.30	\$13.40	\$0.00	\$57.25
	12/01/2016	\$37.55	\$7.30	\$13.40	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR LABORERS - ZONE 1	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
CARPENTER CARPENTERS -ZONE 2 (Eastern Massachusetts)	03/01/2015	\$35.75	\$9.80	\$16.48	\$0.00	\$62.03

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CARPENTER - Zone 2 Eastern MA

Effective Date - 03/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.88	\$9.80	\$1.63	\$0.00	\$29.31
2	60	\$21.45	\$9.80	\$1.63	\$0.00	\$32.88
3	70	\$25.03	\$9.80	\$11.59	\$0.00	\$46.42
4	75	\$26.81	\$9.80	\$11.59	\$0.00	\$48.20
5	80	\$28.60	\$9.80	\$13.22	\$0.00	\$51.62
6	80	\$28.60	\$9.80	\$13.22	\$0.00	\$51.62
7	90	\$32.18	\$9.80	\$14.85	\$0.00	\$56.83
8	90	\$32.18	\$9.80	\$14.85	\$0.00	\$56.83

Notes:

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING	07/01/2015	\$45.82	\$10.90	\$18.71	\$1.30	\$76.73
BRICKLAYERS LOCAL 3 (BOSTON)	01/01/2016	\$46.44	\$10.90	\$18.71	\$1.30	\$77.35

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

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.91	\$10.90	\$12.21	\$0.00	\$46.02
2	60	\$27.49	\$10.90	\$13.71	\$1.30	\$53.40
3	65	\$29.78	\$10.90	\$14.71	\$1.30	\$56.69
4	70	\$32.07	\$10.90	\$15.71	\$1.30	\$59.98
5	75	\$34.37	\$10.90	\$16.71	\$1.30	\$63.28
6	80	\$36.66	\$10.90	\$17.71	\$1.30	\$66.57
7	90	\$41.24	\$10.90	\$18.71	\$1.30	\$72.15

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.22	\$10.90	\$12.21	\$0.00	\$46.33
2	60	\$27.86	\$10.90	\$13.71	\$1.30	\$53.77
3	65	\$30.19	\$10.90	\$14.71	\$1.30	\$57.10
4	70	\$32.51	\$10.90	\$15.71	\$1.30	\$60.42
5	75	\$34.83	\$10.90	\$16.71	\$1.30	\$63.74
6	80	\$37.15	\$10.90	\$17.71	\$1.30	\$67.06
7	90	\$41.80	\$10.90	\$18.71	\$1.30	\$72.71

Notes:

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

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CHAIN SAW OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$44.73	\$10.00	\$14.90	\$0.00	\$69.63
	06/01/2016	\$45.48	\$10.00	\$14.90	\$0.00	\$70.38
	12/01/2016	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	06/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
	12/01/2017	\$48.73	\$10.00	\$14.90	\$0.00	\$73.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$30.13	\$10.00	\$14.90	\$0.00	\$55.03
	06/01/2016	\$30.65	\$10.00	\$14.90	\$0.00	\$55.55
	12/01/2016	\$31.52	\$10.00	\$14.90	\$0.00	\$56.42
	06/01/2017	\$32.21	\$10.00	\$14.90	\$0.00	\$57.11
	12/01/2017	\$32.90	\$10.00	\$14.90	\$0.00	\$57.80
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 2</i>	07/01/2015	\$48.56	\$7.85	\$16.10	\$0.00	\$72.51
	01/01/2016	\$49.51	\$7.85	\$16.10	\$0.00	\$73.46
	07/01/2016	\$50.46	\$7.85	\$16.10	\$0.00	\$74.41
	01/01/2017	\$51.41	\$7.85	\$16.10	\$0.00	\$75.36

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.28	\$7.85	\$0.00	\$0.00	\$32.13
2	55	\$26.71	\$7.85	\$3.66	\$0.00	\$38.22
3	60	\$29.14	\$7.85	\$3.99	\$0.00	\$40.98
4	65	\$31.56	\$7.85	\$4.32	\$0.00	\$43.73
5	70	\$33.99	\$7.85	\$14.11	\$0.00	\$55.95
6	75	\$36.42	\$7.85	\$14.44	\$0.00	\$58.71
7	80	\$38.85	\$7.85	\$14.77	\$0.00	\$61.47
8	90	\$43.70	\$7.85	\$15.44	\$0.00	\$66.99

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.76	\$7.85	\$0.00	\$0.00	\$32.61
2	55	\$27.23	\$7.85	\$3.66	\$0.00	\$38.74
3	60	\$29.71	\$7.85	\$3.99	\$0.00	\$41.55
4	65	\$32.18	\$7.85	\$4.32	\$0.00	\$44.35
5	70	\$34.66	\$7.85	\$14.11	\$0.00	\$56.62
6	75	\$37.13	\$7.85	\$14.44	\$0.00	\$59.42
7	80	\$39.61	\$7.85	\$14.77	\$0.00	\$62.23
8	90	\$44.56	\$7.85	\$15.44	\$0.00	\$67.85

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN LABORERS - ZONE 1	12/01/2015	\$36.00	\$7.30	\$13.20	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 1	12/01/2015	\$37.00	\$7.30	\$13.20	\$0.00	\$57.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS LABORERS - ZONE 1	12/01/2015	\$36.75	\$7.30	\$13.20	\$0.00	\$57.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 1	12/01/2015	\$37.00	\$7.30	\$13.20	\$0.00	\$57.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR LABORERS - ZONE 1	12/01/2015	\$36.75	\$7.30	\$13.20	\$0.00	\$57.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER LABORERS - ZONE 1	12/01/2015	\$36.00	\$7.30	\$13.20	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$58.86	\$9.80	\$19.23	\$0.00	\$87.89
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$42.04	\$9.80	\$19.23	\$0.00	\$71.07
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$63.06	\$9.80	\$19.23	\$0.00	\$92.09
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$88.23	\$9.80	\$19.23	\$0.00	\$117.26
DRAWBRIDGE OPERATOR (Construction) <i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$45.67	\$13.00	\$15.89	\$0.00	\$74.56
	03/01/2016	\$46.17	\$13.00	\$16.39	\$0.00	\$75.56
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$45.67	\$13.00	\$15.89	\$0.00	\$74.56
	03/01/2016	\$46.17	\$13.00	\$16.39	\$0.00	\$75.56

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELECTRICIAN - Local 103

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.27	\$13.00	\$0.55	\$0.00	\$31.82
2	40	\$18.27	\$13.00	\$0.55	\$0.00	\$31.82
3	45	\$20.55	\$13.00	\$11.86	\$0.00	\$45.41
4	45	\$20.55	\$13.00	\$11.86	\$0.00	\$45.41
5	50	\$22.84	\$13.00	\$12.23	\$0.00	\$48.07
6	55	\$25.12	\$13.00	\$12.58	\$0.00	\$50.70
7	60	\$27.40	\$13.00	\$12.95	\$0.00	\$53.35
8	65	\$29.69	\$13.00	\$13.32	\$0.00	\$56.01
9	70	\$31.97	\$13.00	\$13.69	\$0.00	\$58.66
10	75	\$34.25	\$13.00	\$14.06	\$0.00	\$61.31

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.47	\$13.00	\$0.55	\$0.00	\$32.02
2	40	\$18.47	\$13.00	\$0.55	\$0.00	\$32.02
3	45	\$20.78	\$13.00	\$11.84	\$0.00	\$45.62
4	45	\$20.78	\$13.00	\$11.84	\$0.00	\$45.62
5	50	\$23.09	\$13.00	\$12.71	\$0.00	\$48.80
6	55	\$25.39	\$13.00	\$13.07	\$0.00	\$51.46
7	60	\$27.70	\$13.00	\$13.39	\$0.00	\$54.09
8	65	\$30.01	\$13.00	\$13.81	\$0.00	\$56.82
9	70	\$32.32	\$13.00	\$14.18	\$0.00	\$59.50
10	75	\$34.63	\$13.00	\$14.55	\$0.00	\$62.18

