Project Manual

WILKS LIBRARY
WINDOW WALL REPLACEMENT
1911 ACUSHNET AVENUE
New Bedford, Massachusetts 02740

BID NUMBER 1919242R

OWNER:
CITY of NEW BEDFORD
294 Liberty Street
New Bedford
MA 02740

Contact:
Robert Bichel
Project Supervisor
New Bedford Department of Facilities and Fleet Management

ARCHITECT:
Gorman Richardson Lewis Architects, Inc.
239 South Street
Hopkinton
MA 01748

Jonathan F. Mitchell
Mayor

Bid Documents Dated: 18 September, 2019 - GRLA Project No 201734.05
ARCHITECT: GORMAN RICHARDSON LEWIS ARCHITECTS
239 SOUTH STREET
HOPKINTON, MA 01748
T: (508) 544-2600
E: goneill@grlarchitects.com (Attn: George O’Neill)

ENVIRONMENTAL CONSULTANT: UNIVERSAL ENVIRONMENTAL CONSULTANTS
12 BREWSTER ROAD
FRAMINGHAM, MA 01702
T: (508) 628-5486
E: adieb@uec-env.com (Attn: Ammar M. Dieb)

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PART 2  PRODUCTS

Not Used.

PART 3  EXECUTION

Not Used.

END OF DOCUMENT
CITY OF NEW BEDFORD
ADVERTISEMENT
BID No. 1919242R
INVITATION TO BID

The City of New Bedford, the Awarding Authority, in conjunction with Department of Facilities and Fleet Management invites sealed bids for the Wilks Library Window Wall Replacement, in accordance with Drawings and Specifications prepared by Gorman, Richardson, and Lewis Architects of Hopkinton, MA. Bidding procedures shall be in accordance with all applicable portions of Massachusetts General Laws, Chapter 149 – Sections 44A to 44J, inclusive, Section 26 to 29 inclusive, and Chapter 30, Section 39F to 39M inclusive, and 39R of the General Laws of the Commonwealth of Massachusetts, as amended to date.

Project Value is estimated to be $111,000.00 (Including Alternate #1).

The Work of this Contract is scheduled to be substantially completed no later than March 25, 2020.

A DCAMM Certified General Contractor is required for this project.

Sealed Bids for the General Contract will be received by the New Bedford Purchasing Department, 133 William Street, Room 208, New Bedford, Massachusetts, 02740 until 2:00 pm, on October 16, 2019 at which time all bids will be publicly opened and read aloud. Included with General Bid shall be an Update Statement, DCAM Certification and 5% bid deposit.

Bid Documents will be available electronically and must be obtained by emailing Susan.Bruce@newbedford-ma.gov after January 6, 2019. A hard copy set of drawings and specifications shall be on file at the New Bedford Purchasing Department 133 William St # 208, New Bedford, MA 02740 for Contractor review.

General Bids must be submitted on the Form for General Bid included herein. The General Bids shall be completely filled in, signed, enclosed in an envelope, sealed and plainly marked with the project name. The General Bids shall be filed with the Owner at the New Bedford Purchasing Dept. location designated above accompanied by a bid deposit in the form of a bid bond or cash or a certified check on, or a treasurer's or cashier's check issued by, a responsible bank or trust company payable to the City of New Bedford in the amount of 5% of the bid.

Attention is directed to the minimum wage rates to be paid on the work as determined by the Commissioner of Labor and Industries under the provision of M.G.L. Chapter 149, Sections 26 and 27D inclusive. The Work of this Project shall require Minority/Women Owned Business participation pursuant to Chapter 193 of the Acts of 2004, and MGL Chapter 23A, Section 44 and MGL Chapter 7, Section 40N, as amended, and established as a policy by the City of New Bedford.

All bids shall remain in effect for thirty (30) days, Saturdays, Sundays and legal holidays excluded, after the opening of General Bids.

A Non-mandatory Site Inspection will be held on Thursday, September 26, 2019, 10:00 a.m. @ 1191 Acushnet Avenue, New Bedford, MA.

The Owner reserves the right to waive any informalities and to reject any or all bids if it be in the public interest to do so.

Awarding Authority
City of New Bedford
Purchasing Department
Susan Bruce, Purchasing Agent
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:

02 41 13 SELECTIVE DEMOLITION
01 35 43 ENVIRONMENTAL PROCEDURE
02 28 20 ASBESTOS REMEDIATION
02 28 20.01 CHAIN OF CUSTODY – TEST REPORT

1.2 INFORMATION NOT GUARANTEED

A. Information on the Drawings and in the Project Manual relating to existing conditions of building and structures is from the best sources presently available.

B. Such information is furnished only for the information and convenience of the Contractor, and the accuracy or completeness of this information is not guaranteed.

1.3 EXISTING CONDITIONS

A. The project site, Wilks Public Library located at 1911 Acushnet Avenue in New Bedford, is a one-story building built in 1957 consisting of a main reading area with an adjacent large multi-function room. The interior is an open plan with a cathedral ceiling formed by the moderately pitched roof.

a. The Main Reading Room/ Stack Area includes a large south-facing metal framed window wall extending from the top of concrete foundation to the underside of the sloped roof. A heating duct is concealed within a wood cased assembly along the width of the window wall. The window wall assembly is the original (non-thermal) steel framed assembly with 5/8” insulated glass units in the upper sections and marble panel infill in the lowest sections. The glass units are in poor condition with some sections cracked. The steel frame system, although sound, is thermally inefficient and beyond its service life.
b. The Large Multi-function Room includes a large east-facing window wall split by a vertical brick pier (40½” in width) extending from the top of concrete foundation to the underside of the sloped roof. A heating duct is concealed within a wood cased assembly along the width of each section of the window wall. The window wall assembly is the original (non-thermal) steel framed assembly with 5/8” insulated glass units at the top, painted metal panels in the middle glazed units and marble panel infill in the lowest sections. The glass, metal and marble panel units are in poor condition. The steel frame system, although sound, is thermally inefficient and beyond its service life.

B. Coordinate and comply with requirements regarding use of the site, buildings, access, dumpster locations, utilities, and related facilities, as agreed to between the Owner and the Contractor.

B. Information on existing conditions, such as existing building dimensions, existing building construction and similar information, which is bound 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.

1. Accuracy and Completeness: The Owner and Architect do not warrant or contend that this information is complete or accurate. The Contractor may use this information at his sole risk and judgment.

2. Concealed Conditions: No claim for extra cost or extension of time may be made because of the use of this information by the Contractor, except as provided in the Conditions of the Contract regarding Concealed Conditions. The Contractor may obtain additional information on existing conditions at his sole expense, if prior approval is obtained from the Owner.

C. Contractor’s Responsibilities:

1. The Contractor shall become thoroughly familiar with the existing conditions prior to construction including attachment, cutting, and drilling to avoid accidental damage to existing conditions including utilities and to avoid cutting structure not specifically indicated to be cut.

2. The Contractor shall become thoroughly familiar with the existing information and shall carefully examine the existing record information prior to construction including attachment, cutting, and drilling to avoid accidental damage to existing conditions including utilities and to avoid cutting structure not specifically indicated to be cut.

3. The Contractor shall examine existing building and structure to verify existing conditions including building and elevations, dimensions, and locations and conditions affecting proposed renovations and improvements.

D. Lead Paint, Asbestos and other Hazardous Materials Abatement:

1. It is anticipated that the existing building components as indicated in the Testing Report (02 28 20.01 CHAIN OF CUSTODY – TEST REPORT) contain asbestos-containing materials and lead paint.
2. Handling of identified asbestos-containing materials shall be in compliance with all applicable rules and regulations as part of the work of this contract.

3. There may be other hazardous materials.

4. If other hazardous material is found on the site and recognized as such, all work will cease without penalty to the Contractor or Architect so that the Owner can take appropriate steps for its legal removal and disposal.

PART 2 - PRODUCTS
Not Used.

PART 3 - EXECUTION
Not Used.

END OF DOCUMENT
PART 1 GENERAL

A. PROJECT

The City of New Bedford, Massachusetts, and Department of Facilities and Fleet Management invites sealed bids for the following project:

**WILKS LIBRARY WINDOW WALL REPLACEMENT**

The work of this contract is predominantly selective demolition and construction/installation of new indoor air-handler units and associated rooftop equipment and all associated ductwork, electrical work and accessories; a Division of Capital Asset Management (DCAMM) Certified Contractor (DCAMM Certification Category: GENERAL CONSTRUCTION) is to be considered this project’s general contractor.

The work is estimated to cost: $111,000.

**General Contract Bidders:**

Procedures respecting bids and the selection of contractors shall be in conformity with the General Laws of Massachusetts, Chapter 149, Sections 44A to 44H, inclusive, as amended and revised to date, which regulates the award of contracts for public buildings by competitive bidding. In the event of any discrepancy or inconsistency between the contract documents and the cited statute, the provisions of the statute shall govern.

All Bidders must submit a **Certificate of Eligibility and update statement** from DCAMM with their bids. Any bid submitted without the appropriate Certificate shall be invalid.

B. GENERAL

1. **Examination of Site and Contract Documents**

All potential bidders are encouraged to attend the non-mandatory site visit scheduled Thursday September 26th 2019 at 10:00 am at the Wilks Library, 1191 Acushnet Avenue, New Bedford, MA to ascertain personally, by investigation and observation, the locations of the various starting points of the new work, the extent and character of the work to be performed, and to familiarize themselves with existing conditions at the site. All Contractors and Subcontractors shall verify in
the field all dimensions and measurements that are given in the specifications or indicated on the drawings and shall call to the attention of the City any errors, or discrepancies, that he/she may ascertain prior to bidding.

Failure to examine the Contract Documents, shall not in any way relieve a bidder from any obligation with respect to its bid or of any responsibility under the Contract Documents.

2. Interpretation of Contract Documents

All requests for interpretation of Contract Documents must be in writing. Oral interpretation by the Awarding Authority, its employees or others shall be not be binding or have any validity.

Any request for interpretation of the Contract Documents shall be submitted in writing, by mail or email, simultaneously, to:

Susan Bruce  
City of New Bedford  
Purchasing Department  
133 William Street, Room 208  
New Bedford, MA 02740  
Susan.Bruce@newbedford-ma.gov

George O’Neill  
Gorman Richardson Lewis Architects  
239 South Street  
Hopkinton, MA 01748  
goneill@grlarchitects.com

at least five (5) days before the date for opening of general bids. If necessary, an Addendum to the Contract Documents will be issued electronically via email to all bidders of record. It is the responsibility of each bidder to verify the number of Addenda issued and to secure any needed copies from the Purchasing Department before submitting a bid.

C. PROCEDURE FOR GENERAL BIDS

1. Submission of Bids
   a. The Bids shall be submitted on the Forms that are provided. The sealed envelope containing the Bid and the accompanying Bid Security (if required) shall be clearly marked on the outside as follows:

   00 21 30 INSTRUCTIONS TO BIDDERS  
   Page 2 of 9
“General Bid” for **Wilks Library Window Wall Replacement**

_________________________________________________
(Name of Bidder)

__________________________________________________
(Address of Bidder)

and the envelope shall be addressed to:

City of New Bedford  
Purchasing Department  
133 William Street Room 208  
New Bedford, Massachusetts 02740

b. **ALL BIDS SHALL BE SUBMITTED IN DUPLICATE.**

c. The General Base Bid shall be for the complete project as called for in the Specifications, no Alternates are to be included in the Base Bid.

d. The Bid Deposit specified in the Invitation for Bids shall be included in the envelope with the Bid Form.

e. Bids sent by mail are forwarded at the risk of the bidder and will not be accepted if received after the time for the opening of the bids.

f. The award of every such contract shall be made within thirty (30) days, Saturdays Sundays and legal holidays excluded, after such approval; No Bidder may withdraw his bid for at least thirty (30) days after the day and date set for the receipt of General Bids, Saturdays, Sundays, and legal holidays excluded.

g. If the Bidder is a Corporation a Vote of Corporate Authorization shall be submitted with the Bid.

2. **Rejection of General Bids**

Every General Bid which is not accompanied by a Bid Deposit or which otherwise does not conform to the requirements of Chapter 149, Sections 44A to 44J inclusive of the
Massachusetts General Laws, or which is on a form not completely filled in, or which is incomplete, conditional or obscure, or which contains any additional information not called for, shall be invalid, and the Awarding Authority will reject every such bid.

Bid Forms must be completely and correctly filled in; giving all of the information that is requested. Bids must not be qualified in any manner. Such qualification may be cause for the rejection of the bid.

The Awarding Authority reserves the right to waive any informalities in the bidding procedure; to reject any or all bids, if it is deemed to be in the best interest of the City, and further, the Contract for the work may be awarded to any other than the low bidder if the low bidder does not possess the necessary skill, ability, or integrity for faithful performance or cannot certify ability to furnish labor that works in harmony with all other elements of labor.

3. Return of Bid Deposits

All Certified Checks, Certificates of Deposit or Bid Deposits of General Bidders, except those of the three (3) lowest responsible and eligible General Bidders, will be returned within five (5) days, Saturdays, Sundays, and legal holidays excluded, after the opening of the General Bids. Bid Bonds will be retained by the Awarding Authority unless accompanied by a self-addressed stamped envelope. The Bid Deposit of the three (3) lowest responsible and eligible General Bidders will be returned upon the execution and delivery of the general contract, or if no award is made, upon the expiration of the thirty (30) day time limit, Saturdays, Sundays and legal holidays excluded.

If any General Bidder fails to execute a Contract and to furnish a Performance and also a Labor and Materials Payment Bond, his Bid Deposit shall become the property of the Awarding Authority as Liquidated Damages; provided that the amount of the Bid Deposit shall not, in any event, exceed the difference between his price and the bid price of the next lowest responsible and eligible Bidder. The General Bid Deposit will be returned in case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other unforeseen circumstances affecting the General Bidder.

4. Bid Bonds

Every General Bidder whose deposit is not returned pursuant to the provisions of the preceding section may file with the Awarding Authority at any time after five (5) days, Saturdays, Sundays, and legal holidays excluded, from the opening of the General Bids, a Bond in an amount not less than the amount of his Bid Deposit and in a form satisfactory to the Awarding Authority, with a surety company qualified to do business in the Commonwealth of Massachusetts. Upon the filing of a Bond, the Bid Deposit of the General Bidder filing such a Bond will be returned to him.
D. EVALUATION OF BIDS AND AWARD OF CONTRACT

1. Selection of Contractor

   The Contract for this project will be awarded to the lowest, responsible and eligible Bidder. The words "lowest responsible and eligible Bidder" shall mean the Bidder whose bid is the lowest of those Bidders possessing the skill, ability and integrity necessary to the faithful performance of the work and who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work. Essential information in regard to such qualifications shall be submitted; such as, Contractor's Qualification Statement submitted in such forms as the Awarding Authority may require.

   If, after the selection of the lowest responsible and eligible General Bidder, it is decided to consider Sub-bidders other than the ones named by such General Bidders in his general bid, the awarding authority and such general bidder shall jointly consider all filed sub-bids not previously rejected. Any agreement to substitute a sub-bid for the one named in the selected General Bid shall result in an adjustment of the General Bid price by the difference between the amount of the Sub-Bid originally named and the amount of the Sub-Bid substituted therefore. If by such substitution the adjusted general bid price of the general bidder first selected becomes greater than the original general bid price of the second lowest responsible and eligible general bidder, then the latter shall be selected and his sub-bidders similarly considered.

   If, by substitutions as hereinbefore provided, the total adjusted general bid price of the second selected general bidder becomes greater than the total adjusted general bid price of the first selected or greater than the original bid price of third lowest responsible and eligible general bidder, then the bidder having the lower of these two general bid prices shall be selected; provided, that if the third lowest responsible and eligible general bidder is selected, his sub-bidders shall be similarly considered. The general bidder finally selected, by the aforementioned process of substitutions shall be the General Bidder to whom the contract shall be awarded.

   All Sub-Bidders when finally selected shall be notified in writing of their selection within forty-eight (48) hours thereafter by the General Bidder. The Form of Subcontract to be used shall be that stipulated in M.G.L. Chapter 149 Section 44F, a copy of which is included in these Specifications.

   If a selected Sub-Bidder fails, within five (5) days, Saturdays, Sundays, and legal holidays excluded after presentation of a Sub-contract by the General Bidder selected as the General Contractor, to perform his agreement to execute a Subcontract with such General Bidder, in the form provided in the contract, contingent upon the execution of the general contract, and, if requested to do so by such General Bidder in the general bid to furnish a Performance and Payment Bond as stated in his Sub-bid, such General Bidder and the Awarding Authority shall select, from the other Sub-bids duly filed with the Awarding Authority for such Sub-trade, and not rejected under section forty-four H, the
lowest responsible and eligible Sub-bidder at the amount named in his Sub-bid so filed against whose standing and ability the General Contractor makes no objection, and the contract price shall be adjusted by the difference, between the amount of such Sub-bid and the amount of the Sub-bid of the delinquent sub-bidder.

2. **Insurance and Indemnification**

   This agreement becomes part of the contract for which the Contractor is performing services to *City of New Bedford*.

   A. Contractor shall maintain workers compensation, general liability, automobile, professional liability and umbrella insurance for the minimum amount required by the contract that this contractor applies to or as outlined below, whichever limits and coverages are higher. Insurance coverages and certificates shall be provided and include *the City of New Bedford* as an additional insured, on a primary and non-contributory basis, on all liability policies.

   B. Minimum required insurance limits (coverage on an occurrence basis):

      **Commercial General Liability**
      - $2,000,000 Products/Completed Operations Aggregate
      - $2,000,000 General Aggregate
      - $1,000,000 Any One Occurrence (coverage A)
      - $1,000,000 Any One Person or Organization (Coverage B)

      **Automobile Liability (Comprehensive Coverage)**
      - $1,000,000 Each Accident

      **Commercial Excess Liability (“Umbrella”)**
      - $1,000,000 Products/Completed Operations Aggregate
      - $1,000,000 General Aggregate
      - $1,000,000 Any One Occurrence (coverage A)
      - $1,000,000 Any One Person or Organization (Coverage B)

      **Employers Liability (Coverage “B” on the Workers Compensation Policy)**
      - $ 500,000 Each Accident
      - $ 500,000 Each Employee for Injury by Disease
      - $ 500,000 Aggregate for Injury by Disease
C. Any Contractor who does not carry worker’s compensation insurance coverage to protect himself personally from work-related injuries hereby fully releases, holds harmless, and indemnifies the City of New Bedford from any injuries that may occur to the Contractor himself during the course of this contract. In no way does this provision affect the absolute duty of every contractor to provide workers’ compensation insurance coverage to each and every one of his employees and himself according to the provisions of this Agreement and all applicable state and federal laws.

D. All Insurance Certificates must contain a clause indicating that certificate holders be given a minimum of 30 days written notice prior to the cancellation of contractors insurance. Contractor must furnish the certificate referred to above as an express condition precedent to the Contractor’s duty to make any progress payments to contractor pursuant to this Agreement.

E. To the fullest extent permitted by law, the contractor hereby acknowledges and agrees that it shall indemnify, hold harmless and defend the City of New Bedford, the Owner, and any of the officers, directors, employees, agents, affiliates, subsidiaries and partners from and against all claims, damages, losses and expenses, including but not limited to, attorney’s fees, arising out of or resulting from the performance of the Contractor’s Work under this contract, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease, or death or injury to or destruction of tangible property (other than to the Work itself) including loss of use resulting there from, and (2) is caused in whole or in part by any acts or omissions of the contractor, its employees, agents or anyone directly or indirectly employed by any of them or anyone whose acts any of them may be liable.

F. The contractor hereby acknowledges its obligation under the forgoing paragraph to indemnify the City of New Bedford against judgments suffered because of the contractor’s work and to assume the cost of defending the City of New Bedford against claims as described in the forgoing paragraph.

3. The Successful Bidder Shall Furnish the Following Bonds

A Contractor’s Performance Bond and a Labor and Materials Payment Bond for the full amount of the Contract Price. The cost of these Bonds is to be included in the Bid Price.
4. **Corporate or Other Authorization**

If the selected General Bidder is a corporation, the "Vote of Corporation Authorizing Execution of Contract" included in these Specifications shall be executed and submitted to the Awarding Authority by the selected General Bidder. Appropriate authorization for other types of legal entities will be determined by the Awarding Authority.

5. **Award of Contract**

The award of the Contract for this project will be made within thirty (30) days, Saturdays, Sundays, and legal holidays excluded, after the opening of the Bids. The award of every such contract in connection with which approval by an officer, board or agency of the Federal or State government is required shall be made within thirty days, Saturdays, Sundays and legal holidays excluded, after such approval. (See M.G.L. Chapter 149, § 44A).

If the Bidder selected fails to perform his agreement to execute a contract in accordance with the terms of his Bid and furnish a Performance Bond also a Labor and Materials or Payment Bond as stated in the Bid, an award will be made to the next lowest responsible and eligible Bidder. The thirty-day time limit shall not be applicable to a second or subsequent award made after the expiration of the time limit with the consent of said next lowest responsible and eligible Bidder and his Sub-bidders, and made because the original award made within the time limit was invalid, or because the Bidder failed to execute the Contract or to provide a Performance Bond and a Labor and Materials or Payment Bond.

6. **Liquidated Damages**

The OWNER and CONTRACTOR realize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work (or individual phase of Work) is not completed within the time specified in the contract documents. They also recognize the delays, expenses and difficulties involved in proving the actual loss suffered by Owner if Work is not completed on time. Accordingly, instead of requiring any such proof, the Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay Owner the amount of One Thousand Dollars ($1000.00) for each calendar day that expires after the time specified until the Work is Substantially Completed.

E. **SPECIAL REQUIREMENTS**

Bids shall be made on the basis of the Minimum Wage Schedule as determined by the Massachusetts Department of Labor (as published by the Division of Occupational Safety) and the U.S. Department of Labor. Attention is directed to the minimum wage rates to be paid on the work as determined by the Massachusetts Commissioner of Labor and Industries under the provisions of M.G.L. Chapter 149, Sections 26 and 27D, inclusive, The successful general contractor and all filed sub-bidders will be required to submit a certified payroll on a weekly basis for review by Contract Compliance Officer. Attention is further called to Labor Standards.
 provisions regarding conditions of employment, including State Wage Rates, the Copeland Anti-
Kickback Act, and the Contract Work Hours and Safety Standards Act. The schedule of such rates
is to be made a part of this contract, and is hereinafter attached.

The General Contractor shall keep on this work, as long as required during its progress, a
competent surveyor or engineer, and any necessary assistants, all satisfactory to the Owner. It
shall be the primary duty of such contractor's employees, to accurately establish, layout, and
maintain all building lines, grid, lines, column lines, elevations, grades, etc. as required for
construction of the project. At the completion of the work, the General Contractor shall remove
all surplus material, debris, rubbish, etc., from the site, and shall leave the owner's property in a
neat, clean orderly condition.

General Contractor shall guarantee all labor and materials furnished and installed under this
Contract, for a period of one (1) year from the date of final acceptance, and shall make all
replacements or repairs to any defective materials or workmanship without any additional cost
to the owner.

General Contractor shall also provide at its expense a standard manufacturer’s 30-year labor and
materials warranty for the roof replacement at the City of New Bedford City Hall. The roof and
roofing materials shall comply in all respects with the specifications set forth herein.

Any general contractor which is a foreign corporation as defined in Mass General Laws Chapter
156d Section 15.01 shall certify to the Awarding Authority, prior to the award of any contract,
that he has complied with the provisions for foreign corporations under Sections 3 and 5 of
Chapter 156d of the Massachusetts General Laws, and the dates of such compliance.

All work performed under this contract must comply with the current requirements of the
Occupational Safety and Health Act of 1970 as administered by the U.S. Department of Labor,
OSHA Administration, Washington, DC 20210. The Owner will provide the General Contractor
for this project with an Exempt Purchase Certificate and Number issued pursuant to Chapter 14,
Acts of 1966, Section 1, Subsection 6 (E) and (F) which will exempt the project cost from the
Massachusetts Excise Tax.

Bidders are instructed not to include the sales tax in the Bid Price.

PART 2 - PRODUCTS
Not Used.

PART 3 - EXECUTION
Not Used.

END OF DOCUMENT

00 21 30 INSTRUCTIONS TO BIDDERS
Page 9 of 9
DATE: ______________________________________

TO: CITY OF NEW BEDFORD
    C/O NEW BEDFORD PURCHASING DEPARTMENT
    133 WILLIAM STREET, Room 208
    NEW BEDFORD, MASSACHUSETTS 02740
    PURCHASING AGENT

A) The Undersigned proposes to furnish all labor and materials required for the Wilks Library Window Wall Replacement at 1191 Acushnet Avenue, New Bedford MA IN ACCORDANCE WITH THE ENCLOSED CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS.

B) The proposed base contract price is _______________________________ Dollars.

($______________________________)

C) Alternates

<table>
<thead>
<tr>
<th>For Alternate</th>
<th>No. 1</th>
<th>Add $</th>
<th>Subtract $</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

D) The undersigned agrees that, if he is selected as Contractor, he will, within five (5) days, Saturdays, Sundays, and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this Bid, and furnish a Performance Bond, and also a Labor and Materials or Payment Bond, each of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority, and each in the sum of the contract price, the premiums for which are to be paid by the Contractor and are included in the Contract Price.

The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work and that will comply fully with all laws and regulations applicable to awards made subject to Massachusetts General Laws Chapter 149 Section 44A.

The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership,
corporation or other business or legal entity.

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of M.G.L. Section 29F of chapter 29, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

The undersigned hereby certifies, under penalty of perjury, that the said undersigned has paid all State Taxes (Income Taxes, Unemployment Taxes, Excise Taxes, Real Estate Taxes, etc., etc.) due in compliance with the Tax Laws of the Commonwealth of Massachusetts M.G.L. Chapter 62C Sections 47A thru 49A.

The undersigned further certifies that the said undersigned shall comply with the City of New Bedford "Bidders Affirmative Action Requirements, as contained in the BIDDING REQUIREMENTS of these project specifications.

E) **Time of Completion**

The number of calendar days shall not exceed 147 calendar days from the signing of the contract to the Date of Substantial Completion.

Date: ________________

Name of General Bidder: __________________________________________

BY: ___________________________ _____________________________

(Authorized Signature) (Title)

Business Address: __________________________________________

City/State/Zip: __________________________________________

Telephone #: __________________________

Note: If the bidder is a corporation, indicate the State of Incorporation under the signature and affix the Corporate Seal; if a partnership, give full names and residential addresses in space above if different from the business address.

END OF DOCUMENT
CERTIFICATE AS TO CORPORATE BIDDER (GENERAL CONTRACTOR)

I ___________________________________________ certify that I am ________________________________ of the Corporation named ________________________________ as Bidder in the within Bid Form that ____________________________________________ who signed said Bid Form on behalf of the Bidder was then ____________________________________________ of said Corporation; that I know his signature and that his signature hereto is genuine and that said Bid Form was duly signed, sealed, and executed for and on behalf of said Corporation by authority of its Board of Directors.

(Corporate Seal)

________________________________________________________
(Signature)

________________________________________________________
(Title)

(This Certificate must be completed where the General Bidder is a Corporation, and should be so completed by its Clerk. In the event that the Clerk is the person signing the Proposal on behalf of the Corporation, this Certificate must be completed by another Officer of the Corporation.)

END OF DOCUMENT
PRIME/GENERAL CONTRACTOR UPDATE STATEMENT

Completely fill-out and sign Commonwealth of Massachusetts Division of Capital Asset Management (DCAM) – Prime/General Contractor Update Statement and attach to Document 00 40 10, FORM FOR GENERAL BID.

Failure to do so shall result in rejection of Bid.

[A copy of DCAM Prime/General Contractor Update Statement (Effective March 30, 2010), pages 1-10, follows this page.]

END OF DOCUMENT
SPECIAL NOTICE TO AWARDING AUTHORITY
BIDDERS’ UPDATE STATEMENTS ARE NOT PUBLIC RECORDS AND ARE NOT OPEN TO PUBLIC INSPECTION (M.G.L. C.149, §44D)

EFFECTIVE MARCH 30, 2010

Commonwealth of Massachusetts
Division of Capital Asset Management

PRIME/GENERAL CONTRACTOR
UPDATE STATEMENT
TO ALL BIDDERS AND AWARDING AUTHORITIES

A COMPLETED AND SIGNED PRIME/GENERAL CONTRACTOR UPDATE STATEMENT MUST BE SUBMITTED WITH EVERY PRIME/GENERAL BID FOR A CONTRACT PURSUANT TO M.G.L. c.149, §44A AND M.G.L. c. 149A. ANY PRIME/GENERAL BID SUBMITTED WITHOUT AN APPROPRIATE UPDATE STATEMENT IS INVALID AND MUST BE REJECTED.

Caution: This form is to be used for submitting Prime/General Contract bids. It is not to be used for submitting Filed Sub-Bids or Trade Sub-Bids.

AWARDING AUTHORITIES

If the Awarding Authority determines that the bidder does not demonstrably possess the skill, ability, and integrity necessary to perform the work on the project, it must reject the bid.

BIDDER’S AFFIDAVIT

I swear under the pains and penalties of perjury that I am duly authorized by the bidder named below to sign and submit this Prime/General Contractor Update Statement on behalf of the bidder named below, that I have read this Prime/General Contractor Update Statement, and that all of the information provided by the bidder in this Prime/General Contractor Update Statement is true, accurate, and complete as of the bid date.

Bid Date ___________________ Print Name of Prime/General Contractor ___________________

Project Number (or name if no number) ___________________ Business Address ___________________

Awarding Authority ___________________ Telephone Number ___________________

SIGNATURE⇒ ___________________ Bidder’s Authorized Representative ___________________
INSTRUCTIONS

INSTRUCTIONS TO BIDDERS

- This form must be completed and submitted by all Prime/General contractors bidding on projects pursuant to M.G.L. c. 149, §44A and M.G.L. c. 149A.
- You must give complete and accurate answers to all questions and provide all of the information requested. MAKING A MATERIALLY FALSE STATEMENT IN THIS UPDATE STATEMENT IS GROUNDS FOR REJECTING YOUR BID AND FOR DEBARRING YOU FROM ALL PUBLIC CONTRACTING.
- This Update Statement must include all requested information that was not previously reported on the Application used for your firm’s most recently issued (not extended or amended) Prime/General Contractor Certificate of Eligibility. The Update Statement must cover the entire period since the date of your Application, NOT since the date of your Certification.
- You must use this official form of Update Statement. Copies of this form may be obtained from the awarding authority and from the Asset Management Web Site: www.mass.gov/dcam.
- If additional space is needed, please copy the appropriate page of this Update Statement and attach it as an additional sheet.
- See the section entitled “Bidding Limits” in the Instructions to Awarding Authorities for important information concerning your bidding limits.

INSTRUCTIONS TO AWARDING AUTHORITIES

Determination of Bidder Qualifications

- It is the awarding authority’s responsibility to determine who is the lowest eligible and responsible bidder. You must consider all of the information in the low bidder’s Update Statement in making this determination. Remember: this information was not available to the Division of Capital Asset Management at the time of certification.
- The bidder’s performance on the projects listed in Parts 1 and 2 must be part of your review. Contact the project references.
- AWARDING AUTHORITIES ARE STRONGLY ENCOURAGED TO REVIEW THE LOW BIDDER’S ENTIRE CERTIFICATION FILE AT THE DIVISION OF CAPITAL ASSET MANAGEMENT. Telephone (617) 727-9320 for an appointment.

Bidding Limits

Single Project Limit: The total amount of the bid, including all alternates, may not exceed the bidder’s Single Project Limit.

Aggregate Work Limit: The annual value of the work to be performed on the contract for which the bid is submitted, when added to the annual cost to complete the bidder’s other currently held contracts, may not exceed the bidder’s Aggregate Work Limit. Use the following procedure to determine whether the low bidder is within its Aggregate Work Limit:

Step 1 Review Update Statement Question #2 to make sure that all requested information is provided and that the bidder has accurately calculated and totaled the annualized value of all incomplete work on its currently held contracts (column 9).

Step 2 Determine the annual dollar value of the work to be performed on your project. This is done as follows:

(i) If the project is to be completed in less than 12 months, the annual dollar value of the work is equal to the full amount of the bid.

(ii) If the project will take more than 12 months to complete, calculate the number of years given to complete the project by dividing the total number of months in the project schedule by 12 (calculate to 3 decimal places), then divide the amount of the bid by the calculated number of years to find the annual dollar value of the work.

Step 3 Add the annualized value of all of the bidder’s incomplete contract work (the total of column 9 on page 5) to the annual dollar value of the work to be performed on your project. The total may not exceed the bidder’s Aggregate Work Limit.

Correction of Errors and Omissions in Update Statements

Matters of Form: An awarding authority shall not reject a contractor’s bid because there are mistakes or omissions of form in the Update Statement submitted with the bid, provided the contractor promptly corrects those mistakes or omissions upon request of the awarding authority. [810 CMR 8.05(1)].

Correction of Other Defects: An awarding authority may, in its discretion, give a contractor notice of defects, other than mistakes or omissions of form, in the contractor’s Update Statement, and an opportunity to correct such defects, provided the correction of such defects is not prejudicial to fair competition. An awarding authority may reject a corrected Update Statement if it contains unfavorable information about the contractor that was omitted from the Update Statement filed with the contractor’s bid. [810 CMR 8.05(2)].
# PART 1 - COMPLETED PROJECTS

LIST ALL PUBLIC AND PRIVATE *BUILDING* PROJECTS YOUR FIRM HAS COMPLETED SINCE THE DATE OF APPLICATION FOR YOUR MOST RECENTLY ISSUED (NOT EXTENDED OR AMENDED) DCAM CERTIFICATE OF ELIGIBILITY. YOU MUST REPORT ALL REQUESTED INFORMATION NOT PREVIOUSLY REPORTED ON THAT DCAM APPLICATION*.  

<table>
<thead>
<tr>
<th>PROJECT TITLE &amp; LOCATION</th>
<th>WORK CATEGORY</th>
<th>CONTRACT PRICE</th>
<th>START DATE</th>
<th>DATE COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Attach additional sheets if necessary

* If your firm has been terminated from a project prior to completion of the work or has failed or refused to complete its work under any contract, full details and an explanation must be provided. See Part 3 of this Update Statement.
PROVIDE THE FOLLOWING REFERENCE INFORMATION FOR EACH COMPLETED PROJECT LISTED ON THE PREVIOUS PAGE.

<table>
<thead>
<tr>
<th>PROJECT TITLE</th>
<th>COMPANY NAME</th>
<th>CONTACT PERSON</th>
<th>TELEPHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OWNER: Owner</td>
<td>Contact Person</td>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>DESIGNER: Designer</td>
<td>Contact Person</td>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>GC: GC</td>
<td>Contact Person</td>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>OWNER: Owner</td>
<td>Contact Person</td>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>DESIGNER: Designer</td>
<td>Contact Person</td>
<td>Telephone</td>
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<td>Contact Person</td>
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<tr>
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<tr>
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<td></td>
</tr>
<tr>
<td>GC: GC</td>
<td>Contact Person</td>
<td>Telephone</td>
<td></td>
</tr>
</tbody>
</table>

Is your company or any individual who owns, manages or controls your company affiliated with any owner, designer or general contractor named above, either through a business or family relationship?  □ YES  □ NO

Are any of the contact persons named above affiliated with your company or any individual who owns, manages or control your company, either through a business or family relationship?  □ YES  □ NO

If you have answered YES to either question, explain. _______
PART 2 - CURRENTLY HELD CONTRACTS

LIST ALL PUBLIC AND PRIVATE BUILDING AND NON-BUILDING CONSTRUCTION PROJECTS YOUR FIRM HAS UNDER CONTRACT ON THIS DATE REGARDLESS OF WHEN OR WHETHER THE WORK COMMENCED.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROJECT TITLE &amp; LOCATION</td>
<td>WORK CATEGORY</td>
<td>START AND END DATES</td>
<td>ON SCHEDULE (yes / no)</td>
<td>CONTRACT PRICE</td>
<td>% NOT COMPLETE</td>
<td>$ VALUE OF WORK NOT COMPLETE (col. 5 x col. 6)</td>
<td>NO. OF YEARS REMAINING (see note below)</td>
<td>ANNUALIZED VALUE OF INCOMPLETE WORK (col. 7 ÷ col. 8) (divided by)</td>
</tr>
<tr>
<td>---</td>
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<td>---</td>
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</tr>
<tr>
<td>ANNUALIZED VALUE OF ALL INCOMPLETE CONTRACT WORK (Total of Column 9)</td>
<td>$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Provided the following reference information for each incomplete project listed on the previous page.

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Company Name</th>
<th>Contact Person</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner: Owner</td>
<td>Owner</td>
<td>Contact Person</td>
<td>Telephone</td>
</tr>
<tr>
<td>Designer: Designer</td>
<td>Designer</td>
<td>Contact Person</td>
<td>Telephone</td>
</tr>
<tr>
<td>GC: GC</td>
<td>GC</td>
<td>Contact Person</td>
<td>Telephone</td>
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<tr>
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<tr>
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<td>Designer</td>
<td>Contact Person</td>
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</tr>
<tr>
<td>Designer: Designer</td>
<td>Designer</td>
<td>Contact Person</td>
<td>Telephone</td>
</tr>
<tr>
<td>GC: GC</td>
<td>GC</td>
<td>Contact Person</td>
<td>Telephone</td>
</tr>
</tbody>
</table>

Is your company or any individual who owns, manages or controls your company affiliated with any owner, designer or general contractor named above either through a business or family relationship?  

☐ YES ☐ NO

Are any of the contact persons named above affiliated with your company or any individual who owns, manages or control your company, either through a business or family relationship?  

☐ YES ☐ NO

If you have answered YES to either question, explain. ________
PART 3 - PROJECT PERFORMANCE

For Parts 3 and 4, if you answer YES to any question, please provide on a separate page a complete explanation. Information you provide herein must supplement the Application for your most recently issued (not extended or amended) DCAM Certificate of Eligibility. You must report all requested information not previously reported on that DCAM Application for Prime/General Certificate of Eligibility. Include all details [project name(s) and location(s), names of all parties involved, relevant dates, etc.].

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Has your firm been terminated on any contract prior to completing a project or has any officer, partner or principal of your firm been an officer, partner or principal of another firm that was terminated or failed to complete a project?</td>
</tr>
<tr>
<td>2.</td>
<td>Has your firm failed or refused either to perform or complete any of its work under any contract prior to substantial completion?</td>
</tr>
<tr>
<td>3.</td>
<td>Has your firm failed or refused to complete any punch list work under any contract?</td>
</tr>
<tr>
<td>4.</td>
<td>Has your firm filed for bankruptcy, or has any officer, principal or individual with a financial interest in your current firm been an officer, principal or individual with a financial interest in another firm that filed for bankruptcy?</td>
</tr>
<tr>
<td>5.</td>
<td>Has your surety taken over or been asked to complete any of your work under any contract?</td>
</tr>
<tr>
<td>6.</td>
<td>Has a payment or performance bond been invoked against your current firm, or has any officer, principal or individual with a financial interest in your current firm been an officer, principal or individual with a financial interest in another firm that had a payment or performance bond invoked?</td>
</tr>
<tr>
<td>7.</td>
<td>Has your surety made payment to a materials supplier or other party under your payment bond on any contract?</td>
</tr>
<tr>
<td>8.</td>
<td>Has any subcontractor filed a demand for direct payment with an awarding authority for a public project on any of your contracts?</td>
</tr>
<tr>
<td>9.</td>
<td>Have any of your subcontractors or suppliers filed litigation to enforce a mechanic’s lien against property in connection with work performed or materials supplied under any of your contracts?</td>
</tr>
<tr>
<td>10.</td>
<td>Have there been any deaths of an employee or others occurring in connection with any of your projects?</td>
</tr>
<tr>
<td>11.</td>
<td>Has any employee or other person suffered an injury in connection with any of your projects resulting in their inability to return to work for a period in excess of one year?</td>
</tr>
</tbody>
</table>
PART 4 - Legal or Administrative Proceedings; Compliance with Laws

Please answer the following questions. Information must supplement all judicial and administrative proceedings involving bidder’s firm, which were instituted or concluded (adversely or otherwise) since your firm’s Application for your most recently issued (not extended or amended) Certificate of Eligibility. You must report all requested information not previously reported on that DCAM Application for Prime/General Certificate of Eligibility.

The term “administrative proceeding” as used in this Prime/General Contractor Update Statement includes (i) any action taken or proceeding brought by a governmental agency, department or officer to enforce any law, regulation, code, legal, or contractual requirement, except for those brought in state or federal courts, or (ii) any action taken by a governmental agency, department or officer imposing penalties, fines or other sanctions for failure to comply with any such legal or contractual requirement.

The term “anyone with a financial interest in your firm” as used in this Section “I”, shall mean any person and/or entity with a 5% or greater ownership interest in the applicant’s firm.

If you answer YES to any question, on a separate page provide a complete explanation of each proceeding or action and any judgment, decision, fine or other sanction or result. Include all details (name of court or administrative agency, title of case or proceeding, case number, date action was commenced, date judgment or decision was entered, fines or penalties imposed, etc.).

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have any civil, judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to the procurement or performance of any construction contract, including but not limited to actions to obtain payment brought by subcontractors, suppliers or others?</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>2. Have any criminal proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to the procurement or performance of any construction contract including, but not limited to, any of the following offenses: fraud, graft, embezzlement, forgery, bribery, falsification or destruction of records, or receipt of stolen property?</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>3. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a violation of any state’s or federal procurement laws arising out of the submission of bids or proposals?</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>4. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a violation of M.G.L. Chapter 268A, the State Ethics Law?</td>
<td>☐ ☐</td>
</tr>
</tbody>
</table>
### PART 4 - Legal or Administrative Proceedings; Compliance with Laws (continued)

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a violation of any state or federal law regulating hours of labor, unemployment compensation, minimum wages, prevailing wages, overtime pay, equal pay, child labor or worker’s compensation?</td>
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</tr>
<tr>
<td>6. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a violation of any state or federal law prohibiting discrimination in employment?</td>
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<tr>
<td>7. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a claim of repeated or aggravated violation of any state or federal law regulating labor relations?</td>
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</tr>
<tr>
<td>8. Have any proceedings by a municipal, state, or federal agency been brought, concluded, or settled relating to decertification, debarment, or suspension of your firm or any principal or officer or anyone with a financial interest in your firm from public contracting?</td>
<td></td>
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<tr>
<td>9. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a violation of state or federal law regulating the environment?</td>
<td></td>
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</tr>
<tr>
<td>10. Has your firm been fined by OSHA or any other state or federal agency for violations of any laws or regulations related to occupational health or safety? Note: this information may be obtained from OSHA’s Web Site at <a href="http://www.osha.gov">www.osha.gov</a></td>
<td></td>
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</tr>
<tr>
<td>11. Has your firm been sanctioned for failure to achieve DBE/MBE/WBE goals, workforce goals, or failure to file certified payrolls on any public projects?</td>
<td></td>
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</tr>
<tr>
<td>12. Other than previously reported in the above paragraphs of this Section I, have any administrative proceedings or investigations involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled by any local, state or federal agency relating to the procurement or performance of any construction contract?</td>
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<td></td>
</tr>
<tr>
<td>13. Are there any other issues that you are aware which may affect your firm’s responsibility and integrity as a building contractor?</td>
<td></td>
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</tbody>
</table>
PART 5 - SUPERVISORY PERSONNEL

List all supervisory personnel, such as project managers and superintendents, who will be assigned to the project if your firm is awarded the contract. **Attach the resume of each person listed below.**

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE OR FUNCTION</th>
</tr>
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PART 6 - CHANGES IN BUSINESS ORGANIZATION OR FINANCIAL CONDITION

Have there been any changes in your firm’s business organization, financial condition or bonding capacity since the date your current Certificate of Eligibility was issued? ☐ Yes ☐ No

If YES, attach a separate page providing complete details.

PART 7 – LIST OF COMPLETED CONSTRUCTION PROJECTS SUBMITTED TO THE DIVISION OF CAPITAL ASSET MANAGEMENT.

Attach here a copy of the list of completed construction projects which was submitted with your firm’s DCAM Application for your most recently issued (not extended or amended) DCAM Certificate of Eligibility. The Attachment must include a complete copy of the entire Section G – “Completed Projects” and the final page – “Certification” (Section J) containing the signature and date that the Completed Projects list (Section G) was submitted to the Division of Capital Asset Management.
KNOW ALL MEN BY THESE PRESENTS, that we the undersigned,  

________________________________________________________, as Principal,  

(insert name of bidder)  

and,  

________________________________________________________ as Surety,  

(insert name of surety)  

are hereby held and firmly bound unto the CITY of NEW BEDFORD, MASSACHUSETTS acting by and through its DEPARTMENT FACILITIES and FLEET MANAGEMENT as Owner, in the sum of  

________________________________________________________ Dollars  

($ ______________________ ) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.  

The condition of this obligation is such that whereas the Principal has submitted to the Owner a certain Bid attached hereto and hereby made a part hereof, to enter into a contract in writing, hereinafter referred to as the "AGREEMENT" for:  

WILKS LIBRARY WINDOW WALL REPLACEMENT  
New Bedford, Massachusetts 02740  

NOW THEREFORE,  

(a) If said BID shall be rejected, or in the alternative,  

(b) If said BID shall be accepted and the Principal shall duly execute and deliver the form of AGREEMENT attached hereto and shall furnish the specified bond for the payment for labor and materials furnished for the performance of the AGREEMENT, then this obligation shall be void, otherwise it shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder in no event shall exceed the amount of this obligation as herein stated.
The Surety, for value received, hereby agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extensions of the time within which the Owner may accept such BID; and said Surety does hereby waive notice of any such extensions.

IN WITNESS WHEREOF, the Principal and the Surety have set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and have caused this bond to be signed by their proper officers on this

________________________ day of ____________________ , 2019.

CONTRACTOR AS PRINCIPAL                      SURETY

__________________________________________   _____________________________
(Signature)                                      (Signature)

__________________________________________   _____________________________
Name and Title:                                  Name and Title:

SEAL                                           SEAL

END OF DOCUMENT
I HEREBY CERTIFY THAT I HAVE RECEIVED THE FOLLOWING ADDENDUM

ADDENDUM #’S

______________________________

Person submitting bid

______________________________

Company Name

Please include this form with your bid if applicable.
CERTIFICATE OF NON-COLLUSION

The undersigned certified under penalties of perjury that this bid 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

________________________________________

Name of business/organization
TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. c. 62C, §49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes reporting of employees and contractor, and withholding and remitting child support.

____________________________________
Signature of person submitting bid

____________________________________
Name of business
VOTE OF CORPORATION AUTHORIZING EXECUTION OF CONTRACT

I, the undersigned, a resident of _______________ in the State of ______________ hereby certify that I am the ___________ or duly authorized officer of ________________________________________________________________________, a _______________ Corporation duly organized by law and that this is a true, correct and complete copy of vote prepared at a meeting of the Directors of said corporation, duly called and held on ________________, at which meeting a majority of the Directors were present and acting throughout, VOTED:

That ___________________________________________________ the ________________ of ________________________________, the aforementioned corporation, be and hereby is authorized to affix the corporate Seal, sign and deliver in the name and on behalf of the corporation a contract with the City of New Bedford, Massachusetts for the WILKS LIBRARY WINDOW WALL REPLACEMENT Project in the amount of $__________________________

I further certify that the said vote as set out above has not been revoked or rescinded and is now in full force and effect, that said vote and action ordered thereby are in pursuance of the By-Laws of this Corporation.

IN WITNESS WHEREOF, I hereto set my hand this _____________ day of __________________, 2019.

Corporate Seal ________________________________

Clerk/Secretary

*This Must be the Person Authorized in your By-Laws to sign contracts.

NOTE: Since an Officer cannot certify to himself, this must be signed by someone other than the person signing the contract.
CONTRACTOR CERTIFICATION

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

_____________________________________
Contractor Authorized Signature

_____________________________________
Printed Name

________________________
Date

Title_______________________ Telephone:____________________

Fax:_______________________ Email:_______________________
OSHA CERTIFICATION REQUIREMENT

Effective July 1, 2006, all employees of a contractor to be employed on public building and public works worksites must have successfully completed at least a 10 hour course in construction safety and health approved by OSHA at the time the employee begins work.

I, ________________________________, as ________________________________, of the joint venture/corporation/partnership or other legal entity submitting this bid for a public works project falling under §39M of Chapter 30 of the Massachusetts General Laws and Chapter 149 of the same, do hereby certify that any and all employees found on my worksite for this project have, or will have by the start of their work on the project, successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that was at least 10 hours in duration.

A copy of the OSHA completion cards for each employee must be submitted to the City of New Bedford before work on this project is to begin and must be supplemented as new employees are hired or contracted to work on this project.

____________________________, as
Signature

____________________________, of
Position

____________________________, on
Company/Corporation/Joint Venture/Partnership/Etc.

____________________________
Date
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 AGREEMENT

A. CITY OF NEW BEDFORD STANDARD VERTICAL CONSTRUCTION CONTRACT For Projects Over $100,000 Subject to M.G.L. c149, §44A - F shall be used as the Contract for the Project.

B. At least three copies of this Contract shall be executed by both parties, each of whom shall retain one copy for their files, plus one for the Architect.

C. A SAMPLE copy of this Agreement form), three (3) pages, immediately follows this Document.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF DOCUMENT
CITY OF NEW BEDFORD
STANDARD VERTICAL CONSTRUCTION CONTRACT
For Projects Over $100,000 Subject to M.G.L. c149, §44A -F

OWNER - CONTRACTOR AGREEMENT

This agreement (“Contract”) is made as of the _____ day of ___________________, 20___,
by and between the City of New Bedford acting by and through its
______________________________ (Department) __________ with a principal place of business at 133 William
Street, New Bedford, MA 02740 and ________________________________,
a ____________________________________________________________ with a principal place of business at
______________________________, hereinafter called the “Contractor.”

Terms used in this Owner - Contractor Agreement which are defined in the General Conditions
of the Contract shall have the meanings designated therein.

The Awarding Authority and the Contractor agree as follows:

Article 1. Scope of Work. The Work under this Contract is defined as all work required by the
Contract Documents for the construction of ________________________________,
City of New Bedford Contract No. ____________________________, in accordance with and
as described in the Plans and Specifications dated ________________, 20__________, prepared by
__________________________________________________________________ (“Designer”),
as modified by Addenda Nos. ________________, dated ________ 20__.

Article 2. Time for Completion. The Contractor shall commence the Work under this Contract
on the date specified in the written “Notice to Proceed,” and shall, within _____ days after
such date, bring the Work to Substantial Completion and to the point at which a Certificate of
Agency Use and Occupancy may be issued, and shall bring the Work to Final Acceptance within
45 days after the date specified for Substantial Completion.

Article 3. Contract Price. The Awarding Authority shall pay the Contractor, in current funds,
for the performance of the Work, subject to additions and deductions by Approved Change
Order(s), the Contract Price of ________________________________ Dollars
($__________________________ ). The Unit Prices, if any, approved by the
Awarding Authority are those included in the Contractor’s General Bid. The following
Alternates have been accepted and their costs are included in the Contract Price:
Article 4. Approved Subcontractors. The filed Subcontractors listed in the Contractor’s General Bid submitted by the Contractor have been approved for the performance of the specified portions of the Work. No other filed Subcontractors and no non-filed Subcontractors shall be used for these or any other portions of the Work without the prior written approval of the Awarding Authority.

Article 5. Certifications. Pursuant to M.G.L. c. 62(c), s.49 (a), the individual signing this Contract on behalf of the Contractor hereby certifies, under the penalties of perjury, that to the best of his or her knowledge and belief the Contractor has complied with any and all applicable state and federal tax laws. The individual signing this Contract on behalf of the Contractor further certifies under penalties of perjury that the Contractor is not presently debarred from doing public construction work in the Commonwealth under the provisions of M.G.L. c. 29, s. 29F, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder and is not presently debarred from doing public construction work by any agency of the United States.

Article 6. The Contract Documents: The following documents form the Contract, are incorporated by reference herein, and are referred to as the “Contract Documents:”

- The Instructions to Bidders
- The General Bid submitted by the Contractor
- This Owner — Contractor Agreement
- The General Conditions of the Contract
- The Supplementary General Conditions
- The Plans and Specifications, including Addenda identified in Article 1 above
- All Approved Change Orders issued after execution of this Owner - Contractor Agreement

Article 7. Minority Business Enterprise and Women Business Enterprise Participation Goals and Minority/Women Workforce Utilization Percentages: The applicable goals, if any, for minority business enterprise and woman business enterprise participation established for this Contract are as follows:


The applicable minority workforce utilization percentage, if any, is ____________.

The applicable women workforce utilization percentage, if any, is ____________.

Article 8. Liquidated Damages. For the purposes of Article VI of the General Conditions of the Contract, liquidated damages for delay shall be as follows:

$1,000.00 (One thousand dollars and zero cents) Per day
In witness whereof, the parties hereto have caused this instrument to be executed in triplicate under seal as of the date set forth above.

<table>
<thead>
<tr>
<th>Contractor:</th>
<th>CITY OF NEW BEDFORD, MASSACHUSETTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>By: Jonathan F. Mitchell</td>
</tr>
<tr>
<td></td>
<td>Title: Mayor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CERTIFIED that funds are available</th>
<th>DEPT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>By: Peter Schmidt</td>
<td>By:</td>
</tr>
<tr>
<td>Title: City Auditor</td>
<td>Title:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPROVED as to Form and Legality</th>
<th>PURCHASING DEPARTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>By: Shannon Shreve</td>
<td>By: Susan Bruce</td>
</tr>
<tr>
<td>Title: Counsel II</td>
<td>Title: Chief Procurement Officer</td>
</tr>
</tbody>
</table>
KNOW ALL MEN BY THESE PRESENTS: That we

__________________________________________________________________________
(Name of Contractor)

___________________________________________________________________________________
(Corporation, Partnership, or Individual)

hereinafter called "Principal" and________________________________________________________
(Surety)

of _______________________,

State of ____________________________________________________________________________,

hereinafter called the "Surety", are held and firmly bound into the called the "Surety", are held and firmly bound into the CITY of NEW BEDFORD acting by and through its DEPARTEMENT FACILITY and FLEET MANAGEMENT, hereinafter called the "Owner" for the sum of

______________________________________________________________Dollars ($___________),

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner dated

The__________________________________________ day of _____________________________, 2019;

a copy of which is hereto attached and made a part hereof for the construction of:

WILKS LIBRARY WINDOW WALL REPLACEMENT
City of New Bedford
New Bedford, Massachusetts 02740
NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation of this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, the parties to these present have duly executed this bond on the

______________________________________, 2019.

ATTEST:

(SEAL)

_______________________________________________

(Principal)

By_______________________________________________

(Secretary)

_______________________________________________

(Address - Zip Code)

(Witness as to Principal)

_______________________________________________

_______________________________________________

(Address - Zip Code)

NOTES:

1. Date of Bond must not be prior to date of Contract.

2. If Contractor is a Partnership, all partners must execute Bond.

END OF DOCUMENT
KNOW ALL MEN BY THESE PRESENTS: That we

__________________________________________________________ as Principal
(Name of Contractor)

__________________________________________________________
(Corporation, Partnership, or Individual)

hereinafter called "Principal" and________________________________________________________
(Surety)

of ________________________________________________________________________________

State of _____________________________________________________________________________,

hereinafter called the "Surety", are held and firmly bound into the called the "Surety", are held and firmly bound into the CITY of NEW BEDFORD, MASSACHUSETTS acting by and through DEPARTMENT FACILITIES and FLEET MANAGEMENT, hereinafter called the "Owner" for the sum of

_____________________________________________________________________________________
Dollars ($_____________ ),

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner dated

The_________________________________ day of ______________________________________, 2019;

a copy of which is hereto attached and made a part hereof for the construction of:

WILKS LIBRARY WINDOW WALL REPLACEMENT
City of New Bedford
New Bedford, Massachusetts 02740

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, other fuels, repairs on machinery, equipment and tools, consumed or used in
connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, the parties to these present have duly executed in this bond on the

__________________________________day of___________________, 2019.

ATTEST:
(SEAL)

__________________________________ (Principal)

By___________________________________ (Secretary)

(SEAL)

__________________________________

(address - Zip Code)

(Witness as to Principal)

__________________________________

(address - Zip Code)

NOTES:

1. Date of Bond must not be prior to date of Contract.

2. If Contractor is a Partnership, all partners must execute Bond.

END OF DOCUMENT
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 GENERAL CONDITIONS

A. The CITY OF NEW BEDFORD GENERAL CONDITIONS STANDARD VERTICAL CONSTRUCTION CONTRACT For Projects over $100,000 Subject to M.G.L. c. 149, s. 44A-F [hereinafter referred to as ‘General Conditions’ or ‘GENERAL CONDITIONS’] to the extent applicable and except as otherwise revised, amended or supplemented hereinafter, on the Drawings or in other parts of the Contract Documents, whether attached hereto or not, are hereby made a part of the specifications for this project and shall apply to all work under the Contract.

B. A DRAFT copy of this GENERAL CONDITIONS, immediately follows this Document.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF DOCUMENT
CITY OF NEW BEDFORD

GENERAL CONDITIONS
STANDARD VERTICAL CONSTRUCTION CONTRACT
For Projects over $100,000 Subject to M.G.L. c. 149, s. 44A-F

GENERAL CONDITIONS OF THE CONTRACT

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ARTICLE I: DEFINITION OF TERMS

The following words shall have the following meanings as used in this Contract:
Advertisement: The Advertisement or Invitation for Bids or Proposals for the Work identified in Article 6 of the Owner - Contractor Agreement.

Approval: (or Approved): An approval in writing signed by the authorized signatory of the Awarding Authority.

Architect: The architect identified as the Designer in Article 1 of the Owner - Contractor Agreement.

As directed (As permitted, as required, as determined or words of like effect): The direction, permission, requirement or determination of the Designer or the Awarding Authority. Similarly, approved, acceptable, satisfactory or words of like import shall mean approved by or acceptable or satisfactory to the Designer, except as may be otherwise determined by the Awarding Authority.

Awarding Authority: The public agency awarding and administering this Contract identified as the Awarding Authority in the Owner - Contractor Agreement.

Building Code: All applicable rules and regulations to which the Awarding Authority is subject and which are contained or referenced in the code authorized by M.G.L. c. 143, s. 93 et seq., including all amendments thereto.

Certificate of Occupancy: A certificate signed by the Designer and the Awarding Authority pursuant to the requirements of Article VI of these General Conditions of the Contract, indicating that the Awarding Authority has determined that (1) the Work has been completed in accordance with the Contract Documents, except for Punch List items, (2) certificates of inspection, testing and/or approval (including a certificate of occupancy under the Building Code), operating permits for any mechanical apparatus which may be required to permit full use and occupancy of the Work by its intended users (which in a Subcontractor's case may include the Contractor) have been delivered to the Awarding Authority, (3) any applicable written warranties, operating instructions and related materials have been delivered to the Awarding Authority, and (4) the Work may be used for its intended purpose without substantial inconvenience or interference.

Change Order: (1) A written order not requiring the consent of the Contractor, signed by the Owner’s Project Manager and designated as a Change Order, directing the Contractor to make changes in the Work within the general scope of the Contract, or (2) any written or oral order from the Project Manager that causes any change in the Work, provided that the Contractor has given the Awarding Authority written notice stating the date, circumstances, and source of the order and that the Contractor regards the order as a Change Order.

Contract: The Contract formed by the Contract Documents as defined in Article 6 of the Owner - Contractor Agreement.

Contract Documents: The documents listed in Article 6 of the Owner - Contractor Agreement.

Contract Modification: Any alteration of the Contract Documents accomplished by a written agreement properly executed by the parties to this Contract.

Contract Price: The Contract Price stated in Article 3 of the Owner - Contractor Agreement which is the total sum owed to the Contractor for all of the Work.

Designer: The architect or engineer identified as the Designer in Article 1 of the Owner - Contractor Agreement, subject to the provisions of Article III, Section 1 of these General Conditions of the Contract.

Engineer: The Designer.

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.

Final Acceptance: The written determination by the Designer and by the Awarding Authority that the Work has been 100% completed, except for the Contractor’s indemnification obligations, warranty obligations, obligations to continue to maintain insurance coverage for the time periods provided in the Contract Documents, and any other obligations which are intended to survive Final Acceptance and/or the termination of the Contract.

General Bid: The completed bid form submitted by the Contractor in accordance with the requirements of M.G.L. c. 149.

Laws: All applicable statutes, regulations, ordinances, codes, laws, orders, decrees, approvals, certificates and requirements of governmental and quasi-governmental authorities.

Neutral: An impartial third party not having an interest in the Owner, the Designer, the Contractor or the Project.
**Notice to Proceed:** The written notice provided by the Awarding Authority to the Contractor which authorizes the Contractor to commence the Work as of a date specified therein, from which date the time of completion specified in Article 2 of the Owner - Contractor Agreement is measured.

**Or equal (or words of like import):** Equal in the opinion of the Awarding Authority determined pursuant to the provisions of M.G.L. c.30, s. 39M and the provisions of these General Conditions of the Contract.

**Owner:** The city of New Bedford, Massachusetts.

**Plan(s):** Drawing(s).

**Product Data:** Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor or its Subcontractors and suppliers to illustrate materials or equipment for some portion of the Work. Product data also include any such information or instructions produced by the manufacturer or distributor of such materials or equipment and made readily available by said manufacturer or distributor.

**Progress Schedule:** The progress schedule Approved by the Designer and the Awarding Authority in accordance with Article VI of these General Conditions of the Contract.

**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.

**Owner’s Project Manager (OPM):** The Awarding Authority's representative assigned to the Project.

**Punch List:** A list of items determined by the Awarding Authority to be minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the Work for its intended purpose.

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

**Schedule of Values:** The schedule Approved by the Awarding Authority pursuant to Article VIII of these General Conditions of the Contract which allocates the Contract Price to the various portions of the Work and is used as a basis for payments to the Contractor.

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

**Site:** The land and, if any, building(s) or space within any such building(s) on which or in which the Contractor is to perform the Work.

**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.

**Subcontractor:** Person or entity with whom the Contractor contracts in order to perform the Work, except as otherwise specifically provided or required herein or by Law.

**Substantial Completion:** For work subject to M.G.L. c. 30 s. 39K, "substantial completion" shall occur when (1) 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 Awarding Authority, less than one percent of the original contract price, or (2) the Contractor substantially completes the work and the Awarding Authority takes possession for occupancy, whichever occurs first. For work subject to M.G.L. c. 30 s. 39G "substantial completion" shall mean either that the work required by the Contract has been fully completed, completed except for work having a Contract Price of less than one percent of the then adjusted total Contract Price, or substantially all of the Work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the Work.

**Superintendent:** The licensed construction supervisor who is an employee of the Contractor designated to be in full-time attendance at the Site throughout the prosecution and progress of the Work and who shall have complete authority to act for the Contractor.

**Work:** The Work defined in Article 1 of the Owner - Contractor Agreement, Article II, Section 2 of these General Conditions of the Contract and otherwise in the Contract Documents.

**Working Hours:** 7:00 a.m. to 5:00 p.m., but not more than eight hours per day, Monday through Friday, unless otherwise specified by applicable Laws.
ARTICLE II: EXECUTION OF THE CONTRACT, SCOPE OF WORK, INTERPRETATION OF CONTRACT DOCUMENTS

1. Execution.  
   The execution of the Owner – Contractor Agreement by the Contractor is a representation that the Contractor has visited the Site, has become familiar with local conditions under which the Work is to be performed and has correlated personal observations with requirements of the Contract Documents.

2. Scope of Work.  
   The Work consists of the Work identified in the Contract Documents. The Work comprises the completed construction required by the Contract Documents and includes all labor, tools, materials, supplies, equipment, permits, approvals, paperwork, calculations, submittals, and certificates necessary to develop, construct and complete the Work in accordance with all Laws, and all construction and other services required to be supervised, overseen, performed or furnished by Contractor or that the Contract Documents require the Contractor to cause to be supervised, overseen, performed or furnished. The Contractor shall provide and perform for the Contract Price all of the duties and obligations set forth in the Contract Documents.

3. Interpretation.  
   A. The Plans and Specifications and other Contract Documents are to be considered together and are intended to be mutually complementary, so that any work shown on the Plans though not specified in the Specifications, and any work specified in the Specifications though not shown on the Plans, is to be executed by the Contractor as a part of this Contract.
   B. All things that in the opinion of the Designer may be reasonably inferred from the Plans, Specifications and other Contract Documents are to be executed by the Contractor. The Designer shall determine whether the detail Plans conform to the general Plans and Contract Documents, except as may be otherwise determined by the Awarding Authority.
   C. The tables of contents, titles, headings and marginal notes or sub-scripts contained herein are solely to facilitate references, are not intended to be construed as provisions of the Contract, and in no way affect the interpretation of the provisions to which they refer.
   D. Where reference is made in the Contract Documents to publications, standards, or codes issued by associations or societies, such reference shall be interpreted to mean the current edition of such publications, standards, or codes, including revisions in effect on the date of the Advertisement, notwithstanding any reference to a particular date. The foregoing sentence shall not apply to the dates, if any, specified with respect to insurance policy endorsement forms.
   E. In case of any conflict among the Contract Documents, unless the context clearly otherwise requires, the Contract Documents shall be construed according to the following priorities:
   - First Priority: Contract Modifications
   - Second Priority: Owner - Contractor Agreement
   - Third Priority: General Conditions of the Contract
   - Fourth Priority: Drawings -- Schedules take precedence over enlarged detail Drawings, and enlarged Detail Drawings take precedence over reduced scale Drawings; figured dimensions shall prevail over scale.
   - Fifth Priority: Specifications

4. Distribution of Work.
The distribution of the Work is intended to be described under the appropriate trades and, except for filed sub-bid work, may be redistributed, except as directed herein, provided that such redistribution shall cause no controversy among the trades and no delay in the progress of the Work.

The Contract Price constitutes full compensation to the Contractor for everything to be performed and furnished in connection with the Work and for all damages arising out of the performance of the Work and/or the action of the elements, and constitutes the maximum compensation regardless of any difficulty incurred by the Contractor in connection with the Work or in consequence of any suspension or discontinuance of the Work.

ARTICLE III: CONTROL OF WORK / ADMINISTRATION OF THE CONTRACT

1. Designer.
Notwithstanding anything to the contrary expressed or implied in this Contract, any of the powers, rights, and duties of the Designer may be exercised by the Awarding Authority, provided that the Awarding Authority shall be under no obligation to do so. The Awarding Authority may rely on the Designer for the performance and exercise of its rights and obligations hereunder and shall be presumed to so rely on the Designer in the absence of an explicit written assumption by the Awarding Authority of any such rights and obligations, except that any Approval required to be obtained from the Awarding Authority hereunder shall not be valid without the signature of the Awarding Authority. The Awarding Authority may explicitly overrule in writing any action, determination or decision of the Designer should the Awarding Authority choose to do so, except to the extent that the same would violate applicable law. Subject to the foregoing, the Designer shall be responsible for the general administration of the Contract and shall perform the duties and exercise the rights herein conferred on the Designer. Except as otherwise specifically provided herein, the Designer shall decide all questions which may arise as to the conduct, quantity, quality, equality, acceptability, fitness, and rate of progress of the several kinds of work and materials to be performed and furnished under this Contract, and shall decide all questions which may arise as to the interpretation of the Plans and Specifications and as to the fulfillment of this Contract on the part of the Contractor. In the case of the death, resignation, inability or refusal of the Designer to act, or the termination of his or her or its employment, the Awarding Authority may appoint another person to act as Designer for the purposes of this Contract. The Awarding Authority shall give written notice to the Contractor of any such appointment.

2. Right of Access to Work.
The Awarding Authority and the Designer (and persons designated by them) may for any purpose enter upon the Work, the Site, and premises used by the Contractor, and the Contractor shall provide safe facilities therefore. Other contractors of the Awarding Authority may also enter upon the same for the purposes which may be required by their contracts or work. Any differences or conflicts which may arise between the Contractor and other contractors of the Awarding Authority with respect to their work shall be initially resolved by the Designer.

3. Inspection No Waiver.
No inspection by the Awarding Authority or the Designer or employees or agents of either of them, and no order, measurement, certificate, approval, payment order, payment, acceptance or any other action or inaction of any of them, shall operate as a waiver by the Awarding Authority of any provision of this Contract.

ARTICLE IV: GENERAL PERFORMANCE OBLIGATIONS OF THE CONTRACTOR

The Contractor shall complete for the Contract Price all of the Work in a proper, thorough, and workmanlike manner in accordance with the Contract Documents. Without limiting the foregoing and without limiting the Contractor's obligations under any other provision of the
Contract Documents, the Contractor shall for the Contract Price perform the following general obligations:

1. **Review of Contract Documents and Field Conditions.**
   A. Before commencing the Work, the Contractor shall carefully study the Contract Documents and carefully compare all Specifications, Plans, Drawings, figures, dimensions, lines, marks, scales, directions of the Designer, and any other information provided by the Awarding Authority and shall at once report to the Designer any questions, errors, inconsistencies, or omissions.
   B. Before commencing the Work, 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 and shall at once report to the Designer any questions, errors, inconsistencies, or omissions.

2. **Supervision and Construction Procedures; Coordination; Cutting, and Patching.**
   A. The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and shall have control over, construction means, methods, techniques, sequences and procedures, and shall be responsible for coordinating all portions of the Work under the Contract.

   B. The Contractor shall be responsible for the proper fitting of all Work and the coordination of the operations of all trades, Subcontractors, and materialmen engaged upon the Work. The Contractor shall guarantee to each of its Subcontractors all dimensions which they may require for the fitting of their work to all surrounding work.

   C. All necessary cutting, coring, drilling, grouting, and patching required to fit together the several parts of the Work shall be done by the Contractor, except as may be specifically noted otherwise under any particular filed sub-bid section of the Specifications.

   D. The Contractor shall be responsible to the Awarding Authority for the acts and omissions of the Contractor's employees, agents and Subcontractors, and their agents and respective contractors' employees, and other persons performing portions of the Work or supplying materials therefore.

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

   F. The Contractor shall employ a registered land surveyor to perform any engineering required for establishing grades, lines, levels, dimensions, layouts, and reference points for the trades. The Contractor shall be responsible for maintaining benchmarks and other survey marks and shall replace any benchmarks or survey marks that may have become disturbed or destroyed. The Contractor shall verify the materials shown on the Drawings before laying out the Work and shall be responsible for any error resulting from its failure to exercise this precaution.

   G. Unless otherwise required by the Supplementary General Conditions or the Plans and Specifications, or directed in writing by the Awarding Authority, Work shall be performed during regular Working Hours. However, if the Contractor desires to carry on the Work outside of regular Working Hours or on Saturdays, Sundays, or Massachusetts or federal holidays then the Contractor shall allow ample time to allow satisfactory arrangements to be made for inspecting Work in progress and shall bear the costs of such inspection. The Awarding Authority shall bill the Contractor directly for such costs.

   H. Work performed outside of regular Working Hours without the consent or knowledge of the Awarding Authority shall be subject to additional inspection and testing as directed by the Awarding Authority. The cost of this inspection and testing shall be borne by the Contractor whether the Work is found to be acceptable or not. The Awarding Authority at its election shall be entitled either to issue a credit Change Order to cover such cost or to withhold such cost from any further payments due the Contractor and/or to receive a payment from the Contractor of the amount of such cost.

3. **Superintendent.**
   A. The Contractor shall employ a Superintendent whose appointment shall be subject to the Approval of the Awarding Authority. The Superintendent shall be in attendance at the Site full-time during the performance of the Work. The Superintendent shall represent the Contractor.
Communications given to and from the Superintendent shall be deemed given to and from the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed upon written request in each case. The Superintendent shall attend each job meeting. The Superintendent shall be responsible for coordinating all of the Work of the Contractor and the Subcontractors.

B. The Superintendent shall be a competent employee regularly employed by the Contractor. The Superintendent shall be licensed in accordance with the Building Code and shall have satisfactorily performed similar duties on previous construction projects similar in type, complexity and scale to the Project. The Superintendent's resume shall be submitted to the Awarding Authority prior to commencement of construction together with such other information as the Awarding Authority may reasonably require in order to determine whether or not to approve of his or her appointment. Any change in the Superintendent shall require the prior consent of the Awarding Authority. The Contractor shall establish an emergency telephone line by which the Awarding Authority, the Designer, or their respective agents may contact the Superintendent during non-working hours.

4. Labor.
   A. The Contractor shall employ only competent workers. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall certify and insure 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 the Contractor and each of its subcontractors and others working on the Project shall furnish documentation of successful completion of said course by employees working with the first certified payroll report for each employee. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. Whenever the Awarding Authority shall notify the Contractor in writing that any worker is, in the Designer's opinion, incompetent, unfaithful, disorderly, or otherwise unsatisfactory, such employee shall be discharged from the Work and shall not again be employed on the Project except with the consent of the Awarding Authority.
   B. The Contractor shall employ a sufficient number of workers to carry on the Work with all proper speed in accordance with Laws, the requirements of the Contract Documents, and the Progress Schedule.
   C. The Contractor shall procure materials from such sources and shall manage its own forces and the forces of its Subcontractors and any sub-subcontractors in such a manner as will result in harmonious labor relations on the Project Site. The Contractor shall cause persons to be employed in the Work who will work in harmony with others so employed. Should the Work be stopped or materially delayed in the Awarding Authority’s reasonable judgment due to a labor dispute, the Awarding Authority shall have the right to require the Contractor to employ substitutes acceptable to the Awarding Authority.

   A. The Contractor at its sole cost shall take out and pay for all approvals, permits, certificates and licenses required by Laws, pay all charges and fees, and pay for (or cause the appropriate Subcontractor to pay for) all utilities required for the proper execution of the Work.
   B. The Contractor shall comply with all Laws and shall give all notices required thereby.
   C. Except as otherwise specified in this Contract, it is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable Laws. However, if the Contractor observes that portions of the Contract Documents are at variance with the requirements of Laws, the Contractor shall promptly notify the Designer and Awarding Authority in writing, and necessary changes shall be accomplished by an appropriate Contract Modification.
   D. If the Contractor performs Work knowing it to be contrary to Laws without giving such notice to the Designer and Awarding Authority, the Contractor shall bear full responsibility for such Work and all costs attributable thereto, including, without limitation, corrections to the Work.

6. Lines, Marks etc.
The Contractor shall furnish batter boards and stakes and shall cause to be placed and maintained thereon so as to be easily read, such lines, marks and directions relating to the Work as the Designer shall from time to time direct. The Designer shall establish base lines and benchmarks
on the Drawings for the locations of the Work but all other lines and grades shall be determined by the Contractor.

7. **Excavation.**
The Contractor shall prevent by sheeting and shoring or bracing, if necessary, any caving or bulging of the sides of any excavation made by the Contractor, leaving sheeting and shoring in place, or if any is removed, filling solid the spaces left thereby.

8. **Dewatering/Hoisting/Staging.**
The Contractor shall provide pumping, drainage, and disposal of all water and other flows so that no puddle, nuisance, or damage will be caused by water or flooding. The Contractor shall provide all hoisting equipment and machinery required for the proper execution of the Work. The Contractor shall provide all exterior and interior staging required to be of eight feet in height, except as may be otherwise provided in the Contract Documents.

9. **Corrections to the Work; Inspection No Bar to Subsequent Corrections.**
The Designer's inspection of the Work shall not relieve the Contractor of its responsibilities to fulfill the Contract obligations. Defective work may be rejected by the Designer or Awarding Authority whether or not such work and/or materials have been previously overlooked or misjudged by the Designer and accepted for payment. If the Work or any part thereof shall be found defective at any time before the Final Acceptance of the whole Work, the Contractor shall forthwith cease the performance of any defective work in progress and, whether or not such work is still in progress, shall forthwith correct such defect in a manner satisfactory to the Designer and Awarding Authority. If any material brought upon the Site for use in the Work, or selected for the same, shall be rejected by the Designer as unsuitable or not in conformity with the Contract Documents, or as damaged by casualty or deteriorated due to improper storage at the Site or to any other factor, the Contractor shall forthwith remove such materials from the Site. The Contractor shall pay for the cost of making good all work or property of other contractors or of the Awarding Authority destroyed or damaged by such removal or replacement; repair any injury, defect, omission or mistake in the Work as soon as it is discovered; finish and immediately make good any defect, omission or mistake in the Work; and complete and leave the Work in perfect condition.

10. **Sanitary Facilities.**
The Contractor shall provide and maintain sanitary facilities for all persons employed on the Work, beginning with the first worker at the Site. Said facilities shall meet the following requirements unless otherwise specified in the Supplementary General Conditions or Specifications.
   A. There shall be no fewer facilities than the number required by applicable Laws;
   B. Facilities shall be kept in a clean sanitary condition at all times and shall be adequately screened to be inaccessible to flies.

   (Note: If existing sanitary facilities at the Site are to be used by the Contractor, this requirement will be modified accordingly in the Supplementary General Conditions or Specifications.)

11. **Temporary Offices.**
   A. Except as otherwise specified in the Supplementary General Conditions or Specifications, the Contractor shall erect the following temporary offices near the Site as directed by the Awarding Authority and adequately furnish and maintain them in a clean, orderly condition:
      (1) A Contractor's field office at which Contractor's authorized representative shall be present at all times while work is in progress. Instructions, notices, and other communications delivered there by the Designer or the Awarding Authority shall be deemed delivered to the Contractor. The Contractor shall provide a separate conference room space with a conference table and chairs sufficient to accommodate 12 persons at one time.
      (2) Office for the OPM, either a separate building or trailer. Such office shall be in close proximity to the Contractor's field office, shall be at least 475 square feet in area, and shall be equipped with partitions to separate it from public access, electric lights, heat, air conditioning, window screens, secure locking devices, and a toilet room with a working
chemical toilet. Such office shall be equipped with the following furniture and equipment in good condition: 2 lockable steel desks, word processor, 2 swivel chairs, two stools, 2 metal plan racks, plan table at least 32 by 84 inches, 2 metal filing cabinets with locks, 12 feet of 10 inch deep shelving, one accurate Fahrenheit thermometer, one electric water cooler with disposable cups and water supply service, one hard hat for each project representative and 6 visitor hard hats, one dry plain paper copy machine with a legal and standard paper tray, and one calculator with paper print out, all of which shall become the property of the Contractor at the conclusion of the Work. (Note: If office space can be assigned in existing buildings at the Project Site, this requirement will be modified accordingly in the Supplementary General Conditions or Specifications.)

B. The Contractor shall relocate the OPM’s trailer at no additional cost to the Owner if the need for relocation arises as determined by the Awarding Authority.

12. Contract Documents and Samples at the Site.
A reasonable number of sets of Contract Documents will be furnished to the Contractor by the Awarding Authority immediately after signing of the Contract, one of which shall be maintained at the Site for reference by authorized representatives of the Awarding Authority. The Contractor shall maintain at the Site for the use and information of the Awarding Authority one record copy of the Drawings, Specifications, Addenda, Change Orders, Approved Shop Drawings, Product Data, Samples, updated Progress Schedule, and all other submittals, all in good order and marked currently to record changes and selections made during construction. These shall be available to the Designer and the Awarding Authority and shall be delivered to the Designer for submittal to the Awarding Authority upon completion of the Work.

13. Telephones.
The Contractor shall provide and maintain separate individual telephone service and pay for all calls relating to the Work. Service and equipment shall meet the requirements, if any, of the Supplementary General Conditions and Specifications and shall include provisions for incoming and outgoing calls: (1) in the Contractor's field office for the use of its authorized agents and (2) in the OPM’s office for the use of the Designer and authorized agents of the Owner.