Notes :

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

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR	01/01/2015	\$53.30	\$13.58	\$14.21	\$0.00	\$81.09
ELEVATOR CONSTRUCTORS LOCAL 4	01/01/2016	\$54.53	\$14.43	\$14.96	\$0.00	\$83.92
	01/01/2017	\$55.86	\$15.28	\$15.71	\$0.00	\$86.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELEVATOR CONSTRUCTOR - Local 4

Effective Date - 01/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.65	\$13.58	\$0.00	\$0.00	\$40.23
2	55	\$29.32	\$13.58	\$14.21	\$0.00	\$57.11
3	65	\$34.65	\$13.58	\$14.21	\$0.00	\$62.44
4	70	\$37.31	\$13.58	\$14.21	\$0.00	\$65.10
5	80	\$42.64	\$13.58	\$14.21	\$0.00	\$70.43

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.27	\$14.43	\$0.00	\$0.00	\$41.70
2	55	\$29.99	\$14.43	\$14.96	\$0.00	\$59.38
3	65	\$35.44	\$14.43	\$14.96	\$0.00	\$64.83
4	70	\$38.17	\$14.43	\$14.96	\$0.00	\$67.56
5	80	\$43.62	\$14.43	\$14.96	\$0.00	\$73.01

Notes:

Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

Apprentice to Journeyworker Ratio:1:1

ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2015	\$37.31	\$13.58	\$14.21	\$0.00	\$65.10
	01/01/2016	\$38.17	\$14.43	\$14.96	\$0.00	\$67.56
	01/01/2017	\$39.10	\$15.28	\$15.71	\$0.00	\$70.09
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2015	\$40.49	\$10.00	\$14.55	\$0.00	\$65.04
	05/01/2016	\$41.38	\$10.00	\$14.55	\$0.00	\$65.93
	11/01/2016	\$41.97	\$10.00	\$14.55	\$0.00	\$66.52
	05/01/2017	\$42.85	\$10.00	\$14.55	\$0.00	\$67.40
	11/01/2017	\$43.58	\$10.00	\$14.55	\$0.00	\$68.13
	05/01/2018	\$44.29	\$10.00	\$14.55	\$0.00	\$68.84
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2015	\$41.93	\$10.00	\$14.55	\$0.00	\$66.48
	05/01/2016	\$42.82	\$10.00	\$14.55	\$0.00	\$67.37
	11/01/2016	\$43.42	\$10.00	\$14.55	\$0.00	\$67.97
	05/01/2017	\$44.31	\$10.00	\$14.55	\$0.00	\$68.86
	11/01/2017	\$45.04	\$10.00	\$14.55	\$0.00	\$69.59
	05/01/2018	\$45.76	\$10.00	\$14.55	\$0.00	\$70.31
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>	11/01/2015	\$21.71	\$10.00	\$14.55	\$0.00	\$46.26
	05/01/2016	\$22.23	\$10.00	\$14.55	\$0.00	\$46.78
	11/01/2016	\$22.58	\$10.00	\$14.55	\$0.00	\$47.13
	05/01/2017	\$23.11	\$10.00	\$14.55	\$0.00	\$47.66
	11/01/2017	\$23.53	\$10.00	\$14.55	\$0.00	\$48.08
	05/01/2018	\$23.96	\$10.00	\$14.55	\$0.00	\$48.51
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$45.67	\$13.00	\$15.89	\$0.00	\$74.56
	03/01/2016	\$46.17	\$13.00	\$16.39	\$0.00	\$75.56
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE <i>LOCAL 103</i> / COMMISSIONING <i>ELECTRICIANS</i>	09/01/2015	\$34.25	\$13.00	\$14.06	\$0.00	\$61.31
	03/01/2016	\$34.63	\$13.00	\$14.55	\$0.00	\$62.18
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$36.34	\$10.00	\$14.90	\$0.00	\$61.24
	06/01/2016	\$36.96	\$10.00	\$14.90	\$0.00	\$61.86
	12/01/2016	\$38.00	\$10.00	\$14.90	\$0.00	\$62.90
	06/01/2017	\$38.84	\$10.00	\$14.90	\$0.00	\$63.74
	12/01/2017	\$39.67	\$10.00	\$14.90	\$0.00	\$64.57
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER <i>LABORERS - ZONE 1</i>	12/01/2015	\$20.50	\$7.30	\$13.20	\$0.00	\$41.00
	06/01/2016	\$20.50	\$7.30	\$13.20	\$0.00	\$41.00
	12/01/2016	\$20.50	\$7.30	\$13.20	\$0.00	\$41.00
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE 1</i>	09/01/2015	\$41.59	\$9.80	\$17.53	\$0.00	\$68.92

Apprentice - FLOORCOVERER - Local 2168 Zone 1

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.80	\$9.80	\$1.79	\$0.00	\$32.39
2	55	\$22.87	\$9.80	\$1.79	\$0.00	\$34.46
3	60	\$24.95	\$9.80	\$12.16	\$0.00	\$46.91
4	65	\$27.03	\$9.80	\$12.16	\$0.00	\$48.99
5	70	\$29.11	\$9.80	\$13.95	\$0.00	\$52.86
6	75	\$31.19	\$9.80	\$13.95	\$0.00	\$54.94
7	80	\$33.27	\$9.80	\$15.74	\$0.00	\$58.81
8	85	\$35.35	\$9.80	\$15.74	\$0.00	\$60.89

Notes:

Steps are 750 hrs.

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>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$30.13	\$10.00	\$14.90	\$0.00	\$55.03
	06/01/2016	\$30.65	\$10.00	\$14.90	\$0.00	\$55.55
	12/01/2016	\$31.52	\$10.00	\$14.90	\$0.00	\$56.42
	06/01/2017	\$32.21	\$10.00	\$14.90	\$0.00	\$57.11
	12/01/2017	\$32.90	\$10.00	\$14.90	\$0.00	\$57.80

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 2)</i>	07/01/2015	\$38.06	\$7.85	\$16.10	\$0.00	\$62.01
	01/01/2016	\$39.01	\$7.85	\$16.10	\$0.00	\$62.96
	07/01/2016	\$39.96	\$7.85	\$16.10	\$0.00	\$63.91
	01/01/2017	\$40.91	\$7.85	\$16.10	\$0.00	\$64.86

Apprentice - GLAZIER - Local 35 Zone 2

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.03	\$7.85	\$0.00	\$0.00	\$26.88
2	55	\$20.93	\$7.85	\$3.66	\$0.00	\$32.44
3	60	\$22.84	\$7.85	\$3.99	\$0.00	\$34.68
4	65	\$24.74	\$7.85	\$4.32	\$0.00	\$36.91
5	70	\$26.64	\$7.85	\$14.11	\$0.00	\$48.60
6	75	\$28.55	\$7.85	\$14.44	\$0.00	\$50.84
7	80	\$30.45	\$7.85	\$14.77	\$0.00	\$53.07
8	90	\$34.25	\$7.85	\$15.44	\$0.00	\$57.54

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.51	\$7.85	\$0.00	\$0.00	\$27.36
2	55	\$21.46	\$7.85	\$3.66	\$0.00	\$32.97
3	60	\$23.41	\$7.85	\$3.99	\$0.00	\$35.25
4	65	\$25.36	\$7.85	\$4.32	\$0.00	\$37.53
5	70	\$27.31	\$7.85	\$14.11	\$0.00	\$49.27
6	75	\$29.26	\$7.85	\$14.44	\$0.00	\$51.55
7	80	\$31.21	\$7.85	\$14.77	\$0.00	\$53.83
8	90	\$35.11	\$7.85	\$15.44	\$0.00	\$58.40