14. Health, Safety, and Accident Prevention
A. In performing the Work, the Contractor shall:
   (1) Ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health and/or safety as determined under construction safety and health standards promulgated by the U.S. Secretary of Labor by regulation;
   (2) Protect the lives, health, and safety of other persons; and
   (3) Prevent damage to property, materials, supplies, and equipment.
B. For these purposes, the Contractor shall:
   (1) Comply with 84 Stat. 1590, the "Occupational Safety and Health Act of 1970" (OSHA) and with regulations and standards issued by the U.S. Secretary of Labor at 29 CFR Part 1926; and
   (2) Include the terms of this Section 14 in every subcontract so that such terms will be binding on each subcontractor.
   (3) Designate by notice to the Awarding Authority a responsible member of its organization at the Site whose duties shall include ensuring safety, implementation of Contractor’s Safety Plan referenced below and preventing accidents.
C. The Contractor shall maintain an accurate record of exposure data on all accidents incident to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment, and shall report this data in the manner prescribed by 29 CFR Part 1904. Without limiting the foregoing, the Contractor shall submit to the Awarding Authority without delay verbal and written reports of all accidents involving bodily injury or property damage arising in connection with the Work.
D. In any emergency affecting the safety of persons or property the Contractor shall immediately act in the exercise of reasonable judgment to prevent threatened damage, injury, or loss. The Contractor shall immediately notify the Awarding Authority of such emergency.
E. The Contractor shall be responsible for its Subcontractors’ compliance with the provisions of this Section 14.

F. Before commencing any portion of the Work the Contractor shall submit a written Project-specific plan for implementing this Section 14. The plan shall include an analysis of the significant hazards to life, limb and property inherent in the performance of the Work and a plan for controlling these hazards.

G. Without limiting the foregoing provisions of this Section 14, the Contractor shall comply with all health and safety Laws applicable to the Work. Without limitation,

1. If the Contractor uses, stores or encounters toxic or hazardous substances it shall comply with M.G.L. c. 111F, s. 2, the "Right to Know" law and regulations promulgated by the Department of Public Health, 105 CMR 670, the Department of Environmental Protection, 310 CMR 33, and the Department of Labor and Workforce Development, 441 CMR 21; and shall post a Workplace Notice obtainable from the Department of Labor and Workforce Development.

2. The Contractor shall comply with the Federal Resource Conservation and Recovery Act, the Federal Comprehensive Environmental Response, Compensation and Liability Act, M.G.L. c. 21C, M.G. L. c. 21E, and any other Laws affecting toxic or hazardous materials, solid, special or hazardous waste (collectively "Hazardous Materials Laws). Should the Contractor discover unforeseen materials subject to Hazardous Materials Laws at the Site, the Contractor shall immediately comply with any and all requirements for dealing with such materials and notify all required governmental authorities and the Awarding Authority of such discovery.

3. The Contractor shall be responsible for the location of all utilities in connection with the Work. Without limiting the foregoing, the Contractor shall comply with Dig-Safe Laws. Dig-Safe is the Utility Underground Plant Damage Prevention System, 331 Montvale Road, Woburn, MA, 01801, 1-888-344-7233. The Contractor shall notify Dig-Safe of contemplated excavation, demolition, or explosive work in public or private ways, and in any utility company right of way or easement, by certified mail, with a copy to Department of Environmental Protection (DEP). This notice shall be given at least 72 hours prior to the work, but not more than sixty days before the work is to be done. Such notice shall state the name of the street or the route number of the way and shall include an accurate description of the location and nature of the proposed work. Dig-Safe is required to respond to the notice within 72 hours of receipt by designating the location of pipes, mains, wires or conduits at the Site. The Contractor shall not commence work until Dig-Safe has responded. The work shall be performed in such manner and with reasonable precautions taken to avoid damage to utilities under the surface at the work location. The Contractor shall provide the Superintendent with current Dig-Safe regulations, and a copy of M.G.L. c. 82, s. 40. Any costs related to the services performed by Dig-Safe shall be borne by the Contractor.

4. The Contractor shall comply with M.G.L. c. 149, s. 129A, relative to shoring and bracing of trenches.

H. Without limiting the Contractor’s responsibilities described above, the Contractor shall take all reasonable precautions for the safety of, and the prevention of injury or damage to (1) all agents and employees and contractors on the Work and all other persons who may be affected thereby including the general public, (2) all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the Site, under the care custody or control of the Contractor or any of its Subcontractors or any contractors directly or indirectly contracting through any of them, and (3) other property at the Site or adjacent thereto, including but not limited to trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of the Work. The Contractor shall promptly remedy all damage or loss to any such property caused in whole or in part by the Contractor, any Subcontractor, or anyone directly or indirectly contracted or employed by any of them or by anyone for whose acts any of them may be liable. Without limiting the foregoing, the Contractor shall:

1. post and maintain adequate danger signs and other warnings against hazards;
2. promulgate safety regulations and give appropriate notices to the Awarding Authority and users of adjacent utilities and property;
(3) insure the adequate strength and safety of all scaffolding, staging and hoisting equipment, temporary shoring, bracing and tying;
(4) protect adjoining private or public property;
(5) provide barricades, temporary fences, and covered walkways required by prudent construction practices, Laws and/or the Contract Documents;
(6) furnish approved hard hats and other personal protective equipment, furnish approved first aid supplies, furnish the name of the first aid attendant, and maintain a posted list of emergency facilities;
(7) provide proper means of access to property where the existing access is cut off by the Contractor;
(8) maintain from the beginning of any darkness or twilight through the whole of every night sufficient lights on or near any obstruction so as to guard and protect travelers from injury from such obstruction;
(9) maintain adequate security at the Site so as not to expose the Work and surrounding property to vandalism or malicious mischief;
(10) provide adequate fire protection procedures during the use of cutting torches, welding equipment, plumbers' torches and other flame and spark producing apparatus;
(11) take prompt action to correct any dangerous or hazardous conditions.

1. The Contractor shall not use or store explosives in the performance of the Work unless the Contractor first obtains the Awarding Authority's prior written specific Approval. If the Awarding Authority Approves the use or storage of explosives during the performance of the Work, the Contractor shall first comply with all Laws and obtain all permits, approvals, and certificates required in connection with the same and shall exercise best efforts, including but not limited to the employment and supervision of properly qualified personnel, to prevent damage, injuries, and accidents involving said explosives.

J. The Contractor shall not permit cutting or welding in or immediately adjacent to existing property of the Owner, Awarding Authority or of anyone else without the Awarding Authority's prior Approval in each instance.

15. Debris and Chemical Waste.
   A. The Contractor shall not permit the accumulation of interior or exterior debris. The Contractor shall keep the Work area clean at all times. Without limitation, garbage shall be removed daily.
   B. The Contractor shall properly classify and remove debris and waste from the Site and transport and dispose of it, all in accordance with Laws, employing a qualified and properly licensed transporter, at any landfill, disposal or recycling facility licensed under applicable Laws, including without limitation, hazardous materials laws. The Contractor shall make all arrangements and give and obtain all notices, communications, documentation, permits, certificates, and approvals necessary for said disposal from the owner or officials in charge of such landfills, disposal or recycling facilities. The Contractor shall bear all fees and costs in connection with such classification, removal, transportation, disposal and storage. The Contractor shall not permit any storage of debris or waste except in accordance with Laws.
   C. The Contractor shall not permit any open fire on the Site.
   D. Chemical Waste: Chemical waste shall be stored in corrosion resistant containers, removed from the Site, and disposed of not less frequently than monthly unless more frequently required by Laws, including without limitation hazardous materials laws, or by the Supplementary General Conditions or Specifications. Disposal of chemical waste shall be performed in accordance with requirements of the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP). Fueling and lubricating of vehicles and equipment shall be conducted in a manner that affords the maximum protection against spills and evaporation. Lubricants shall be disposed of in accordance with procedures meeting all applicable Laws. The Contractor shall immediately notify the Designer of any hazardous materials release large enough to require reporting under applicable Laws. The Contractor shall be responsible for immediately cleaning up in accordance with Laws any oil or hazardous materials releases resulting from its operations. Any costs incurred in cleaning up any such releases shall be borne by the Contractor.

16. Weather Protection (M.G.L. c. 149, s. 44G. and 44F (1)).
The Contractor shall furnish and install "weather protection," which means temporary protection of that Work adversely affected by moisture, wind and cold. Weather protection shall be achieved by covering, enclosing and/or heating working areas such that a minimum temperature of 40 degrees Fahrenheit is maintained at the working surface during the months of November through March in order to permit construction to be carried on during such period in accordance with the Progress Schedule. After the building or portion thereof is completely enclosed by either permanent construction or substantial temporary materials having a resistance comparable to the specified permanent construction, the Contractor shall provide heat therein of not less than 55 degrees F. nor more than 75 degrees F. The foregoing provisions do not supersede any specific requirements for methods of construction, curing of materials and the like. Such weather protection shall be consistent with the Progress Schedule, shall permit the continuous progress of the Work necessary to maintain an orderly and efficient sequence of construction operations, shall include one thermometer for every 2,000 square feet of floor space or fraction thereof, shall be subject to the Approval of the Awarding Authority, and shall meet such additional requirements as may be specified by the Supplementary General Conditions or the Specifications.

17. Furnishings and Equipment.
When, in the opinion of the Designer, any portion of the Work is in a reasonable condition to receive fittings, furniture, or other property of the Owner not covered by this Contract, the Contractor shall allow the Awarding Authority to bring such fittings, furniture, and/or other property into such portions of the Work and shall provide all reasonable facilities and protection thereof. No such occupancy shall be construed as interfering with the provisions relating to time of completion, or as constituting an acceptance of the whole or any part of the Work. Any furniture or fittings so installed shall be placed in the Work at the risk of the Awarding Authority except that the Contractor shall be liable for damages or losses to such furniture or fittings to the extent such damages or losses arise in whole or in part from the negligence or intentional misconduct of Contractor, Subcontractors, their agents and/or employees, or anyone for whose acts Contractor is responsible.

18. Form for Sub-contract.
The Contractor when subcontracting with sub-bidders filed pursuant to M.G.L. c. 149, s.44F shall use the form for sub-contract in M.G.L. c. 149, s. 44F(4) (c). The Contractor shall not interpret paragraph 3 of the statutory form of Subcontract to require such sub-bidders to provide insurance with limits higher than the limits that are required by Article XIV of these General Conditions of the Contract assuming that the term “Contractor” refers to the sub-bidder and that the term “Contract Price” refers to the sub-bidder’s price stated in paragraph 1 of the statutory form of Subcontract.

19. Sales Tax Exemption and Other Taxes.
All building materials and supplies as well as the rental charges for construction vehicles, equipment and machinery rented exclusively for use on the Site, or while being used exclusively for the transportation of materials for the Work are entitled to an exemption from sales taxes under M.G.L. c. 64H, s. 6(f). The Contractor shall take all action required to obtain the benefit of such sales tax exemption. The Contractor shall bear the cost of any sales taxes that Contractor incurs in connection with the Work and the Awarding Authority shall not reimburse the Contractor for any such taxes. The exemption number assigned to the Contractor as an exempt purchaser shall be provided to the Contractor by the Awarding Authority upon the written request of the Contractor.

20. Final Cleaning.
At the completion of the Work, the Contractor shall remove all waste materials, rubbish, tools, equipment, machinery and surplus materials, and professionally clean all sight-exposed surfaces so that the Work is clean and ready for occupancy. Subsequent to installation of furniture, telephones, and equipment, the Contractor shall provide such additional cleaning as may be necessary to remove any soil resulting from installation of such furniture, telephones and equipment.

Subject to such additional requirements as may be provided in the Supplementary General Conditions or Specifications, the Contractor shall compile 3 complete and identical binders of operating and maintenance data for the entire Work. The Contractor shall submit record maintenance data to the Designer for approval, shall submit approved maintenance data to the Awarding Authority, and shall instruct and train the Awarding Authority’s personnel in proper inspection and maintenance procedures.

22. **Closeout Procedures.**
The Contractor shall take all actions and submit all items required for the issuance of the Certificate of Use and Occupancy and Final Acceptance as specified in the Contract Documents.

23. **Risk of Loss.**
The Contractor shall bear all risk of loss to the Work during the term of the Contract except for any portion of the Work as to which the Certificate of Occupancy has been issued pursuant to Article VI of these General Conditions of the Contract. Nothing herein shall limit the Contractor's responsibilities under Article IX or XV of these General Conditions of the Contract.

**ARTICLE V: MATERIALS AND EQUIPMENT**

1. **Materials Generally.**
   A. Unless otherwise specifically provided in the Contract Documents, the Contractor shall provide and pay for 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.

   B. Materials and equipment to be installed as part of the Work (both or either of which are hereinafter referred to as "materials") shall be new, unused, of recent manufacture, assembled, and used in accordance with the best construction practices. The Contractor shall give a preference in the purchase of supplies and materials, other considerations being equal, in favor, first, of supplies and materials manufactured and sold within the Commonwealth, and, second, of supplies and materials manufactured and sold elsewhere within the United States.

2. **Shop Drawings, Product Data, and Samples.**
   A. The Contractor shall furnish to the Designer all samples of the materials to be used in the execution of the Work as required by the Contract Documents. The Contractor shall furnish to the Designer in a timely manner all coordination Drawings, shop details, Shop Drawings, and setting diagrams which may be necessary for acquiring and installing materials. These shall be reviewed as required by the Designer. A minimum of four (4) copies shall be submitted for final approval, one of which shall be returned to the Contractor, one to the OPM, one to the Awarding Authority and one filed with the Designer. The inspection and approval by the Designer of Shop Drawings, etc. shall be general and shall in no way relieve the Contractor from responsibility for proper fitting, coordinating, construction, and construction sequencing. The Contractor shall furnish to the Designer such information and vouchers relative to the Work, the materials therefore, and the persons employed thereon, as the Designer shall from time to time request.

   B. Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. The purpose of their submission 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.

   C. The Contractor shall review, approve, and submit to the Designer, Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Awarding Authority or of separate contractors. Submittals made by the Contractor which are not required by the Contract Documents or which do not comply with the Contract Documents may be returned without action. The Contractor's attention is directed to the provisions of Section 4 of this Article V and to the Specifications.

   D. The Contractor shall prepare and keep current for the Designer's approval a schedule of submittals which is coordinated with the Progress Schedule and allows the Designer reasonable time to review submittals.
E. 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 approved by the Designer. Such Work shall be in accordance with Approved submittals.

F. By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements, and field construction criteria related thereto and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

G. The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Designer's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Designer in writing of such deviation at the time of submittal and the Awarding Authority has given explicit 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 Designer's or the Awarding Authority's actions.

H. 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 Designer on previous submittals.

I. Informational submittals upon which the Designer is not expected to take responsive action may be so identified in the Contract Documents.

J. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, such certification must be stamped by a registered Massachusetts professional in the discipline required. The Designer shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

K. Materials furnished or used or employed under the Contract must be equal in quality to the samples furnished and be satisfactory to the Designer.

3. Tests.

A. Any material to be used in the Work may be tested or inspected at any time by the Designer with the prior Approval of the Awarding Authority and may be rejected if it fails to comply with specified tests. The Awarding Authority shall pay for all testing of specified material. If the Contractor requests permission to use a material that was not specified, then the Contractor shall pay for such testing. The cost of testing of materials that fail the testing criteria shall be borne by the Contractor.

B. The Contractor shall notify the Designer and the Awarding Authority of the proposed sources of materials in time to permit all required testing and inspection before the material is needed for incorporation into the Work. The Contractor shall have no claim arising from Contractor's failure to designate the proposed source or to order the material in time for adequate testing and inspection. Necessary arrangements shall be made to permit the Designer to make factory, shop or other inspection of materials or equipment ordered for the Work in process of manufacture or fabrication, or in storage elsewhere than the Site.

4. "Or Equal" Submissions.

A. Where products or materials are prescribed by manufacturer name, trade name, or catalog reference, the words "or Approved equal" shall be understood to follow. An item shall be considered equal to the item so named or described if in the opinion of the Awarding Authority (a) it is at least equal in quality, durability, appearance, strength and design, (b) it performs at least equally the function imposed in the general design for the Work, and (c) it conforms substantially, even with deviations, to the detailed requirements for the items as indicated by the Specifications. Any structural or mechanical changes made necessary to accommodate products or materials substituted as an "or equal" shall be at the expense of the Contractor. "Approved equal" shall mean an item with respect to which the Awarding Authority shall have issued a written statement to the Contractor to the effect that the item is, in the Awarding Authority's opinion, equal within the meaning of this paragraph to that prescribed in the Contract Documents.

B. The Contractor shall be responsible for providing the Designer with any information and test results that the Designer reasonably requires to determine whether or not a material is equal to a material named or described in the Contract Documents.
C. Whenever the Contractor submits a material for approval as a substitute for a material named or described in the Contract Documents, such submission shall be made at least sixty (60) days prior to the date the materials will be used in the Work. In no event shall the Contractor maintain a claim for delays based upon the Designer's review of such substituted materials if the Contractor has failed to comply with the sixty (60) day submission requirement.

D. The Contractor shall save the written calculations, pricing information, and other data that the Contractor used to calculate the General Bid (the “Bid Pricing Materials”) for at least six years after the Awarding Authority makes Final Payment under this Contract. No increase in the Contract Price shall be allowed for any material later found to have been improperly rejected as not being equal unless the Contractor can show persuasive evidence that the rejection increased the Contractor's costs over those provided for in the Bid Pricing Materials, net of all savings the Contractor obtained by substituting other "or-equal" items. Without limiting the foregoing, if the Awarding Authority rejects a proposed substitution on the basis that the item is not equal and if the appropriate authority finds that the proposed substitution was equal, the Contract Price may be increased only to the extent that (1) the item that the Contract Documents specifically require costs more than the item later approved as equal, (2) the Bid Pricing Materials prove that the Contractor calculated its bid using the cost of the item later found as equal, (3) any increase is reduced by any cost that the Contractor would have incurred for structural or mechanical changes necessary to accommodate the substitute item, (4) the Contractor shall not be entitled to any adjustment for overhead and profit, (5) any increase must exceed the aggregate amount that the Contractor saved using products or materials that the Awarding Authority approved as equal under this Contract. In calculating the Contractor's aggregate saving under the preceding clause (5), the Contractor shall provide the Awarding Authority with the Bid Pricing Materials and a calculation based on the Bid Pricing Materials that compare the price (stated in the Bid Pricing Materials) of each item replaced with an “or equal” item, with the cost of the approved equal item, specifically describes all costs that Contractor would have incurred making structural or mechanical changes to include within the Work the item later found to have been improperly rejected and copies of all plans, specifications, shop Drawings, and other design documents that the Awarding Authority deems necessary or desirable.


A. Materials and equipment shall be progressively delivered to the Site so that there will be neither delay in the progress of the Work nor an undue accumulation of materials that are not to be used within a reasonable time and so that their security, quality, and fitness of the materials for the Work is preserved.

B. Materials stored off Site shall be insured and stored at the expense of the Contractor so as to guarantee the preservation of their security, quality and fitness for the Work. Without derogating from the Contractor's responsibilities in the previous sentence, when necessary to avoid deterioration or damage, material (on or off Site) shall be placed on wooden platforms or other hard clean surfaces and not on the ground and shall be properly protected.

C. Expenses for inspection of material by the Designer and/or the Awarding Authority personnel including travel, quarters, and subsistence shall be borne by the Contractor requesting the inspection of material stored outside the Commonwealth of Massachusetts as part of the Contract Price. The policy of the Awarding Authority precludes the payment for material stored outside the boundaries of Massachusetts except in extremely limited circumstances with the express written consent of the Awarding Authority. If the Contractor requests an inspection of material stored outside the Commonwealth of Massachusetts, the Awarding Authority will initially pay for all expenses of inspecting the material incurred by the Designer and/or Awarding Authority’s personnel including travel, quarters, and subsistence. The Awarding Authority will then give Contractor an invoice for those costs and the Contractor shall submit a credit Change Order for the amount of those expenses.

D. Stored materials either at the Site or at some other location agreed upon in writing shall be so located as to facilitate prompt inspection and even though approved before storage, may again be inspected prior to their use in the Work.

E. All storage sites shall be restored to their original condition by the Contractor at the Contractor’s expense.
F. The Contractor shall take charge of and be liable for any loss of or injury to the materials for his use delivered to or in the vicinity of the place where the Work is being done, whether furnished by the Owner or otherwise; the Contractor shall notify the Designer as soon as any such materials are so delivered, allow them to be examined by the Designer, and furnish workers to assist therewith.

6. Defective, Damaged, or Deteriorated Materials and Rejection Thereof.
The Designer or Awarding Authority may reject materials if either reasonably determines that such materials do not conform to the Contract Documents in any manner, including but not limited to materials that have become damaged or deteriorated from improper storage whether or not such materials have previously been accepted. The Contractor at its own expense shall remove rejected materials from the Work. No rejected material, the defects of which have been subsequently corrected, shall be used except with the written permission of the Designer. Should the Contractor fail to remove rejected material within a reasonable time, the Designer and/or Awarding Authority may, in addition to any other available remedies, remove and/or replace the rejected material, and to deduct the cost of such removal and/or replacement from any moneys due or to become due the Contractor. No extra time shall be allowed for completion of Work by reason of such rejection. The inspection of the Work shall not relieve the Contractor of any of its obligations herein prescribed, and any defective Work shall be corrected. Work not conforming to the Contract Documents may be rejected notwithstanding that such Work and materials have been previously overlooked or misjudged by the Designer and accepted for payment. If the Work or any part thereof shall be found defective at any time before Final Acceptance of the whole Work, the Contractor shall forthwith make good such defect in a manner satisfactory to the Designer. Nothing in the Contract shall be construed as vesting in the Contractor any property rights in the materials used after they have been attached or affixed to the Work or the Site; but all such materials shall upon being so attached or affixed become a property of the Owner.

ARTICLE VI: PROSECUTION AND PROGRESS

1. Beginning, Progress Schedule, and Completion of Work.
   A. The Contract time shall commence upon the date specified in the Notice to Proceed. The Contractor shall begin Work at the Site within ten days of said date unless otherwise ordered in writing by the Awarding Authority.
   B. Within ten days after the Work has commenced, the Contractor shall submit to the Designer and to the Awarding Authority, a progress schedule for the term of the Contract as required by the Contract Documents, showing in detail his proposed progress for the construction of the various parts of the Work and the proposed times for receiving required materials. Upon Approval by the Awarding Authority, said schedule shall constitute the Progress Schedule. The Contractor shall at the end of each month, or more often if required, furnish to the Designer and to the Awarding Authority a schedule meeting the requirements of the Specifications showing the actual progress of the parts of the Work in comparison with the Progress Schedule.
   C. Time is of the essence of this Contract. The Work shall be completed within the time specified in Article 2 of the Owner - Contractor Agreement. Should the Contractor require additional time to complete the Work, the Contractor shall document the reasons therefore and submit a written request for an extension of time within 20 days of the occurrence of the event alleged to be the cause of the delay, as provided in this Article and in Article VII of these General Conditions of the Contract. Failure to submit said written request within the time required by the preceding sentence shall preclude the Contractor from subsequently claiming any time extension due to said delay.
   D. If, in the opinion of the Designer or the Awarding Authority, the Contractor fails to comply with the Progress Schedule, the Awarding Authority may give the Contractor a notice specifying the time limits and performance standards that the Contractor is failing to meet whereupon (1) the Contractor shall, if the notice requires, discontinue all or any portion of the Work (which discontinuance shall neither terminate the Contract nor give the Contractor any claim for an
increase in the Contract Price, damages, or an extension of any completion deadlines); or (2) at Contractor's sole cost increase the work force, equipment and plant, or any of them, employed on the whole or any part of the Work, to the extent required by such notice, and employ the same from day to day until the completion of the Work or such part thereof, or until the failure regarding the rate of progress, in the opinion of the Designer or the Awarding Authority, shall have been sufficiently corrected.

E. If, in the opinion of the Awarding Authority, the Contractor fails to comply with the Progress Schedule, and whether or not the Awarding Authority shall have given the Contractor a notice described in D above, the Awarding Authority may (but shall not be required to) give the Contractor notice of such failure and five days to cure the same. Unless the Contractor shall within that five days take all necessary steps to do so (including, if the Awarding Authority requires, increasing its forces, equipment and plant) and continue to do so until in the opinion of the Awarding Authority the failure is corrected, the Awarding Authority may at the Contractor's expense and without terminating this Contract take exclusive or joint possession of all or a portion of the Site and employ and direct the labors of existing or such additional forces, equipment and plant as may in the Designer's or Awarding Authority's opinion be necessary to insure the completion of the Work or such part thereof within the time specified in the Contract Documents or at the earliest possible date thereafter. The Awarding Authority may exercise its rights under this Article at any time and from time to time without waiving any of its rights under this Contract, at law or in equity, including, without limitation, the right to deem this Contract terminated or to order the Contractor to discontinue the Work at any time thereafter. The Contractor shall continue to perform the remaining Work under this Contract even if the Awarding Authority elects to have another contractor perform a portion of the Work under this Article.

F. The Awarding Authority shall deduct the cost of any actions the Awarding Authority takes under this Article from any amount then due or which might have become due to the Contractor under this Contract had the Contractor performed as required. On demand, the Contractor shall pay the Awarding Authority any amount by which the cost of completing all or any portion of the Work exceeds the amount attributable to that Work under the Contract Documents. The Awarding Authority's sole goal will be to complete the Work that it elects to complete within the time limits stated in the Contract or at the earliest possible date thereafter. Consequently, the Awarding Authority shall have no obligation to obtain competitive bids or the lowest cost for completing the Work or any part thereof. The Awarding Authority's election to complete all or part of the Work shall not release the Contractor from any liability for failure to complete the Work as the Contract Documents require, and shall not entitle the Contractor to a claim for an increase in the Contract Price or an extension of the time for completing the Work. If the cost that the Awarding Authority incurs in completing all or any portion of the Work is less than the amount that the Contract Documents attribute to that Work, the Awarding Authority will pay or credit the difference to the Contractor, less any other costs and expenses that the Awarding Authority incurs, including the cost of supervision, and the Designer's and attorneys' fees and costs.

2. Failure to Complete Work on Time - Liquidated Damages.

A. If liquidated damages are specified in the Owner - Contractor Agreement, the Awarding Authority has determined that its damages as a result of Contractor's failure to complete the Work to the point at which it qualifies for the issuance of a Certificate of Use and Occupancy will be difficult or impracticable to ascertain. Accordingly, if the Work is not completed to such point by the date specified in this Contract, the Contractor shall pay to the Awarding Authority the sum designated as liquidated damages in the Contract for each and every calendar day that the Contractor is in default in completing the Work to such point. Such monies shall be paid as liquidated damages, not as a penalty, to cover losses and expenses to the Awarding Authority and/or the User Agency resulting solely from the fact that the Work is not completed on time.

B. Similarly, if the Contract states that by a specified date a designated portion of the Work shall be prosecuted to the point at which it qualifies for the issuance of a Certificate of Agency Use and Occupancy, and if such portion has not been prosecuted to such point by said date, the Contractor shall pay to the Awarding Authority the sum designated in the Contract for each calendar day that the Contractor is in default in completing such portion of the Work to such
point. Such monies shall also be paid as liquidated damages not as a penalty, to cover losses and expenses to the Owner resulting solely from the fact that the Work is not completed on time.

C. The Awarding Authority may recover such liquidated damages by deducting the amount thereof from any moneys due or that might become due the Contractor, and if such moneys shall be insufficient to cover the liquidated damages, then the Contractor or the Surety shall pay to the Awarding Authority the amount due.

D. Permitting the Contractor to continue and finish the Work or any portion of it after the time fixed in the Contract for its completion shall not be deemed as a waiver of any of the Owner's rights hereunder, at law or in equity.

E. Liquidated damages or a portion thereof may be waived by the Awarding Authority if the Contractor submits evidence satisfactory to the Awarding Authority that the delay was caused solely by conditions beyond the control of the Contractor and that the Awarding Authority has not suffered any damages as a result of said delay.

F. Failure by the Awarding Authority to specify a sum as liquidated damages in the Owner-Contractor Agreement, or the insertion of "N/A" or "none" in the space provided therein for liquidated damages, shall not be deemed a waiver of the Awarding Authority's right to recover actual damages arising from the Contractor's failure to complete the Work on time.

3. Delays; Statutory Provisions (M.G.L. c. 30, s. 39O).

A. Notwithstanding any provision of this Contract to the contrary, except as otherwise provided by law as set forth in paragraph B below, the Contractor shall not be entitled to increase the Contract Price or to receive damages on account of any hindrances or delays, avoidable or unavoidable; but if any delay is caused in the opinion of the Designer by the Awarding Authority, the Contractor shall be entitled to an extension of time. The length of the extension shall be sufficient in the opinion of the Designer for the Contractor to complete the Work. Although no delay shall increase the Contract Price, the Awarding Authority may require that any change in the date by which the Contractor must complete all or any part of the Work be processed on a standard Change Order form.

B. If a suspension, delay, interruption or failure to act of the Awarding Authority increases the cost of performance to any Subcontractor, that Subcontractor shall have the same rights against the Contractor with respect to such increase as the Contractor shall have against the Awarding Authority by virtue of (a) and (b) of M.G.L. c. 30, s. 39O set forth below, but nothing in provisions (a) and (b) shall alter any other rights which the Contractor or the subcontractor may have against each other. As used in the statutory language of (a) and (b) below, "contract" means this Contract, "general contractor" means the Contractor and "awarding authority" means the Awarding Authority:

"(a) The awarding authority may order the general 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 awarding authority; provided, however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase; and provided further, that the awarding authority shall not make any adjustment in the contract price 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 price under any other contract provisions.

(b) The general contractor must submit the amount of a claim under provision (a) to the awarding authority 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 the date of final payment under this contract and except for costs due to a suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty days before the general contractor notified the awarding authority in writing of the act or failure to act involved in the claim."

4. Use and Occupancy Prior to Final Acceptance.

A. The Contractor agrees to the use and occupancy of the Project or any portion thereof before Final Acceptance of the Work by the Awarding Authority.
B. The Awarding Authority will cooperate with the Contractor with respect to the completion of the Work by taking such reasonable steps as may be possible to avoid interference with the Contractor’s Work provided that they do not interfere with the proper functioning of the facility.
C. The Contractor shall not be responsible for wear and tear or damage resulting solely from temporary occupancy.
D. Use and occupancy of any part of the Work prior to Final Acceptance by the Awarding Authority shall not relieve the Contractor from maintaining the required payment and performance bonds and insurance (to the extent that insurance is required to be maintained after Substantial Completion) required by this Contract.

A. When the Work, or portion thereof which the Awarding Authority agrees to accept separately has reached the state of Substantial Completion as shown on Approved payment request, the Contractor shall develop, with the participation of the Designer and the Awarding Authority, the Punch List identifying those items of unfinished or unacceptable Work that remain to be performed or corrected under the Contract.
B. Before the Work shall be deemed completed to the point where it is ready for the issuance of a Certificate of Occupancy, the Contractor shall:
   (1) Provide Contractor’s proposed Punch List containing a statement of the reason for each item listed thereon;
   (2) Advise the Awarding Authority of proposed changes in insurance in accordance with the provisions of this Contract, and provide to the Awarding Authority evidence of Contractor’s Completed Operations insurance coverage to the extent required by the Contract Documents;
   (3) Execute and submit a notarized warranty on a form provided by the Awarding Authority meeting the requirements of Article IX of these General Conditions of the Contract, to commence upon the date of the issuance of the Certificate of Occupancy for the Work or the designated portion thereof, unless otherwise provided in the Certificate of Occupancy;
   (4) Submit signed special warranties and warranties of longer than one year as required by the Contract Documents;
   (5) Submit signed maintenance agreements for all portions of the Work specified to receive maintenance after the issuance of the Certificate of Occupancy;
   (6) Submit all preliminary record Drawings and documents and framed data in the forms required by the Contract Documents to the Awarding Authority and Designer;
   (7) Complete all items required to be completed by the New Bedford Department of Inspectional Services and obtain a Certificate of Occupancy from the Department of Inspectional Services and similar releases which permit the Awarding Authority full and unrestricted use of the areas claimed to be ready for occupancy;
   (8) Deliver specified maintenance stocks of materials, required spare parts, and all special tools furnished by manufacturers to persons designated by the Awarding Authority and obtain written receipts for same;
   (9) Make final changes of lock cylinders or cores and advise the Awarding Authority of the change of project security responsibility;
   (10) Complete start-up of systems and instruct Awarding Authority personnel on proper operation and routine maintenance of all systems and equipment and notify the Awarding Authority that start-up and instruction have been completed;
   (11) Remove all remaining temporary facilities that are no longer needed, surplus materials, and debris; (the Contractor shall not remove construction offices and trailers without the prior Approval of the Awarding Authority);
   (12) Submit final utility meter readings and similar information and advise the Awarding Authority of the change of responsibility for utility charges and payments upon the issuance of the Certificate of Occupancy;
   (13) Complete final clean-up of all Work, restoration of damaged finishes, and replacement of all damaged and broken glass not listed on the Contractor's Punch List;
   (14) Complete such other items as may be called for in the Supplementary General Conditions, if any, or in the Specifications.
C. After completing the items specified in subsection A above, the Contractor shall make a written request for the Designer's inspection for a Certificate of Occupancy in accordance with the Contract Documents. The Designer shall review the submittals and the Work and shall either 1) sign a Certificate of Occupancy or 2) notify the Contractor of incomplete and/or incorrect Work that must be completed and corrected prior to the issuance of the Certificate of Occupancy. The Designer shall notify the Contractor of any additions to the Punch List. In connection with the execution of the Certificate of Occupancy the Designer shall assign dollar values to each item on the Punch List. Failure to include any incomplete or defective item on the Punch List shall not relieve the Contractor of the obligation to complete all Work in accordance with the Contract Documents.

   A. Prerequisites for Final Acceptance. After the issuance of a Certificate of Occupancy for the entire Work, and after the Contractor has completed all of the Work required by this Contract, including Change Orders and Punch List Items, the Contractor shall submit the following completed items to the Awarding Authority together with such additional items as may be specified in the Contract Documents:
      (1) A completed Final Application for Payment showing a final accounting of all changes in the Work, on the form provided by the Awarding Authority.
      (2) Certification and satisfactory evidence that all taxes, fees, and similar obligations have been paid.
      (3) Consent of the Surety to Final Payment executed by applicable bonding companies.
      (4) Certified copy of the Punch List stating that the Contractor has completed or corrected every item listed.
      (5) Evidence of Contractor's continuing Completed Operations Insurance coverage to the extent required by the Contract Documents.
      (6) All final record Drawings and documents in the forms specified by the Contract Documents.
      (7) A notarized certification that all purchases made under the tax exemption certificate were legitimate and entitled to exemption.
      (8) Written certifications from the Department of Inspectional Services and the Designer to the effect that: a) the Work has been inspected for compliance with the Contract Documents and has satisfied the Department of Inspectional Services; b) all equipment and systems included in the Work have been tested in the presence of the Designer and are operational and satisfactory; c) the Work is completed and ready for final inspection.
      (9) Such other items as may be required by the Contract Documents.
   B. Re-inspection; Final Acceptance. After notification from the Contractor that all remaining contract exceptions, omissions and incomplete items have been completed (with the exception of Contractor's continuing warranty, insurance, indemnification, and such other obligations as are intended by the terms of the Contract Documents to extend beyond the date of Final Acceptance), the Awarding Authority and the Designer shall inspect the Work to verify the completion of the same. If the Work is satisfactory, the Awarding Authority shall prepare a Certificate of Final Acceptance or shall notify Contractor of items which remain to be completed prior to Final Acceptance.

7. One-Year Warranty Repair List and Inspection.
   Approximately 30 days prior to the expiration of the comprehensive one-year warranty period, the Contractor shall schedule an appointment with the Awarding Authority for a re-inspection of the Work with the Awarding Authority, and shall thereafter inspect the work at the time scheduled. Based on this inspection and on prior inspections, the Awarding Authority shall issue a "Warranty Repair List" of items to be corrected by the Contractor. The Contractor shall make the repairs and/or replacements listed within 30 days of the issuance of the Warranty Repair List unless otherwise agreed by the Awarding Authority in writing.

ARTICLE VII: CHANGES IN THE WORK

A. No changes in the Work shall be made in absence of a Change Order (sometimes called a "Notice to Proceed") defined in Article I of these General Conditions of the Contract, directing the Contractor to perform such changes. A request for a change in the provisions of this Contract may be submitted to the Awarding Authority by the Contractor, Designer, or OPM. The request must be made in writing and in accordance with the provisions of this Contract, Laws, and the procedures of the Awarding Authority.

B. A Change Order may be issued by the Awarding Authority for changes in the Work within the scope of the Contract, including but not limited to, changes in: (1) the Plans and Specifications; (2) the method or manner of performance of the Work; (3) the Owner-furnished facilities, equipment, materials, services or Site; (4) the schedule for performance of the Work.

C. The Contractor shall immediately perform any Change Order work that is ordered by the Awarding Authority.

D. Whenever a Change Order is issued and said Change Order will cause a change in the Contractor’s cost, the Contractor or the Awarding Authority may request an equitable adjustment in the Contract Price. For such an adjustment shall be in writing and shall be submitted by the party making such claim to the other party before commencement of the pertinent work or as soon thereafter as possible.

E. The Awarding Authority and the Contractor shall negotiate in good faith an agreement on an equitable adjustment in the Contract Price, and/or time if appropriate, before commencement of the pertinent work or as soon thereafter as is possible. In the absence of an agreement for an equitable adjustment, the Awarding Authority shall unilaterally determine the costs attributable to the change and provide the Contractor with a written notice to that effect. The Contractor may appeal the decision of the Awarding Authority within thirty days of receipt of said notice, to the chief executive official of the Awarding Authority or his designee. However, if the Contractor shall exercise its rights to appeal the decision of the Awarding Authority as aforesaid, the Contractor shall be required to engage in the mandatory mediation procedures set forth in Section 5 of this Article VII.

F. During the negotiation of an equitable adjustment in the Contract Price, the Contractor shall, if requested, provide the Awarding Authority with all cost and pricing data used by him in computing the amount of the equitable adjustment, and the Contractor shall certify that the pricing data used was accurate, complete and current. If the Awarding Authority subsequently determines that the data submitted by the Contractor was incomplete, incorrect or not current, the Awarding Authority may exclude such data from consideration under the equitable adjustment request.


A. Equitable adjustments in the Contract Price shall be determined according to one of the following methods, or a combination thereof, as determined by the Awarding Authority: (1) fixed price basis, provided that the fixed price shall be inclusive of items (a) through (e) below and shall be computed in accordance with those provisions; (2) estimated lump sum basis to be adjusted in accordance with Contract unit prices or other agreed upon unit prices provided that the unit prices shall be inclusive of all costs related to such equitable adjustment; (3) time and materials basis to be subsequently adjusted on the basis of actual costs (but subject to a predetermined "not to exceed limit") calculated as follows:

(a) the direct cost (or credit) for labor at the minimum wage rates established for this Contract pursuant to M.G.L. c. 149, s 26-27H, and the direct cost for material and use of equipment;
(b) plus (or minus) the cost of Workmen’s Compensation Insurance, Liability Insurance, Federal Social Security and Massachusetts Unemployment Compensation, or as an alternative the Contractor may elect to use a flat 30% of the total labor rate computed in accordance with subparagraph (a) above;
(c) plus an allowance equal to 20% of the amount of (a) above for overhead, superintendence and profit; (In the case of Item 1 work, which is the work of the Contractor and all his non-filed Subcontractors, said 20% allowance shall be paid to the Contractor and the Contractor and said non-filed Subcontractors shall agree upon the distribution of this amount as a matter of contract between them. In the case of Item 2 work, which is work performed by a Subcontractor filed pursuant to M.G.L. c. 149, s. 44F, said 20% allowance shall be paid to the filed Subcontractor, it being understood that this provision does not apply to other Subcontractors including sub-Subcontractors listed under paragraph E of the form for sub-Bid);
(d) plus, for work performed by a Subcontractor filed pursuant to M.G.L. c. 149, s. 44F, an additional allowance equal to 7% of the sum of (a) through (c) above as full compensation to the Contractor for processing forms and assuming full responsibility for the faithful performance of such work by said filed Subcontractor(s);
(e) plus (or minus) the actual direct premium cost of payment and performance bonds required of Contractor and filed Subcontractors for this Contract.