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HOISTING ENGINEER/CRANES/GRADALLS OPERATING ENGINEERS LOCAL 4	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$24.05	\$10.00	\$0.00	\$0.00	\$34.05
2	60	\$26.24	\$10.00	\$14.90	\$0.00	\$51.14
3	65	\$28.42	\$10.00	\$14.90	\$0.00	\$53.32
4	70	\$30.61	\$10.00	\$14.90	\$0.00	\$55.51
5	75	\$32.80	\$10.00	\$14.90	\$0.00	\$57.70
6	80	\$34.98	\$10.00	\$14.90	\$0.00	\$59.88
7	85	\$37.17	\$10.00	\$14.90	\$0.00	\$62.07
8	90	\$39.36	\$10.00	\$14.90	\$0.00	\$64.26

Effective Date - 06/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$24.46	\$10.00	\$0.00	\$0.00	\$34.46
2	60	\$26.69	\$10.00	\$14.90	\$0.00	\$51.59
3	65	\$28.91	\$10.00	\$14.90	\$0.00	\$53.81
4	70	\$31.14	\$10.00	\$14.90	\$0.00	\$56.04
5	75	\$33.36	\$10.00	\$14.90	\$0.00	\$58.26
6	80	\$35.58	\$10.00	\$14.90	\$0.00	\$60.48
7	85	\$37.81	\$10.00	\$14.90	\$0.00	\$62.71
8	90	\$40.03	\$10.00	\$14.90	\$0.00	\$64.93

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 - A	08/01/2015	\$43.31	\$10.20	\$21.48	\$2.25	\$77.24
	02/01/2016	\$44.31	\$10.20	\$21.48	\$2.25	\$78.24
	08/01/2016	\$45.46	\$10.20	\$21.48	\$2.25	\$79.39
	02/01/2017	\$46.56	\$10.20	\$21.48	\$2.25	\$80.49
	08/01/2017	\$47.66	\$10.20	\$21.48	\$2.25	\$81.59
	02/01/2018	\$48.81	\$10.20	\$21.48	\$2.25	\$82.74

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 103	09/01/2015	\$45.67	\$13.00	\$15.89	\$0.00	\$74.56
	03/01/2016	\$46.17	\$13.00	\$16.39	\$0.00	\$75.56

For apprentice rates see "Apprentice- ELECTRICIAN"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 - A	08/01/2015	\$43.31	\$10.20	\$21.48	\$2.25	\$77.24
	02/01/2016	\$44.31	\$10.20	\$21.48	\$2.25	\$78.24
	08/01/2016	\$45.46	\$10.20	\$21.48	\$2.25	\$79.39
	02/01/2017	\$46.56	\$10.20	\$21.48	\$2.25	\$80.49
	08/01/2017	\$47.66	\$10.20	\$21.48	\$2.25	\$81.59
	02/01/2018	\$48.81	\$10.20	\$21.48	\$2.25	\$82.74
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (TESTING AND BALANCING - WATER) PIPEFITTERS LOCAL 537	09/01/2015	\$49.69	\$9.70	\$16.89	\$0.00	\$76.28
	03/01/2016	\$50.69	\$9.70	\$16.89	\$0.00	\$77.28
	09/01/2016	\$51.69	\$9.70	\$16.89	\$0.00	\$78.28
	03/01/2017	\$52.69	\$9.70	\$16.89	\$0.00	\$79.28
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC PIPEFITTERS LOCAL 537	09/01/2015	\$49.69	\$9.70	\$16.89	\$0.00	\$76.28
	03/01/2016	\$50.69	\$9.70	\$16.89	\$0.00	\$77.28
	09/01/2016	\$51.69	\$9.70	\$16.89	\$0.00	\$78.28
	03/01/2017	\$52.69	\$9.70	\$16.89	\$0.00	\$79.28
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS LABORERS - ZONE 1	12/01/2015	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	06/01/2016	\$37.35	\$7.30	\$13.20	\$0.00	\$57.85
	12/01/2016	\$38.35	\$7.30	\$13.20	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	09/01/2015	\$43.81	\$11.50	\$13.80	\$0.00	\$69.11
	09/01/2016	\$45.81	\$11.50	\$13.80	\$0.00	\$71.11
	09/01/2017	\$47.81	\$11.50	\$13.80	\$0.00	\$73.11
	09/01/2018	\$50.06	\$11.50	\$13.80	\$0.00	\$75.36
	09/01/2019	\$52.56	\$11.50	\$13.80	\$0.00	\$77.86

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

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.91	\$11.50	\$10.05	\$0.00	\$43.46
2	60	\$26.29	\$11.50	\$10.80	\$0.00	\$48.59
3	70	\$30.67	\$11.50	\$11.55	\$0.00	\$53.72
4	80	\$35.05	\$11.50	\$12.30	\$0.00	\$58.85

Effective Date - 09/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.91	\$11.50	\$10.05	\$0.00	\$44.46
2	60	\$27.49	\$11.50	\$10.80	\$0.00	\$49.79
3	70	\$32.07	\$11.50	\$11.55	\$0.00	\$55.12
4	80	\$36.65	\$11.50	\$12.30	\$0.00	\$60.45

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (BOSTON AREA)</i>	09/16/2015	\$42.40	\$7.80	\$20.85	\$0.00	\$71.05
	03/16/2016	\$43.40	\$7.80	\$20.85	\$0.00	\$72.05
	09/16/2016	\$44.05	\$7.80	\$20.85	\$0.00	\$72.70
	03/16/2017	\$44.65	\$7.80	\$20.85	\$0.00	\$73.30

Apprentice - IRONWORKER - Local 7 Boston

Effective Date - 09/16/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$25.44	\$7.80	\$20.85	\$0.00	\$54.09
2	70	\$29.68	\$7.80	\$20.85	\$0.00	\$58.33
3	75	\$31.80	\$7.80	\$20.85	\$0.00	\$60.45
4	80	\$33.92	\$7.80	\$20.85	\$0.00	\$62.57
5	85	\$36.04	\$7.80	\$20.85	\$0.00	\$64.69
6	90	\$38.16	\$7.80	\$20.85	\$0.00	\$66.81

Effective Date - 03/16/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$26.04	\$7.80	\$20.85	\$0.00	\$54.69
2	70	\$30.38	\$7.80	\$20.85	\$0.00	\$59.03
3	75	\$32.55	\$7.80	\$20.85	\$0.00	\$61.20
4	80	\$34.72	\$7.80	\$20.85	\$0.00	\$63.37
5	85	\$36.89	\$7.80	\$20.85	\$0.00	\$65.54
6	90	\$39.06	\$7.80	\$20.85	\$0.00	\$67.71

Notes:

** Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:**

JACKHAMMER & PAVING BREAKER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
LABORER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER - Zone 1

Effective Date - 12/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.51	\$7.30	\$13.20	\$0.00	\$42.01
2	70	\$25.10	\$7.30	\$13.20	\$0.00	\$45.60
3	80	\$28.68	\$7.30	\$13.20	\$0.00	\$49.18
4	90	\$32.27	\$7.30	\$13.20	\$0.00	\$52.77

Effective Date - 06/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.96	\$7.30	\$13.20	\$0.00	\$42.46
2	70	\$25.62	\$7.30	\$13.20	\$0.00	\$46.12
3	80	\$29.28	\$7.30	\$13.20	\$0.00	\$49.78
4	90	\$32.94	\$7.30	\$13.20	\$0.00	\$53.44

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.00	\$7.30	\$13.20	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10
This classification applies to all tree work associated with the removal of standing trees, and trimming and removal of branches and limbs when the work is not done for a utility company for the purpose of operation, maintenance or repair of utility company equipment. For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	08/01/2015	\$38.08	\$10.18	\$17.25	\$0.00	\$65.51
	02/01/2016	\$38.53	\$10.18	\$17.25	\$0.00	\$65.96
	08/01/2016	\$39.23	\$10.18	\$17.33	\$0.00	\$66.74
	02/01/2017	\$39.69	\$10.18	\$17.33	\$0.00	\$67.20