B. If the net change is an addition to the Contract Price, it shall include the Contractor’s overhead, superintendence and profit. On any change that involves a net credit, no allowance for overhead, superintendence and profits shall be included. For any change that does not include labor performed or materials installed in the project, there will be no markup for the Contractor’s overhead, superintendence, and profit, even though there may be a net increase in the Contract Price. Charges for small tools known as “tools of the trade” are not to be computed in the amount of any change in the Contract Price.

C. Statutory Contract adjustments made under the provisions of M.G.L. c. 149, s.44F shall not be considered Change Orders and shall not entitle the Contractor to any adjustments for overhead, profit, and superintendence, although the Awarding Authority may require that such Contract adjustments be processed on standard Change Order and equitable adjustment forms.


The Contractor agrees to perform all Work as directed by the Awarding Authority, and if the OPM determines that certain Work that the Contractor believes to be or to warrant a Change Order under this Article does not represent a change in the Work, the Contractor shall perform said Work. The Contractor shall be deemed to have concurred with the OPM’s determination as aforesaid unless the Contractor shall perform Work under protest in compliance with the following sub-paragraphs (1) and (2) below:

(1) If the Contractor claims compensation for a change in the Work that is not deemed by the OPM to be a change or to warrant additional compensation as claimed by the Contractor, the Contractor shall on or before the first working day following the commencement of any such work or the sustaining of any such damage submit to the Designer, OPM and the Awarding Authority a written statement of the nature of such work or claim. The Contractor shall not be entitled to additional compensation for any work performed or damage sustained for which written notice is not given within the time limit specified in the preceding sentence, even though similar in character to work or damage with respect to which notice is timely given.

(2) On or before the second working day after the commencement of such work or the sustaining of such damage, and daily thereafter, the Contractor shall file to the extent possible with the OPM, the Designer, and the Awarding Authority, itemized statements of the details and costs of such work performed or damage sustained.


A. Criminal Penalties: The Contractor’s attention is directed to M.G.L. c. 30, s. 39I, which provides criminal penalties for unauthorized deviations from the Plans and Specifications, and to M.G.L. c. 30, s. 39J. The Contractor’s attention is also directed to M.G.L. 266, s. 67B which provides criminal penalties for false claims by Contractor under this Contract:
"Whoever makes or presents to any employee, department, agency or public instrumentality of the commonwealth, or of any political subdivision thereof, any claim upon or against any department, agency, or public instrumentality of the commonwealth, or any political subdivision thereof, knowing such claim to be false, fictitious, or fraudulent, shall be punished by a fine of not more than ten thousand dollars or by imprisonment in the state prison for not more than five years, or in the house of correction for not more than two and one-half years, or both."

B. Differing Site Conditions (M.G.L. c. 30, s. 39N): "If, during the progress of the work, the contractor or the awarding authority 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 contracting authority may request an equitable adjustment in the contract price of the contract 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 contracting authority 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 contracting authority shall make an equitable adjustment
in the contract price and the contract shall be modified in writing accordingly."

C. Timely Decision By Awarding Authority( M.G.L. c. 30, s. 39P): "Every contract subject
to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine
which requires the awarding authority, any official, its architect or engineer to make a decision
on interpretation of the specifications, approval of equipment, material or any other approval, or
progress of the work, shall require that the decision be made promptly and, in any event, no later
than thirty days after the written submission for decision; but if such decision requires extended
investigation and study, the awarding authority, the official, architect or engineer shall, within
thirty days after the receipt of the submission, give the party making the submission written
notice of the reasons why the decision cannot be made within the thirty day period and the date
by which the decision will be made."

5. Mandatory Mediation.
In the case of every dispute where the dollar amount in dispute (or the estimated dollar value of
the extension of time in dispute) is $50,000 or more and the Contractor appeals the decision of
the chief executive officer of the Awarding Authority or his designee described in Section 4.B
above, the Awarding Authority and the Contractor shall engage in good faith in a non-binding
mediation process, which process shall be concluded within sixty days from the date that the
Contractor files an appeal from said decision as provided in Section 4.B above. In the case of
such disputes where the dollar amount in dispute (or the estimated dollar value of the extension
of time in dispute) is $500,000 or more, the parties shall, if the mediation process fails, submit
the dispute to a third-party Neutral which shall within sixty days render a non-binding advisory
opinion. Unless the parties have previously agreed in writing to a process for submitting
disputes to mediation, the Awarding Authority shall determine in its reasonable discretion the
procedures to be followed and shall give the Contractor notice of the same in writing within 7
days of the date that the Awarding Authority receives notice of the Contractor's appeal from the
decision of the chief executive officer of the Awarding Authority or his designee. The mediator
shall be selected jointly by the parties to this Contract. The cost of the services of any mediator
selected jointly by the parties to this Contract or jointly by mediators selected by the parties to
this Contract shall be borne equally by the Contractor and the Awarding Authority.

ARTICLE VIII: PAYMENT PROVISIONS

1. Schedule of Values.
Before the first application for payment the Contractor shall submit to the Designer and the
Awarding Authority a schedule of values allocated to various portions of the Work in sufficient
detail to reflect the various major components of each trade (with filed Subcontractors as well as
MBE/WBE noted), including quantities when requested, aggregating the total Contract Price and
divided so as to facilitate payments for work under each section of the Specifications. The
schedule shall be prepared in such form and supported by such data to substantiate its accuracy as
the Designer or the Awarding Authority may require. Each item in the schedule shall include its
proper share of overhead and profit. When Approved by the Designer and the Awarding
Authority, it shall constitute the Schedule of Values and shall be used only as a basis for the
Contractor's requests for payments.

2. Payment Liabilities of Contractor.
   A. The Contractor shall pay to the Owner all expenses, losses and damages, as determined by
the Awarding Authority or the Designer, incurred in consequence of any default, defect,
omission or mistake of the Contractor or his employees or Subcontractors or the making good thereof.

B. If the Work (or a portion thereof) is not completed to Substantial Completion and the Contractor has not satisfied the requirements for the issuance of a Certificate of Occupancy by the date specified in Article 2 of the Owner - Contractor Agreement, the Contractor shall pay to the Owner liquidated damages as provided in Article VI, Section 2 of these General Conditions of the Contract.

3. **Retention of Moneys by Awarding Authority.**
   
   **A.** The Awarding Authority may keep any moneys which would otherwise be payable at any time hereunder, and apply the same, or so much as may be necessary therefore, to (1) the Owner's expenditures for the Contractor's account, (2) to secure the Awarding Authority's remedies against the Contractor for the Contractor's breach of its obligations under this Contract or the breach of any person performing any part of the Work and (3) the payment of any expenses, losses or damages incurred by the Awarding Authority or any agency of the Commonwealth as a result of the failure of the Contractor to perform its obligations hereunder. The Awarding Authority may retain, until all claims are settled, such moneys as the Awarding Authority estimates to be the fair value of the Awarding Authority's claims against the Contractor, and of all claims for labor performed or furnished and for materials used or employed in or in connection with the Work and for the rental of vehicles, appliances and equipment employed and for the employment of substitute contractors and labor in connection with the Work filed in accordance with M.G.L. c. 30, s. 39A and s. 39F. The Awarding Authority may make such settlements and apply thereto any moneys retained under this Contract.

   **B.** The Contractor shall each week examine all claims so filed, and if the same are in any respect incorrect or do not correctly show the amount due from the Contractor to the claimant for such labor and materials, the Contractor shall forthwith file with the Awarding Authority a separate written statement of all inaccuracies in each claim and of the correct amount due from the Contractor to each claimant therefore, and shall immediately file a statement of all payments thereafter made to such claimants. Each such statement shall be sworn to and contain a detailed breakdown required by M.G.L. c. 30 s. 39F(d) and (e). Unless such statements are so filed by the Contractor the amount shown by the claims filed shall at the option of the Awarding Authority be conclusively deemed to be the accurate amount due from the Contractor therefore in all accounting with the Awarding Authority. If the moneys retained under this Contract are insufficient to pay the sums found by the Awarding Authority to be due under the claims for labor and materials filed as aforesaid, the Awarding Authority may, at its discretion, pay the same, and the Contractor shall repay to the Awarding Authority all sums paid out. The Awarding Authority may also at its discretion use any moneys retained, due or to become due under this Contract, for the purpose of paying for both labor and materials used or employed in the Work for which claims have not been filed with the Awarding Authority.

   **C.** No moneys retained under the provisions of this Article shall be held to be statutory security for the payment of claims filed in accordance with the provisions of M.G.L. c. 149, s. 29, as amended, for which security is provided by bond.

4. **Applications for Payment.**
   
   **A.** The Contractor shall, once in each month on the day of the month corresponding to the day of the month specified in the Notice to Proceed referenced in Article 2 of the Owner - Contractor Agreement, on forms provided and in the manner prescribed by the Awarding Authority, submit to the Awarding Authority a statement showing the total amount of Work done to the time of such estimate and the value thereof as approved by the OPM and the Designer. It shall be the sole responsibility of the Contractor to deliver or cause to be delivered to the OPM (the "designee" as provided by M.G.L. c. 30, s. 39K) said periodic estimate in proper form, approved as provided above and arithmetically correct. All periodic estimates shall contain such certifications and other evidence supporting the Contractor's right to payment as the Awarding Authority may require, including without limitation, lien waivers and other evidence, on such forms as the Awarding Authority may require, establishing that title to the equipment or materials is unencumbered and has been transferred to the Owner. If there is no OPM assigned to the Contract, the Designer shall be the designee. If there is neither an OPM nor a Designer the designee shall be a person designated by the Awarding Authority at the project field office or
alternatively the home office of the Awarding Authority. The Contractor shall include in such periodic estimate only such materials as are incorporated in the Work, except as provided in paragraph C below. The Awarding Authority shall retain five percent of such estimated value as part security for the completion of the Work and shall pay to the Contractor while carrying on the Work the balance not retained as aforesaid, subject to the Approval of the Awarding Authority after deducting therefrom all previous payments and all sums to be kept under the provisions of this Contract.

B. Each periodic estimate shall constitute the Contractor’s representation that (1) the payment then requested to be disbursed has been incurred by the Contractor on account of the Work and is justly due to Subcontractors or, to the Contractor in the case of other Work performed by the Contractor on account thereof, (2) the materials, supplies and equipment for which Application for Payment is being submitted have been installed or incorporated into the Work or have been stored at the Site or at such off Site storage locations as the Awarding Authority shall have Approved, (3) the materials, supplies and equipment are insured in accordance with the provisions of this Contract, (4) the materials, supplies and equipment are owned by the Owner and are not subject to any liens or encumbrances, (5) the Work which is the subject of such periodic estimate has been performed in accordance with the Contract Documents and (6) that all due and payable bills with respect to the Work have been paid to date or shall be paid from the proceeds of such periodic estimate. The Contractor’s attention is directed to the criminal penalties for false claims referenced in paragraph A above.

C. The Contractor may include in a periodic estimate the value of materials or equipment delivered at the Site (or at some location agreed to in writing) only upon delivery to the Awarding Authority of: (1) an acceptable transfer of title on the form provided by the Awarding Authority; (2) written certification by the Contractor (or applicable subcontractor) on the form provided by the Awarding Authority that the Contractor (or the Subcontractor which executed the transfer of title) is the lawful owner and that the materials or equipment are free from all encumbrances, accompanied by receipted invoices or other acceptable proof of prior payment for such materials; (3) a stored materials insurance binder that covers the materials for which payment is requested, that names the Owner as an insured party should the stored materials be subjected to any casualty, loss, or theft prior to their inclusion in the Work. The material(s) or equipment must, in the judgment of the Designer (1) meet the requirements of the Contract, including prior shop drawing, product data, and sample approval, (2) be ready for use, and (3) be properly stored by the Contractor and be adequately protected until incorporated into the Work. See also Article V.5.C of these General Conditions of the Contract concerning the cost of inspections.

D. The Awarding Authority may make changes in any periodic estimate submitted by the Contractor in accordance with M.G.L. c.30, s. 39K (see below) and the payment due shall be computed in accordance with the changes so made. The provisions of said section 39K shall govern payments on which the Awarding Authority has made changes.

E. No certificate for payment and no progress payment shall constitute acceptance of Work that is not in accordance with the Contract Documents.

F. The Contractor and all Subcontractors furnishing labor on this Contract agree to furnish certified payroll reports if requested to do so, at no additional expense to the Awarding Authority. The Awarding Authority may at all reasonable times audit such reports.

5. Periodic Payments (M.G.L. c. 30, s. 39K).
The Awarding Authority shall make payment to the Contractor in accordance with M.G.L. c. 30, s. 39K.

6. Payment of Subcontractors (M.G.L. c. 30, s. 39F).
The Contractor shall make payments to Subcontractors in accordance with M.G.L c.30, s. 39F which is quoted in this section below. For the purposes of this Contract, the word "forthwith" appearing in paragraph (1) (a) of c. 30, § 39F shall be deemed to mean "within five (5) business days."

7. Final Payment; Release of Claims by Contractor.
Upon Final Acceptance of the Work the Contractor shall be entitled to payment of the balance of the Contract Price. Final payment shall be as provided in this Article above and in accordance with any process set forth in the Supplementary General Conditions. The Contractor agrees to
execute a Certificate of Final Inspection, Release (with Contractor’s own exceptions listed therein) and Acceptance as a condition precedent to Final Payment. The acceptance by the Contractor of the Final Payment made as aforesaid, or the execution of the Certificate of Final Acceptance by the Contractor, shall constitute a release of the Owner, the Awarding Authority, the Designer, and every member and agent of any of them, from all claims of and liability to the Contractor for anything done or furnished for or relating to the Work, or for any act or neglect of the Owner, the Designer, or of any person relating to or affecting the Work, except the claim against the Owner or the Designer for the remainder, if any there be, of the amounts set forth by the Contractor in the Certificate of Final Inspection, Release and Acceptance. Final Acceptance shall not relieve Contractor of the requirements of Articles IX, XIV, and XV of these General Conditions of the Contract, or of other provisions of this Contract, to the extent that the same are intended to survive Final Acceptance.

ARTICLE IX. GUARANTEES AND WARRANTIES

1. **General Warranty.**
   If at any time during the period of one (1) year from the date of the issuance of the Certificate of Occupancy by the Awarding Authority or the date of Final Acceptance, whichever occurs first, any part of such Work shall in the reasonable opinion of the Awarding Authority be defective or require replacing or repairing, or damage to other property of the Owner is caused by any defect in the Work, the Awarding Authority shall notify the Contractor in writing to make the required repairs or replacements and repair such damage. If the Contractor shall neglect to commence such repairs or replacements to the satisfaction to the Awarding Authority within ten (10) days from the date of the giving of such notice, then the Awarding Authority may employ other persons to make the same. The Contractor agrees, upon demand, to pay to the Awarding Authority all amounts which it expends for such repairs, replacements, and/or damages. During this one-year guarantee period any corrective work shall be performed under all the applicable terms of this Contract, and if Change Orders are issued in accordance with the terms of this Contract, the Contractor shall be entitled to compensation for special insurance, as required. This one-year guarantee shall not limit any express guaranty or warranty provided elsewhere in the Contract.

2. **Special Guarantees and Warranties.**
   A. The Contractor's obligation to correct Work as set forth in paragraph 1 above is in addition to, and not in substitution of, such guarantees or warranties as may be required in the various sections of the Specifications.
   B. Guarantees and warranties required in the various sections of the Specifications must be delivered to the Owner before final payment to the Contractor may be made, or in the case of guarantees and warranties which originate with a subcontractor’s section of the Work, before final payment for the amount of that subtrade or for the phase of Work to which the guarantee or warranty relates.
   C. The failure to deliver a required guarantee or warranty shall constitute a failure to fully complete the Work in accordance with the Contract Documents and a breach of the Owner-Contractor General Contract.

ARTICLE X: MISCELLANEOUS LEGAL REQUIREMENTS.

1. **Contractor to be Informed.**
   The Contractor shall inform itself of all existing and future Laws in any manner affecting those engaged or employed in the Work, or the materials used or employed in the Work, or in any way affecting the conduct of the Work, and of all orders and decrees of bodies or tribunals having any applicable jurisdiction or authority over the Work.

2. **Compliance with all Laws.**
   The Contractor shall cause all persons employed in the performance of the Work to comply with all existing and future Laws, including but not limited to those set forth below:
   A. **Corporate Disclosures.** The Contractor, if a foreign corporation, shall comply with M.G.L. c. 181, s.3 and s. 5, and M.G.L. c. 30, s.39L.
A ½. Employment Eligibility Verification

The Contractor shall comply with Federal Department of Homeland Security Requirements in hiring any and all “Employees” to be employed in the Project who are required to be listed in the certified payroll reports for the Project. Such compliance shall include, but not be limited to the faithful completion of the Federal Department of Homeland Security Form I-9 process by the Contractor for each of its Employees. The Contractor shall execute a Certificate of Compliance with Employment Eligibility Verification Requirements (I-9 Certificate) with the execution of its Contract. The Contractor shall require each of its subcontractors and sub subcontractors to execute and provide to Contractor an I-9 Certificate with the execution of each subcontract, and Contractor shall immediately provide a copy to the Awarding Authority. Contractor acknowledges that the weekly workforce report form contained in the contract documents, which must be submitted by the Contractor on a weekly basis, contains a statement that the Form I-9 process was faithfully completed for all employees listed on the weekly certified payroll report. By the signature of the Contractor’s Authorized Signatory on the I-9 Certificate, the Contractor certifies under the pains and penalties of perjury that the Contractor shall not knowingly use undocumented workers in connection with the performance of this contract; that pursuant to federal requirements, the Contractor shall verify the immigration status of all workers assigned to the contract without engaging in unlawful discrimination; and that the Contractor shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker. The Contractor understands and agrees that breach of any of these terms during the period of a contract may be regarded as a material breach, subjecting the Contractor to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination.

B. Veterans Preference. In the employment of mechanics and apprentices, teamsters, chauffeurs, and laborers in the performance of Work in the Commonwealth, 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 and who are veterans as defined M.G.L. c.4, s.7 (34), 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.

C. Prevailing Wages. The Contractor shall comply with M.G.L. c. 149, s. 26-27H. The prevailing wage schedule is found in Exhibit A to the Instructions to Bidders, listing the prevailing minimum wage rates that must be paid to all workers employed in the Work. The Awarding Authority is not responsible for any errors, omissions, or misprints in the said schedule. Such Schedule shall continue to be the minimum rate wages payable to workers employed in the Work throughout the term of this Contract, subject to the exceptions provided in M.G.L c.149, s. 26-27H. The Contractor shall not have any claim for extra compensation from the Owner if the actual wages paid to workers employed in the Work exceeds the rates listed on the schedule or as otherwise provided by law. The Contractor shall cause a copy of said Schedule to be kept in a conspicuous place at the Site during the term of the Contract. If reserve police officers are employed by the Contractor, they shall be paid the prevailing wage of regular police officers. (See M.G.L c.149, s.34B).

D. Payroll Records and Statement of Compliance. The Contractor shall comply and shall cause its Subcontractors to comply with Massachusetts General Law c. 149, s. 27B, which requires that a true and accurate record be kept of all persons employed on the a project for which the prevailing wage rates have been provided. The Contractor and all Subcontractors shall keep these records and preserve them for a period of three years from the date of completion of the Contract. Such records shall be open to inspection by any authorized representative of the Owner at any reasonable time, and as often as may be necessary. The Contractor shall, and shall cause its subcontractors to, submit weekly copies of their weekly payroll records to the Awarding Authority. In addition, the Contractor and each Subcontractor shall furnish to the Awarding Authority within fifteen days after completion of its portion of the Work a signed Statement of Compliance in the form required by c. 149, § 27B.
E. Vehicle operators. If the Director of the Department of Labor and Workforce Development has established a Schedule of wage rates to be paid to the operators of trucks, vehicles or equipment for the Work, the Contractor shall be obligated to pay such operators at least the minimum wage rate contained on such Schedule. (See M.G.L. c.149, s.26-27H).

F. Eight Hour Day. The Contractor shall comply with M.G.L. c. 149, s. 30, 34 and 34A which provide that no laborer, workman, mechanic, foreman or inspector working within the Commonwealth in the employ of the Contractor, subcontractor or other person doing or contracting to do the whole or part of the Work 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 extraordinary emergency.

G. Timely Payment of Wages. The Contractor shall comply with, and shall cause its Subcontractors to comply with M.G.L. c. 149, s. 148 which requires the weekly or biweekly payment of employees within six days of the end of the pay period during which wages were earned if employed for five or six days of a calendar week, and within other periods of time under certain circumstances as set forth therein.

H. Lodging, etc. The Contractor shall comply with, and shall cause its Subcontractors to comply with, M.G.L. c. 149, s. 25 which provides that 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.

I. Truck Rates. The use by the Contractor of trucks or other motor vehicles hired from either common or contract motor carriers in the course of performance of this Contract is subject to such minimum rates and charges, and rules and regulations as may from time to time be promulgated by the Department of Public Utilities of the Commonwealth of Massachusetts or other agency of the State of Federal government which may be authorized by law to set rates or otherwise regulate the use of such vehicles. The Contractor expressly assumes the risk of any additional expense that may arise by reason of any change in such minimum rates and charges, and rules and regulations, and shall be entitled to no additional compensation or reimbursement by reason thereof.

ARTICLE XI: CONTRACTOR'S ACCOUNTING METHOD REQUIREMENTS (M.G.L. c. 30, s. 39R)

1. Definitions.

The words defined herein shall have the meaning stated below whenever they appear in this Article XI:

"Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a Contract pursuant to M.G.L. c. 30, s. 39M, M.G.L. c. 149, s. 44A-J, and M.G.L. c. 7, s. 30B-P.

"Contract" means any Contract awarded or executed pursuant to M.G.L. c. 30, s. 39M, M.G.L. c. 149, s.44A-J, and M.G.L. c. 7, s. 30B-P, which is for an amount or estimated amount greater than one hundred thousand dollars.

"Independent Certified Public Account" means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his/her residence or principal office and who is in fact independent. In determining whether an accountant is independent with aspect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant's independence shall not be confined to the relationships existing in connection with the filing of reports with the awarding authority.

"Records" means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.

"Audit", when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted
accounting principles and auditing standards for the purpose of expressing a certified opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.

or other person or persons primarily responsible for the financial and operational policies and practices of the Contractor.

Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

2. Record Keeping.
   A. The Contractor shall make, and keep for at least six years after final payment, books, records, and accounts that in reasonable detail accurately and fairly reflect the transactions and dispositions of the Contractor.
   B. Until the expiration of six years after final payment, the Inspector General, DCAM, and the Awarding Authority shall have the right to examine any books, documents, papers or records of the Contractor and Subcontractors that directly pertain to, and involve transactions relating to the Contractor and Subcontractors.
   C. The Contractor shall describe any change in the method of maintaining records or recording transactions which materially affects any statements filed with the Awarding Authority including the date of the change and reasons therefore, and shall accompany said description with a letter from the Contractor's independent certified public accountant approving or otherwise commenting on the changes.
   D. The Contractor represents that it has, prior to the execution of the Contract, filed a statement of management on internal accounting controls as set forth in Section 3 below.
   E. The Contractor represents that it has, prior to the execution of the Contract, filed an audited financial statement for the most recent completed fiscal year as set forth in section 4 below and will continue to file such statement annually during the term of the Contract.

   A. The Contractor shall file with the Awarding Authority a statement of management as to whether the system of internal accounting controls of the Contractor and its subsidiaries reasonably assures that:
      (1) transactions are executed in accordance with management's general and specific authorization;
      (2) transactions are recorded as necessary to: (a) to permit preparation of financial statements in conformity with generally accepted accounting principles, and (b) to maintain accountability for assets;
      (3) access to assets is permitted only in accordance with management's general or specific authorization; and
      (4) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.
   B. The Contractor shall file with the Awarding Authority a statement prepared and signed by an independent certified public accountant, stating that the accountant has examined the statement of management on internal accounting controls, and expressing an opinion as to:
      (1) whether the representations of management in response to subparagraph 3 above are consistent with the results of management's evaluation of the system of internal accounting controls; and
      (2) whether such representations of management are reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statement.

   A. Every Contractor awarded a contract shall annually file with DCAM during the term of the Contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report.
B. The office of Inspector General and DCAM shall have the right to enforce the provisions of this Article. A Contractor's failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to M.G.L. c. 149, s. 44C.

The Contractor shall save the written calculations, pricing information, and other data that the Contractor used to calculate the bid that induced the Awarding Authority to enter into this Contract (the "Bid Pricing Materials") for at least six years after the Awarding Authority makes final payment under this Contract.

ARTICLE XII: INSURANCE REQUIREMENTS

1. Insurance Generally.
   A. The Contractor shall take out and maintain the insurance coverages listed in this Article with respect to the operations as well as the completed operations of this Contract. This insurance shall be provided at the Contractor's expense and shall be in full force and effect for the full term of the Contract or for such longer period as this Article requires.
   B. All policies shall be written on an occurrence basis and be issued by companies authorized to write that type of insurance under the laws of the Commonwealth and rated in Best's Insurance Guide (or any successor thereto or replacement thereof) as having a general policy holder rating of "A" or better and a financial rating of at least "9" or otherwise acceptable to the Awarding Authority.
   C. Contractor shall submit three originals of each certificate of insurance, acceptable to the Awarding Authority, simultaneously with the execution of this Contract. Certificates shall show the Awarding Authority and the Owner as an additional insured as to all policies of liability insurance and shall state that Contractor has paid all premiums and that none of the coverages shall be cancelled, terminated, or materially modified unless and until 30 days prior notice is given in writing to the Awarding Authority. Contractor shall submit updated certificates prior to the expiration of any of the policies referenced in the certificates so that the Awarding Authority shall at all times possess certificates indicating current coverage. Certificates shall indicate that the contractual liability coverage, and Contractor's Protective Liability coverage is in force. Certificates shall include specific acknowledgment that the following coverages are included in the policies:
      -Contractual liability
      -Contractor's protective
      -Owner as additional insured by form CG2010 (11/85 ed.) to the general liability
      -Owner as additional insured to automobile liability, umbrella liability, and pollution liability
      -General Liability is endorsed with CG2404, Waiver of Subrogation, in favor of the Owner
      -Builder's Risk or Installation Floater includes Owner, Contractor and subcontractors of any tier as named insureds. Builder’s Risk or Installation floater is on an All Risk basis including earthquake and flood.
   D. The Contractor shall file one certified copy of all policies with the Awarding Authority within sixty days after Contract award. If the Awarding Authority or the Owner is damaged by the Contractor's failure to maintain such insurance and to comply with the terms of this Article, then the Contractor shall be responsible for all costs and damages to the Owner attributable thereto.
   E. Termination, cancellation, or material modification of any insurance required by this Contract, whether by the insurer or the insured, shall not be valid unless written notice thereof is given to the Awarding Authority at least thirty days prior to the effective date thereof, which shall be expressed in said notice.

2. Contractor's Commercial General Liability.
   A. The Contractor shall provide the following minimum general liability coverage with respect to the operations performed by Contractor and any employee, subcontractor, or supplier, unless a higher coverage is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the additional coverage:
      Bodily Injury & $1,000,000 each occurrence
Property Damage $2,000,000  general aggregate, per project
Products & Completed Operations $1,000,000  annual aggregate
Personal & Advertising Injury $1,000,000  each occurrence
Medical Expenses $10,000

B. This policy shall include coverage relating to explosion, collapse, and underground property damage.
C. This policy shall include contractual liability coverage.
D. The completed operations coverage shall be maintained for a period of three (3) years after Substantial Completion.
E. If the Work includes work to be performed within 50 feet of a railroad, any exclusion for liability assumed under contract for work within 50 feet of a railroad shall be deleted.
F. This policy shall include endorsement CG2010 (10/85 edition), Owner as Additional Insured and CG2404 (11/85 edition) Waiver of Subrogation in Favor of Owner.

A. The Contractor shall provide the following minimum coverage with respect to the operations of any employee, including coverage for owned, non-owned, and hired vehicles, unless a higher coverage is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the additional coverage:
   Combined Single Limit $1,000,000
B. The policy shall include a CA9948 Pollution Endorsement and shall name the Owner as an Additional Insured.

4. Pollution Liability.
The Contractor shall provide coverage for bodily injury and property damage resulting from liability arising out of pollution related exposures such as asbestos abatement, lead paint abatement, tank removal, removal of contaminated soil, etc. The Awarding Authority and the Owner shall be named as an additional insured and coverage must be on an occurrence basis. The amount of coverage shall be $1,000,000 per occurrence and $3,000,000 in the aggregate unless a higher amount is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the additional coverage.

5. Worker's Compensation.
A. The Contractor shall provide the following coverage in accordance with M.G.L. c.149 §34A and c.152 as amended, unless a higher coverage is specified in Exhibit B to the Owner - Contractor Agreement, in which case the Contractor shall provide the higher coverage:
   Worker's Compensation
   Part One  Provide Statutory Minimum
   Employer's Liability $ 500,000 each accident
   Part Two  $ 500,000 disease per employee
             $ 500,000 disease policy aggregate
B. If specified in Exhibit A to the Owner - Contractor Agreement the policy must be endorsed to cover United States Longshoremen & Harborworkers Act (USLHW), Maritime Liability for $1,000,000/$1,000,000, or Federal Employer's Liability Act liability.

A. The Contractor shall provide coverage against loss or damage on all Work included in this Contract in an amount equal to the Contract Price. Such coverage shall be written on an all risks basis or equivalent form and shall include, without limitation, insurance against perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood (if the project is not in an "A" or a "V" flood Zone), windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a
result of such insured loss. This policy and/or installation floater shall indicate if Stored Materials coverage is provided as required below.

B. When Work will be completed on existing buildings owned by the Owner, the Contractor shall provide an installation floater, in the full amount of the Contract Price. Such coverage shall be written on an all risks basis or equivalent form and shall include, without limitation, insurance against perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood (if the project is not in an “A” or a “V” flood Zone), windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss. This policy and/or installation floater shall indicate if Stored Materials coverage is provided as required below.

C. The Contractor shall maintain insurance on delivered and/or stored material designated to be incorporated in the Work against fire, theft or other hazards. Any loss or damage of whatever nature to such material while stored at some approved off Site location shall be forthwith replaced by the Contractor at no expense to the Awarding Authority.

D. The policy or policies shall specifically state that they are for the benefit of and payable to the Awarding Authority, Owner, the Contractor, and all persons furnishing labor or labor and materials for the Contract Work, as their interests may appear. The policy or policies shall list the Awarding Authority, Owner, the Contractor, and Subcontractors of any tier as named insureds.

E. Coverage shall include any costs for work performed by the Designer or any consultant as the result of a loss experienced during the term of this Contract.

F. Coverage shall include temporary occupancy and waiver of subrogation.

7. Umbrella Coverage.
The Contractor shall provide Umbrella Coverage in form at least as broad as primary coverages required by Sections 2, 3 and 5 of this Article in the following amount unless a higher amount is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the higher amount:

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<thead>
<tr>
<th>Contract Price</th>
<th>Umbrella Coverage</th>
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<tr>
<td>Under $1,000,000</td>
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<tr>
<td>$10,000,001and over</td>
<td>$25,000,000</td>
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</tbody>
</table>

8. Additional types of Insurance.
The Contractor shall provide such other types of insurance as may be required by Exhibit A to the Owner - Contractor Agreement.

ARTICLE XIII: INDEMNIFICATION

1. Generally.
To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Owner, Awarding Authority and Designer and their officers, agents, divisions, agencies, employees, representatives, successors and assigns from and against all claims, damages, losses and expenses, including but not limited to court costs and attorneys’ fees, arising out of or resulting from the performance of the Work, including but not limited to those arising or resulting from:
- labor performed or furnished and/or materials used or employed in the performance of the Work;
- violations by Contractor, any Subcontractor, or by any person directly or indirectly employed or used by any of them in the performance of the Work or anyone for whose acts any of them may be liable (Contractor, subcontractor and all such persons herein collectively called "Contractor's Personnel") of any Laws;
- violations of any provision of this Contract by any of Contractor's Personnel;
- injuries to any persons or damage to any property in connection with the Work;
- any act, omission, or neglect of Contractor's Personnel.
The Contractor shall be obligated as provided above, regardless of whether or not such claims, damages, losses and/or expenses, are caused in whole or in part by the actions or inactions of a party indemnified hereunder. In any and all claims by Contractor's Personnel against parties indemnified hereunder, the Contractor's indemnification obligation set forth above shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Article XV.

2. Designer's Actions.
The obligations of the Contractor under Section 1 above shall not extend to the liability of the Designer, its agents or employees, arising out of (i) the preparation or approval of maps, Drawings, opinions, reports, surveys Change Orders, designs or specifications, or (ii) the giving of or the failure to give directions or instructions by the Designer, its agents to employees provided such giving or failure to give is the primary cause of the injury or damage.

The provisions of this Article XV are intended to survive Final Acceptance and/or any termination of this Contract.

ARTICLE XIV: PERFORMANCE AND PAYMENT BONDS

1. Contractor Bonds.
   A. The Contractor shall provide performance and payment (labor and materials) bonds in the form provided by the Awarding Authority, executed by a surety licensed by the Commonwealth of Massachusetts Division of Insurance. Each such bond shall be in the amount of the Contract Price.
   B. If at any time prior to final payment to the Contractor, the Surety:
      -is adjudged bankrupt or has made a general assignment for the benefit of its creditors;
      -has liquidated all assets and/or has made a general assignment for the benefit of its creditors;
      -is placed in receivership;
      -otherwise petitions a state or federal court for protection from its creditors; or
      -allows its license to do business in Massachusetts to lapse or be revoked;
      then the Contractor shall, within 21 days of any such action listed above, provide the Awarding Authority with new performance and payment bonds as described in Paragraph A above. Such bonds shall be provided solely at the Contractor's expense.

2. Subcontractor Bonds.
   A. If the Contractor provided in its General Bid that any or all filed subcontractors shall provide the Contractor with payment and performance bonds for the full amount of their respective Subcontracts, then the costs for said bonds shall be the responsibility of the Contractor.
   B. If the Contractor provided in its General Bid that filed Subcontractors shall provide bonds, and subsequently waives the requirement, the Contractor shall give the Awarding Authority a written certification that the Contractor understands that if the filed Subcontractor defaults or is terminated, the Contractor shall have full responsibility for all costs and expenses related to said default or termination but shall be entitled to a credit adjustment to the Contract Price in an amount equal to the bond premium Contractor would have paid had Contractor required the filed Subcontractor to provide such bonds.

ARTICLE XV: TERMINATION OF CONTRACT
1. Termination for Cause.

A. The Awarding Authority may without prejudice to any other right or remedy deem this Contract terminated for cause if any of the following defaults shall occur and not be cured within three (3) days after the giving of notice thereof by the Awarding Authority to the Contractor and any surety that has given bonds in connection with this Contract:

1. The Contractor has filed a petition, or a petition has been filed against the Contractor with its consent, under any federal or state law concerning bankruptcy, reorganization, insolvency or relief from creditors, or if such a petition is filed against the Contractor without its consent and is not dismissed within sixty (60) days; or if the Contractor is generally not paying its debts as they become due; or if the Contractor becomes insolvent; or if the Contractor consents to the appointment of a receiver, trustee, liquidate, custodian or the like of the Contractor or of all or any substantial portion of its assets and such appointment or possession is not terminated within sixty (60) days; or if the Contractor makes an assignment for the benefit of creditors;

2. The Contractor refuses or fails, except in cases for which extension of time is provided under this Contract's express terms, to supply enough properly skilled workers or proper materials to perform its obligations under this Contract, or the Designer has determined that the rate of progress required for the timely completion of the Work is not being met;

3. The Contractor fails to make prompt payment to Subcontractors or for materials, equipment, or labor;

4. All or a part of the Work has been abandoned;

5. The Contractor has sublet or assigned all or any portion of the Work, the Contract, or claims thereunder, without the prior written consent of the Owner, except as expressly permitted in this Contract;

6. The Contractor has failed to comply with Laws;

7. The Contractor fails to maintain, or provide to the Awarding Authority evidence of the insurance or bonds required by this Contract, or

8. The Contractor has failed to prosecute the Work or any portion thereof to the standards required under this Contract or has otherwise breached any material provision of this Contract.

B. The Awarding Authority shall give the Contractor and any surety notice of such termination for cause, but the giving of notice of such termination shall not be a condition precedent or subsequent to the termination’s effectiveness. In the event of such termination, and without limiting any other available remedies, the Awarding Authority may, at its option:

1. hold the Contractor and its sureties liable in damages for a breach of Contract;

2. notify the Contractor to discontinue all work, or any part thereof, and the Contractor shall discontinue all work, or any part thereof, as the Owner may designate;

3. complete the Work, or any part thereof, and charge the expense of completing the Work or part thereof, to the Contractor;

4. require the surety or sureties to complete the Work and perform all of the Contractor’s obligations under this Contract.

If the Awarding Authority elects to complete all or any portion of the Work as specified in (3) above, it may take possession of all materials, equipment, tools, machinery, implements at or near the Site owned by the Contractor and finish the Work at the Contractor's expense by whatever means the Awarding Authority may deem expedient; and the Contractor shall cooperate at its expense in the orderly transfer of the same to a new contractor or to the Awarding Authority as directed by the Awarding Authority. In such case the Awarding Authority shall not make any further payments to the Contractor until the Work is completely finished. The Owner shall not be liable for any depreciation, loss or damage to said materials, machinery, implements or tools during said use and the Contractor shall be solely responsible for their removal from the Site after the Owner has no further use for them. Unless so removed within fifteen days after notice to the Contractor to do so, they may be sold at public auction, after publication of notice thereof at least twice in any newspaper published in the county where the Work is being performed, and the proceeds credited to the Contractor’s account; or they may, at the option of the Awarding Authority, be stored at the Contractor’s expense subject to a lien for the storage charges.

C. Damages and expenses incurred under paragraph B above shall include, but not be limited to, costs for the Designer’s extra services and OPM services required, in the opinion of the Awarding Authority, to successfully inspect and administer the construction contract through final completion of the Work.
D. Expenses charged under paragraph B above may be deducted and paid by the Awarding Authority out of any moneys then due or to become due the Contractor under this Contract.

E. All sums damages, and expenses incurred by the Owner to complete the Work shall be charged to the Contractor. In case the damages and expenses charged are less than the sum that would have been payable under this Contract if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference. In case such expenses shall exceed the said sum, the Contractor shall pay the amount of the excess to the Owner.

2. Termination For Convenience.

A. The Awarding Authority may terminate this Contract for convenience even though the Contractor is not in default by giving notice to the Contractor specifying in said notice the date of termination.

B. In case of such termination without cause, the Contractor shall be paid:
   (1) all sums due and owing under this Contract through the date of termination, including any retainage withheld to the date of termination, less any amount which the Awarding Authority determines is necessary to correct or complete the Work performed to the date of termination; plus
   (2) a reasonable sum to cover the expenses which Contractor would not have incurred but for the early termination of the Contract, such as demobilization of the work force, restocking charges, termination fees payable to Subcontractors.

C. The payment provided in paragraph B above shall be considered to fully compensate the Contractor for all claims and expenses and those of any consultants, Subcontractors, and suppliers, directly or indirectly attributable to the termination, including any claims for lost profits.

3. Contractor's Duties upon Termination for Convenience.

Upon termination of this Contract for convenience as provided in Section 2 of this Article, the Contractor shall: (1) stop the Work; (2) stop placing orders and Subcontracts in connection with this Contract; (3) cancel all existing orders and Subcontracts; (4) surrender the Site to the Awarding Authority in a safe condition; (5) transfer to the Awarding Authority all materials, supplies, work in process, appliances, facilities, equipment and machinery of this Contract, and all plans, Drawings, specifications and other information and documents used in connection with this Contract.

ARTICLE XVI: MISCELLANEOUS PROVISIONS

1. No Assignment by Contractor.

The Contractor shall not assign by power of attorney or otherwise, or sublet or subcontract, the Work or any part thereof, without the previous written consent of the Awarding Authority and shall not, either legally or equitably, assign any of the moneys payable under this Contract, or Contractor's claims hereunder, unless with the like consent of the Awarding Authority, whether said assignment is made before, at the time of, or after the execution of the Contract. The Contractor shall remain responsible for satisfactory performance of all Work sublet or assigned. Consent of the Awarding Authority shall not be deemed to constitute a representation or waiver of any right hereunder by the Awarding Authority as to the qualifications or the responsibility of the Contractor or Subcontractor(s).

2. Non-Appropriation.

If the Awarding Authority is unable to obtain an appropriation of funds sufficient to discharge its obligations under this Agreement for any fiscal year during the term of this Agreement, it shall not be obligated to make any further payments, and this Agreement may be terminated immediately by either the Awarding Authority or the Contractor, provided that the Awarding Authority shall make payment to the Contractor for obligations incurred during the period for which funding was included in an annual or supplemental appropriation.

3. Claims by Others Not Valid.

No person other than the Contractor shall acquire any interest in this Contract or claim against the Awarding Authority or Owner hereunder, and no claim by any other person shall be valid except as provided in M.G.L. c. 30, s. 39F of the General Laws.
4. **No Personal Liability of Public Officials.**
No public official, employee, or agent of the Awarding Authority or Owner shall have any personal liability for the obligations of the Awarding Authority or Owner set forth in this Contract.

5. **Severability.**
The provisions of this Contract are severable, and if any of these provisions shall be held unconstitutional or unenforceable by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the other provisions of this Contract.

6. **Choice of Laws.**
This Contract shall be governed by the laws of the Commonwealth of Massachusetts for all purposes, without regard to its laws on choice of law. All proceedings under this Contract or related to the Project shall be brought in the courts of the Commonwealth of Massachusetts.

7. **Standard Forms.** NOT APPLICABLE

8. **No Waiver of Subsequent Breach.**
No waiver of any breach or obligation of this Contract shall constitute a waiver of any other or subsequent breach or obligation.

9. **Remedies Cumulative.**
All remedies of the Awarding Authority provided in this Contract shall be construed as cumulative and may be exercised simultaneously or in any order as determined by the Awarding Authority in its sole discretion. The Awarding Authority shall also be entitled as of right to specific performance and equitable relief including the right to an injunction against any breach of any of the provisions of this Contract.

10. **Notices.**
Notices to the Contractor shall be deemed given when hand delivered to the Contractor's temporary field office at or near the Site, or when deposited in the U.S. mail addressed to the Contractor at the Contractor's address specified in the Owner - Contractor Agreement, or when delivered by courier to either location. Unless otherwise specified in writing by the Awarding Authority, notices and deliveries to the Awarding Authority shall be effective only when delivered to the Awarding Authority at the address specified in the Owner - Contractor Agreement and date-stamped at the reception desk or for which a receipt has been signed by the agent or employee designated by the Awarding Authority to receive official notices.

**ARTICLE XVII: EQUAL EMPLOYMENT OPPORTUNITY, NON-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM.**

This Contract includes the provisions of the Awarding Authority's "Equal Employment Opportunity, Non-Discrimination, and Affirmative Action Program" attached as Appendix A to these General Conditions of the Contract and incorporated herein by reference.

**ARTICLE XVIII: GOALS FOR PARTICIPATION BY MINORITY BUSINESS ENTERPRISES AND WOMEN BUSINESS ENTERPRISES**
This Contract includes the provisions of the Awarding Authority's program relating to Goals for Participation by Minority Business Enterprises and Women Business Enterprises attached as Appendix B to these General Conditions of the Contract and incorporated herein by reference.

City of
New Bedford
INSTRUCTIONS TO BIDDERS
For
AFFIRMATIVE ACTION ISSUES
for Public Works and Construction Projects

Office of Equal Opportunity & Contract Compliance
133 William Street, Room 208
New Bedford, Massachusetts 02740
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<td>Appendix A</td>
<td>Bid Submission Documents</td>
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AA.01: Definitions
relevant to the requirements set forth in this bidding document

**Construction Bidding Statutes***

**Public Works Projects**
Governed under Massachusetts General Laws, ch. 30, sec. 39M.
Includes all municipal contracts for construction, reconstruction, alteration, remodeling, or repair estimated to cost more than $5,000, which does not include work on a building. Includes the construction and repair of roads, bridges, water mains, sewers, and the like, as well as improvement to public land (i.e.: operation of a municipal landfill, removal of waste materials, grading, erosion control, and other forms of improvement and maintenance.

Also governs contracts of $5,000 - $25,000 for construction, reconstruction, installation, demolition, maintenance, or repair work on a building.

**Building Projects**
Governed under Massachusetts General Laws, Ch. 149, sec. 44.
Includes all contracts for the construction, reconstruction, installation, demolition, maintenance, or repair of a building at an estimated cost of more then $25,000.

**Lowest Eligible & Responsible Bidder***
Massachusetts G.L. c. 30, sec. 39M; c. 149, sec. 44A state that the contract be awarded to the lowest eligible and responsible bidder.

**Eligible** means the bidder meets all the requirement set forth in the bidding documents.

**Responsible** means the bidder possesses the skill, ability, and integrity to complete the job.

**Reasonable Accommodations**
Any change in work environment or the way job duties are customarily performed that enables individuals with disabilities to perform the essential functions of the job in issue, or that ensures equal opportunity for individuals with disabilities with respect to the application process or the enjoyment of benefits and privileges of employment.

**Administering Agency**
The agency that administers the state, state-assisted, or federally assisted contract awarded by the contracting agency

**Contracting Agency**
The agency that directly awards the contract

**Contractor**
Any general contractor and all subcontractors

* This information is taken directly from Designing and Constructing Municipal Facilities: Legal Requirements; Recommended Practices; Sources of Assistance Published by, William Francis Galvin, Secretary of the Commonwealth, Office of the Inspector General, Oct. 1989.
Minority / Women Business Enterprise
As defined by the Massachusetts State Office of Minority/Women Business Assistance (SOMWBA). In summary, an MBE/WBE is a business at least fifty-one percent (51%) owned or controlled by minority/women group members, or an individual contractor or professional who is a minority/women group member (as defined by SOMWBA).

Minority refers to:

Native American
A person having origin in any of the original people of North America, who is recognized as American Indian by a tribe or tribal organization or is recognized as such within his/her community

Asian
A person having origin in any of the original people of the Far East, Southeast Asia, Indian Subcontinent, Korea, Philippines, and Samoa

Black
A person having origin in any of the black racial groups of Africa

Cape Verdean
A person having origin in any of the original people of the Cape Verde Islands

Eskimo / Aleut
A person having origin in any of the original people of Northern Canada, Greenland, Alaska, and East Siberia

Hispanic
A person of Spanish descent and culture having origin in Mexico, the Island of the Caribbean, Central America or South America

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MINORITY/WOMAN BUSINESS ENTERPRISE PROGRAM

It is the policy of the government of the United State of America, the Commonwealth of Massachusetts and the City of New Bedford, that no person shall be discriminated against in any manner whatsoever, on the grounds of race, color, age, national origin, disability, religion, or sex.

Under this policy, the minority and woman business enterprises shall have the maximum practicable opportunity to participate in federally assisted projects, and shall not be excluded from such participation, nor denied the benefits of or be subjected to discrimination under any program or activity receiving federal assistance.

The City of New Bedford unequivocally ascribes to said policies as the recipient of Federal and State financial assistance, in connection with its activities, and may receive further Federal and State financial assistance in the future.

The City of New Bedford strongly affirms that it will not discriminate in any contractual procedure against any person because of race, color, age, national origin, disability, religion, or sex, or any other condition that is a bona fide qualification. This policy shall be administered at all levels with a positive, aggressive and supportive attitude by all department heads.

It is the responsibility of all department heads and employees to take affirmative steps to implement this policy to ensure equality of opportunity in conducting the affairs of the City of New Bedford, including notifying those persons and businesses doing business with the City of New Bedford, that contracts for goods and services and construction, shall be made without, reference to race, color, age, national origin, disability, religion, or sex.

This Minority/Woman Business Enterprise Program sets forth the administrative standards for further implementation of the City of New Bedford's policy for the utilization of minority and female contractor, subcontractors, and suppliers.

Each department shall ensure that all solicitation in advertisements includes a statement of the City’s affirmative action policy, in an approved format.

The city’s Equal Opportunity shall be responsible for ensuring that all aspects of the MBE/WBE program are initiated and undertaken. By virtue of the delegation of this responsibility and authority to direct the program, the Contract Compliance Officer will report directly to the Mayor on equal opportunity matters. The Equal Opportunity Officer shall be responsible for the development, administration, and monitoring of all activities necessary to ensure the accomplishment and success of this program.

NOW, THEREFORE IT IS HEREBY RESOLVED that the following Minority/Woman Business Enterprise Program is instituted for and in behalf of the City of New Bedford.

[Signature]

Mayor, Jon Mitchell

[1/3/12]

Date

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AA.03: City of New Bedford Ordinances - Synopsis

See Appendix A for complete City Ordinances relevant to this bid document

(1) Residency Requirements for Certain City-Supported Construction Projects, Chap. 10, Article II.

(a) shall apply to all general and subcontractors of public works projects which have a projected cost of more than $100,000.00

(b) fifty (50) percent of the total employee man-hours in each trade must be performed by residents of the City of New Bedford (excluding the employer’s foreman or supervisor and two other key employees.)*

* Contact the N.B. EEO Dept. for further assistance in this matter.

(c) resident is defined as someone having his/her true, fixed, and permanent home and principal establishment in the City of New Bedford, for a minimum of six (6) months prior to the contract bid opening date.

(2) Contractor Qualifications and Sanctions, a.k.a. The Responsible Employer Plan, Chap. 10-77.

(a) shall apply to all bidders and subcontractors for projects subject to MGL c. 149.

(b) not applicable to construction projects where the low general bid was less than $100,000; to subcontracts bid for less than $25,000; or to re-bids for which the City receives fewer than three (3) qualified bidders in the original bid.

(c) must pay appropriate lawful prevailing wage rates to employees

(d) must maintain or participate in a bona fide apprentice training program for each apprenticeable trade represented in the workforce

(e) must furnish hospitalization and medical benefits and maintain appropriate accident insurance coverage

(f) must classify all employees as employees rather than independent contractors, and treat accordingly regarding workers compensation, unemployment taxes, social security taxes and income tax withholding

AA.04: Contractors Agreements under Executive Order 11246, as Amended by Executive Order 11375

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment of compensation; and selection of training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

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(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers’ representative of the contractor’s commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of Sept. 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor’s noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order, unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of Sept. 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

AA.05: Dept. of Labor, 41 Code of Federal Regulations Parts 60-1, 60-6 - Government Contractors, Affirmative Action Requirements, Executive Order 11246

(1) Segregated Facilities. The contractor hereby certifies that it does not and will not maintain or provide any facilities for its employees in a segregated manner, or permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. Further, the contractor shall obtain a similar certification of nonsegregated facilities prior to the award of any contract or subcontract, which is subject to Executive Order 11246, and shall provide a copy thereof to the Association. This clause prohibits segregation on the basis of race, color, religion, national origin, or sex, and applies to all contracts regardless of the amount thereof. The term “facilities” includes, but is not limited to, waiting rooms, work areas, restaurants and other eating areas, time clock, parking lots, drinking fountains, recreation or entertainment areas, transportation, employer-provided housing, washrooms, locker rooms or other storage or dressing areas.

(2) Affirmative Action Compliance Program. The contractor certifies that it has developed a written affirmative action compliance program for each of its establishments consistent with the rules and regulations published by the Department of Labor in 41 CFR Chapter 60, and agrees to require a similar certification from each of its nonexempt subcontractors. Such an affirmative action program shall contain a set of specific and result-oriented procedures, the objective of which shall be the achievement of equal employment opportunity. An acceptable affirmative action program must include an analysis of areas within which the contractor is deficient in the utilization of minority groups and women and further, goals and timetables to which the contractor’s good faith efforts

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must be directed to correct any deficiencies and, thus, to achieve prompt and full utilization of minorities and women, at all levels and in all segments of his work force where deficiencies exist. The contractor’s affirmative action plan shall be summarized and updated annually and the program summary shall be submitted to the Office of Federal Contract Compliance Programs (OFCCP) on the anniversary date of the contractor’s affirmative action program.

(3) Contractor’s Compliance with Exec. Order and 41 CFR Par 60-4. The contractor’s compliance with E.O. 11246 and 41 C.F.R. Part 60-4, shall be based on its implementation of the Equal Opportunity clause, specific affirmative action obligations required by the specifications set forth in 41 C.F.R. 60-4.3, and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed.

AA.06: Section 503 of the Rehabilitation Act of 1973

(Dept. of Labor, 41 Code of Federal Regulations, Parts 60-250 and 60-741, □Affirmative Action & Nondiscrimination Obligations of Contractors and Subcontractors Regarding Individuals with Disabilities, Disabled Veterans, and Veterans of Vietnam Era)

Parties holding a Government contract or subcontract in excess of $10,000 must take affirmative action to employ and advance in employment-qualified individuals with disabilities. Contractors are required to use effective practices to recruit qualified individuals with disabilities.

Applicants with disabilities must be provided a reasonable accommodation if they are qualified with respect to the application process (e.g.: if they present themselves at the correct location and time to fill out an application).

AA.07: MBE / WBE Policy (for the life of the project)

(1) Eleven (11) percent of the work on this project shall be performed by Minority Business Enterprises (MBEs) and five (5) percent of the work shall be performed by Women Business Enterprises (WBEs) for a total of 16% overall. Four (4%) percent of all Airport projects shall be performed by Disadvantaged Business Enterprises (DBE). Proven documentation of nonavailability of either one of these entities provides that the available businesses may be awarded no less than 16% of the total contract dollar value for most City projects and 4% of Airport projects.

(2) The Bidder must submit with the bid the necessary certification setting forth the bidder’s compliance with the MBE/WBE contractors or the DBE contractors when required. FAILURE TO SUBMIT THESE CERTIFICATIONS AT THE TIME OF THE BID MAY RESULT IN THE BID BEING CONSIDERED NONRESPONSIVE.

(3) If it is determined that one or more of the MBE/WBE or DBE contractors, as submitted by the Contractor on the EEO forms, is not SOMWBA certified or certified by the Local Government Unit, in accordance with the provision of Executive Order 237, the bidder shall have five (5) working days, following notification, to either find a certified MBE/WBE/DBE contractor to perform work equal to or greater than that of the uncertified contractor, or to submit a waiver request.

(4) The contractor shall not enter into any subcontract with any person or firm debarred from government contracts, pursuant to Executive Order 11246.
AA.08: Workforce Utilization (for the life of the project)

(1) Minimum percentages for employment (workforce utilization) on the project are at 18% minority and 6.9% female participation. The employment percentages shall apply to the contractor and to all subcontractors, regardless of tier, for all on-site work.

A single goal for minorities and a separate goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally, the contractor may be in violation of the Exec. Order if a specific minority group of women is under-utilized.)

(3) The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

AA.09: Contractor’s EEO / Records Monitor

The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof, as may be required by the Government, and to keep records which shall at least include, for each employee, the name, address, telephone numbers, social security number, race, sex, status, (e.g.: mechanic, apprentice, trainee, helper, or laborer) dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents.

AA.10: Bidder’s Eligibility

The lowest responsible and eligible bidder shall mean the General Bidder whose bid is the lowest of those bidders demonstrating possession of the skill, ability and integrity necessary for the faithful performance of the work, and

(a) who shall certify that he/she is able to furnish labor that can work in harmony with other labor employed on the work;
(b) who shall certify that he/she will comply with the minority workforce goal (18%) the woman workforce goal (6.9%) and, for projects $100,000+, NB residency goal of 50%; the insurance that all subcontractors and/or subcontractors are also in compliance with workforce utilization goals; including compliance with the minority business goal (11%) and woman business goal (5%), for a total of 16% (or 4.0% for Airport projects) of the total dollar amount of the contract, and will certify that it will meet all applicable City Ordinances in accordance with this contract provision.

AA.11: Bid Submission Requirements

(1) Required bid forms that must be completed, signed, and submitted with the bid at the time of the bid opening, are as follows:

(a) Certificate of Understanding; Certification of Compliance w/ Exec. Order 11246
(b) Schedule of Participation for MBE/WBE or DBE as required
(c) Letter of Intent (for each MBE/WBE/DBE participation)
(d) MBE/WBE/DBE Contractor Identification Statement (for each MBE/WBE/DBE)
(e) Bidder’s Certification (to be completed by both the General Contractor and each MBE/WBE/DBE)

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(f) If applicable, a completed and signed MBE/WBE/DBE Unavailability Certification in the event that the work listed on the Schedule is not sufficient to fulfill the requirement for MBE/WBE/DBE Participation. This certification must include a statement by the bidder of the reasons why it believes it is in compliance with this provision, and a list of the names, addresses, telephone numbers and reason given for unavailability of the Minority/Women Contractor contacted by the bidder with respect to the performance of work under the contract.

(2) The successful bidder will also be required to submit, prior to award, its estimates of labor (permanent and trainee) and material required to carry out its work under the contract, for review by the City, so as to establish maximum feasible goals for the utilization of City residents and business concerns. These goals, and the basis for monitoring and reporting progress toward meeting them, will be established by mutual agreement, with the assistance of the City’s Contract Compliance Officer, and discussed in the Pre-Construction or Pre-Award Conference.

AA.12: Bid Approval or Disapproval

(1) Failure to submit any of the required MBE/WBE/DBE forms and percentages at the time of the bid, will have the Bid/Proposal eliminated. Failure to meet the required percentages, or to fully complete any of the submitted paperwork, at the time of the bid opening, the bidder will have five (5) days, from the date of the bid opening, to comply with the requirements. Failure to meet these requirements within the five days will have the Bid/Proposal disapproved by the Office of Equal Opportunity.

(2) Each bidder, as part of its bid submission, must agree to contract with minority and woman owned businesses, as defined by the State Office of Minority and Woman Business Assistance (SOMWBA) and the City of New Bedford’s affirmative action policies. The amount of participation reserved for such enterprises shall not be less than 16% of the total bid amount, of which at least 11% of the total bid amount applies to minority businesses. The balance 5% is applied to women-owned businesses. Proven documentation of nonavailability of either one of these entities provides that the available business may be awarded no less than 16% of the total contract dollar value.

(3) If the general bidder is either an MBE or WBE and is responsible for 100% of the project work, the 16% is fulfilled. If said MBE/WBE contractor is a joint venture, the MBE/WBE must be responsible for at least 51% of the project.

(4) The general contractor must submit, as part of its bid and as a condition of contract approval, signed Letters of Intent with all subcontractors and material suppliers listed on the participation schedule. Sub-bidders must submit the participation schedule with their bid and a participation schedule if they intend to sub-sub work.

AA.13: Steps to Ensure a Responsive Bid

The total price for work to be performed by Minority/Woman or Disadvantaged Contractors, as indicated in each bidder’s bid submission, is required to be sufficient to fulfill the MBE/WBE/DBE requirements, unless the bidder shall demonstrate to the satisfaction of the Awarding Authority that:

(1) it has made every possible effort to contact and negotiate with Minority/Women or Disadvantaged Contractors in an attempt to subcontract work, including every possible effort to select the portions of the work proposed to be subcontracted in order to meet the requirements;

(2) it was unable, notwithstanding such efforts, to achieve the stated requirement because Minority/Woman or Disadvantaged Contractors were not qualified or were unavailable.
(any proven nonavailability of MBE/WBE/DBE must make up the difference to still fulfill the 16% goals with the available MBE or WBE or 4.0% DBE. If neither category is available to fulfill the goal, it must have a SOMWBA statement as to no business listed);

(3) it included in its Schedule of Participation such proposed agreements as could be made with such efforts;

(4) the general contractor is an MBE or WBE and said contractor is performing 16% of work or the general contractor is a DBE and is performing 4.0% of the work and therefore, will be deemed as fulfilling the affirmative action bidding requirements;

(5) for contractors under $50,000, that can demonstrate all work will be completed under the contractor’s own workforce, the contractor must be able to demonstrate how this will be accomplished and submit, at the time of the bid a statement requesting a waiver of the 16% MBE/WBE or 4.0% DBE participation goal. Employment percentages must still be met.

AA.14: Bid Award or Rejection

(1) The Awarding Authority will responsible for awarding or rejecting any bid, with the approval/disapproval of the Office of Equal Opportunity & Contract Compliance in its decision. The Awarding Authority also reserves the right to reject any or all bids, or to accept any other than the lowest bidder, should it be deemed to be in the best interest of the City of New Bedford, Massachusetts, to do so.

(2) The Awarding Authority shall reject, as non-responsive, any bid, which it determines, fails to comply with the applicable requirements of this contract provision. Nothing, herein, shall relieve any bidder or any contractor performing any work under the contract, from any of the terms, conditions, or requirements of the contract.

AA.15: Awarded Contractor’s Obligations

(1) The Contractor shall specifically ensure that the company’s EEO policy and affirmative action obligations under this contract provision, is reviewed with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decision, including specific review of these terms with on-site supervisory personnel, prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(2) Minority/Woman Work Hours must be maintained for the life of this project (at a minimum ratio of 18% minority work hours and 6.9% woman work hours to total work hours in each job category, including, but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those classes of work identified in Section 44C of M.G.L. ch. 149). (Please note the City of New Bedford’s Residency Ordinance requiring 50% City of New Bedford residents on projects of $100,000+)

(3) Apprentices and Trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability, in order for the apprentices and trainees to be counted toward the minority/woman work hour percentage goals.

(4) Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women, shall excuse the contractor’s obligation under these specifications, Exec. Order 11246, or the regulations promulgated pursuant thereto.

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(5) In the employment of journeymen, apprentices, teamsters and laborers, 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 which the employment relates, and secondly, to citizens of the City of New Bedford, and if such cannot be obtained in sufficient numbers, the Commonwealth generally, then to citizens of the United States.

(6) Reports to Be Submitted to the Office of Equal Opportunity & Contract Compliance include:

(a) Licensing Statutes: Every contractor and subcontractor must submit, before starting work, a plan by which he/she will satisfy the requirements of licensing statutes, including the following, where applicable: MGL Ch. 149, Sec. 6 (painters); Ch. 146, Sec. 53 (hoisting engineers); Ch. 149, Sections 6B-6F (asbestos abatement workers, supervisors & contractors); Ch. 146, Sec. 3 & 3B (plumbers & gas fitters); Ch. 141, Sec. 1 (electricians); Ch. 14, Sec. 84 (pipefitters & sprinkler fitters); and Ch. 143, Sec. 94 (construction supervisor).

(b) Work Hour Reports: The contractor and each subcontractor shall prepare weekly reports in an approved form, of the hours worked in each trade by each employee, identified as minority or non-minority, and/or female, and/or resident. Copies of these shall be provided at the end of each such week to the City’s Office of Equal Opportunity & Contract Compliance.

(c) Projected Manning Tables: 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 City. A copy of the certified payroll will be submitted with these reports.

(d) Billing Reports: The contractor shall prepare and submit monthly billing reports of amounts paid to MBEs, WBEs and/or DBEs each monthly billing period, as well as the record of final payment accompanied by canceled checks.

(e) Payroll Reports: Every contractor and subcontractor shall submit weekly payroll reports to the City, indicating the following information for each employee and/or independent contractor employed on the project; name, address, hours worked, occupational classification, wages, and fringe benefit payments, if any. Said reports shall be signed by the employer or his authorized agent under the penalties of perjury (see MGL Ch. 149, Section 27B).

AA.16 Recruitment/Referral Responsibilities

(1) In the hiring of minority/woman journeymen, apprentices, teamsters, and laborers, the contractor shall rely on referrals from a multi-employer affirmative action program approved by the City, traditional referral method utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the City’s Equal Opportunity Officer.

(2) Records of employment referral orders, prepared by the contractor, shall be made available to the awarding authority.

(3) The contractor will maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization, and of what action was taken with respect to each such individual.

(4) If such individual was sent to the union hiring hall for referral, and was not referred back to the contractor, this shall be documented in the file with the reason therefore, along with whatever

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additional actions the contractor may have taken.

(5) The contractor will document and maintain a record of all solicitations of offers for subcontractors from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractors associations and groups.

(6) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin, and maintain a record thereof.

**AA.17: Subcontracts**

(1) The Contractor receiving the award of the contract shall be required to obtain from each of its subcontractors (filed or non-filed) and submit to the Authority prior to the performance of any work under said subcontract, a certification by said subcontractor, regardless of tier, that it will comply with the minority and women work hours/employee ratio and specific affirmative action steps, and to submit this information to the Office of Equal Opportunity, prior to the subcontractor’s performance on the project.

(2) In order to ensure that the said subcontractor’s certification becomes a part of all subcontracts under the prime contract, no subcontract shall be executed until an authorized representative of the Authority administering this project has determined, in writing, that the said certification has been incorporated in such subcontract, regardless of tier. Any subcontract executed without such written approval shall be void.

(3) Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000, the contract provisions listed in this Instructions to Bidders for Affirmative Action Issues, and the applicable goals for minority and female participation and which is set forth in the solicitation form which the contract resulted.

(4) Noncompliance of a subcontractor in compliance with these provisions, will result in the contractor taking such action, with respect to any subcontract or purchase order, as the administering agency may direct, as a means of enforcing such equal opportunity provisions; provided that, in the event a contractor becomes involved in, or is threatened with litigation with a subcontractor or vendor, as a result of such direction, the contractor may request the United States, the State of Massachusetts or the City of New Bedford, to enter into such litigation to protect the interests of the U.S., the State or the City.

**AA.18: Wage Rates**

(1) Attention is called to Labor Standards provisions regarding conditions of employment, including State and Federal Wage Rates, the Davis-Bacon Act, the Copeland Anti-Kickback Act, and the Contract Work Hours and Safety Standards Act. Where Federal and State wage rates differ, the higher rates shall be used as a minimum.

(2) The rate per hour of the wages to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the work shall be not less then the rate of wages in Minimum Wage Rates as determined by the Commissioner of Labor and Industries, as required by M.G.L. Chapter 149, Sections 26 & 27-27h. This schedule shall be in place for said employees during the life of this contract.

(3) Contractor shall keep posted on the site, a legible copy of said schedule. Keep on file wage rates and classifications of labor employed on this work, in order that they may be available for inspection by the Administrator, the Office of Equal Opportunity, or the Architect.

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

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(5) Pay reserve police officers employed on this work the prevailing rate of wages paid to regular police officers, as required by M.G.L. Chap. 149, Sec. 34B, as amended. Such police officers shall be covered by Workmen’s Compensation Insurance and Employer’s Liability Insurance by the Contractor.

(6) Noncompliance by the contractor or any subcontractor will result in the City’s Contract Compliance Office and/or Legal Office, to consult with the Department of Labor and Industries, and will result in the contractor or subcontractor receiving notification of such, and subsequently must respond to the City of New Bedford within five (5) business days.

AA.19: Access to Compliance Information & Reports

(1) The contractor will provide all information and reports, required by the administering agency or the City of instructions issued by either of them, and will permit access to its facilities and any books, records, accounts, and other sources of information pertinent to the City’s affirmative action contract requirements.

(2) Where the 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 City, and shall set forth what efforts he/she has made to obtain the information.

AA.20: Noncompliance

(1) Investigation
Whenever the administering agency or the City believe the general contractor or any subcontract may not be operating in compliance with the terms of this provision, the City directly or through it 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 contract provision. If noncompliance is found, then a preliminary report on noncompliance will be made, and the City or its agent will notify such contractor, in writing, of such steps as will, in the judgment of the city or its agent, bring such contractor into compliance.

(2) Report of Noncompliance
In the event that such contractor fails or refuses to fully perform such affirmative action steps, the City shall make a final report of non-compliance, and recommend to the administering agency, the imposition of one or more of the sanctions identified in these provisions. Within fourteen (14) days of the receipt of the recommendations of the City, 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.

(3) Any disagreement between the City and a contractor or subcontractor shall be submitted for a hearing pursuant to the provisions of Chapter 30A. The City shall impose one or more of the following sanctions, as it may deem appropriate, to attain full and effective enforcement.

AA.21: Sanctions

(1) The recovery by the administering agency from the general contractor of 1/100 of 1% of the contract award price, or $1,000.00, 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 general contractor, a back charge against the subcontractor, of 1/10 of 1% of the subcontract price or $400.00, whichever sum is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply.

(2) The suspension of any payment or part thereof, due under the contract, until such as the general contractor or any subcontractor is able to demonstrate his/her compliance with the terms of the preceding sections of the contract.

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(3) The termination of employment of the contractor and taking possession of the site and finishing the work by whatever method he/she may deem expedient, upon giving the contractor and his/her surety, if any, seven days written notice.

(4) The termination or cancellation of the contract, in whole or in part.

(5) The denial to the general contractor and any subcontractor of the right to participate in any future contract awarded by the administering agency for a period of up to three years.

(6) Other sanctions to be applied, as stipulated in the City of New Bedford Ordinances (Residency and Responsible Employer Plan ordinances) and other local, state, and federal laws and regulations, as applicable.

AA.22: Appeal of Sanctions

If, at any time after imposition of one or more of the sanctions listed in these provisions, the contractor or subcontractor is able to demonstrate that it is in compliance with the EEO/AA program, the contractor or subcontractor may request the administering or contracting agency, in consultation with the City’s Office of Equal Opportunity, to conditionally suspend the sanction, pending final determination by the investigating officer, whether the contractor is in compliance. Upon final determination by the investigating officer, the administering or contracting agency, based on the investigating officer’s recommendation, shall either lift the sanctions or impose them.

Sanctions shall not be imposed by the contracting agency or administering agency except after an adjudicatory proceeding, as defined by M.G.L. Chapter 30A, has been conducted. No investigation by the Office of Equal Opportunity shall be initiated without prior notice to the contractor or the subcontractor.

AA.23: Severability

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

BID SUBMISSION DOCUMENTS
THE GENERAL BIDDER SHALL SUBMIT ALL THE FOLLOWING FORMS AS A PART OF ITS BID SUBMISSION, AND SHALL SUBMIT A COPY OF SUCH TO:

The City of New Bedford
Office of Equal Opportunity
133 William Street Room 208
New Bedford, MA 02740
ph: 979-1446 / fax: 508-991-6148

(1) Certificate of Understanding: Certification of Compliance with Executive Order 11246"
(2) Schedule of Participation for Minority, Woman & Disadvantaged Business Enterprises≈
(3) Letter of Intent - for each MBE/WBE/DBE Participation
(4) MBE/WBE Contractor Identification Statement≈ - for each MBE/WBE/DBE
(5) Bidder’s Certification≈ - must be completed and signed by the General Contractor and all Subcontractors who will work on the project (to include MBE/WBE/DBE and non-MBE/WBE/DBEs)
(6) If applicable, a completed and signed MBE/WBE/DBE Unavailability Certification≈ in the event that the work listed on the Schedule is not sufficient to fulfill the Requirement for MBE/WBE/DBE Participation. This certification must include a statement by the bidder of the reasons why it believes it is in compliance with this Provision, and a list of the names, addresses, telephone numbers and reason given for unavailability of the Minority/Woman/Disadvantaged Contractor who was contacted by the Bidder with respect to the performance of work under the contract.

NOTE: FAILURE TO FULLY COMPLETE AND/OR TO SUBMIT ANY OF THE ABOVE-REFERENCED DOCUMENTS AT THE TIME OF THE BID SUBMISSION MAY RESULT IN THE BID BEING CONSIDERED DISAPPROVED.

Revised 2007

I, the undersigned, understand that:

A. Minority Business Enterprises are to be awarded at least 11% of the total contract amount for construction/public works projects.

B. Woman Business Enterprises are to be awarded at least 5% of the total contract amount for construction/public works projects.

C. Disadvantaged Business Enterprises are to be awarded at least 4% of the total contract amount for airport projects.

D. All required MBE/WBE/DBE forms included in Instructions to Bidders are to be completed and submitted with the bid.

E. Prior to award of the contract, a pre-construction conference must be held (to be attended by the general contractor and all subcontractors, regardless of tier) at which time the following requirements will be discussed:
   1. Weekly Workforce Utilization Reports (Form CAD85) are to be submitted weekly with payroll reports within five (5) days of last payroll;
   2. Quarterly Manpower Projection Tables (Form CAD85-1) are to be submitted with the Start of Construction notification;
   3. Any project in the amount of $100,000+ is subject to the New Bedford Resident Hiring and the Responsible Employer Plan ordinances;
   4. A minimum goal of 18% minority manpower utilization, in terms of total work hours in the aggregate workforce, in each trade or craft, on each project, will be maintained. The goal for female manpower utilization will be maintained at 6.9% according to regulations;
   5. Minority and female work hours are to be uniform in each trade, and minorities and females are to be employed evenly on each project;
   6. Minority or female employees are not be transferred from project to project for the purpose of meeting goals;
   7. A roster of all minority and/or female applicants for employment must be maintained at each project site (Federal & Non-Federal) in the New Bedford Hometown Plan Area.

E. The submission of the above reports and adherence to hiring practices and equal opportunity performance of subcontractors is the responsibility of the prime contractor. The bidder hereby certifies that he/she shall comply with the minority manpower ratio and specific affirmative action steps contained in the EEO above, including compliance with the minority contractor compliance specifications. The Contractor receiving the award of the contract shall be required to obtain from each of its subcontractors, and submit to the contracting or administering agency prior to the performance of any work under said contract, a certification by said sub-contractor, regardless of tier, that it will comply with the minority manpower ratio and specific affirmative action steps contained in this appendix.

Authorized Signature ____________________________ Date ______________

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## SCHEDULE OF PARTICIPATION

**DISADVANTAGED/MINORITY / WOMAN BUSINESS ENTERPRISES**

to be completed by the Bidder

### Item I - Minority Or Disadvantaged Business Enterprise Participation

1. **Name:** ______________________________
   
   Address: ________________________________________________
   
   Nature of Participation: _________________________________________
   
   Dollar Value / % of Bid: ____________________________

2. **Name:** ______________________________
   
   Address: ________________________________________________
   
   Nature of Participation: _________________________________________
   
   Dollar Value / % of Bid: ____________________________

<table>
<thead>
<tr>
<th>TOTAL BID PRICE</th>
<th>TOTAL DBE or MBE COMMITMENT</th>
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<tbody>
<tr>
<td>$_________________</td>
<td>$_________________</td>
</tr>
</tbody>
</table>

### Item II – Woman Or Disadvantaged Business Enterprise Participation

1. **Name:** ______________________________
   
   Address: ________________________________________________
   
   Nature of Participation: _________________________________________
   
   Dollar Value / % of Bid: ____________________________

2. **Name:** ______________________________
   
   Address: ________________________________________________
   
   Nature of Participation: _________________________________________
   
   Dollar Value / % of Bid: ____________________________

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<thead>
<tr>
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Revised 2007
The bidder agrees to furnish implementation reports, as required by the awarding authority, to indicate the MBE/WBE or DBE which it has used or intends to use. Breach of this commitment constitutes a breach of the contract.

General Bidder: ________________________________________________________________

Signature: ___________________________________________ Date: ________________

LETTER OF INTENT

to be completed by the DBE/MBE/WBE

This form is to be completed by the DBE or MBE and WBE and must be submitted by the General Bidder as part of the Bid Proposal. A separate form must be completed for each MBE, WBE or DBE involved in the project.

Project Title: ________________________ Project Location: ________________________

To: ____________________________________________ (Name of Bidder)

From: ________________________________________ (Name of DBE/MBE/WBE) Indicate

DBE/MBE/WBE status

I / we intend to perform work in connection with the above project as (Check One)

{ } an individual  { } a partnership
{ } a corporation  { } a joint venture with: _____________________________
{ } other (explain): ___________________________________________________________________

It is understood that if you are awarded the contract, you intend to enter into an agreement to perform the activity described below for the prices indicated.

DBE/MBE/WBE PARTICIPATION:

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<td>________________________</td>
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</table>

The undersigned certify that they will enter into a formal agreement upon execution of the contract for the above-referenced project
<table>
<thead>
<tr>
<th>BIDDER</th>
<th>DBE/MBE / WBE</th>
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</thead>
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<td>Address</td>
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<td>Address</td>
<td>Address</td>
</tr>
<tr>
<td>Telephone / Fax</td>
<td>Telephone / Fax</td>
</tr>
</tbody>
</table>

Revised 2007
MINORITY / WOMAN BUSINESS ENTERPRISE PROGRAM

CONTRACTOR IDENTIFICATION STATEMENT

Project Name: __________________________________________________________ Project#:__________

Total Bid Price: $__________________________________     Bid Date: ______________

In accordance with the New Bedford Minority Business Enterprise Program, the undersigned bidder certifies that he/she:

1. is a bona fide Minority/Woman/Disadvantaged Business Enterprise currently certified by the State Office of Minority/Woman Business Assistance (SOMWBA); and such SOMWBA certification has not changed; and in the event of said status changing, it will immediately forward written notification to the City of New Bedford and SOMWBA; and

2. intends to perform certain work (specified by formal bid proposal) under a contract in connection with the above-named project, and that work will not be sublet to any company at any tier; and

3. will comply with the minority/woman workforce ratio and specific affirmative action steps contained in the EEO/AA Contract Provisions and shall obtain from each of its subcontractors a copy of the bidder’s certification and submit to the administering agency, prior to the award of such subcontract, regardless of tier, that he/she will comply with the minority/woman workforce ratio and specific affirmative action steps contained in these and the EEO/AA Contract Provisions.

SOMWBA CERTIFICATION CATEGORY: __________________________________________________________

CONTRACTORS NAME: ____________________________________________________________
{ } MBE   { } WBE   { } DBE

ADDRESS: ____________________________________________________________________________
____________________________________________________________________________________

TELEPHONE #: ___________________ FAX #: ___________________

REPRESENTATIVE NAME & TITLE: _________________________________________________________

AUTHORIZED SIGNATURE: ___________________________________________________________

GENERAL BIDDERS NAME: ____________________________________________________________

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BIDDERS CERTIFICATION

to be completed by General Contractor & each of its Subcontractors (MBE/WBE/DBE and non-MBE/WBE/DBE)

The undersigned bidder hereby certifies that he/she will comply with the Minority/Woman Workforce Ratio and Specific Affirmative Action Steps contained in the EEO/AA Provisions of this contract, including compliance with the Minority/Woman/Disadvantaged Business Enterprise as required under these contract provisions.

The contractor receiving the award of the contract shall be required to obtain, from each of its subcontractors, regardless of tier, a copy of this Bidder’s Certification indicating that it will comply with the Minority/Woman Workforce Ratio and Specific Affirmative Action Steps contained in these EEO/AA Contract Provisions, and submit it to the contracting agency prior to the award of such contract and subcontract.

Name of General Contractor

Name of Subcontractor
{ } MBE { } WBE { } DBE { } Non-MBE/WBE

Signature of Authorized Representative

Signature of Authorized Representative

Name & Title (Printed or Typed)

Name & Title (Printed or Typed)

Date

Date

Revised 2007
MINORITY / WOMAN BUSINESS ENTERPRISES
UNAVAILABILITY CERTIFICATIONS

_to be completed by General Contractor_

_(the Bidder shall prepare additional copies of this information form in the quantity necessary to comply with the bidding requirements)_

I, _____________________________________________________, _____________________________
Name
Title
of __________________________________________________________________________________
Contractor Name
certify that on ____________________________________, I contacted the below listed MBE/WBE/DBE
Date of Contact
requesting a bid for
Project __________________________________ as an {    }MBE, {   }WBE or {  }DBE for the provision of
{    }Goods & S
{    } Labor
Subcontract Work Offered to this MBE/WBE/DBE Company
________________________________________________________________________________
Name of Prospective Sub-Contractor
________________________________________________________________________________
Address                City and State
Telephone #
Contact was made by {    } Telephone  {    } In Person
Said sub-contractor was unavailable for work on this project or unable to prepare a bid for the following reason(s): (check appropriate answer):

{    } MBE/WBE/DBE Firm Declined Job

{   } MBE/WBE/DBE Firm offered to do a job at the price of $___________________________, which was not acceptable because: ________________________________

{   } Other _____________________________________________________________________

The above information is accurate and complete, to the best of my knowledge and belief. Signed under the pains and penalties of perjury.