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

Effective Date - 08/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.04	\$10.18	\$17.25	\$0.00	\$46.47
2	60	\$22.85	\$10.18	\$17.25	\$0.00	\$50.28
3	70	\$26.66	\$10.18	\$17.25	\$0.00	\$54.09
4	80	\$30.46	\$10.18	\$17.25	\$0.00	\$57.89
5	90	\$34.27	\$10.18	\$17.25	\$0.00	\$61.70

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.27	\$10.18	\$17.25	\$0.00	\$46.70
2	60	\$23.12	\$10.18	\$17.25	\$0.00	\$50.55
3	70	\$26.97	\$10.18	\$17.25	\$0.00	\$54.40
4	80	\$30.82	\$10.18	\$17.25	\$0.00	\$58.25
5	90	\$34.68	\$10.18	\$17.25	\$0.00	\$62.11

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS, TILELAYERS & TERRAZZO MECH <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	08/01/2015	\$49.90	\$10.18	\$18.57	\$0.00	\$78.65
	02/01/2016	\$50.47	\$10.18	\$18.57	\$0.00	\$79.22
	08/01/2016	\$51.37	\$10.18	\$18.65	\$0.00	\$80.20
	02/01/2017	\$51.94	\$10.18	\$18.65	\$0.00	\$80.77

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 08/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.95	\$10.18	\$18.57	\$0.00	\$53.70
2	60	\$29.94	\$10.18	\$18.57	\$0.00	\$58.69
3	70	\$34.93	\$10.18	\$18.57	\$0.00	\$63.68
4	80	\$39.92	\$10.18	\$18.57	\$0.00	\$68.67
5	90	\$44.91	\$10.18	\$18.57	\$0.00	\$73.66

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.24	\$10.18	\$18.57	\$0.00	\$53.99
2	60	\$30.28	\$10.18	\$18.57	\$0.00	\$59.03
3	70	\$35.33	\$10.18	\$18.57	\$0.00	\$64.08
4	80	\$40.38	\$10.18	\$18.57	\$0.00	\$69.13
5	90	\$45.42	\$10.18	\$18.57	\$0.00	\$74.17

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) OPERATING ENGINEERS LOCAL 4	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE OPERATING ENGINEERS LOCAL 4	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 1) MILLWRIGHTS LOCAL 1121 - Zone 1	04/01/2015	\$37.64	\$9.80	\$16.21	\$0.00	\$63.65
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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Apprentice - MILLWRIGHT - Local 1121 Zone 1

Effective Date - 04/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$20.70	\$9.80	\$4.48	\$0.00	\$34.98
2	65	\$24.47	\$9.80	\$13.36	\$0.00	\$47.63
3	75	\$28.23	\$9.80	\$14.18	\$0.00	\$52.21
4	85	\$31.99	\$9.80	\$14.99	\$0.00	\$56.78

Notes:

Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER LABORERS - ZONE 1	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES,GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2015	\$22.27	\$10.00	\$14.90	\$0.00	\$47.17
	06/01/2016	\$22.66	\$10.00	\$14.90	\$0.00	\$47.56
	12/01/2016	\$23.31	\$10.00	\$14.90	\$0.00	\$48.21
	06/01/2017	\$23.82	\$10.00	\$14.90	\$0.00	\$48.72
	12/01/2017	\$24.34	\$10.00	\$14.90	\$0.00	\$49.24

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2015	\$26.08	\$10.00	\$14.90	\$0.00	\$50.98
	06/01/2016	\$26.54	\$10.00	\$14.90	\$0.00	\$51.44
	12/01/2016	\$27.29	\$10.00	\$14.90	\$0.00	\$52.19
	06/01/2017	\$27.89	\$10.00	\$14.90	\$0.00	\$52.79
	12/01/2017	\$28.50	\$10.00	\$14.90	\$0.00	\$53.40

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 - ZONE 2	07/01/2015	\$48.56	\$7.85	\$16.10	\$0.00	\$72.51
	01/01/2016	\$49.51	\$7.85	\$16.10	\$0.00	\$73.46
	07/01/2016	\$50.46	\$7.85	\$16.10	\$0.00	\$74.41
	01/01/2017	\$51.41	\$7.85	\$16.10	\$0.00	\$75.36

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.28	\$7.85	\$0.00	\$0.00	\$32.13
2	55	\$26.71	\$7.85	\$3.66	\$0.00	\$38.22
3	60	\$29.14	\$7.85	\$3.99	\$0.00	\$40.98
4	65	\$31.56	\$7.85	\$4.32	\$0.00	\$43.73
5	70	\$33.99	\$7.85	\$14.11	\$0.00	\$55.95
6	75	\$36.42	\$7.85	\$14.44	\$0.00	\$58.71
7	80	\$38.85	\$7.85	\$14.77	\$0.00	\$61.47
8	90	\$43.70	\$7.85	\$15.44	\$0.00	\$66.99

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.76	\$7.85	\$0.00	\$0.00	\$32.61
2	55	\$27.23	\$7.85	\$3.66	\$0.00	\$38.74
3	60	\$29.71	\$7.85	\$3.99	\$0.00	\$41.55
4	65	\$32.18	\$7.85	\$4.32	\$0.00	\$44.35
5	70	\$34.66	\$7.85	\$14.11	\$0.00	\$56.62
6	75	\$37.13	\$7.85	\$14.44	\$0.00	\$59.42
7	80	\$39.61	\$7.85	\$14.77	\$0.00	\$62.23
8	90	\$44.56	\$7.85	\$15.44	\$0.00	\$67.85

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	07/01/2015	\$39.46	\$7.85	\$16.10	\$0.00	\$63.41
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2	01/01/2016	\$40.41	\$7.85	\$16.10	\$0.00	\$64.36
	07/01/2016	\$41.36	\$7.85	\$16.10	\$0.00	\$65.31
	01/01/2017	\$42.31	\$7.85	\$16.10	\$0.00	\$66.26

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.73	\$7.85	\$0.00	\$0.00	\$27.58
2	55	\$21.70	\$7.85	\$3.66	\$0.00	\$33.21
3	60	\$23.68	\$7.85	\$3.99	\$0.00	\$35.52
4	65	\$25.65	\$7.85	\$4.32	\$0.00	\$37.82
5	70	\$27.62	\$7.85	\$14.11	\$0.00	\$49.58
6	75	\$29.60	\$7.85	\$14.44	\$0.00	\$51.89
7	80	\$31.57	\$7.85	\$14.77	\$0.00	\$54.19
8	90	\$35.51	\$7.85	\$15.44	\$0.00	\$58.80

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.21	\$7.85	\$0.00	\$0.00	\$28.06
2	55	\$22.23	\$7.85	\$3.66	\$0.00	\$33.74
3	60	\$24.25	\$7.85	\$3.99	\$0.00	\$36.09
4	65	\$26.27	\$7.85	\$4.32	\$0.00	\$38.44
5	70	\$28.29	\$7.85	\$14.11	\$0.00	\$50.25
6	75	\$30.31	\$7.85	\$14.44	\$0.00	\$52.60
7	80	\$32.33	\$7.85	\$14.77	\$0.00	\$54.95
8	90	\$36.37	\$7.85	\$15.44	\$0.00	\$59.66

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	07/01/2015	\$37.52	\$7.85	\$16.10	\$0.00	\$61.47
PAINTERS LOCAL 35 - ZONE 2	01/01/2016	\$38.47	\$7.85	\$16.10	\$0.00	\$62.42
	07/01/2016	\$39.42	\$7.85	\$16.10	\$0.00	\$63.37
	01/01/2017	\$40.37	\$7.85	\$16.10	\$0.00	\$64.32