__________________________________________________________
Signature of Authorized Representative, General Contractor

Date

Revised 2007

Submit with Bid
MINORITY / WOMAN/DISADVANTAGED BUSINESS ENTERPRISES

REQUEST FOR WAIVER

Upon exhausting all known sources and making every possible effort to meet the minimum requirements for MBE/WBE/DBE participation, the Contractor may seek relief from these requirements by filing this form (completed) NO LATER THAN FIVE (5) working days following the bid opening. Failure to comply with this process shall be cause the bidder to be rejected, thereby rendering the contractor not eligible for award of the contract.

General Information

Project Title: ______________________________ Location: ________________________________

Bid Opening (time/date): ______________________________ Location: ________________________________

Bidder:

___________________________________________________________________________

Mailing Address:

____________________________________________________________________________

____________________________________________________________________________

Contact Person:

_____________________________________________________________________________

Telephone No.: (            )                                                                      Ext.

Minimum Requirements

The contractor must show that good faith efforts were undertaken to comply with the percentage goals, as specified. The bidder seeking relief must show that such efforts were taken appropriately, in advance of the time set for opening bid proposals, to allow adequate time for response(s) by submitting the following: (please check all that apply and attach applicable documentation)

A. A detailed record of the effort made to contact and negotiate with minority, woman or disadvantaged business enterprises, to include:
   (   ) 1. Names, addresses and telephone numbers of all such companies contacted;
   (   ) 2. Copies of written notice(s) which were sent to MBE/WBE/DBE potential subcontractors prior to bid opening;
   (   ) 3. Copies of advertisements prior to bid opening, as appearing in general publications, trade-oriented publications, and applicable minority/women focused media detailing the opportunities for participation;
4. A detailed statement as to why each subcontractor contacted (a) was not willing or (b) was not qualified to perform the work as solicited; and
5. In the case(s) where a negotiated price could not be reached, the bidder should detail what efforts were made to reach an agreement on a competitive price
6. Contractor certifies that 100% of the project is to be carried out with his/her own workforce.

B. The Agency may require the contractor to produce such additional information, as it deems appropriate and may obtain whatever other information it deems necessary to reach a conclusion from any source.

C. No later than fifteen (15) days after receipt of all necessary information and documentation, a decision will be made in writing to the bidder. If the waiver request is denied, the facts upon which a denial is based will be set forth. A contractor who is dissatisfied with the decision may then appeal that decision to the Equal Opportunity Employment Agency.

Certification

The undersigned herewith certified that the above information and appropriate attachments are true and accurate to the best of my ability, and that I have been authorized to act on behalf of the bidder in this matter.

___________________________________________________
(authorized original signature)  Date

Submit to: Equal Employment Opportunity Compliance Officer
133 William Street, Room 208
New Bedford, MA 02740

To be completed by the City of New Bedford’s EEO

__________________________________________  Bid Date

Date Received by EEO  ________________  Initials
INTRODUCTION to WAGE RATE DETERMINATION SCHEDULE

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 THE MASSACHUSETTS PREVAILING WAGE LAW (MGL. c149, §§26-27H) - AN IMPORTANT GUIDE FOR CONTRACTORS DOING PUBLIC WORKS PROJECTS IN MASSACHUSETTS

A. Prevailing Wage Schedules

1. Every contractor should obtain a schedule of prevailing wage rates for every public works project from the Awarding Authority (city, town, county, district, state agency or authority). It is the Awarding Authority’s responsibility to ensure that a copy of the wage schedule is provided to all contractors from whom estimates or bids are solicited for all projects. The Commonwealth of Massachusetts Division of Occupational Safety (DOS), Department of Labor and Workforce Development will not issue wage schedules directly to contractors or employees.

2. Once a wage schedule has been issued for a project by DOS, it will remain in effect for the entire project. Appeals of wage determinations or classifications of employment may be made to the DOS Commissioner.

3. A copy of the wage schedule is required to be posted at the work site.

4. A wage schedule issued for a project may not be used on any other project. If, by chance, an Awarding Authority fails to provide you with a wage schedule to use when figuring your bid, do not use one you may have from another project. In this case, you should contact DOS immediately and urge the Awarding Authority to contact DOS to correct the oversight.

5. The failure of an Awarding Authority to provide a wage schedule does not excuse a contractor from paying the prevailing rate.

6. A copy of current Prevailing Wage Rates including Minimum Wage Rates for Apprentices; Notice regarding Massachusetts Prevailing Wage Law; Weekly Payroll Records Report and Statement of Compliance; and Weekly Payroll Report Form will be issued by Addendum.

B. Bidding

1. The Attorney General’s Division of Fair Labor and Business Practices enforces the prevailing wage law. All bids must reflect prevailing wage rates. Contractors may be required by an Awarding Authority to “demonstrate how (they) could complete the project and comply with Mass. Gen. Laws.” The Division issued an
“Advisory” discussing these and other points. For a copy, please contact the Attorney General’s Office.

C. Paying Employees
1. Prevailing wages must be paid to all employees on public works projects regardless of whether they are employed by the general contractor, a filed sub-bidder or any subcontractor. The prevailing wage applies equally to unionized and non-unionized workers.
2. All employees who perform work on a public works project must be paid hourly according to the wage schedule issued for the particular project.
3. The wage schedule issued for each project is in effect for the duration of that project. All wage increases listed on the schedule must be paid on the specified dates.
4. Employers are limited in the deductions that can be made from the hourly rate (represented as the “total rate” on the wage schedules). Only contributions to the following plans may be deducted:
   • Health and Welfare
   • Pension
   • Supplementary Unemployment
5. All contributions must be made to bona fide plans.
6. If an employer contributes to any, or all, of the above plans, it may deduct the hourly amount contributed from the “total rate.” If the employer does not contribute to any of the benefit plans listed above, then the employee’s hourly rate of pay will be the “total rate” from the wage schedule.
7. All other deductions, including but not limited to the following, may not be subtracted from the employee’s hourly prevailing wage rate:
   • Vacation Time
   • Sick Time
   • Training Funds
   • Charitable Contributions
   • Worker’s Compensation
   • Unemployment Insurance
   • Uniforms
8. Overtime, which must be paid to all employees who work more than 40 hours per week, shall be at least time-and-one-half the base rate (“total rate” less benefits, if any).
9. Any “separate check” given to an employee as the “benefit portion” of the prevailing wage may not be treated differently than the check for “base wages.” All “separate checks” are considered wages and subject to state and federal taxes, unemployment insurance and worker’s compensation requirements.

D. Payroll Records
1. Employers are required to submit weekly certified payroll reports to the Awarding Authority and keep them on file for three (3) years. A reporting form is sent along with each wage schedule that may be used. Each report must
contain at least: the employee’s name, address, occupational classification, hours worked and wages paid. Do not submit weekly payroll reports to DOS.

2. After each contractor completes its portion of the public works project, the contractor must submit a Statement of Compliance to DOS. A Statement of Compliance form is also sent along with each wage schedule issued.

E. Apprentices
   1. If your company employs apprentices, they must be registered with the Division of Apprentice Training (DAT). All persons not registered with DAT must be paid the “total rate” listed on the wage schedule. An apprentice sheet showing percentages based on the apprentice steps is included with all wage schedules.

F. Penalties
   1. Failure to pay the prevailing wage subjects the contractor to potential civil and criminal liability.

G. Wage schedules are issued by:

   Massachusetts Department of Labor and Workforce Development
   Division of Occupational Safety
   399 Washington Street, 5th Floor
   Boston, Massachusetts 02108
   Telephone 617-727-3492; Fax 617-727-0726

H. Enforcement is carried out by:

   Office of the Attorney General
   Fair Labor and Business Practices
   100 Cambridge Street
   Boston, Massachusetts 02108
   Telephone 617-727-3465

1.3 WAGE RATES

A. Classifications and wage rates as established by the Commonwealth of Massachusetts Division of Occupational Safety (DOS), Department of Labor and Workforce Development under the provisions of MGL Chapter 149, Section 26 immediately follows this Document.

   1. The rate per hour of the wages to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the work shall not be less than the rate of wages included under “Minimum Wage Rates”.

   00 73 43
   WAGE RATE DETERMINATION SCHEDULE
   Page 3 of 5
2. The Contractor shall keep posted on the site a legible copy of said schedule. The Contractor shall also keep on file the wage rates and classifications of labor employed on this work in order that they may be available for inspection by the Awarding Authority, Administrator, or the Architect.

3. Apprentices employed pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council. Wherever rates for journeymen or apprentices are not listed, and if any other labor is not included in this list, the Contract shall insert the rates of all those employed on the work.

4. The Contractor shall pay to any reserve police officers employed on the work the prevailing rate of wages paid to regular police officers as required by MGL Chapter 149Section 34b, as amended. Such police officers shall be covered by Workmen's Compensation Insurance and Employer's Liability Insurance by the Contractor.

1.4 NOTICE TO AWARDING AUTHORITIES AND TO CONTRACTORS

Notice to Awarding Authorities
The Massachusetts Prevailing Wage Law
M.G.L. c. 149, §§26-27

NOTICE TO AWARDING AUTHORITIES

- The enclosed wage schedule applies only to the specific project listed at the top of the schedule, and these rates will remain in effect for the duration of the project, except in the case of multiyear projects. For projects lasting longer than one year, awarding authorities must request updated rates.

- You should request an updated wage schedule from the Department of Labor Standards if you have not opened bids or selected a contractor within 90 days of the date of issuance of the enclosed wage schedule.

- The wage schedule shall be incorporated in any advertisement or call for bids for the project for which it has been issued.

- Once a contractor has been selected by the awarding authority, the wage schedule shall be made a part of the contract for that project.
NOTICE TO CONTRACTORS

· The enclosed wage schedule must be posted in a conspicuous place at the work site during the life of the project.

· The wages listed on the enclosed wage schedule must be paid to employees on public works projects regardless of whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.

· The enclosed wage schedule applies to all phases of the project, including the final clean-up. Contractors whose only role is to perform final clean-up must pay their employees according to this wage schedule.

· All apprentices must be registered with the Massachusetts Division of Apprenticeship Training (DAT) in order to be paid at the lower apprentice rates. All apprentices must keep his/her apprentice identification card on his/her person during all work hours. If a worker is not registered with DAT, they must be paid the "total rate" listed on the wage schedule regardless of experience or skill level. For further information, please call 617-626-5409, or write to: DAT, 19 Staniford Street, 1ST Floor, P.O. Box 146759, Boston, MA 02114.

PART 2 – PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF DOCUMENT
REPLACEMENT OF TWO EXISTING STEEL FRAMED WINDOW WALL ASSEMBLIES WITH NEW POLYMER WINDOW WALL ASSEMBLIES AT THE EXISTING WILKS LIBRARY IN NEW BEDFORD, MA.

Awarding Authority: City of New Bedford
Contract Number: 1919242R
City/Town: NEW BEDFORD
Description of Work: Replacement of two existing steel framed window wall assemblies with new polymer window wall assemblies at the existing Wilks Library in New Bedford, MA.
Job Location: 1911 ACUSHNET AVENUE, New Bedford, MA 02740

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

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

| BACKHOE/Front-END LOADER                           | 06/01/2019     | $48.18    | $12.00 | $15.60  | $0.00                     | $75.78     |
|                                                      | 12/01/2019     | $49.33    | $12.00 | $15.60  | $0.00                     | $76.93     |
|                                                      | 06/01/2020     | $50.43    | $12.00 | $15.60  | $0.00                     | $78.03     |
|                                                      | 12/01/2020     | $51.58    | $12.00 | $15.60  | $0.00                     | $79.18     |
|                                                      | 06/01/2021     | $52.68    | $12.00 | $15.60  | $0.00                     | $80.28     |
|                                                      | 12/01/2021     | $53.83    | $12.00 | $15.60  | $0.00                     | $81.43     |

For apprentice rates see "Apprentice - OPERATING ENGINEERS"

| BARCO-TYPE JUMPING TAMPER                         | 06/01/2019     | $34.20    | $7.85  | $14.88  | $0.00                     | $56.93     |
|                                                      | 12/01/2019     | $35.06    | $7.85  | $14.88  | $0.00                     | $57.79     |
|                                                      | 06/01/2020     | $35.95    | $7.85  | $14.88  | $0.00                     | $58.68     |
|                                                      | 12/01/2020     | $36.84    | $7.85  | $14.88  | $0.00                     | $59.57     |
|                                                      | 06/01/2021     | $37.76    | $7.85  | $14.88  | $0.00                     | $60.49     |
|                                                      | 12/01/2021     | $38.67    | $7.85  | $14.88  | $0.00                     | $61.40     |

For apprentice rates see "Apprentice - LABORER"

| BLOCK PAVER, RAMMER / CURB SETTER                 | 06/01/2019     | $34.70    | $7.85  | $14.88  | $0.00                     | $57.43     |
|                                                      | 12/01/2019     | $35.56    | $7.85  | $14.88  | $0.00                     | $58.29     |
|                                                      | 06/01/2020     | $36.45    | $7.85  | $14.88  | $0.00                     | $59.18     |
|                                                      | 12/01/2020     | $37.34    | $7.85  | $14.88  | $0.00                     | $60.07     |
|                                                      | 06/01/2021     | $38.26    | $7.85  | $14.88  | $0.00                     | $60.99     |
|                                                      | 12/01/2021     | $39.17    | $7.85  | $14.88  | $0.00                     | $61.90     |

For apprentice rates see "Apprentice - LABORER"

| BOILER MAKER                                      | 01/01/2019     | $44.71    | $7.07  | $17.72  | $0.00                     | $69.50     |
|                                                      | 01/01/2020     | $46.10    | $7.07  | $17.98  | $0.00                     | $71.15     |
### Apprentice - BOILERMAKER - Local 29

**Effective Date:** 01/01/2019

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**Notes:**
- Apprentice to Journeyworker Ratio: 1:4

**BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)**

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**BRICKLAYERS LOCAL 3 (NEW BEDFORD)**
### BRICK/PLASTER/CEMENT MASON - Local 3 New Bedford

**Apprentice Base Wage**

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**Effective Date - 08/01/2019**

**Apprentice to Journeyworker Ratio:** 1:5

### BULLDOZER/GRADER/SCRAPER OPERATING ENGINEERS LOCAL 4

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

### CAISSON & UNDERPINNING BOTTOM MAN LABORERS - FOUNDATION AND MARINE

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For apprentice rates see "Apprentice- LABORER"

### CAISSON & UNDERPINNING LABORER LABORERS - FOUNDATION AND MARINE

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For apprentice rates see "Apprentice- LABORER"

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For apprentice rates see "Apprentice- LABORER"

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**Effective Date - 09/01/2019**

### Notes:

- % Indentured After 10/1/17; 45/45/55/55/70/70/80/80
- Step 1&2 $29.99/ 3&4 $35.85/ 5&6 $54.22/ 7&8 $60.14

### Apprentice to Journeyworker Ratio: 1:5

## Carpenter WOOD FRAME

### Carpenter - Zone 2 Eastern MA

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### Notes:

- % Indentured After 10/1/17; 45/45/55/55/70/70/80/80
- Step 1&2 $29.99/ 3&4 $35.85/ 5&6 $54.22/ 7&8 $60.14

### Apprentice to Journeyworker Ratio: 1:5

## CARPENTER WOOD FRAME

### Carpenter - Zone 2 (Wood Frame)

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### Apprentice to Journeyworker Ratio: 1:5

All Aspects of New Wood Frame Work
### CARPENTER (Wood Frame) - Zone 2

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### Bricklayers Local 3 (New Bedford)

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Notes:
- % Indentured After 10/1/17; 45/45/55/55/70/70/80/80
- Step 1&2 $19.45/ 3&4 $26.96/ 5&6 $34.19/ 7&8 $36.95
- Apprentice to Journeyworker Ratio: 1:5

### CEMENT MASONRY/PLASTERING

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**Issue Date:** 09/16/2019  
**Wage Request Number:** 20190916-050  
**Page:** 8 of 38
# Classification

**Apprentice - CEMENT MASONRY/PLASTERING - Eastern Mass (New Bedford)**

**Effective Date - 07/01/2019**

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**Notes:**

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

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**Apprentice to Journeyworker Ratio: 1:3**

**CHAIN SAW OPERATOR**

**LABORERS - ZONE 2**

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For apprentice rates see "Apprentice- LABORER"

**CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES**

**OPERATING ENGINEERS LOCAL 4**

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

**COMPRESSOR OPERATOR**

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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### PAINTER Local 35 - BRIDGES/TANKS

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Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

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**DEMO: ADZEMAN**

LABORERS - ZONE 2

For apprentice rates see "Apprentice- LABORER"

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**DEMO: BACKHOE/LOADER/HAMMER OPERATOR**

LABORERS - ZONE 2

For apprentice rates see "Apprentice- LABORER"

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**DEMO: BURNERS**

LABORERS - ZONE 2

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**DEMO: CONCRETE CUTTER/SAWYER**

LABORERS - ZONE 2

For apprentice rates see "Apprentice- LABORER"

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Issue Date: 09/16/2019                Wage Request Number: 20190916-050
### ELECTRICIAN - Local 223

**Effective Date:** 09/01/2019

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**ELEVATOR CONSTRUCTOR**

**Effective Date:**
- 01/01/2019
- 01/01/2020
- 01/01/2021
- 01/01/2022

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**Notes:**
Steps are 750 hours

**Apprentice to Journeyworker Ratio:** 2:3***
### Apprentice - ELEVATOR CONSTRUCTOR - Local 4

**Effective Date:** 01/01/2019

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**Effective Date:** 01/01/2020

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**Notes:**
- Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

**Apprentice to Journeyworker Ratio:** 1:1

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**ELEVATOR CONSTRUCTOR HELPER**

*ELEVATOR CONSTRUCTORS LOCAL 4*

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For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

**FENCE & GUARD RAIL ERECTOR**

*LABORERS - ZONE 2*

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For apprentice rates see "Apprentice- LABORER"

**FIELD ENG.INST.PERSON-BLDG,SITE,HWY/HWY**

*OPERATING ENGINEERS LOCAL 4*

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY     | 05/01/2019     | $22.48    | $11.50 | $15.60  | $0.00                     | $49.58     |
| OPERATING ENGINEERS LOCAL 4                | 11/01/2019     | $23.07    | $11.50 | $15.60  | $0.00                     | $50.17     |
|                                              | 05/01/2020     | $23.74    | $11.50 | $15.60  | $0.00                     | $50.84     |
|                                              | 11/01/2020     | $24.33    | $11.50 | $15.60  | $0.00                     | $51.43     |
|                                              | 05/01/2021     | $25.01    | $11.50 | $15.60  | $0.00                     | $52.11     |
|                                              | 11/01/2021     | $25.61    | $11.50 | $15.60  | $0.00                     | $52.71     |
|                                              | 05/01/2022     | $26.28    | $11.50 | $15.60  | $0.00                     | $53.38     |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| FIRE ALARM INSTALLER                        | 09/01/2019     | $42.26    | $10.15 | $13.54  | $0.00                     | $65.95     |
| ELECTRICIANS LOCAL 223                      | 03/01/2020     | $42.87    | $10.40 | $13.94  | $0.00                     | $67.21     |

For apprentice rates see "Apprentice- ELECTRICIAN"

| FIRE ALARM REPAIR / MAINTENANCE             | 09/01/2019     | $35.78    | $10.15 | $11.45  | $0.00                     | $57.38     |
| / COMMISSIONING ELECTRICIANS               | 03/01/2020     | $36.27    | $10.40 | $11.78  | $0.00                     | $58.45     |

For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"

| FIREMAN (ASST. ENGINEER)                   | 06/01/2019     | $39.54    | $12.00 | $15.60  | $0.00                     | $67.14     |
| OPERATING ENGINEERS LOCAL 4                | 12/01/2019     | $40.49    | $12.00 | $15.60  | $0.00                     | $68.09     |
|                                              | 06/01/2020     | $41.40    | $12.00 | $15.60  | $0.00                     | $69.00     |
|                                              | 12/01/2020     | $42.35    | $12.00 | $15.60  | $0.00                     | $69.95     |
|                                              | 06/01/2021     | $43.26    | $12.00 | $15.60  | $0.00                     | $70.86     |
|                                              | 12/01/2021     | $44.21    | $12.00 | $15.60  | $0.00                     | $71.81     |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| FLAGGER & SIGNALER                         | 06/01/2019     | $22.50    | $7.85  | $14.88  | $0.00                     | $45.23     |
| LABORERS - ZONE 2                          | 12/01/2019     | $23.50    | $7.85  | $14.88  | $0.00                     | $46.23     |
|                                              | 06/01/2020     | $23.50    | $7.85  | $14.88  | $0.00                     | $46.23     |
|                                              | 12/01/2020     | $24.50    | $7.85  | $14.88  | $0.00                     | $47.23     |
|                                              | 06/01/2021     | $24.50    | $7.85  | $14.88  | $0.00                     | $47.23     |
|                                              | 12/01/2021     | $24.50    | $7.85  | $14.88  | $0.00                     | $47.23     |

For apprentice rates see "Apprentice- LABORER"

| FLOORCOVERER                               | 09/01/2019     | $46.25    | $9.40  | $19.25  | $0.00                     | $74.90     |
| FLOORCOVERERS LOCAL 2168 ZONE 1            | 03/01/2020     | $47.05    | $9.40  | $19.25  | $0.00                     | $75.70     |
|                                              | 09/01/2020     | $47.85    | $9.40  | $19.25  | $0.00                     | $76.50     |
|                                              | 03/01/2021     | $48.65    | $9.40  | $19.25  | $0.00                     | $77.30     |
|                                              | 09/01/2021     | $49.45    | $9.40  | $19.25  | $0.00                     | $78.10     |
|                                              | 03/01/2022     | $50.25    | $9.40  | $19.25  | $0.00                     | $78.90     |
### FLOORCOVERER - Local 2168 Zone I

**Effective Date:** 09/01/2019

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**Notes:** Steps are 750 hrs. % After 09/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)

Step 1&2 $32.00/ 3&4 $38.36/ 5&6 $57.45/ 7&8 $63.86

Apprentice to Journeyworker Ratio: 1:1

---

### FORK LIFT/CHERRY PICKER

*OPERATING ENGINEERS LOCAL 4*

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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### GENERATOR/LIGHTING PLANT/HEATERS

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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### GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)

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**Notes:**

Apprentice to Journeyworker Ratio: 1:3

### HOISTING ENGINEER/CRANES/GRADALLS

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**Notes:**

- **HVAC (DUCTWORK)**
  - SHEETMETAL WORKERS LOCAL 17 - B
  - Effective Date: 04/01/2019
  - Apprentice Base Wage: $34.71
  - Health: $13.20
  - Pension: $16.55
  - Supplemental Unemployment: $1.93
  - Total Rate: $66.39
  - For apprentice rates see "Apprentice- SHEET METAL WORKER"

- **HVAC (ELECTRICAL CONTROLS)**
  - ELECTRICIANS LOCAL 223
  - Effective Date: 09/01/2019
  - Apprentice Base Wage: $42.66
  - Health: $10.15
  - Pension: $13.54
  - Supplemental Unemployment: $0.00
  - Total Rate: $66.59
  - For apprentice rates see "Apprentice- ELECTRICIAN"

- **HVAC (TESTING AND BALANCING - AIR)**
  - SHEETMETAL WORKERS LOCAL 17 - B
  - Effective Date: 04/01/2019
  - Apprentice Base Wage: $34.71
  - Health: $13.20
  - Pension: $16.55
  - Supplemental Unemployment: $1.93
  - Total Rate: $66.39
  - For apprentice rates see "Apprentice- SHEET METAL WORKER"

- **HVAC (TESTING AND BALANCING -WATER)**
  - PLUMBERS & PIPEFITTERS LOCAL 51
  - Effective Date: 09/01/2018
  - Apprentice Base Wage: $42.04
  - Health: $10.00
  - Pension: $18.20
  - Supplemental Unemployment: $0.00
  - Total Rate: $70.24
  - For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

- **HVAC MECHANIC**
  - PLUMBERS & PIPEFITTERS LOCAL 51
  - Effective Date: 09/01/2018
  - Apprentice Base Wage: $42.04
  - Health: $10.00
  - Pension: $18.20
  - Supplemental Unemployment: $0.00
  - Total Rate: $70.24
  - For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"
## HYDRAULIC DRILLS

**LABORERS - ZONE 2**

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For apprentice rates see "Apprentice- LABORER"

## INSULATOR (PIPES & TANKS)

**HEAT & FROST INSULATORS LOCAL 6 (SOUTHERN MASS)**

<table>
<thead>
<tr>
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<th>Base Wage</th>
<th>Health</th>
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<th>Total Rate</th>
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## Apprentice - **ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Southern MA**

**Effective Date -** 09/01/2019

<table>
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<th>Step</th>
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**Notes:** Steps are 1 year

Apprentice to Journeyworker Ratio: 1:4

## IRONWORKER/WELDER

**IRONWORKERS LOCAL 37**

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<th>Total Rate</th>
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## Apprentice - **IRONWORKER - Local 37**

**Effective Date -** 09/16/2019

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**Notes:**

Apprentice to Journeyworker Ratio: 1:4
### JACKHAMMER & PAVING BREAKER OPERATOR

**LABORERS - ZONE 2**

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For apprentice rates see "Apprentice- LABORER"

### LABORER

**LABORERS - ZONE 2**

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<th>Pension</th>
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### Apprentice - LABORER - Zone 2

**Effective Date - 06/01/2019**

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**Effective Date - 12/01/2019**

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**Notes:**

Apprentice to Journeyworker Ratio: 1:5

### LABORER: CARPENTER TENDER

**LABORERS - ZONE 2**

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<th>Total Rate</th>
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For apprentice rates see "Apprentice- LABORER"

### LABORER: CEMENT FINISHER TENDER

**LABORERS - ZONE 2**

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<th>Pension</th>
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For apprentice rates see "Apprentice- LABORER"

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"

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For apprentice rates see "Apprentice- LABORER"

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For apprentice rates see "Apprentice- LABORER"
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### Effective Date - 02/01/2020

| Apprentice | MARBLE & TILE FINISHER - Local 3 Marble & Tile |
| Step | percent | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
| 1 | 50 | $21.00 | $10.75 | $19.61 | $0.00 | $51.36 |
| 2 | 60 | $25.20 | $10.75 | $19.61 | $0.00 | $55.56 |
| 3 | 70 | $29.40 | $10.75 | $19.61 | $0.00 | $59.76 |
| 4 | 80 | $33.60 | $10.75 | $19.61 | $0.00 | $63.96 |
| 5 | 90 | $37.80 | $10.75 | $19.61 | $0.00 | $68.16 |

### Notes:

- Apprentice to Journeyworker Ratio: 1:3

### MARBLE MASONS, TILELAYERS & TERRAZZO MECH

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### Issue Date: 09/16/2019  Wage Request Number: 20190916-050
### MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile

**Classification:**

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**Notes:**

Apprentice to Journeyworker Ratio: 1:5

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### MECH. SWEEPER OPERATOR (ON CONST. SITES)

**OPERATING ENGINEERS LOCAL 4**

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

### MECHANICS MAINTENANCE

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

### MILLWRIGHT (Zone 2)

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### MILLWRIGHT - Local 1121 Zone 2

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**Notes:**
- Steps are 2,000 hours
- Apprentice to Journeyworker Ratio: 1:5

### MORTAR MIXER
**LABORERS - ZONE 2**

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For apprentice rates see "Apprentice- LABORER"

### OILER (OTHER THAN TRUCK CRANES, GRADALLS)
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

### OILER (TRUCK CRANES, GRADALLS)
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

### OTHER POWER DRIVEN EQUIPMENT - CLASS II
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

### PAINTER (BRIDGES/TANKS)
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**Issue Date:** 09/16/2019  
**Wage Request Number:** 20190916-050 
**Page 23 of 38**
## Apprentice - PAINTER Local 35 - BRIDGES/TANKS
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### Notes:
- Steps are 750 hrs.
- Apprentice to Journeyworker Ratio: 1:1

## PAINTER (SIGN, PICTORIAL & DISPLAY)
### PAINTER LOCAL 35 - ZONE 2

| Issue Date: 09/16/2019 | Wage Request Number: 20190916-050 | Page 24 of 38 |
### Apprentice - PAINTER SIGN - Local 35 Zone 2

**Effective Date:** 06/01/2013

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**Notes:**
- Steps are 4 mos.

**Apprentice to Journeyworker Ratio:** 1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *

* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2
### Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New

#### Effective Date - 07/01/2019

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**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:** 1:1

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**PAINTER (SPRAY OR SANDBLAST, REPAINT)**

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**Notes:**
- Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

PAINTER (TRAFFIC MARKINGS)
LABORERS - ZONE 2

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For Apprentice rates see "Apprentice- LABORER"

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

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**Notes:**
- Steps are 750 hrs.

**Apprentice to Journeyworker Ratio: 1:1**

**PAINTER / TAPER (BRUSH, REPAINT)**

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**Effective Date**: 07/01/2019

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**Effective Date**: 01/01/2020

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**Notes:**
- Steps are 750 hrs.

**Apprentice to Journeyworker Ratio**: 1:1

---

**PANEL & PICKUP TRUCKS DRIVER**

**TEAMSTERS JOINT COUNCIL NO. 10 ZONE B**

- 08/01/2019: $34.08, $12.41, $12.70, $0.00, $59.19
- 12/01/2019: $34.08, $12.41, $13.72, $0.00, $60.21
- 06/01/2020: $34.98, $12.41, $13.72, $0.00, $61.11
- 08/01/2020: $34.98, $12.91, $13.72, $0.00, $61.61
- 12/01/2020: $34.98, $12.91, $14.82, $0.00, $62.71
- 06/01/2021: $35.78, $12.91, $14.82, $0.00, $63.51
- 08/01/2021: $35.78, $13.41, $14.82, $0.00, $64.01
- 12/01/2021: $35.78, $13.41, $16.01, $0.00, $65.20

**PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)**

**PILE DRIVER LOCAL 36 (ZONE 2)**

For apprentice rates see "Apprentice- PILE DRIVER"

**PILE DRIVER**

**PILE DRIVER LOCAL 36 (ZONE 2)**

- 08/01/2019: $44.61, $9.90, $21.15, $0.00, $75.66
### Classification: PILE DRIVER - Local 56 Zone 2

**Effective Date:** 08/01/2019

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**Notes:** Apprentice wages shall be no less than the following Steps;

(Same as set in Zone 1)

- $54.34/2
- $58.99/3
- $63.65/4
- $65.98/5
- $68.31/6
- $72.96/7
- $72.96/8

### Apprentice to Journeyworker Ratio: 1:5

---

### PIPELAYER

**LABORERS - ZONE 2**

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For apprentice rates see "Apprentice- LABORER"

### PLUMBER & PIPEFITTER

**PLUMBERS & PIPEFITTERS LOCAL 51**

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### Apprentice - PLUMBER/PIPEFITTER - Local 51

**Effective Date:** 09/01/2018

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**Notes:**

- Steps 2000hrs. Prior 9/1/05; 40/40/45/50/55/60/65/75/80/85

### Apprentice to Journeyworker Ratio: 1:3

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### PNEUMATIC CONTROLS (TEMP.)

**PLUMBERS & PIPEFITTERS LOCAL 51**

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

### PNEUMATIC DRILL/TOOL OPERATOR

**LABORERS - ZONE 2**

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For apprentice rates see "Apprentice- LABORER"
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For apprentice rates see "Apprentice- LABORER"

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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For apprentice rates see "Apprentice- LABORER"
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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**Apprentice - ROOFER - Local 33**

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**Notes:** **1.5, 2.6-10, the 1:10; Reroofing: 1:4, then 1:1**

- Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.
- (Hot Pitch Mechanics' receive $1.00 hr. above ROOFER)

**Apprentice to Journeyworker Ratio:**

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For apprentice rates see "Apprentice- ROOFER"

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### SHEET METAL WORKER - Local 17-B

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### Notes:

- **Apprentice to Journeyworker Ratio:** 1:3

### SPECIALIZED EARTH MOVING EQUIP < 35 TONS

*TEAMSTERS JOINT COUNCIL NO. 10 ZONE B*

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### SPECIALIZED EARTH MOVING EQUIP > 35 TONS

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### SPRINKLER FITTER

*SPRINKLER FITTERS LOCAL 550 - (Section B) Zone 2*

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**Issue Date:** 09/16/2019  **Wage Request Number:** 20190916-050  **Page 33 of 38**
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**Notes:** Apprentice entered prior 9/30/10: 40/45/50/55/60/65/70/75/80/85
Steps are 850 hours

### STEAM BOILER OPERATOR

**OPERATING ENGINEERS LOCAL 4**

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

### TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN

**OPERATING ENGINEERS LOCAL 4**

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"
## TELECOMMUNICATION TECHNICIAN - Local 223

**Effective Date**: 09/01/2019

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### Notes:
- See Electrician Apprentice Wages
- Steps are 750hrs
- Telecom Apprentice Wages shall be the same as the Electrician Apprentice Wages

### Apprentice to Journeyworker Ratio: 2:3***

## TERRAZZO FINISHERS - Local 3 Marble & Tile

**Effective Date**: 08/01/2019

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### Notes:
- Apprentice to Journeyworker Ratio: 1:3

### Effective Date**: 02/01/2020

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For apprentice rates see "Apprentice- LABORER"

| TUNNEL WORK - FREE AIR LABORERS (FREE AIR TUNNEL) | 06/01/2019 | $43.45 | $7.85 | $16.45 | $0.00 | $67.75 |
| | 12/01/2019 | $44.45 | $7.85 | $16.45 | $0.00 | $68.75 |
| | 06/01/2020 | $45.44 | $7.85 | $16.45 | $0.00 | $69.74 |
| | 12/01/2020 | $46.42 | $7.85 | $16.45 | $0.00 | $70.72 |
| | 06/01/2021 | $47.44 | $7.85 | $16.45 | $0.00 | $71.74 |
| | 12/01/2021 | $48.45 | $7.85 | $16.45 | $0.00 | $72.75 |

For apprentice rates see "Apprentice- LABORER"

| TUNNEL WORK - FREE AIR (HAZ. WASTE) LABORERS (FREE AIR TUNNEL) | 06/01/2019 | $45.45 | $7.85 | $16.45 | $0.00 | $69.75 |
| | 12/01/2019 | $46.45 | $7.85 | $16.45 | $0.00 | $70.75 |
| | 06/01/2020 | $47.44 | $7.85 | $16.45 | $0.00 | $71.74 |
| | 12/01/2020 | $48.42 | $7.85 | $16.45 | $0.00 | $72.72 |
| | 06/01/2021 | $49.44 | $7.85 | $16.45 | $0.00 | $73.74 |
| | 12/01/2021 | $50.45 | $7.85 | $16.45 | $0.00 | $74.75 |

For apprentice rates see "Apprentice- LABORER"

| VAC-HAUL TEAMSTERS JOINT COUNCIL NO. 10 ZONE B | 08/01/2019 | $34.54 | $12.41 | $12.70 | $0.00 | $59.65 |
| | 12/01/2019 | $34.54 | $12.41 | $13.72 | $0.00 | $60.67 |
| | 06/01/2020 | $35.44 | $12.41 | $13.72 | $0.00 | $61.57 |
| | 08/01/2020 | $35.44 | $12.91 | $13.72 | $0.00 | $62.07 |
| | 12/01/2020 | $35.44 | $12.91 | $14.82 | $0.00 | $63.17 |
| | 06/01/2021 | $36.24 | $12.91 | $14.82 | $0.00 | $63.97 |
| | 08/01/2021 | $36.24 | $13.41 | $14.82 | $0.00 | $64.47 |
| | 12/01/2021 | $36.24 | $13.41 | $16.01 | $0.00 | $65.66 |

| WAGON DRILL OPERATOR LABORERS - ZONE 2 | 06/01/2019 | $34.20 | $7.85 | $14.88 | $0.00 | $56.93 |
| | 12/01/2019 | $35.06 | $7.85 | $14.88 | $0.00 | $57.79 |
| | 06/01/2020 | $35.95 | $7.85 | $14.88 | $0.00 | $58.68 |
| | 12/01/2020 | $36.84 | $7.85 | $14.88 | $0.00 | $59.57 |
| | 06/01/2021 | $37.76 | $7.85 | $14.88 | $0.00 | $60.49 |
| | 12/01/2021 | $38.67 | $7.85 | $14.88 | $0.00 | $61.40 |

For apprentice rates see "Apprentice- LABORER"

| WASTE WATER PUMP OPERATOR OPERATING ENGINEERS LOCAL 4 | 06/01/2019 | $48.18 | $12.00 | $15.60 | $0.00 | $75.78 |
| | 12/01/2019 | $49.33 | $12.00 | $15.60 | $0.00 | $76.93 |
| | 06/01/2020 | $50.43 | $12.00 | $15.60 | $0.00 | $78.03 |
| | 12/01/2020 | $51.58 | $12.00 | $15.60 | $0.00 | $79.18 |
| | 06/01/2021 | $52.68 | $12.00 | $15.60 | $0.00 | $80.28 |
| | 12/01/2021 | $53.83 | $12.00 | $15.60 | $0.00 | $81.43 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| WATER METER INSTALLER PLUMBERS & PIPEFITTERS LOCAL 51 | 09/01/2018 | $42.04 | $10.00 | $18.20 | $0.00 | $70.24 |

For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"
### Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Effective Date</th>
<th>Base Wage</th>
<th>Health</th>
<th>Pension</th>
<th>Supplemental Unemployment</th>
<th>Total Rate</th>
</tr>
</thead>
</table>

**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, 3:3, 4:4, 5:5, 6:6, 7:7, 8:8, 9:9, 10:10, 11:11, 12:12, 13:13, 14:14, etc.

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

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 PROJECT IDENTIFICATION AND DESCRIPTION OF WORK

A. Project Identification: The name of the Project on the Contract Documents is WILKS LIBRARY WINDOW WALL REPLACEMENT
   City of New Bedford
   New Bedford, Massachusetts 02740

B. Work of this Contract shall include, but is not limited to, replacement of existing south-facing and east-facing window walls with new polymer window wall systems and extending into other areas of the building as required by code and the configuration of these systems.

C. Hazardous Materials Remediation:
   1. Remediation and abatement of hazardous materials in accordance with other sections of this PROJECT MANUAL are included in the work of this project.

D. The Contractor will have partial use of interior of building for the proposed improvements.

E. All work shall be in accordance with the Bidding and Contract Documents prepared by Architect, GORMAN RICHARDSON LEWIS ARCHITECTS, INC., 239 South Street, Hopkinton, Massachusetts 01748, and their consultants.

F. Contract Drawings: Refer to Project Manual Document 00 01 15, LIST OF DRAWINGS.

G. Existing Conditions: Refer to Project Manual Document 00 20 30 EXISTING CONDITIONS.

1.4 CONSTRUCTION PERIOD / LIQUIDATED DAMAGES

A. Time is of the Essence. Construction shall be executed in a timely and orderly manner as follows:
   1. Award of Contract: on or about October 30, 2019
   2. Commencement of Work: on or about October 31, 2019.
2. Substantial Completion Date: The undersigned agrees to substantially complete the Contract Work, including Certificate of Occupancy, 147 calendar days from date of Notice-To-Proceed.

3. Final Completion Date: The undersigned agrees to a final completion of the Base Bid Contract Work thirty calendar days from Date of Substantial Completion.

B. Refer to Document 00 40 10, FORM FOR GENERAL BID for Liquidated Damages for work not completed by the stipulated completion date.

1.5 CONDITIONS OF THE CONTRACT

A. Unless otherwise indicated, the Conditions of the Contract shall include the following:
   1. GENERAL CONDITIONS: Document 00 72 00 GENERAL CONDITIONS OF THE CONTRACT.
   2. CORI Requirements: All workers employed on the project by the General Contractor and all subcontractors shall be trained personnel who are directly employed and supervised by the Contractor and subcontractors and who have been cleared by a CITY of NEW BEDFORD CORI investigation, or other security credentials as may be required by the Owner.

1.6 WORK UNDER OTHER CONTRACTS

A. It is not anticipated that the work of this contract will require coordination with other construction contractors to execute the work defined by the Project Documents.

1.7 PERMIT AND INSPECTION FEES

A. Building permit shall be obtained by the General Contractor; fee for building permit will not be waived by the CITY of NEW BEDFORD.

B. All other permits including electrical, plumbing, and gas permits and inspection fees shall be paid for by the Contractor.

1.8 CONTRACTOR’S USE OF PREMISES

A. Contractor shall limit use of the premises for Work and for storage, to allow for:
   1. Work by other contractors not associated with this project.
   2. Owner occupancy of the building
   3. Public use of building grounds.

B. Coordinate use of premises under direction of Owner.
   1. Assume full responsibility for the protection and safekeeping of Products under this Contract, stored on the site.
   2. Move any stored Products, under Contractor’s control, which interfere with operations of the Owner or separate contractor.
3. Obtain and pay for the use of additional storage or work areas needed for operations.
4. Move any stored Products, under Contractor’s control, which interfere with operations of the Owner or separate contractor.

C. Prior to beginning work of the Contract, the General Contractor shall meet with the Owner and the Architect to determine procedures regarding access to and use of site, exterior staging, parking and storage areas, tree protection, special site conditions and safety issues, and any other restrictions regarding the use of the site areas surrounding the construction.

D. The General Contractor shall keep all public and private access roads, and walks clear of debris caused by this work during the entire term of the Contract. The General Contractor shall repair all public and private streets, drives, curbs, walks, and other improvements where disturbed by work of, or related to, building operations, leaving them in as good condition after completion of the work as before operations started, in accordance with rules, regulations, and specifications of the public agencies having jurisdiction.

E. Parking for workmen’s personal vehicles shall be permitted only within designated areas.

F. Access roads and fire-lanes on and about the site shall be kept open and free at all times, including public roads and access to adjacent homes and businesses.

1.9 REMOVAL/REINSTALLATION OF EXISTING FIXTURES FURNITURE AND EQUIPMENT

A. Removal of existing Fixtures, Furniture, and Equipment (FF&E) from the project area except for Air Conditioners (02 41 13 SELECTIVE DEMOLITION), prior to commencement of the Work in areas to be agreed on by Owner and Contractor including temporary storage and re-installation will be performed by CITY of NEW BEDFORD personnel.

1.10 OWNER’S OCCUPANCY

A. The Owner will continue to occupy and use the building(s) during the execution of the work.

B. Owner Occupancy: The Owner reserves the right to place and install equipment in completed areas of the work prior to Substantial Completion, provided that such occupancy does not interfere with completion of the Work.
1. Execute Certificate of Substantial Completion for each specific Portion of the Work prior to Owner occupancy. After Owner occupancy Contractor shall allow free and clear access to all partially occupied areas.
1.11 EXAMINATION OF SITE AND PREBID CONFERENCE AND WALKTHROUGH

A. Prior to bidding the General Contractor and each of the Filed Subcontractors and other Subcontractors shall carefully examine the site and the Contract Documents to ensure their knowledge of conditions and requirements affecting the work. No claim for extra compensation or extension of time will be allowed for General Contractor's, Filed Subcontractor's or other Subcontractors failure to comply with this requirement nor will any condition at the site, whether or not in agreement with conditions shown or called for on the Contract Documents, be allowed as a basis or such claims, except as otherwise specifically provided for.

B. Refer to Document 00 11 00, INVITATION AND ADVERTISEMENT for pre-bid conference and scheduled site visits.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 SUMMARY

A. This Section administrative and procedural requirements required for handling modifications to the Contract Documents, including, but not limited to:
   1. Architect's Supplemental Instructions (ASI).
   2. Proposal Request (PR).
   5. Request for Information (RFI).

1.3 RELATED REQUIREMENTS

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:
   1. Document 00 72 00, GENERAL CONDITIONS; Methods of determining cost or credit to Owner resulting from changes in Work made on a time and material basis, and Contractor's claims for additional costs.
   2. Section 01 35 00 SUBMITTAL PROCEDURES.
   3. Section 01 77 20 SUBSTANTIAL COMPLETION.
   4. SECTION 01 77 30 PROJECT CLOSEOUT AND FINAL COMPLETION

1.4 DEFINITIONS

A. Change Order (CO):
   1. Definition: See Document 00700, GENERAL CONDITIONS.
   2. Form: AIA Document G701, Change Order, or other form acceptable to Owner and Architect.

B. Construction Change Directive (CCD):
   1. Definition: A written order to the Contractor, signed by Owner and Architect which amends the Contract Documents as described, and authorizes Contractor
to proceed with a change which affects the Contract Sum or the Contract Time, for inclusion in a subsequent Change Order.


C. Architect's Supplemental Instructions (ASI):
   1. Definition: A written order, instructions, or interpretations, signed by Architect making minor changes in the Work not involving a change in Contract Sum or Contract Time.
   2. Form: AIA Document G710, Architect's Supplemental Instructions, or other form acceptable to Owner and Architect.

D. Proposal Request (PR):
   1. Definition: A request to the Contractor, signed by the Architect, for submission of an itemized quotation for changes in the Contract Sum or Contract Time. This is not a Change Order or a direction to proceed with the Work.
   2. Form: AIA Document G709, Proposal Request, or other form acceptable to Owner and Architect.

E. Request for Information (RFI):
   1. Definition: A request from the Contractor to the Architect soliciting additional information regarding the Contract Documents.
   2. Form: AIA Document G716, Request For Information, or other form acceptable to Owner and Architect.

1.5 PRELIMINARY PROCEDURES

A. Architect may initiate change by submitting a Proposal Request (PR) to Contractor. Request will include:
   1. Detailed description of the Change, Products, and location of the change in the Project.
   2. Supplementary or revised Drawings and Specifications.
   3. The projected time span for making the change and a specific statement as to whether overtime work is, or is not, authorized.
   4. A specific period of time during which the requested price will be considered valid.
   5. Such request is for information only, and is not an instruction to execute the changes, nor to stop Work in progress.

B. Contractor may initiate changes by submitting a written notice to Architect, containing:
   1. Description of the proposed changes.
   2. Statement of the reason for making the changes.
   4. Statement of the effect on the work of separate contractors.
5. Documentation supporting any change in Contract Sum or Contract Time, as appropriate.

1.6 CONSTRUCTION CHANGE AUTHORIZATION

A. In lieu of Proposal Request, Architect may issue a Construction Change Directive for Contractor to proceed with a change for subsequent inclusion in a Change Order.

B. Directive will describe change in the Work, both additions and deletions, with attachments of revised Contract Documents to define details of the change, and will designate the method of determining any change in the Contract Sum and any change in Contract Time.

C. Architect will sign and date the Construction Change Directive and send it to the Owner for authorization for the Contractor to proceed with the changes.

D. Once authorized by the Owner, the Architect will send the Construction Change Directive to the Contractor. Contractor shall sign and date the Construction Change Directive to indicate agreement with the terms therein.

1.7 DOCUMENTATION OF PROPOSALS AND CLAIMS

A. Support each quotation for a lump-sum proposal, and for each unit price which has not previously been established, with sufficient substantiating data to allow Architect to evaluate the quotation.

B. On request provide additional data to support time and cost computations including, but not limited to:
   1. Labor required.
   2. Equipment required.
   3. Products required.
      a. Recommended source of purchase and unit cost.
      b. Quantities required.
   4. Taxes (where applicable), insurance, and bonds.
   5. Credit for work deleted from Contract, similarly documented.
   6. Overhead and profit.

C. Support each claim for additional costs, and for work done on a time-and-material/force account basis, with documentation as required for a lump-sum proposal, plus additional information:
   1. Name of the Owner’s authorized agent who ordered the work, and date of the order.
   2. Dates and times work was performed, and by whom.
   3. Time record, summary of hours worked, and hourly rates paid.
4. Receipts and invoices for:
   a. Equipment used, listing dates and times of use.
   b. Products used, listing quantities.
   c. Subcontracts.

1.8 PREPARATION OF CHANGE ORDERS

A. Unless otherwise indicated, Architect will prepare each Change Order.

B. Form: Change Order, AIA Document G701.

C. Change Order will describe changes in the Work, both additions and deletions, with attachments of revised Contract Documents to define details of the change.

1.9 LUMP-SUM/FIXED PRICE CHANGE ORDER

A. Content of the Change Orders will be based on either:
   1. Architect’s Proposal Request and Contractor’s responsive Proposal as mutually agreed between Owner and Contractor.
   2. Contractor’s Proposal for a change, as recommended by Architect.

B. Owner and Architect will sign and date the Change Order as authorization for the Contractor to proceed with the changes.

C. Contractor shall sign and date the Change Order to indicate agreement with the terms therein.

1.10 UNIT PRICE CHANGE ORDER

A. Content of Change Orders will be based on, either:
   1. Architect’s definition of the scope of the required changes.
   2. Contractor’s Proposal for a change, as recommended by Architect.

B. The amounts of the unit prices to be:
   1. Those stated in the Agreement.
   2. Those mutually agreed upon between Owner and Contractor.

C. When quantities of each of the items affected by the Change Order can be determined prior to start of the Work:
   1. Owner and Architect will sign and date the Change Order as authorization for Contractor to proceed with the changes.
   2. Contractor shall sign and date the Change Order to indicate agreement with the terms therein.
D. When quantities of the items cannot be determined prior to start of the Work:
   1. Architect and Owner will issue a Construction Change Directive directing Contractor to proceed with the change on the basis of unit prices, and will cite the applicable unit prices.
   2. At completion of the change, Architect will determine the cost of such work based on the unit prices and quantities used.
      a. Contractor shall submit documentation to establish the number of units of each item and any claims for a change in Contract Time.
   3. Architect will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
   4. Owner and Contractor will sign and date the Change Order to indicate their agreement with the terms therein.

1.11 TIME AND MATERIAL/FORCE ACCOUNT CHANGE ORDER/CONSTRUCTION CHANGE DIRECTIVE

A. Architect and Owner will issue a Construction Change Directive directing Contractor to proceed with the changes.

B. At completion of the change, Contractor shall submit itemized accounting and supporting data as provided in the Article "Documentation of Proposals and Claims" of this Section.

C. Architect will determine the allowable cost of such work, as provided in Document 00 72 01, GENERAL CONDITIONS.

D. Architect will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.

E. Owner and Contractor will sign and date the Change Order to indicate their agreement therewith.

1.12 CORRELATION WITH CONTRACTOR'S SUBMITTALS

A. Periodically revise Schedule of Values and Request for Payment forms to record each change as a separate item of Work, and to record the adjusted Contract Sum.

B. Periodically revise the Construction Progress Schedule to reflect each change in Contract Time.
   1. Revise sub-schedules to show changes for other items of work affected by the changes.

C. Upon completion of work under a Change Order, enter pertinent changes in Record Documents.
PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements governing the Schedule of Values and the Contractor's Applications for Payment.

1.2 SCHEDULE OF VALUES

A. Format and Content: Present the Schedule of Values in the format stipulated in the Owner/Contractor agreement acceptable to the Architect.

1. Line Items: Use the Project Manual Table of Contents as a guide to establish the line items for the Schedule of Values. Provide a breakdown of construction activities and their costs in sufficient detail to enable the Architect and the Owner to evaluate Applications for Payment.

2. Each item in the Schedule of Values shall be complete, including its total cost to the Contractor and proportionate share of overhead and profit, except that costs of General Conditions shall be listed separately in the Schedule and shall not be included in overhead of other line items. Schedule of Values shall be agreed on at time of Contract Award or prior to submission of first Application of Payment, whichever is sooner.

3. Stored Materials: For each part of the Work where an Application for Payment may include materials or equipment which have been purchased or fabricated, and stored offsite, provide separate values for cost of the materials.

4. General Conditions Work: Attach breakdown for the General Conditions in a form consistent with the Owner's Cost Breakdown Model.

B. Schedule Updating: Update and resubmit the Schedule of Values when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

A. Refer to "CITY OF NEW BEDFORD GENERAL CONDITIONS STANDARD VERTICAL CONSTRUCTION CONTRACT For Projects over $100,000 Subject to M.G.L. c. 149, s. 44A-F", Article VIII.

B. If the General Contractor wishes to submit an advance Pencil Requisition, coordinate with the Architect to define a consistent schedule including date, time and procedure.
C. Number of Copies of final Requisition: Submit one executed original copy.
   1. The Architect will review the final requisition in accordance with either the pencil requisition, or in accordance the General Conditions of the Contract.
   2. The Architect will sign the requisition for the amount requested if the requisition is consistent with observed Work as of the date of the Requisition.
   3. The Architect will adjust and sign the requisition in the event that the requisition is not consistent with observed Work as of the date of the Requisition.
   4. The Architect will make two (2) copies of the requisition, distributing the original to the Owner for payment, and sending one of the copies to the General Contractor for record.

PART 2 - PRODUCTS (Not Used.)

PART 3 - EXECUTION (Not Used.)

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 SUMMARY

A. This Section specifies supervisory and administrative requirements for coordination of Work, including, but not limited to:
   1. Coordination of work of employees and subcontractors.
   2. Expedition of Work to assure compliance with schedules.
   3. Coordination of Work with that of other contractors and work by Owner.
   4. Compliance with orders and instructions of Architect or Owner.

1.3 RELATED REQUIREMENTS

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:
   1. Document 00 20 30 EXISTING CONDITIONS
   2. Document 00 72 00, GENERAL CONDITIONS.
   3. Section 01 73 29, CUTTING AND PATCHING.
   4. Section 01 31 19, PROJECT MEETINGS.
   5. Section 01 35 00, SUBMITTALS.
   6. Section 01 50 00, TEMPORARY FACILITIES AND CONTROLS.
   7. Section 01 77 20, SUBSTANTIAL COMPLETION.
   8. Section 01 77 30, PROJECT CLOSEOUT AND FINAL COMPLETION.
   9. Section 02 82 13 ASBESTOS ABATEMENT AND RELATED WORK.

1.4 COORDINATION BY CONTRACTOR

A. Coordinate the Work of the Contract, including other subcontractors. Anticipate areas where the installation of work will be restricted, congested, or difficult. Consult all affected subcontractors.
   1. All work associated with this Contract shall be fully coordinated with the Owner.
   2. Coordinate and comply with requirements regarding use of the building, access, dumpster locations, utilities, and related facilities, as agreed to between the Owner and Contractor.
1.5 EXISTING UTILITIES AND SERVICES

A. The Contractor shall immediately notify Architect and appropriate authorities when coming across an unknown utility or service line, and await decision as to how to proceed. When an existing utility or service line must be cut and plugged or capped, moved, or relocated, or has become damaged, Contractor shall notify Architect. If it is on a utility or provider side of metering or building perimeter, notify the utility or service entity involved as well.

B. Assure protection, support, or moving of utilities or services to adjust them to new work. Contractor shall be responsible for damage caused to existing, active utilities or services under work of this Contract, whether or not such utilities are indicated on Drawings, including resultant damages or injuries to persons or properties.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for project meetings, including but not limited to:
   1. Pre-Construction Meeting.
   2. Progress Meetings.
   3. Coordination Meetings.
   4. Special Meetings.

B. Representatives of contractors, subcontractors, and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.

C. The Owner and the Architect may attend any meeting to ascertain that Work is expedited consistent with Contract Documents and construction schedules.

1.3 RELATED REQUIREMENTS

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:
   1. Document 00 72 01, GENERAL CONDITIONS.
   2. Section 00 31 35, SUBMITTALS.
   3. Section 01 77 20, SUBSTANTIAL COMPLETION.
   4. Section 01 77 30, PROJECT CLOSEOUT AND FINAL COMPLETION.

1.4 MEETINGS, GENERAL

A. Organization, scheduling, agendas, invitations, minutes, etc. are the responsibility of the General Contractor unless the meeting is called by the Architect.
B. Agendas: Prepare agendas for Project Meetings. Distribute copies to parties in attendance. It is preferable to distribute Agendas two (2) working days in advance of each meeting, however, the realities of the project may require updates to the Agendas immediately before the meetings.

C. Meeting Notices: Prepare and distribute written notices of Project Meetings two (2) working days in advance of each meeting.

D. Arrangements: Make physical arrangements for Project Meetings, including but not limited to:
   1. Arranging space, table and seating.

E. Preside at Project Meetings. Unless the Architect calls for a special meeting, the General Contractor shall preside at all meetings.

F. Minutes: Record Minutes of Project Meetings, including significant procedures and decisions. Record Minutes for special meetings called by the Architect will be the responsibility of the Architect.

G. Distribution of Minutes: Reproduce and distribute copies of Project Meeting minutes not later than three (3) working days after each meeting to participants of meeting, to parties affected by decisions made at meetings, and to Architect.
   1. Electronic Distribution is preferred, with supplemental paper copies available at each meeting.

1.5 PRE-CONSTRUCTION MEETING

A. Schedule not later than 10 days after date of Notice to Proceed.

B. Location: A central site, at the WILKS LIBRARY if possible, convenient for all parties, designated by Contractor.

C. Attendance: Require and notify the following to attend
   1. Owner’s Representative.
   3. Contractor’s Superintendent.
   4. Major subcontractors.
   5. Lift Contractor
   6. Others as appropriate.

D. Suggested Agenda:
   1. Discussion of major subcontractors and suppliers.
   2. Projected Construction Progress Schedules.
   3. Critical work sequencing.
   4. Equipment and material deliveries and priorities.
5. Project Coordination, including designation of responsible personnel.
6. Procedures and processing of:
   a. Submittals.
   b. Change Orders.
   c. Application for Payment.
8. Procedures for maintaining:
   a. As-Designed Documents (by Architect)
   b. As-Built Documents (by General Contractor and Sub-Contractors)
   c. Project Record Documents (by General Contractor and Sub-Contractors)
9. Use of premises:
   a. Office, work, and storage areas.
   b. Owner’s requirements.
10. Construction facilities, controls, and construction aids.
11. Temporary utilities.
14. Contractor Parking
15. Deliveries
17. Project Progress Meetings.

1.6 PROJECT PROGRESS MEETINGS

A. Schedule weekly meetings, unless it is mutually agreed by Owner, Architect and General Contractor that another meeting schedule is appropriate.

B. Location of the meetings: On-site at location acceptable to the Owner at or adjacent to the WILKS LIBRARY.

C. Attendance: Require and notify the following to attend:
   1. Owner’s Representative.
   2. Suppliers, as appropriate to the agenda.
   3. Others as may be selected by the General Contractor or recommended by the Architect.

D. Architect’s attendance is optional.

E. Suggested Agenda:
   1. Review and approval of minutes of previous meeting.
   2. Review of Work progress since previous meeting.
   3. Field observations, problems and conflicts.
   4. Problems which impede Construction Progress Schedule.
5. Review of off-site fabrication and delivery schedules.
6. Corrective measures and procedures to regain projected schedule.
7. Report on and if needed revisions to Construction Progress Schedule.
8. Progress schedule during succeeding work period.
   a. One Week look ahead
   b. Two week look ahead
9. Review submittal schedules; expedite as required.
11. Pending changes and substitutions.
12. Review proposed changes for:
   a. Effect on Construction Progress Schedule and on completion date.
   b. Effect on other contracts of the Project.
13. Other business.

1.7 COORDINATION MEETINGS

A. Conduct Coordination Meetings as necessary to properly coordinate the trades. Require representation of parties involved in coordination or planning of activities involved.

1.8 SPECIAL MEETINGS

A. Conduct Special Meetings as required throughout the course of the Work. Special meeting issues may include, but are not limited to:
   1. Safety issues.
   2. Labor issues.
   3. Special schedule issues.

B. The Owner and the Architect reserve the right to call special meetings when they deem it to be in the best interest of the project.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 – GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements required for handling documentation to record and log Architect's identification of nonconforming Work.

1.2 RELATED REQUIREMENTS

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

1. GENERAL CONDITIONS; Conditions of the Contract and responsibilities of each party regarding Work.
2. Section 01 35 00 - SUBMITTAL PROCEDURES.
3. Section 01 77 20 - SUBSTANTIAL COMPLETION

1.3 DEFINITIONS:

A. 'Exceptions': Work of the General Contractor observed by the Architect during construction that is not in accordance with the Contract Documents.

B. Exceptions Summary Log: A log prepared by the Architect which records status of all ‘Exceptions’.

1.4 PROCEDURES

A. Field Reports:

1. Field Reports, when issued, shall be distributed as a record to the Owner, Authority Having Jurisdiction (AHJ) and the General Contractor.
2. Field Reports will be issued each time the Architect visits the site during construction.

B. The Architect will, in addition to identifying 'Exceptions' in the Architect's Field Report, create and maintain throughout the construction period, an 'Exceptions Summary Log'. The Exceptions Summary Log shall contain the following information:

1. The Field Report number and Exception number
2. The date the Exception is first recorded
3. A written description of the Exception
4. The Sub-contractor responsible for correcting the Exception
5. The date by which the Exception is to be corrected
6. The date on which the General Contractor or Sub-contractor reports the Exception as having been corrected
7. The date on which the Architect verifies that the Exception has been corrected
8. Remarks summarizing additional information about the Exception

C. General Contractor’s Responsibilities:
1. The General Contractor will be responsible to inform all other Contractors and Sub-contractors responsible for the correction of Exceptions in a timely manner to allow for the correction of the Exception within the time specified on the Exceptions Summary Log.
   a. The Architect or the Owner will not be responsible for notifying other contractors and subcontractors.
   b. Uncorrected Exceptions:
      i. If an Exception is not corrected on or before “the date by which the Exception is to be corrected” as identified in the Field Reports and/or the Exceptions Summary Log and if, in the sole judgment of the Architect, the uncorrected Exception is detrimental to the achieving the intent of the Contract Documents then the Architect shall issue a Notice Of Deficiency (NOD) to the General Contractor, Owner and Authority(ies) Having Jurisdiction (AHJ). Such NOD shall freeze all payments to the General Contractor until the Exception is corrected to the satisfaction of the Architect.
      ii. If an Exception is not corrected on or before “the date by which the Exception is to be corrected” as identified in the Field Reports and/or the Exceptions Summary Log and if, in the sole judgment of the Architect, the uncorrected Exception is not detrimental to the achieving the intent of the Contract Documents then the Architect shall move the item to the Punch List.
2. The General Contractor shall inform the Architect that the Exception has been corrected.

D. Architect’s Responsibilities:
1. The Architect will include the date of the General Contractor’s notification on the Exceptions Summary Log.
   a. In consultation with the General Contractor, the Architect will identify a “Fix-by Date” and record same in both Field Report and Exceptions Summary Log.
2. During the next regularly scheduled site visit after the established “Fix-by Date”, the Architect will observe the work to verify that the Exception has been corrected.
3. If the Architect verifies that the Exception has been corrected, the Architect will note that the Exception has been corrected on the Field Report and include the date of verification on the Exceptions Summary Log.
4. If the Architect cannot verify that the Exception has been corrected, the Architect will notify the General Contractor that the Exception cannot be observed and require the General Contractor to perform selected demolition to remove visually obstructing work or perform such non-invasive verification satisfactory to the Architect.
5. In circumstances of time sensitive work photographs taken by the General Contractor may be acceptable to the Architect providing such arrangements are made in advance. Under no other circumstance will photographs taken by any party be accepted by the architect for corrected exception verification.

1.5 CORRECTION OF ALL EXCEPTIONS:

A. The General Contractor is responsible for correcting or cause correction of any and all Exceptions in a timely manner.

B. All Exceptions must be corrected or listed in the Punch List prior to the Architect conducting inspections to determine the date or dates of Substantial Completion.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 SUMMARY

A. This section sets forth administrative and procedural requirements for the following types of submittals:
   1. Shop Drawings
   2. Product Data
   3. Samples.
   4. Quality Control Submittals
   5. Submittals for commissioning.

1.3 RELATED REQUIREMENTS

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:
   1. Submittals Required: Types of submittals required are listed in each product section.
   2. Reports of field tests and inspections: Section 01 45 00, "Quality Control".
   3. Closeout Submittals: Submittals of final property survey, warranties, record documents, operating manuals, maintenance materials are specified in Section 01 77 20, "Substantial Completion" and Section 01 77 30 “Project Closeout / Final Completion”.

1.4 SUBMITTAL SCHEDULE

A. General Contractor to submit to the Architect within 10 days from the date of Owner Authorization to proceed with construction, a Schedule of Submittals. For each submittal:
   1. Identify the proposed date for General Contractor to make the submission to the Architect
   2. Identify date General Contractor requires reviewed submittal back from the Architect.
   3. Allow ten working days from date of Architect’s receipt of Submittal for Architect’s review.
4. Schedule submittals so that Architect may review them in a sequence that reflects the logical sequence of the Work.
5. Identify priority if needed.
6. Submit items which must be coordinated, such as colors of finishes, at the same time, so that submittals may be reviewed together.

B. General Contractor will be responsible for delay resulting from failure to present submittals to the Architect in accordance with the Submittal Schedule.
   1. The Architect and the Design Team will allot time in accordance with the Submittal schedule.
   2. Un-coordinated modifications of the submittal schedule without Architect and Design Team input will jeopardize procurement.

C. Procurement prior to satisfactory submittal review is at the procurer’s sole risk.

1.5 COMPLYING PRODUCTS

A. For products specified only by reference standard, select any product meeting that standard.

B. For products specified by description of physical properties or performance, submit a product meeting the specified requirements.

C. For products specified by naming one or more brand names or manufacturers, select one of the named products.

D. The Architect will not consider requests for substitutions in place of specified products.

1.6 GENERAL CONTRACTOR’S REVIEW, RECORDING AND TRANSMITTAL RESPONSIBILITIES

A. In advance of presenting any submittal to the Architect and the Design Team, review each submittal from Contractors, Subcontractors, Suppliers and Fabricators.

B. As a minimum, verify conformance with the Construction documents for:
   1. Materials.
   2. Field dimensions.
   3. Adjacent construction.
   4. Conformance with specified environmental and job conditions.
   5. Coordination with other work.

C. Stamp each Submittal with General Contractor’s review stamp and sign to signify that it has been reviewed by and that information given on the submittals has been verified by the Design Build Constructor.
   1. Transmit each submittal with a numbered letter of transmittal that identifies:
a. Sequence number.
b. Date of transmittal.
c. Project name and Architect's job number.
d. Contractor, Subcontractor, Supplier or Fabricator name
e. Applicable specification section and identification of the product(s) or item(s) being submitted.

2. Maintain a log of submissions by number indicating status of each.

D. The Architect will review only those submittals explicitly required by the Contract Documents or requested as the work proceeds.

E. The Architect will review only submittals bearing the General Contractor's stamp as evidence of review.

F. In reviewing Shop Drawings, Product Data, Samples and similar submittals, the Architect shall be entitled to rely upon the Contractor's representation that the information given is correct and accurate.

1.7 SPECIFICS REQUIREMENTS FOR EACH TYPE OF SUBMITTAL:

A. Shop Drawings:
   1. Prepare shop drawings specific to this project to describe the fabrication and installation of products.
   2. Draw clearly and present complete information
   3. Include plans, elevations and large-scale details, as appropriate to the work shown
   4. Note field dimensions and adjacent construction
   5. Include schedules, patterns, calculations and instructions regarding coordination and installation as required
   6. Manufacturer's pre-printed standard details are not acceptable as shop drawings
   7. Drawings made from Contract Drawings are not acceptable as shop drawings.

B. Quantity of Shop Drawing Submittals:
   1. If submitted as hard copy:
      a. Submit five (5) copies of each submittal.
      b. Three (3) reviewed copies will be returned or at the discretion of the Architect, the submittal will be scanned and returned electronically.
   2. If submitted electronically:
      a. Only a reviewed electronic copy will be returned.

C. Architectural shell drawings in electronic format ("CADD Drawings") may be obtained upon request by the Contractor to the Architect, for use by the Contractor, Subcontractors, Fabricators or Suppliers to facilitate the preparation of shop drawings, subject to execution of an "Agreement and Release" in the
form required by the Architect, and a fee to compensate the Architect for its service in providing the documents for this use.
1. If “CAD Drawings” are used in the preparation of shop drawings, do not extract dimensions from the drawings; refer to the written dimensions, and then check these for internal consistency and verify them in the field as the work progresses.
2. The Contractor and the subcontractor, fabricator, or other entity preparing shop drawings remains solely responsible for the information on the shop drawings.

1.8 PRODUCT DATA

A. Submit manufacturer’s printed data:
   1. Clearly mark each copy to identify pertinent products or models; cross out information which is not applicable to the work and supplement standard information to provide information which is specifically applicable to the work.
   2. Show performance characteristics and capacities.
   3. Show dimensions and clearances required.
   4. For equipment, show wiring or piping diagrams and controls.

B. Quantity of Product Data Submittals:
   1. If submitted as hard copy:
      a. Submit five (5) copies of each submittal.
      b. Three (3) reviewed copies will be returned
   2. If submitted electronically:
      a. Only a reviewed electronic copy will be returned.

1.9 SAMPLES

A. Provide samples of size specified or of adequate size to permit proper evaluation of material by the Architect.

B. Where variations in color or in other characteristics are to be expected, submit samples showing the maximum range of variation.

C. Tag or permanently mark each sample to identify the item; indicate applicable transmittal number on tag.

D. Quantity of Sample Submittals:
   1. Submit three (3) of each samples.
      a. Two (2) reviewed samples will be returned.
1.10 QUALITY CONTROL SUBMITTALS:

A. Quality control submittals:
   1. Include information provided after submittal acceptance by the Architect and prior to delivery and installation of products.
   2. Document compliance with the Contract Documents
   3. Are furnished for the Architect's information only
   4. Will not receive the Architect's review stamp unless specifically stated under the submittals subheading of the specification sections.

B. Quality control submittals required by various sections of these specifications include, without limitation:
   1. Qualifications of manufacturer or installer.
   2. Test reports on fabricated products and mixes.
   3. Certificates.
   4. Material safety data sheets.

C. Quantity of Quality Control Submittals:
   1. If submitted as hard copy:
      a. Submit three (3) copies of each submittal.
      b. No reviewed copies will be returned
   2. If submitted electronically:
      a. No reviewed electronic copy will be returned.

D. Include on the accompanying transmittal form:
   1. Date of submission.
   2. Project title and number.
   3. Names of Contractor and the subcontractor, fabricator and installer, as applicable.
   4. Specification Section number and identification of the product.
   5. If applicable, the name, address and telephone number of the testing or inspecting agency or certifying agency or engineer (or similar applicable information); this information need not be on the transmittal form if it is clearly readable on the report or certification.

1.11 ARCHITECT'S REVIEW

A. The Architect will stamp each submittal to indicate the action taken and the General Contractor shall comply with the direction given.

B. The Architect will accept only original hard copy or original electronic copy.

C. The Architect will take no action on any submittal which has been faxed at any time prior to submittal to the Architect.
D. The Architect will take no action on any submittal which is faxed to the Architect.

E. The Architect will take no action on any submittal which is submitted by any project entity other than the General Contractor.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 REQUIREMENTS INCLUDED

A. Coordinate Work and schedule elements of alterations and renovation work by procedures and methods that expedite completion of the Work.

B. In addition to demolition specified in Section 02 41 13 - SELECTIVE DEMOLITION as well as required elsewhere in this project and/or indicated on Drawings; cut, move and remove miscellaneous existing work as necessary to provide access and to allow alterations and new work to proceed. Include but do not limit work to:

   1. Repair and removal of hazardous and unsanitary conditions and materials.
   2. Removal of unsuitable and extraneous materials not otherwise marked for salvage, such as debris such as rotted wood, rusted metals, and deteriorated concrete.
   3. Cleaning of surfaces, and removal of surface finishes as needed to install new work and finishes.

C. Patching, repair, and refinishing existing work intended for reuse, to specified condition for each material, with suitable transition to adjacent new items of construction.

1.3 ALTERATIONS, CUTTING AND PROTECTION

A. Ensure that work is performed by workers qualified for each condition and material encountered.

B. Cut and remove minimum materials necessary and avoid damage to adjacent work intended for reuse.

C. Cut finish surfaces by methods that terminate surfaces in a straight line at natural points of division.

D. Cutting and patching work shall comply with requirements of Section 01 73 29, CUTTING AND PATCHING.
E. Protect existing finishes, equipment, and adjacent work scheduled to remain from damage from weather and extremes of temperature.

F. Provide temporary enclosures to separate work areas from existing building and from areas occupied by Owner, and to provide weather protection.

PART 2 - PRODUCTS

2.1 SALVAGED MATERIALS FOR REUSE

A. Salvage sufficient quantities of cut and removed materials to replace damaged work of existing construction when material is not readily obtainable on current markets.
   1. Store salvaged items in dry, secure place on site.
   2. Items not required for use in repair of existing work shall remain Owner's property.
   3. Do not incorporate salvaged or used materials in new construction without Architect's approval.

2.2 PATCHING, EXTENDING, AND MATCHING

A. Provide same products or types of construction as those in existing structure, as needed to patch, extend, and match existing work.

B. Generally, Contract Documents do not define products or standards of workmanship present in existing construction; determine products and workmanship by inspection and testing. Architect will judge workmanship and materials against existing as a sample of comparison.

C. Provide products, finishes, and types of construction for patching, extending and matching shall be performed as necessary to make work complete and consistent to identical standards of quality.

PART 3 - EXECUTION

3.1 PERFORMANCE

A. Patching of existing construction to accommodate work of various Sections shall be performed under Sections that specify methods and materials similar to adjacent existing construction, in the following areas:
   1. Removal and patching of damaged material where indicated.
B. Patch and extend existing work using skilled workers who are capable of matching existing quality of workmanship. Quality of patched or extended work shall be equal to that specified for new work.

3.2 TRANSITION FROM EXISTING TO NEW WORK

A. When new work abuts or finishes flush with existing work, make smooth transition. Patched work shall match existing adjacent work in texture and appearance so that patch or transition is not visible from 5 ft. away.

B. When finished surfaces are cut so that smooth transition with new work is not possible, terminate existing surface in a neat manner along straight line at natural line of division. Provide trim appropriate to finished surface.

C. Transition from existing carpeted floors to new VCT will depend on the cutting of the carpet during demolition. In addition, cut carpet so all new partition bear on existing wood floor below carpet.

3.3 CLEANING

A. Perform periodic and final cleaning as specified in Section 01 77 30, PROJECT CLOSEOUT AND FINAL COMPLETION.

B. At completion of work of each Section, clean area and prepare surfaces for work of other Sections.

C. At completion of alterations work in each area, provide final cleaning and return space to condition suitable for use by Owner and occupants of the building.

END OF SECTION
PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 INTENT

A. General: Provide and coordinate Mock-Up assemblies at Project site for Architect's review and acceptance, in accordance with requirements of the Contract Documents. Refer to individual Specification Sections for Mock-Up requirements. Generally, without limitation, Mock-Ups on site include the following:
   1. Mock-Ups of individual pieces of the work, as specified within individual Specification Section.
   2. It shall be the responsibility of the General Contractor to coordinate the work of the related Specification Sections so that each Mock-Up meets the specified requirements.

B. Mock-Ups to be prepared for the purposes of:
   1. Verification of product and material selections
   2. Demonstration of aesthetic effects
   3. Evaluate material quality
   4. Establish acceptable execution and workmanship
   5. Review Coordination and construction
   6. Testing and operation

C. Requirements:
   1. No Mock-Up shall be any part of the final construction unless the Specification Section specifically states otherwise. If stated otherwise it shall be termed an “In-Place Mock-Up”.
   2. No permanent construction of any component of a Mock-Up shall begin until the entire Mock-Up is completed and accepted by the Architect.
   3. Where Mock-Ups illustrate intersections with existing construction and/or materials, simulation is to be provided by materials with physical properties identical or similar as possible to the existing materials.

1.3 RELATED WORK
A. Examine Contract Documents for requirements that affect Work of this Section. Other Specification Sections that directly relate to Work of this Section include, but are not limited to:

1. Section 01 41 00 - QUALITY ASSURANCE.

1.4 DEFINITIONS

A. **In-Place Mock-Ups**: Full-size, physical assemblies that are constructed in-place and remain part of final construction.

   1. In-place mock-ups will be used to verify selections made under sample submittals, to demonstrate aesthetic effects, qualities of materials and execution, and to review construction, coordination, testing, or operation.

   2. Approved in-place mock-ups establish the standard by which the Work will be judged.

   3. Approved In-Place Mock-Ups may remain part of the completed Work.

1.5 SUBMITTALS

A. **Schedule**: General Contractor shall submit a schedule of Mock-Up construction, including dates for Mock-Up review by the Architect.

   1. Mock-up schedule shall be reviewed at each progress meeting, revised and resubmitted as required.

   2. Schedule shall allow sufficient time for Mock-Ups which are not accepted to be reconstructed and reviewed until accepted by the Architect.

B. **Shop Drawings of Mock-Ups**: Provide large scale shop drawings for fabrication, installation and erection of all parts of each mock-up. Provide plans, elevations, and details of anchorage, connections and accessory items.

C. **Photographs of Mock-Ups**: Submit photographs of mock-ups after completion of installation and acceptance of each mock-up.

D. **Submittal Samples**: Refer to individual Specification Sections for submittal requirements of mock-up components and coordinate accordingly.

1.6 QUALITY ASSURANCE

A. **Design Modifications**: Make design modifications to Mock-Up work only as required to meet performance requirements and to coordinate the work.

B. Indicate proposed design modifications on shop drawings. Maintain original design concept without altering profiles and alignments indicated.
C. Clearly identify all Design Modifications incorporated into the Mock-Ups. If no Design Modification is called to the attention of the Architect, the Architect will conclude that the Mock-Up exactly reflects the Design Documents.

D. Obtain the specific acceptance from the Architect for all Design Modifications

PART 2 – PRODUCTS

2.1 MATERIALS AND PRODUCTS

A. Provide materials, components, and products for Mock-Ups as specified in individual Specification Sections.

PART 3 – EXECUTION

3.1 GENERAL

A. Refer to PART 3, EXECUTION portions of the various Specification Sections for specific requirements regarding condition of surfaces, erection, and erection tolerances.

3.2 MOCK-UP QUANTITY, LOCATION, ACCEPTANCE

A. Provide Mock-Ups of types and sizes indicated in the Drawings to evaluate and set the standard of quality for that work.

B. Obtain Architect's acceptance of visual qualities prior to commencing work that individual Mock-Up is intended to represent.

C. Protect and maintain approved Mock-Ups throughout the work of the Contract.

D. Locate Mock-Ups as shown on the Drawings.
   1. Provide as many mock-ups as required until Architect's approval has been received.
   2. In-Place Mock-Ups, approved Mock-Ups may be incorporated into the finish work.

END OF SECTION
PART 1 - GENERAL

1.1 SUMMARY

A. This section specifies procedures for measuring and reporting the quality and performance of construction, including:
   1. Code required and specification required tests and inspections performed by independent agencies employed by the Owner and Managed by the Architect.
   2. Code required and specified tests and inspections provided by the General Contractor or by an independent testing agency employed and managed by the General Contractor regardless of whether the tests are code required, specified or undertaken at the option of the General Contractor.
   3. Testing related responsibilities of the General Contractor.
   4. Establishment of Bench Marks for workmanship; performance of materials, assemblies and equipment.
   5. Management of Field Observation Reports (Field Reports, Exceptions, Rolling Punchlist, Deficiencies and Notice Of Deficiency (NOD)).