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.76	\$7.85	\$0.00	\$0.00	\$26.61
2	55	\$20.64	\$7.85	\$3.66	\$0.00	\$32.15
3	60	\$22.51	\$7.85	\$3.99	\$0.00	\$34.35
4	65	\$24.39	\$7.85	\$4.32	\$0.00	\$36.56
5	70	\$26.26	\$7.85	\$14.11	\$0.00	\$48.22
6	75	\$28.14	\$7.85	\$14.44	\$0.00	\$50.43
7	80	\$30.02	\$7.85	\$14.77	\$0.00	\$52.64
8	90	\$33.77	\$7.85	\$15.44	\$0.00	\$57.06

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.24	\$7.85	\$0.00	\$0.00	\$27.09
2	55	\$21.16	\$7.85	\$3.66	\$0.00	\$32.67
3	60	\$23.08	\$7.85	\$3.99	\$0.00	\$34.92
4	65	\$25.01	\$7.85	\$4.32	\$0.00	\$37.18
5	70	\$26.93	\$7.85	\$14.11	\$0.00	\$48.89
6	75	\$28.85	\$7.85	\$14.44	\$0.00	\$51.14
7	80	\$30.78	\$7.85	\$14.77	\$0.00	\$53.40
8	90	\$34.62	\$7.85	\$15.44	\$0.00	\$57.91

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (TRAFFIC MARKINGS)	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
LABORERS - ZONE 1	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10
For Apprentice rates see "Apprentice- LABORER"						
PAINTER / TAPER (BRUSH, NEW) *	07/01/2015	\$38.06	\$7.85	\$16.10	\$0.00	\$62.01
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2	01/01/2016	\$39.01	\$7.85	\$16.10	\$0.00	\$62.96
	07/01/2016	\$39.96	\$7.85	\$16.10	\$0.00	\$63.91
	01/01/2017	\$40.91	\$7.85	\$16.10	\$0.00	\$64.86

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.03	\$7.85	\$0.00	\$0.00	\$26.88
2	55	\$20.93	\$7.85	\$3.66	\$0.00	\$32.44
3	60	\$22.84	\$7.85	\$3.99	\$0.00	\$34.68
4	65	\$24.74	\$7.85	\$4.32	\$0.00	\$36.91
5	70	\$26.64	\$7.85	\$14.11	\$0.00	\$48.60
6	75	\$28.55	\$7.85	\$14.44	\$0.00	\$50.84
7	80	\$30.45	\$7.85	\$14.77	\$0.00	\$53.07
8	90	\$34.25	\$7.85	\$15.44	\$0.00	\$57.54

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.51	\$7.85	\$0.00	\$0.00	\$27.36
2	55	\$21.46	\$7.85	\$3.66	\$0.00	\$32.97
3	60	\$23.41	\$7.85	\$3.99	\$0.00	\$35.25
4	65	\$25.36	\$7.85	\$4.32	\$0.00	\$37.53
5	70	\$27.31	\$7.85	\$14.11	\$0.00	\$49.27
6	75	\$29.26	\$7.85	\$14.44	\$0.00	\$51.55
7	80	\$31.21	\$7.85	\$14.77	\$0.00	\$53.83
8	90	\$35.11	\$7.85	\$15.44	\$0.00	\$58.40

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	07/01/2015	\$36.12	\$7.85	\$16.10	\$0.00	\$60.07
PAINTERS LOCAL 35 - ZONE 2	01/01/2016	\$37.07	\$7.85	\$16.10	\$0.00	\$61.02
	07/01/2016	\$38.02	\$7.85	\$16.10	\$0.00	\$61.97
	01/01/2017	\$38.97	\$7.85	\$16.10	\$0.00	\$62.92

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT

Effective Date - 07/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.06	\$7.85	\$0.00	\$0.00	\$25.91
2	55	\$19.87	\$7.85	\$3.66	\$0.00	\$31.38
3	60	\$21.67	\$7.85	\$3.99	\$0.00	\$33.51
4	65	\$23.48	\$7.85	\$4.32	\$0.00	\$35.65
5	70	\$25.28	\$7.85	\$14.11	\$0.00	\$47.24
6	75	\$27.09	\$7.85	\$14.44	\$0.00	\$49.38
7	80	\$28.90	\$7.85	\$14.77	\$0.00	\$51.52
8	90	\$32.51	\$7.85	\$15.44	\$0.00	\$55.80

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.54	\$7.85	\$0.00	\$0.00	\$26.39
2	55	\$20.39	\$7.85	\$3.66	\$0.00	\$31.90
3	60	\$22.24	\$7.85	\$3.99	\$0.00	\$34.08
4	65	\$24.10	\$7.85	\$4.32	\$0.00	\$36.27
5	70	\$25.95	\$7.85	\$14.11	\$0.00	\$47.91
6	75	\$27.80	\$7.85	\$14.44	\$0.00	\$50.09
7	80	\$29.66	\$7.85	\$14.77	\$0.00	\$52.28
8	90	\$33.36	\$7.85	\$15.44	\$0.00	\$56.65

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PANEL & PICKUP TRUCKS DRIVER <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$32.58	\$10.41	\$10.08	\$0.00	\$53.07
	06/01/2016	\$33.08	\$10.41	\$10.08	\$0.00	\$53.57
	08/01/2016	\$33.08	\$10.91	\$10.08	\$0.00	\$54.07
	12/01/2016	\$33.08	\$10.91	\$10.89	\$0.00	\$54.88
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$42.04	\$9.80	\$19.23	\$0.00	\$71.07
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$42.04	\$9.80	\$19.23	\$0.00	\$71.07

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PILE DRIVER - Local 56 Zone 1

Effective Date - 08/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.02	\$9.80	\$19.23	\$0.00	\$50.05
2	60	\$25.22	\$9.80	\$19.23	\$0.00	\$54.25
3	70	\$29.43	\$9.80	\$19.23	\$0.00	\$58.46
4	75	\$31.53	\$9.80	\$19.23	\$0.00	\$60.56
5	80	\$33.63	\$9.80	\$19.23	\$0.00	\$62.66
6	80	\$33.63	\$9.80	\$19.23	\$0.00	\$62.66
7	90	\$37.84	\$9.80	\$19.23	\$0.00	\$66.87
8	90	\$37.84	\$9.80	\$19.23	\$0.00	\$66.87

Notes:

Apprentice to Journeyworker Ratio:1:3

PIPEFITTER & STEAMFITTER	09/01/2015	\$49.69	\$9.70	\$16.89	\$0.00	\$76.28
PIPEFITTERS LOCAL 537	03/01/2016	\$50.69	\$9.70	\$16.89	\$0.00	\$77.28
	09/01/2016	\$51.69	\$9.70	\$16.89	\$0.00	\$78.28
	03/01/2017	\$52.69	\$9.70	\$16.89	\$0.00	\$79.28

Apprentice - PIPEFITTER - Local 537

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.88	\$9.70	\$7.50	\$0.00	\$37.08
2	45	\$22.36	\$9.70	\$16.89	\$0.00	\$48.95
3	60	\$29.81	\$9.70	\$16.89	\$0.00	\$56.40
4	70	\$34.78	\$9.70	\$16.89	\$0.00	\$61.37
5	80	\$39.75	\$9.70	\$16.89	\$0.00	\$66.34

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$20.28	\$9.70	\$7.50	\$0.00	\$37.48
2	45	\$22.81	\$9.70	\$16.89	\$0.00	\$49.40
3	60	\$30.41	\$9.70	\$16.89	\$0.00	\$57.00
4	70	\$35.48	\$9.70	\$16.89	\$0.00	\$62.07
5	80	\$40.55	\$9.70	\$16.89	\$0.00	\$67.14

Notes:

**** 1:3; 3:15; 1:10 thereafter / Steps are 1 yr.**

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

Apprentice to Journeyworker Ratio:**

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIPELAYER LABORERS - ZONE 1	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
PLUMBERS & GASFITTERS PLUMBERS & GASFITTERS LOCAL 12	09/01/2015	\$50.46	\$10.82	\$15.14	\$0.00	\$76.42
	03/01/2016	\$51.61	\$10.82	\$15.14	\$0.00	\$77.57
	09/01/2016	\$52.66	\$10.82	\$15.14	\$0.00	\$78.62
	03/01/2017	\$53.66	\$10.82	\$15.14	\$0.00	\$79.62

Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.66	\$10.82	\$5.63	\$0.00	\$34.11
2	40	\$20.18	\$10.82	\$6.37	\$0.00	\$37.37
3	55	\$27.75	\$10.82	\$8.56	\$0.00	\$47.13
4	65	\$32.80	\$10.82	\$10.03	\$0.00	\$53.65
5	75	\$37.85	\$10.82	\$11.48	\$0.00	\$60.15

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$18.06	\$10.82	\$5.61	\$0.00	\$34.49
2	40	\$20.64	\$10.82	\$6.36	\$0.00	\$37.82
3	55	\$28.39	\$10.82	\$8.56	\$0.00	\$47.77
4	65	\$33.55	\$10.82	\$10.02	\$0.00	\$54.39
5	75	\$38.71	\$10.82	\$11.48	\$0.00	\$61.01

Notes:

** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
Step4 with lic\$56.90 Step5 with lic\$63.40

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.) PIPEFITTERS LOCAL 537	09/01/2015	\$49.69	\$9.70	\$16.89	\$0.00	\$76.28
	03/01/2016	\$50.69	\$9.70	\$16.89	\$0.00	\$77.28
	09/01/2016	\$51.69	\$9.70	\$16.89	\$0.00	\$78.28
	03/01/2017	\$52.69	\$9.70	\$16.89	\$0.00	\$79.28

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

PNEUMATIC DRILL/TOOL OPERATOR LABORERS - ZONE 1	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

POWDERMAN & BLASTER LABORERS - ZONE 1	12/01/2015	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	06/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10
	12/01/2016	\$38.60	\$7.30	\$13.20	\$0.00	\$59.10

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$30.13	\$10.00	\$14.90	\$0.00	\$55.03
	06/01/2016	\$30.65	\$10.00	\$14.90	\$0.00	\$55.55
	12/01/2016	\$31.52	\$10.00	\$14.90	\$0.00	\$56.42
	06/01/2017	\$32.21	\$10.00	\$14.90	\$0.00	\$57.11
	12/01/2017	\$32.90	\$10.00	\$14.90	\$0.00	\$57.80
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY MIX CONCRETE DRIVERS after 4/30/10 (Drivers Hired After 4/30/2010) <i>TEAMSTERS LOCAL 25c</i>	07/01/2015	\$27.88	\$7.98	\$8.92	\$0.00	\$44.78
	05/01/2016	\$28.03	\$7.98	\$9.31	\$0.00	\$45.32
	07/01/2016	\$28.03	\$8.23	\$9.31	\$0.00	\$45.57
	05/01/2017	\$28.18	\$8.23	\$9.72	\$0.00	\$46.13
	07/01/2017	\$28.18	\$8.48	\$9.72	\$0.00	\$46.38
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 25c</i>	07/01/2015	\$29.18	\$7.98	\$8.92	\$0.00	\$46.08
	05/01/2016	\$29.33	\$7.98	\$9.31	\$0.00	\$46.62
	07/01/2016	\$29.33	\$8.23	\$9.31	\$0.00	\$46.87
	05/01/2017	\$29.48	\$8.23	\$9.72	\$0.00	\$47.43
	07/01/2017	\$29.48	\$8.48	\$9.72	\$0.00	\$47.68
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RESIDENTIAL WOOD FRAME (All Other Work) <i>CARPENTERS -ZONE 2 (Residential Wood)</i>	04/01/2011	\$24.24	\$8.67	\$15.51	\$0.00	\$48.42
RESIDENTIAL WOOD FRAME CARPENTER ** ** The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement. <i>CARPENTERS -ZONE 2 (Residential Wood)</i> As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.	05/01/2011	\$24.24	\$6.34	\$6.23	\$0.00	\$36.81

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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Apprentice - CARPENTER (Residential Wood Frame) - Zone 2

Effective Date - 05/01/2011

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$14.54	\$6.34	\$0.00	\$0.00	\$20.88
2	60	\$14.54	\$6.34	\$6.23	\$0.00	\$27.11
3	65	\$15.76	\$6.34	\$6.23	\$0.00	\$28.33
4	70	\$16.97	\$6.34	\$6.23	\$0.00	\$29.54
5	75	\$18.18	\$6.34	\$6.23	\$0.00	\$30.75
6	80	\$19.39	\$6.34	\$6.23	\$0.00	\$31.96
7	85	\$20.60	\$6.34	\$6.23	\$0.00	\$33.17
8	90	\$21.82	\$6.34	\$6.23	\$0.00	\$34.39

Notes:

Apprentice to Journeyworker Ratio:1:5

RIDE-ON MOTORIZED BUGGY OPERATOR LABORERS - ZONE 1	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

ROLLER/SPREADER/MULCHING MACHINE OPERATING ENGINEERS LOCAL 4	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

ROOFER (Inc.Roofer Waterproofing &Roofer Dampproofg) ROOFERS LOCAL 33	08/01/2015	\$40.11	\$11.00	\$12.00	\$0.00	\$63.11
	02/01/2016	\$41.01	\$11.00	\$12.00	\$0.00	\$64.01

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ROOFER - Local 33

Effective Date - 08/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.06	\$11.00	\$3.38	\$0.00	\$34.44
2	60	\$24.07	\$11.00	\$12.00	\$0.00	\$47.07
3	65	\$26.07	\$11.00	\$12.00	\$0.00	\$49.07
4	75	\$30.08	\$11.00	\$12.00	\$0.00	\$53.08
5	85	\$34.09	\$11.00	\$12.00	\$0.00	\$57.09

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.51	\$11.00	\$3.38	\$0.00	\$34.89
2	60	\$24.61	\$11.00	\$12.00	\$0.00	\$47.61
3	65	\$26.66	\$11.00	\$12.00	\$0.00	\$49.66
4	75	\$30.76	\$11.00	\$12.00	\$0.00	\$53.76
5	85	\$34.86	\$11.00	\$12.00	\$0.00	\$57.86

**Notes: ** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1
Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.**

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE ROOFERS LOCAL 33	08/01/2015	\$40.36	\$11.00	\$12.00	\$0.00	\$63.36
	02/01/2016	\$41.26	\$11.00	\$12.00	\$0.00	\$64.26
For apprentice rates see "Apprentice- ROOFER"						
SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 - A	08/01/2015	\$43.31	\$10.20	\$21.48	\$2.25	\$77.24
	02/01/2016	\$44.31	\$10.20	\$21.48	\$2.25	\$78.24
	08/01/2016	\$45.46	\$10.20	\$21.48	\$2.25	\$79.39
	02/01/2017	\$46.56	\$10.20	\$21.48	\$2.25	\$80.49
	08/01/2017	\$47.66	\$10.20	\$21.48	\$2.25	\$81.59
	02/01/2018	\$48.81	\$10.20	\$21.48	\$2.25	\$82.74

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SHEET METAL WORKER - Local 17-A

Effective Date - 08/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.32	\$10.20	\$4.90	\$0.00	\$32.42
2	40	\$17.32	\$10.20	\$4.90	\$0.00	\$32.42
3	45	\$19.49	\$10.20	\$9.59	\$1.18	\$40.46
4	45	\$19.49	\$10.20	\$9.59	\$1.18	\$40.46
5	50	\$21.66	\$10.20	\$10.45	\$1.27	\$43.58
6	50	\$21.66	\$10.20	\$10.70	\$1.28	\$43.84
7	60	\$25.99	\$10.20	\$12.17	\$1.45	\$49.81
8	65	\$28.15	\$10.20	\$13.04	\$1.54	\$52.93
9	75	\$32.48	\$10.20	\$14.76	\$1.72	\$59.16
10	85	\$36.81	\$10.20	\$15.98	\$1.89	\$64.88

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.72	\$10.20	\$4.90	\$0.00	\$32.82
2	40	\$17.72	\$10.20	\$4.90	\$0.00	\$32.82
3	45	\$19.94	\$10.20	\$9.59	\$1.19	\$40.92
4	45	\$19.94	\$10.20	\$9.59	\$1.19	\$40.92
5	50	\$22.16	\$10.20	\$10.45	\$1.28	\$44.09
6	50	\$22.16	\$10.20	\$10.70	\$1.29	\$44.35
7	60	\$26.59	\$10.20	\$12.17	\$1.47	\$50.43
8	65	\$28.80	\$10.20	\$13.04	\$1.56	\$53.60
9	75	\$33.23	\$10.20	\$14.76	\$1.75	\$59.94
10	85	\$37.66	\$10.20	\$15.98	\$1.92	\$65.76

Notes:

Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SIGN ERECTOR PAINTERS LOCAL 35 - ZONE 2	06/01/2013	\$25.81	\$7.07	\$7.05	\$0.00	\$39.93
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SIGN ERECTOR - Local 35 Zone 2

Effective Date - 06/01/2013

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

Notes:
Steps are 4 mos.

Apprentice to Journeyworker Ratio:1:1

SPECIALIZED EARTH MOVING EQUIP < 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$33.04	\$10.41	\$10.08	\$0.00	\$53.53
	06/01/2016	\$33.54	\$10.41	\$10.08	\$0.00	\$54.03
	08/01/2016	\$33.54	\$10.91	\$10.08	\$0.00	\$54.53
	12/01/2016	\$33.54	\$10.91	\$10.89	\$0.00	\$55.34
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$33.33	\$10.41	\$10.08	\$0.00	\$53.82
	06/01/2016	\$33.83	\$10.41	\$10.08	\$0.00	\$54.32
	08/01/2016	\$33.83	\$10.91	\$10.08	\$0.00	\$54.82
	12/01/2016	\$33.83	\$10.91	\$10.89	\$0.00	\$55.63
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1</i>	10/01/2015	\$54.83	\$8.42	\$15.65	\$0.00	\$78.90
	01/01/2016	\$54.43	\$8.67	\$15.80	\$0.00	\$78.90
	03/01/2016	\$55.43	\$8.67	\$15.80	\$0.00	\$79.90
	10/01/2016	\$56.58	\$8.67	\$15.80	\$0.00	\$81.05
	03/01/2017	\$57.58	\$8.67	\$15.80	\$0.00	\$82.05

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 10/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.19	\$8.42	\$8.40	\$0.00	\$36.01
2	40	\$21.93	\$8.42	\$8.40	\$0.00	\$38.75
3	45	\$24.67	\$8.42	\$8.40	\$0.00	\$41.49
4	50	\$27.42	\$8.42	\$8.40	\$0.00	\$44.24
5	55	\$30.16	\$8.42	\$8.40	\$0.00	\$46.98
6	60	\$32.90	\$8.42	\$8.40	\$0.00	\$49.72
7	65	\$35.64	\$8.42	\$8.40	\$0.00	\$52.46
8	70	\$38.38	\$8.42	\$8.40	\$0.00	\$55.20
9	75	\$41.12	\$8.42	\$8.40	\$0.00	\$57.94
10	80	\$43.86	\$8.42	\$8.40	\$0.00	\$60.68

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.05	\$8.67	\$8.55	\$0.00	\$36.27
2	40	\$21.77	\$8.67	\$8.55	\$0.00	\$38.99
3	45	\$24.49	\$8.67	\$8.55	\$0.00	\$41.71
4	50	\$27.22	\$8.67	\$8.55	\$0.00	\$44.44
5	55	\$29.94	\$8.67	\$8.55	\$0.00	\$47.16
6	60	\$32.66	\$8.67	\$8.55	\$0.00	\$49.88
7	65	\$35.38	\$8.67	\$8.55	\$0.00	\$52.60
8	70	\$38.10	\$8.67	\$8.55	\$0.00	\$55.32
9	75	\$40.82	\$8.67	\$8.55	\$0.00	\$58.04
10	80	\$43.54	\$8.67	\$8.55	\$0.00	\$60.76

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

Apprentice to Journeyworker Ratio:1:3

STEAM BOILER OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN OPERATING ENGINEERS LOCAL 4	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TELECOMMUNICATION TECHNICIAN ELECTRICIANS LOCAL 103	09/01/2015	\$34.25	\$13.00	\$14.06	\$0.00	\$61.31
	03/01/2016	\$34.63	\$13.00	\$14.55	\$0.00	\$62.18

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.70	\$13.00	\$0.41	\$0.00	\$27.11
2	40	\$13.70	\$13.00	\$0.41	\$0.00	\$27.11
3	45	\$15.41	\$13.00	\$11.03	\$0.00	\$39.44
4	45	\$15.41	\$13.00	\$11.03	\$0.00	\$39.44
5	50	\$17.13	\$13.00	\$11.30	\$0.00	\$41.43
6	55	\$18.84	\$13.00	\$11.58	\$0.00	\$43.42
7	60	\$20.55	\$13.00	\$11.86	\$0.00	\$45.41
8	65	\$22.26	\$13.00	\$12.13	\$0.00	\$47.39
9	70	\$23.98	\$13.00	\$12.41	\$0.00	\$49.39
10	75	\$25.69	\$13.00	\$12.68	\$0.00	\$51.37

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.85	\$13.00	\$0.42	\$0.00	\$27.27
2	40	\$13.85	\$13.00	\$0.42	\$0.00	\$27.27
3	45	\$15.58	\$13.00	\$11.52	\$0.00	\$40.10
4	45	\$15.58	\$13.00	\$11.52	\$0.00	\$40.10
5	50	\$17.32	\$13.00	\$11.79	\$0.00	\$42.11
6	55	\$19.05	\$13.00	\$12.06	\$0.00	\$44.11
7	60	\$20.78	\$13.00	\$12.34	\$0.00	\$46.12
8	65	\$22.51	\$13.00	\$12.62	\$0.00	\$48.13
9	70	\$24.24	\$13.00	\$12.90	\$0.00	\$50.14
10	75	\$25.97	\$13.00	\$13.17	\$0.00	\$52.14

Notes:

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS	08/01/2015	\$48.80	\$10.18	\$18.57	\$0.00	\$77.55
BRICKLAYERS LOCAL 3 - MARBLE & TILE	02/01/2016	\$49.37	\$10.18	\$18.57	\$0.00	\$78.12
	08/01/2016	\$50.27	\$10.18	\$18.65	\$0.00	\$79.10
	02/01/2017	\$50.84	\$10.18	\$18.65	\$0.00	\$79.67

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 08/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.40	\$10.18	\$18.57	\$0.00	\$53.15
2	60	\$29.28	\$10.18	\$18.57	\$0.00	\$58.03
3	70	\$34.16	\$10.18	\$18.57	\$0.00	\$62.91
4	80	\$39.04	\$10.18	\$18.57	\$0.00	\$67.79
5	90	\$43.92	\$10.18	\$18.57	\$0.00	\$72.67

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.69	\$10.18	\$18.57	\$0.00	\$53.44
2	60	\$29.62	\$10.18	\$18.57	\$0.00	\$58.37
3	70	\$34.56	\$10.18	\$18.57	\$0.00	\$63.31
4	80	\$39.50	\$10.18	\$18.57	\$0.00	\$68.25
5	90	\$44.43	\$10.18	\$18.57	\$0.00	\$73.18

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2015	\$37.20	\$7.30	\$13.40	\$0.00	\$57.90
	06/01/2016	\$37.95	\$7.30	\$13.40	\$0.00	\$58.65
	12/01/2016	\$38.95	\$7.30	\$13.40	\$0.00	\$59.65
For apprentice rates see "Apprentice- LABORER"						
TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2015	\$35.92	\$7.30	\$13.40	\$0.00	\$56.62
	06/01/2016	\$36.67	\$7.30	\$13.40	\$0.00	\$57.37
	12/01/2016	\$37.67	\$7.30	\$13.40	\$0.00	\$58.37
For apprentice rates see "Apprentice- LABORER"						
TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2015	\$35.80	\$7.30	\$13.40	\$0.00	\$56.50
	06/01/2016	\$36.55	\$7.30	\$13.40	\$0.00	\$57.25
	12/01/2016	\$37.55	\$7.30	\$13.40	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$33.62	\$10.41	\$10.08	\$0.00	\$54.11
	06/01/2016	\$34.12	\$10.41	\$10.08	\$0.00	\$54.61
	08/01/2016	\$34.12	\$10.91	\$10.08	\$0.00	\$55.11
	12/01/2016	\$34.12	\$10.91	\$10.89	\$0.00	\$55.92

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2015	\$48.08	\$7.30	\$13.80	\$0.00	\$69.18
	06/01/2016	\$48.83	\$7.30	\$13.80	\$0.00	\$69.93
	12/01/2016	\$49.83	\$7.30	\$13.80	\$0.00	\$70.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2015	\$50.08	\$7.30	\$13.80	\$0.00	\$71.18
	06/01/2016	\$50.83	\$7.30	\$13.80	\$0.00	\$71.93
	12/01/2016	\$51.83	\$7.30	\$13.80	\$0.00	\$72.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2015	\$40.15	\$7.30	\$13.80	\$0.00	\$61.25
	06/01/2016	\$40.90	\$7.30	\$13.80	\$0.00	\$62.00
	12/01/2016	\$41.90	\$7.30	\$13.80	\$0.00	\$63.00
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2015	\$42.15	\$7.30	\$13.80	\$0.00	\$63.25
	06/01/2016	\$42.90	\$7.30	\$13.80	\$0.00	\$64.00
	12/01/2016	\$43.90	\$7.30	\$13.80	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$33.04	\$10.41	\$10.08	\$0.00	\$53.53
	06/01/2016	\$33.54	\$10.41	\$10.08	\$0.00	\$54.03
	08/01/2016	\$33.54	\$10.91	\$10.08	\$0.00	\$54.53
	12/01/2016	\$33.54	\$10.91	\$10.89	\$0.00	\$55.34
WAGON DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS & GASFITTERS LOCAL 12</i>	09/01/2015	\$50.46	\$10.82	\$15.14	\$0.00	\$76.42
	03/01/2016	\$51.61	\$10.82	\$15.14	\$0.00	\$77.57
	09/01/2016	\$52.66	\$10.82	\$15.14	\$0.00	\$78.62
	03/01/2017	\$53.66	\$10.82	\$15.14	\$0.00	\$79.62
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
Outside Electrical - East						
CABLE TECHNICIAN (Power Zone) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$26.11	\$7.25	\$1.78	\$0.00	\$35.14
	08/28/2016	\$26.61	\$7.50	\$1.80	\$0.00	\$35.91
	09/03/2017	\$27.14	\$7.75	\$1.81	\$0.00	\$36.70
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$36.98	\$7.25	\$8.12	\$0.00	\$52.35
	08/28/2016	\$37.70	\$7.50	\$8.87	\$0.00	\$54.07
	09/03/2017	\$38.45	\$7.75	\$9.53	\$0.00	\$55.73
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$30.46	\$7.25	\$8.34	\$0.00	\$46.05
	08/28/2016	\$31.05	\$7.50	\$8.89	\$0.00	\$47.44
	09/03/2017	\$31.66	\$7.75	\$9.44	\$0.00	\$48.85
For apprentice rates see "Apprentice- LINEMAN"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$23.93	\$7.25	\$1.72	\$0.00	\$32.90
	08/28/2016	\$24.39	\$7.50	\$1.73	\$0.00	\$33.62
	09/03/2017	\$24.88	\$7.75	\$1.75	\$0.00	\$34.38
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$36.98	\$7.25	\$12.29	\$0.00	\$56.52
	08/28/2016	\$37.70	\$7.50	\$12.95	\$0.00	\$58.15
	09/03/2017	\$38.45	\$7.75	\$13.61	\$0.00	\$59.81
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$32.63	\$7.25	\$9.05	\$0.00	\$48.93
	08/28/2016	\$33.26	\$7.50	\$9.63	\$0.00	\$50.39
	09/03/2017	\$33.92	\$7.75	\$10.21	\$0.00	\$51.88
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$23.93	\$7.25	\$1.72	\$0.00	\$32.90
	08/28/2016	\$24.39	\$7.50	\$1.73	\$0.00	\$33.62
	09/03/2017	\$24.88	\$7.75	\$1.75	\$0.00	\$34.38
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$19.58	\$7.25	\$1.59	\$0.00	\$28.42
	08/28/2016	\$19.96	\$7.50	\$1.60	\$0.00	\$29.06
	09/03/2017	\$20.35	\$7.75	\$1.61	\$0.00	\$29.71
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$43.51	\$7.25	\$15.06	\$0.00	\$65.82
	08/28/2016	\$44.35	\$7.50	\$15.83	\$0.00	\$67.68
	09/03/2017	\$45.23	\$7.75	\$16.61	\$0.00	\$69.59

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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Apprentice - LINEMAN (Outside Electrical) - East Local 104

Effective Date - 08/30/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$26.11	\$7.25	\$3.28	\$0.00	\$36.64
2	65	\$28.28	\$7.25	\$3.35	\$0.00	\$38.88
3	70	\$30.46	\$7.25	\$3.41	\$0.00	\$41.12
4	75	\$32.63	\$7.25	\$4.98	\$0.00	\$44.86
5	80	\$34.81	\$7.25	\$5.04	\$0.00	\$47.10
6	85	\$36.98	\$7.25	\$5.11	\$0.00	\$49.34
7	90	\$39.16	\$7.25	\$7.17	\$0.00	\$53.58

Effective Date - 08/28/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$26.61	\$7.50	\$3.30	\$0.00	\$37.41
2	65	\$28.83	\$7.50	\$3.36	\$0.00	\$39.69
3	70	\$31.05	\$7.50	\$3.43	\$0.00	\$41.98
4	75	\$33.26	\$7.50	\$5.00	\$0.00	\$45.76
5	80	\$35.48	\$7.50	\$5.06	\$0.00	\$48.04
6	85	\$37.70	\$7.50	\$5.13	\$0.00	\$50.33
7	90	\$39.92	\$7.50	\$7.20	\$0.00	\$54.62

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/01/2015	\$28.12	\$4.25	\$3.09	\$0.00	\$35.46
	01/01/2016	\$28.98	\$4.25	\$3.12	\$0.00	\$36.35
TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/01/2015	\$26.49	\$4.25	\$3.04	\$0.00	\$33.78
	01/01/2016	\$27.31	\$4.25	\$3.07	\$0.00	\$34.63
TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/01/2015	\$26.49	\$4.25	\$3.04	\$0.00	\$33.78
	01/01/2016	\$27.31	\$4.25	\$3.07	\$0.00	\$34.63
TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/01/2015	\$18.05	\$3.55	\$0.00	\$0.00	\$21.60
	01/31/2016	\$18.51	\$3.55	\$0.00	\$0.00	\$22.06
This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is not on the ground. This classification does not apply to wholesale tree removal.						
TREE TRIMMER GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/01/2015	\$15.92	\$3.55	\$0.00	\$0.00	\$19.47
	01/31/2016	\$16.32	\$3.55	\$0.00	\$0.00	\$19.87
This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is on the ground. This classification does not apply to wholesale tree removal.						

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

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

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

All steps are six months (1000 hours.)

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

** Multiple ratios are listed in the comment field.

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

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