1.2 SUBMITTALS

A. Test Reports:
   1. For tests and inspections which are paid for by the Owner and managed by the Architect, certified written reports will be forwarded from the inspecting agency to the Architect for Distribution to the Owner and General Contractor. Such reports will be incorporated into the Architects Field Observation Reports and sent to local authorities.
   2. For code required and specified tests and inspections which are paid for by and managed by the General Contractor, certified written reports will be forwarded from the inspecting agency to the General Contractor for Distribution to the Owner and Architect. Such reports will be incorporated into the Architects Field Observation Reports and sent to local authorities.
   3. For tests and inspections which are paid for and performed at the option of the General Contractor, written reports certified or otherwise may be distributed to the Owner and Architect at the sole discretion of the General Contractor.

1.3 TESTING BY OWNER
A. Where inspections, tests, and other requirements of the Contract Documents are specifically indicated to be the Owner's responsibility, the Owner will employ and pay a qualified independent testing agency to perform those services.

1. The Owner may delegate to the Architect the responsibility for hiring the testing agency, however the Owner will pay the cost for the qualified independent testing agency.

1.4 TESTING BY THE GENERAL CONTRACTOR

A. Scope of Testing Performed by General Contractor: The General Contractor shall provide all other inspections, tests, and other quality control services specified elsewhere in the Contract Documents or required by authorities having jurisdiction.

B. Include costs for these services in the Contract Sum.

1. Unless the Contract Documents or local authorities permit such testing or inspections to be performed by the General Contractor's own forces, the General Contractor shall employ and pay a qualified independent testing agency or agencies to perform these services. This agency shall be referred to as "the Contractor's Testing Agency" or "the Contractor's Testing and Inspection Agency".

1.5 GENERAL CONTRACTOR'S RESPONSIBILITIES FOR ALL TESTING

A. Regardless of whether testing and inspection is performed by the Owner's Testing and Inspection Agency or the General Contractor's Testing and Inspection Agency, the General Contractor shall be responsible for coordination and scheduling of testing, and for associated services, as follows:

1. Schedule times for inspections, tests, taking samples, and similar activities. Coordinate this schedule with construction activities so that testing does not delay the work and so that testing is completed before work to be tested is closed in or otherwise made inaccessible. Provide and include in the cost of the work all Associated Services.

2. When the Owner delegates the management of the Owner's Testing to the Architect, coordinate and cooperate with the Architect with needed scheduling, access and Associated Services as described below. Include in the cost of the work all Associated Services.

3. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable support services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services may include, but are not limited to, the following:
a. Provide access to the Work.
b. Furnish incidental labor and facilities necessary to facilitate inspections and tests.
c. Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.
d. Provide facilities for storage and curing of test samples.
e. Deliver samples to testing laboratories.
f. Provide the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
g. Provide security and protection of samples and test equipment at the Project Site.
h. Protect construction exposed by or for quality-control service activities.

B. Retesting: The General Contractor is responsible for the costs of and all coordination of retesting where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Documents, regardless of whether or not the original test was Contractor’s responsibility.

C. Do not cover or enclose with permanent construction items or assemblies which are to be tested or inspected until such testing or inspection has been completed and the Work has been accepted in accordance with the Contract Documents.
   1. Protect construction exposed by or for testing and inspection until it is covered or enclosed with permanent construction.
   2. After inspection and testing is completed, complete the enclosing Work and repair substrates and finishes that have been damaged by the testing.

D. Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with requirements for cutting and patching specified in Section 01 73 29, "Cutting and Patching".

1.6 TESTING AGENCY’S RESPONSIBILITIES FOR ALL TESTING

A. Duties of the Testing Agency:
   1. Provide qualified personnel to perform required inspections and tests.
2. Furnish equipment, tools and supplies necessary for taking samples and performing tests, except where sampling is indicated to be the responsibility of the General Contractor.

3. Prepare test reports, as specified elsewhere in this Section.

4. Promptly notify the Architect and the General Contractor of irregularities or deficiencies observed in the Work during performance of its services.

B. The agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.

C. Promptly after completion of each inspection or test performed, the testing agency shall prepare a certified written report of the tests or inspections performed. Submittal of such reports shall be a prerequisite to payment for the work being tested.

D. Report Data: Include as a minimum, the following information:
   1. Date of issue.
   2. Project title and number.
   3. Name, address, and telephone number of testing agency.
   4. Name of individual making the inspection or test. Have this person sign the report after it is completed.
   5. Identification of product or assembly and Specification Section.
   6. Dates and locations of samples and tests or inspections.
   7. Ambient conditions at the time of sample taking and testing.
   8. Description of the type of inspection or test method.
   9. Complete inspection or test data.
   10. An interpretation of test results, including comments or professional opinion on whether inspected or tested Work complies with the Contract Documents.
   11. Recommendation for remedial action or retesting.

E. Submittal:
   1. If the Testing Agency is performing the testing for the Owner, the Testing Agency shall deliver reports to the Architect as follows
      a. If paper, three (3) copies, plus additional copies as requested by the Architect for special distribution. The Architect will forward paper copies of the test reports to the Owner, General Contractor and the local authority having jurisdiction.
      b. If electronic, forward PDF file to the Architect. The Architect will forward electronic copies of the test reports to the Owner, General Contractor and the local authority having jurisdiction.
   2. If the Testing Agency is performing the code or specification required testing for the General Contractor, the Testing Agency shall deliver reports to the General Contractor as follows
a. If paper, three (3) copies, plus additional copies as requested by the General Contractor for distribution. The General Contractor will forward paper copies of the test reports to the Architect, Owner and the local authority having jurisdiction, if required.

b. If electronic, forward PDF file to the General Contractor. The General Contractor will forward electronic copies of the test reports to the Architect and the Owner. The Architect will forward electronic copies of the test reports to the local authority having jurisdiction.

3. If the Testing Agency is performing optional testing for the General Contractor, the Testing Agency shall deliver reports to the General Contractor as follows

   a. If paper, three (3) copies, plus additional copies as requested by the General Contractor. Further distribution is at the General Contractor’s option.

   b. If electronic, forward PDF file to the General Contractor. Further distribution is at the General Contractor’s option.

1.7 FIELD SAMPLES

A. Field Samples:

1. Retain and maintain approved Field Samples during construction in undisturbed condition as standard for judging completed construction.

2. Field Samples are to be accessible to Sub-Contractors and field crew to insure that the installed work is consistent with prior approvals.

3. Retain Field Samples until directed otherwise by the Architect.

4. In the absence of direction, return field samples to the Architect.

1.8 BENCHMARKS

A. Benchmarks:

1. Benchmarks are used by the Contractor, Architect and Owner to verify compliance of the Work to the Contract Documents.

2. They are established by standards, samples, and submittal as part of the Work prior to installation of the related work.

3. Prior to installation of a major component of the Work, and/or as called for in the Specifications, the Contractor, Architect and Owner shall discuss and agree what components are to be “benchmarks”.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF SECTION
PART 1 – GENERAL

1.1 SUMMARY

A. Furnish and install temporary services and facilities, including utilities, construction and support facilities, security and protection required for the Work.

B. Construction facilities and temporary controls which may be required for this Project include, but are not limited to:
   1. Fire protection during construction.
   2. Field offices and sheds.
   3. Use of permanent elevators and stairs.
   4. Temporary protection of building construction.
   5. Temporary partitions
   6. Environmental controls during construction.
   7. Temporary barriers, safety devices and signs.

1.2 REFERENCED STANDARDS

A. National Fire Protection Association (NFPA):
   1. NFPA 10, Standard for Portable Fire Extinguisher.
   2. NFPA 70, National Electrical Code.

1.3 QUALITY ASSURANCE

A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
   1. State Building Code requirements.
   2. Health and safety regulations.
   3. Utility company regulations.
   4. Police, Fire Department and Rescue Squad rules.
   5. Environmental protection regulations.
   6. The State Electrical Code, referred to in this section as the "Electrical Code."
   7. Massachusetts Criminal Offense Record Information (CORI).

B. Superintendence: Contractor’s superintendent shall be on site from the beginning of the Work, prior to placing or erecting temporary construction specified in this Section.
C. Standards: Contractor shall be responsible for identifying and complying with applicable standards and guidelines for safe construction of the Work.

D. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.4 JOB SITE CONDITIONS

A. Existing Access Roads and Parking Areas: Do not obstruct existing driveways, roads, and parking on the site that are used by the Owner or Owner's personnel, unless otherwise approved by the Owner.

1.5 SEQUENCING AND SCHEDULING

A. Install or initiate temporary services in a timely fashion, when they are needed, so that the progress of the work is not delayed.

B. Maintain temporary facilities until the time of Substantial Completion, or until they are no longer required.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. The Contractor shall be responsible for selecting suitable materials and equipment that meet applicable codes and regulations.

B. Fire Extinguishers: Provide hand-carried, portable UL-rated fire extinguishers conforming to NFPA recommendations. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent and size required by location and class of fire exposure, and location of fire extinguishers.

C. Tarpaulins: Use only fire-retardant tarpaulins.

PART 3 - EXECUTION

3.1 FIRE PROTECTION DURING CONSTRUCTION

A. Applicable Standards: Comply with NFPA 10 and NFPA 241.

B. Temporary Fire Protection:
   1. Provide and maintain temporary fire protection devices while any work of this Project is underway.
   2. As a minimum, provide portable fire extinguishers.
3. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.

C. Precaution: Institute controls to minimize or eliminate risk of fires. As a minimum:
1. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires.
2. Prohibit smoking on the Project site.
3. Store combustible materials in containers in fire-safe locations.
4. Supervise torching and welding operations to prevent accidental ignition.
5. Supervise installations which involve flammable materials or processes capable of starting combustion.
6. Supervise combustion type temporary heating units.
7. Keep the area within the limits of the Project orderly and clean and promptly remove combustible rubbish from the site.

D. Comply with all reasonable recommendations regarding fire protection made by the representative of the fire insurance company carrying insurance on the Work or by the local fire chief or fire marshal.

E. Fire Watch: Maintain a fire watch of the interior and exterior of the facility for at least one hour after the following activities have ceased for the day: torching, welding, installation of epoxy flooring, or other activities capable of starting combustion.

F. Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire protection system, and place into operation. Make sure key personnel understand how the system operates.
1. If it is necessary thereafter to disable the permanent system for short periods of time, provide temporary protection of type acceptable to Owner's insurer and to the local fire department while the permanent system is inoperative.

3.2 FIELD OFFICES

A. Contractor's/Owner's/Architect's Field Offices: Provide insulated, weather-tight temporary offices which are appropriately heated and cooled, suitably furnished and equipped, as agreed upon with the Owner and the Architect, of sufficient size to accommodate required office personnel at the Project site. Keep the office clean and orderly.

B. Storage and Fabrication Enclosures: Provide as required for Contractor's own work. Enclosures shall be fabricated of non-combustible or fire-resistant materials and shall comply with NFPA 241.
3.3 USE OF PERMANENT LIFTS

A. Temporary Use of Permanent Lifts: Do not use Owner’s Elevators or Lifts for construction purposes.

3.4 TEMPORARY PROTECTION OF BUILDING CONSTRUCTION

A. Protect the Work and other existing conditions against damage from normal day-to-day construction activities including, without limitation, movement of materials and personnel, traffic of all kinds, weather hazards, spillages and other reasonably foreseeable danger.

1. Specific protections (masking or covering, for example) are specified in the Section covering the trade doing the work. However, the Contractor shall be responsible for protecting the Work and other existing conditions against general hazards.

2. Typical Situations: Without limiting the generality of this Article, protect the Work against the following hazards and abuses:

B. Protect window and door jambs from damage resulting from collision.

C. Protect finished floors against traffic soiling.

D. Protect walls and floors scheduled to receive subsequent finishes from soiling that would impair the adhesion of those finishes.

E. Protect installed glass against breakage.

F. Protect stored materials against weather damage.

3.5 TEMPORARY PARTITIONS

A. Temporary Partitions: When performing work in or directly adjacent to an occupied area, erect temporary partitions with locking doors to separate the construction area from areas of the area(s) which are occupied and in use. The intent is to contain dust and debris generated by demolition and construction, and also to secure the project area(s) both during work and when work is not in progress. Locate partitions at locations shown on the drawings; or if not shown, at location agreed upon with the Owner.

1. Finish side of temporary partitions exposed to view in occupied areas with a layer of gypsum board and a coat of paint as agreed to with the Architect.
3.6 ENVIRONMENTAL CONTROLS

A. Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result.

B. Consistent with safe and reasonable construction practices, employ equipment, machinery and techniques of a kind which will minimize detrimental impact on the environment. Avoid excessive noise, unnecessary air pollution from dust, demolition, machinery exhaust, and the use of sprayed-on materials. Do not employ open burning on the construction site. Dispose of waste material only at authorized disposal sites. Refer to Section 01 74 19 - CONSTRUCTION WASTE MANAGEMENT.

C. Air-Borne Dust Control: Provide adequate means for containing dust caused by construction operations. Wet down demolition debris and cover dumpsters with tarps, if necessary to prevent dust and debris from blowing around.

D. Noise Control: Comply with local city or town bylaws limiting hours of construction.

E. There shall be no smoking on the Project property.

3.7 TEMPORARY BARRIERS, SAFETY DEVICES, AND SIGNS

A. Security Enclosure and Lockup: Secure partially completed areas of construction to prevent unauthorized entrance, vandalism, and theft.
   1. Storage: Provide a secure lock-up for materials and equipment which are of significant value or attractive for theft.
   2. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

B. Barricades, Warning Signs: Provide as required to warn and keep people away from hazards on the site. Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against.
   1. Where required, illuminate barricades and warning signs with appropriate lighting.

C. Informational Signs: Post signs as required to provide directional information to construction personnel and visitors. Construct signs in an attractive manner, of materials and of a size acceptable to the Architect.

D. Temporary Exit Signs: Post and maintain temporary exit signs at all firewalls and all other active egress doors in accordance with authorities having jurisdiction until permanent signs are installed and functioning.
3.8 CONSTRUCTION SIGN

A. Nominal Size: 4’ x 8’.

B. Material: Exterior signage grade ¾” plywood or other similar panel material which will possess similar weather resistance and structural integrity.

C. Colors and images: Provide for full color signage of both text and City of New Bedford seal.

D. Text and Detail: Architect will provide text and detail to the Contractor immediately after execution of the Owner-Contractor Agreement.

E. Location and installation: Details of location and installation will be mutually agreed upon by the Owner, Architect and Contractor.

F. Sign Installation and Removal Schedule:
   1. The Construction Sign shall be in place prior to the commencement of work on the site.
   2. The Construction Sign shall be removed immediately prior to Final Completion.
   3. If required by Owner or the progress of the work, the Contractor shall relocate the sign as required or as directed by the Owner in coordination with the Architect.

3.9 USE OF DUMPSTERS

A. Dumpsters: Prior to providing dumpsters on-site for construction waste, obtain written approval of Owner for location of all dumpsters.

3.10 TERMINATION AND REPAIR

A. Termination and Removal: Remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion.

B. Repair or replace Work damaged by installation and removal of temporary facilities. Comply with requirements of 01 73 29 “CUTTING AND PATCHING”.

C. Repair public right-of-way where disturbed by construction or removal of temporary facilities, including paving, plantings, and improvements, in accordance with the standards and requirements of authorities having jurisdiction, as applicable, and leave public property in as good condition after completion as before operations started.

END OF SECTION
PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be include in and made a part of this Section.

1.2 WORK INCLUDED

A. Requirements for minimum indoor air quality (IAQ) performance standards during the construction period.

B. The General Contractor shall develop, for Owner and Architect review, a Construction Indoor Air Quality Management Plan for this Project.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect the work of this Section. Other Specification Sections that relate directly to work of this Section include, but are not limited to:
   1. Section 01 32 60 - EXCEPTIONS
   2. Section 01 33 00 - SUBMITTAL PROCEDURES; Submittal requirements.
   3. Section 01 50 00 - TEMPORARY FACILITIES AND CONTROLS.
   4. Section 01 74 19 - CONSTRUCTION WASTE MANAGEMENT.
   5. Section 01 74 00 - PROGRESS AND FINAL CLEANING

1.4 PERFORMANCE REQUIREMENTS


B. Prevent exposure of building systems to environmental tobacco smoke during construction. At a minimum, take the following measures:
   1. Do not allow on the project site.
   2. Do not allow smoking adjacent to fresh air intakes for the building.

C. Comply with requirements of Sheet Metal and Air Conditioning National Contractors Association (SMACNA) “IAQ Guideline for Occupied Buildings under Construction”.

1.5 CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT PLAN

B. Within seven (7) calendar days after receipt of Notice to Proceed, the Contractor shall submit to the Architect and the Owner a finalized Construction IAQ Management Plan. The proposed Plan shall include, but not be limited to, the following:
   1. Protection of ventilation system components during construction.
   2. Cleaning and replacing contaminated ventilation system components after construction.
   3. Temporary ventilation.
   4. Environmental isolation and protection of occupants and the occupied portions of the building.
   5. Coordination with the Owner retained Industrial Hygienist.
   6. Procedures for clearing areas affected by remediation and window removal.
   7. Coordination of IAQ during progress and Final cleaning procedures.

C. Work which involves remediation and/or window removal shall not begin until an accepted Construction Indoor Air Quality Management Plan is in place.

D. Failure to submit a Construction Indoor Air Quality Management Plan in a timely manner will be cause for the Architect to issue an NOD. (See Section 01 32 60 – EXCEPTIONS.)

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 CONSTRUCTION IAQ MANAGEMENT PLAN IMPLEMENTATION

A. IAQ Manager: The General Contractor shall designate an on-site person responsible for instructing workers and overseeing and documenting results of the Construction IAQ Management Plan for the Project.
   a. This on-site person shall coordinate with the Owner’s on-site Industrial Hygienist.

B. Distribution: The General Contractor shall distribute copies of the Construction IAQ Management Plan to the Job Site Foreman, each Sub-contractor, the Owner, and the Architect.
C. Instruction: The General Contractor shall provide on-site instruction of appropriate procedures and methods to be used by all parties at the appropriate stages of the Project.

D. Coordinate Construction IAQ Management Plan with final cleaning as indicated in Section 01 77 30, PROJECT CLOSEOUT / FINAL COMPLETION.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for materials and equipment used for the Project.

1.3 RELATED REQUIREMENTS

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

1. Section 01 11 00, SUMMARY OF WORK.
2. Section 01 35 00, SUBMITTALS.
3. Section 01 77 20 SUBSTANTIAL COMPLETION.
4. Section 01 77 30 PROJECT CLOSEOUT AND FINAL COMPLETION.

1.4 PRODUCTS

A. Products include material, equipment, and systems.

B. Comply with Specifications and referenced standards as minimum requirements.

C. Components required to be supplied in quantity within a Specification Section shall be the same, and shall be interchangeable.

D. Do not use materials and equipment removed from existing structures, except as specifically required, or allowed, by the Contract Documents.

E. In the case of an inconsistency between Drawings and the Project Manual, or within either document which is not clarified by addendum, the product of greater quality or greater quantity of work shall be provided in accordance with the Architect's interpretation.
1.5 WORKMANSHIP

A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.

B. Perform work by persons qualified to produce workmanship of specified quality.

1.6 MANUFACTURERS' INSTRUCTIONS

A. When work is specified to comply with manufacturers' instructions, submit copies as specified in Section 01 35 00, SUBMITTAL PROCEDURES, distribute copies to persons involved, and maintain one set in field office.

B. Perform work in accordance with details of instructions and specified requirements.

1.7 TRANSPORTATION AND HANDLING

A. Refer to Document 00 72 01 GENERAL CONDITIONS OF THE CONTRACT and Specifications Sections for requirements pertaining to transportation and handling of materials and equipment.

B. Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturers' unopened containers or packaging, dry.

C. Provide equipment and personnel to handle products by methods to prevent soiling or damage.

D. Promptly inspect shipments to assure that products comply with requirements, that quantities are correct, and products are undamaged.

1.8 STORAGE AND PROTECTION

A. Refer to Document 00 72 01 GENERAL CONDITIONS OF THE CONTRACT and Specifications Sections for requirements pertaining to storage and protection of materials and equipment.

B. Store products in accordance with manufacturers' instruction, with seals and labels intact and legible. Store sensitive products in weather tight enclosures; maintain within temperature and humidity ranges required by manufacturers' instructions.

C. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
D. Arrange storage to provide access for inspection. Periodically inspect to assure that products are undamaged, and are maintained under required conditions.

E. General Contractor shall protect all loose and installed materials from damage until final acceptance of the Project.

1.9 PRODUCT STANDARDS

A. Any product specified by reference to the number, symbol, or title of a standard, such as Commercial Standard, a Federal Specification, an ASTM Standard, an ANSI Standard, a trade association standard, or other similar standard, shall comply with the requirements of the latest issue of such standard or revision thereof, including any amendment or supplement thereto, as listed in the latest official index in effect as of the bid date.

B. The standards referred to, except as modified in the Specifications, shall have full force and effect as though printed in the Specifications. The Architect will furnish, upon request, information as to how copies of the standards referred to may be obtained.

C. All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned, in accordance with the manufacturer’s printed instructions, unless otherwise specified.

1.10 SUBSTITUTIONS OF SPECIFIED PRODUCTS AND SYSTEMS

A. Substitutions of specified products and systems shall comply with requirements of Chapter 30, Section 39M of General Laws, and additional requirements and procedures specified herein.

B. The Contract Documents are intended to produce a building of consistent character and quality of design. All components of the building including visible materials and equipment have been selected to have a coordinated design in relation to the overall appearance of the building. The Architect will judge the design, functionality, 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 Work. With respect to exterior finishes value or effect, the Architect may not approve as equal any proposed substitute which, in the Architect’s sole opinion, would not produce the same artistic or aesthetic value or effect. In order to permit coordinated design of color and finishes the General 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.
C. Specific reference in the Specification to any product, material, or process by name, make, or catalog number shall be interpreted as establishing a standard of quality. An item will be considered equal to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design; (2) it will perform at least equally the function imposed by the general design for the work; and (3) it conforms substantially, even with deviations to the detailed requirements for the item in the Specification. [M.G.L. Chapter 30, Section 39M (b).] The Architect shall be the sole judge of whether and proposed substitute product, material, process, or method is equal to that specified according to this standard, and his decision shall be final and binding on the General Contractor and any Subcontractor or Sub-Subcontractor.

D. If the General 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 General 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.

E. In requesting approval of deviations of substitutions, the General Contractor shall provide, upon request, evidence leading to a reasonable certainty that the proposed substitution or deviation will provide a quality or result at least equal to that otherwise attainable. If in the opinion of the Architect, the evidence presented by the General Contractor does not provide a sufficient basis for such reasonable certainty, the Architect may reject such substitution or deviation without further investigation.

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

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 – GENERAL

1.1 SUMMARY

A. This section specifies general requirements for selecting products.

B. Related Work:
   1. Review of submittals: Section 01 33 00, "SUBMITTAL PROCEDURES".
   2. Definition of "Referenced Standards": Section 01 41 00, "QUALITY ASSURANCE".

1.2 PRODUCT OPTIONS

A. For products specified only by reference standard, select any product meeting that standard.

B. For products specified by description of physical properties or performance, submit a product meeting the specified requirements. Provide sufficient documentation of performance testing to demonstrate compliance with the requirements to the satisfaction of the Architect.

C. For products specified by naming an acceptable product as an example, submit that product or another product matching the performance and characteristics of the named product. Provide sufficient documentation of performance testing to demonstrate compliance with the requirements to the satisfaction of the Architect.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 - GENERAL

1.1 SUMMARY

A. This section specifies general requirements for delivering, storing, and handling materials, including Owner-furnished materials.

1.2 PRODUCT DELIVERY

A. Require manufactured materials to be delivered in manufacturer’s original packaging, with labels clearly indicating the contents and special handling and safety requirements. On labels, show product names, model numbers, types, grades, compliance, and other information needed for identification.

B. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

1.3 PRODUCT STORAGE

A. Store materials safely on the site and protect them from weather, water and from other damage. Comply with manufacturer’s instructions with regard to acceptable temperature and humidity conditions so that materials will not deteriorate or age excessively while in storage.

B. Generally, for materials stored outdoors (except for landscaping materials), store materials off the ground on pallets and cover them in a way that protects them from rain and snow but allows air to circulate.

C. Store items which are vulnerable to damage from impact, dirt, dust, and rough-handling – such as equipment with moving parts, valves, controls, finish hardware and items with easily damaged finishes - in original packaging until just prior to installation. Leave protective coatings on finished items until just prior to Substantial Completion, unless directed by the Architect to remove the protection.

D. Deliver to storage location on-site as directed by Owner.

E. Contractor shall maintain Material Safety Data Sheets (MSDS) for hazardous materials used and/or stored on-site during construction.
1.4 EXTRA MATERIALS AND MAINTENANCE MATERIALS

A. Furnish extra materials, maintenance materials, spare parts and supplies required by the various sections, neatly packaged with protective covering for storage and identified with labels clearly describing contents and application or location where item is installed.

B. Deliver to storage location on-site as directed by Owner.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for cutting, fitting, and patching work required to complete the Work or to:
   1. Make its several parts fit together properly.
   2. Uncover portions of the Work to provide for installations of ill-timed work.
   3. Remove and replace defective work.
   4. Remove and replace work not conforming to requirements of Contract Documents.

B. Subcontractors shall cut existing construction, under the direction of the General Contractor, to provide for installation of components required by their respective trades or performance of other construction activities required by their trade and the subsequent fitting and patching required to restore surfaces to their original condition. In instances of conflicts of trades the General Contractor shall coordinate proper control of cutting by the trades and be responsible for unnecessary over cutting or damage caused by improper cutting and or patching.

1.3 RELATED REQUIREMENTS

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:
   1. Section 01 11 00 - SUMMARY OF WORK.
   2. Section 01 35 16 - ALTERATION PROJECT PROCEDURES
   3. Section 02 41 13 - SELECTIVE DEMOLITION.

1.4 QUALITY ASSURANCE

A. Permission to patch any items of work does not imply a waiver of the Architect’s right to require complete removal and replacement in said areas and of said items if, in Architect’s opinion, patching does not satisfactorily restore quality and appearance of work.

01 73 29
CUTTING AND PATCHING
Page 1 of 3
B. 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.

C. Operational and Safety Limitations: Do not cut-and-patch operational elements and safety related components in a manner resulting in a reduction of capacities to perform in the manner intended or resulting in decreased operational life, increased maintenance, or decreased safety.

D. Visual Requirements: Do not cut-and-patch work that is exposed on exterior or in occupied spaces of building, 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 Architect. Remove and replace work judged by the Architect to be visually unsatisfactory.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Except as otherwise indicated or authorized by the Architect, provide materials for cutting-and-patching which will result in equal-or-better work than the work being cut-and-patched, in terms of performance characteristics and including visual effect where applicable.

B. Comply with the requirements, and use materials identical with the original materials where feasible and where recognized that satisfactory results can be produced thereby.

C. Comply with specifications and standards for each specific product involved.

PART 3 - EXECUTION

3.1 INSPECTION

A. Inspect existing conditions of Project, including elements subject to damage or to movement during cutting and patching.

B. After uncovering work, inspect conditions affecting installation of Products, or performance of work.

C. Report unsatisfactory or questionable conditions to Architect in writing; do not proceed with work until Architect has provided further instructions.
3.2 PREPARATION

A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of Work.

B. Provide devices and methods to protect other portions of Project from damage.

C. Provide protection from elements for that portion of the Project which may be exposed by cutting and patching work.

3.3 PERFORMANCE

A. Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.

B. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes.

C. Restore work which has been cut or removed; install new products to provide completed Work in accordance with requirements of Contract Documents.

D. Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work.

E. Restore exposed finishes of patched areas; and, where necessary extend finish restoration onto retained work adjoining, in a manner which will eliminate evidence of patching.

F. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
   1. For continuous surfaces, refinish to nearest intersection.
   2. For an assembly, refinish entire unit.

END OF SECTION
01 74 00
PROGRESS, FINAL CLEANING AND POST PUNCH LIST REPAIR CLEANING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 - GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 SUMMARY

A. This Section specifies cleaning requirements for work of this Project. Included are the following:
   1. Progress cleaning requirements during construction.
   2. Final cleaning by professional cleaners prior to Substantial Completion.
   3. Post punch list repair cleaning

1.3 RELATED REQUIREMENTS

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:
   1. Document 00 72 01 GENERAL CONDITIONS OF THE CONTRACT, GENERAL CONDITIONS
   2. Section 01 11 00, SUMMARY OF WORK; Owner occupancy.
   3. Section 01 77 20 “SUBSTANTIAL COMPLETION” and Section 01 77 30 “PROJECT CLOSEOUT AND FINAL COMPLETION”; other than Progress and Final Cleaning.
   4. Respective Sections of Specifications: Closeout Submittals for work of the Section.

1.4 SUBMITTALS

A. Product Data: For each type of cleaning product indicated. Include recommendations for application and use. Include test data substantiating that products comply with requirements. Provide MSDS for each product.

B. Qualification Data: For professional cleaners to be engaged for final cleaning including qualifications of field supervisors and references for similar projects.
PART 2 - PRODUCTS

2.1 CLEANING MATERIALS

A. General: Provide cleaning materials that will not create hazards to health nor property, and will not damage surfaces or finishes.

B. Use cleaning materials and methods recommended by manufacturer of surface to be cleaned.

C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 PROGRESS CLEANING

A. This Article refers to regular cleaning operations conducted while construction is in progress. Requirements for final cleaning before Substantial Completion are included under Article 3.2.

B. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

C. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.

D. Do not hold waste materials in approved receptacles more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80°F.

E. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

F. Site: Maintain Project site free of waste materials and debris.

G. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

H. Remove liquid spills promptly.

I. Where dust will impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
J. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

K. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

L. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

M. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

N. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

O. Limiting Exposures: Supervise construction operations to assure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

P. Clean Project site, yards, grounds and public ways daily to remove construction related rubbish, waste material, litter, and other foreign substances.

Q. Maintain toilet facilities used by construction personnel daily. Restock paper goods. Wash down all fixtures and sanitize. Empty waste receptacles, polish mirrors, clean and sanitize all contact surfaces including doors and hardware.

3.2 FINAL CLEANING

A. General: Provide final cleaning by professional cleaners. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project in advance of Owner’s move-in of furnishings and equipment.
   a. Clean Project site, yard, and grounds, in areas disturbed by construction activities including landscape areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.

c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.

d. Remove tools, construction equipment, machinery, and surplus material from Project site.

e. Clean exposed exterior and interior hard-suraced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

g. Sweep concrete floors broom clean in unoccupied spaces.

h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.

i. Clean glass. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.

j. Remove labels that are not permanent.

k. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

l. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.

m. Replace parts subject to unusual operating conditions.

n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.

2. Leave Project clean and ready for occupancy.

3. Evaluation of cleaning will be part of Punchlist review.

3.3 CLEANING AFTER PUNCH LIST REPAIR WORK

A. Provide cleaning after punch list repair work by professional cleaners to provide same level of cleaning as Final Cleaning per paragraph 3.2 above.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, and applicable parts of DIVISION 1 – GENERAL REQUIREMENTS, as listed in the Table of Contents, shall be included in and made a part of this Section.

1.2 SUMMARY

A. This Section specifies requirements for the Contractor’s implementation of waste management controls and systems for the duration of the Work.

B. Related Sections include the following:
   1. Section 01 50 00, TEMPORARY FACILITIES AND CONTROLS.

1.3 INTENT

A. This Section specifies requirements for the General Contractor’s implementation of waste management controls and systems for the duration of the Work.

B. It has been established that this Project shall generate the least amount of waste practical and that processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors shall be employed.

C. Of the waste that is generated, as many of the waste materials as economically feasible shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized to the greatest extent practical.

D. The General Contractor shall develop a Waste Management Plan for this Project.

E. Each subcontractor shall be responsible for segregating their own waste as directed by the General Contractor.

F. The General Contractor shall be responsible for ensuring that debris will be disposed of at appropriately designated licensed solid waste disposal facilities.

1.4 WASTE MANAGEMENT PLAN:

A. Waste Management Plan:
Within 10 calendar days after receipt of Notice to Proceed, the General Contractor shall provide a plan containing the following:

a. Analysis of the proposed jobsite waste to be generated, including types and rough quantities.

b. Landfill Options:
   i. The name of the landfills where trash and building debris will be disposed of, the applicable landfill tipping fees, and the projected cost of disposing of all Project waste in the landfills.

c. Landfill Certification:
   i. General Contractor’s statement of verification that landfills proposed for use are licensed for types of waste to be deposited and have sufficient capacity to receive waste from this project.

d. Alternatives to Disposal at Landfill:
   i. A list of each material proposed to be salvaged or recycled during the course of the Project.
   ii. Include the following and any additional items proposed:
       • Cardboard.
       • Clean dimensional wood.
       • Beverage containers.
       • Concrete.
       • Gypsum Board
       • Asphalt.
       • Metals from framing, banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass and bronze.
       • Mechanical and electrical equipment.
       • Building components which can be removed relatively intact from existing construction.

e. Meetings:
   i. A description of the regular meetings to be held to address waste management.

f. Materials Handling Procedures:
   i. A description of the means by which any waste materials identified above will be protected from contamination, and a description of the means to be employed in recycling the above materials consistent with requirements for acceptance by designated facilities.

g. Transportation: A description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site) and destination of materials.
B. Summary Report:
1. Prior to Substantial Completion, the Contractor shall submit a written Waste Management Report summarizing the types and quantities of materials recycled and disposed of under the Waste Management Plan.
2. Also include the name and location of disposal facilities.

C. Recycling
1. Refer to the Massachusetts Recycling Directory available at the Massachusetts State Bookstore (617-727-2834) in the State Capital Building for recycling operations within the State.
2. Metal, including but not limited to aluminum, steel, and reinforcing steel shall be recycled.
3. Wood that is not painted and does not contain preservatives (i.e. creosote, arsenic, and chromium-containing preservatives) shall be segregated and recycled.

1.5 WASTE MANAGEMENT PLAN IMPLEMENTATION:

A. Manager:
1. The General Contractor shall designate an on-site person responsible for instructing workers and overseeing and documenting results of the Waste Management Plan for the Project.

B. Distribution:
1. The General Contractor shall distribute copies of the Waste Management Plan to the Job Site Foreman, each subcontractor, the Owner and the Architect.

C. Instruction:
1. The General Contractor shall provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the Project.

D. Separation Facilities:
1. The General Contractor shall layout and label a specific area to facilitate separation of materials for recycling, salvage, reuse, and return. Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid contamination of materials.
2. Location of separation areas shall be acceptable to the Owner.

END OF SECTION
PART 1 – GENERAL

1.1 SUMMARY

A. This section specifies requirements for Substantial Completion, including:
   1. Substantial Completion.
   2. Progress Punch List Inspections.
   3. Re-inspection fees.
   4. Project Record Documents.
   5. Operation and Maintenance Manuals and Warranties.
   6. Submittal of spare parts and maintenance materials.
   7. Owner training.

1.2 SUBSTANTIAL COMPLETION AND SUBSTANTIAL COMPLETION PROCESS:

A. Definition of Substantial Completion:
   1. For the purposes of this project: “The time and day when construction has substantially met the requirements of the Construction Documents and construction allows the Owner to legally use the project anywhere and everywhere for the Owner’s intended purpose.”

B. The General Contractor shall organize a Substantial Completion meeting and walkthrough with the Owner and Architect.
   1. After the walkthrough, declaration of Substantial Completion will be determined.
   2. Complete final cleaning of the work or of the portion of the work which is designated for Substantial Completion, as specified in Section 01 74 00 “PROGRESS, FINAL CLEANING AND POST PUNCH LIST REPAIR CLEANING”, prior to the Substantial Completion walkthrough.

C. Submit the following a minimum of two business days prior to or at the time and date of Substantial Completion:
   1. Certifications, testing reports, and preliminary balancing reports, and similar information substantiating that project conforms to the requirements of the Contract Documents.
   2. Commissioning reports, if any.
   3. Final meter readings, if applicable.
   4. Application for reduction of retainage (and consent of surety if applicable).
   5. List of Incomplete Work which will be recognized as exceptions which will be appended to Architect’s Certificate of Substantial Completion.
6. One copy of each warranty required by the Contract Documents, in the name of the Owner, endorsed by the General Contractor, and in a form reasonably acceptable to the Architect. (The Architect will accept unbound warranties at this time; these warranties will be returned to the General Contractor for binding into the binders specified in this Section).

7. Draft Operation and Maintenance Manuals consistently organized into suitable bound and indexed sets.

8. Owner training complete with a written certification of same signed by the General Contractor and the Owner.

9. Checklist of activities and deliverables required for Substantial Completion and Final Completion including mutually agreeable dates.

10. Typed list of major subcontractors and suppliers with addresses and emergency telephone numbers.

11. Project Record Documents

12. Confirmation of closed Exceptions and Rolling Punch List items.

13. Written statement from the General Contractor certifying that all hazardous materials associated with the work performed or brought to the jobsite by construction personnel as required to execute the work has been removed and/or disposed of properly.
   a. Provide a list of any hazardous materials that will remain on the site that are specifically required to perform


15. Architect will verify that a statement regarding hazardous materials has been provided prior to issuing Certificate of Substantial Completion.

16. Submit written certification to the Architect that the Project or designated portion thereof, has achieved Substantial Completion.
   a. Include contractor’s Punch List and list of Incomplete Work.
   b. If the Architect agrees that the Project has achieved Substantial Completion, the Architect will take the following actions:
      i. Review the work of the project determined by the General Contractor as Substantially Complete and prepare an additional list of items that the Architect requires to be completed or corrected ("Punch List"), as determined by the inspection(s).
      ii. Prepare and issue a Certificate of Substantial Completion on a form provided by the Architect, including:
         • Date of Substantial Completion.
         • Punch List with monetized values for each item. Include items from the walk through with the Owner and Architect.
         • Schedule for completion of Punch List items provided by the Contractor.
         • Date and time on which the Owner will occupy the Work or designated portion thereof.
         • Responsibilities of the Owner and General Contractor for transfer of insurance, utilities, operation of
mechanical and electrical systems, maintenance, cleaning, and security.

- Signatures of Architect, General Contractor, and Owner.
- The Contractor shall complete punch list work in accordance with the schedule for completion as defined in Item above.

c. Should Architect consider the work to be less than substantially complete, the Architect will:
   
   i. Promptly notify the General Contractor in writing, listing incomplete or defective work.
   
   ii. The General Contractor shall take immediate steps to correct the remaining item and send a second written certification that work is substantially complete.
   
   iii. The Architect will re-inspect the work.

d. Warranties required by the Contract Documents for work cited as not substantially complete shall commence when such work is accepted as substantially complete.

e. Remove construction facilities and temporary controls, except those that are required to complete incomplete work.

f. Architect will verify that Project Record Documents are complete and accurate.

17. Warranties:

a. Submit all warranties with a Warranty Summary Sheet identifying Section, Item, Warranty Start, Warranty End, Warranty Holder.

b. All Warranties will be in the name of the Owner.

1.3 MULTIPLE SUBSTANTIAL COMPLETION PUNCH LIST INSPECTIONS/MULTIPLE SUBSTANTIAL COMPLETION PROCESSES:

A. In the event multiple Substantial Completion Punch List Inspections are required prior to Substantial Completion, the requirements of this Section apply.

B. The Architect has included in his fee time for a single Substantial Completion Process including associated inspections.

1. If, due to decisions made solely by the General Contractor, the General Contractor requires multiple Substantial Completion Processes and/or multiple Substantial Completion Punch List Inspections prior to Substantial Completion, the Architect will proceed on an hourly basis.

2. The hourly fees will be in accordance with the schedule of fees and charges appended to the Architect-Owner Agreement, or in the absence thereof, the hourly rate in effect at the time of the multiple Substantial Completion Processes and/or multiple Substantial Completion Punch List Inspections request.
3. If the General Contractor invokes multiple Substantial Completion Processes and/or multiple Substantial Completion Punch List Inspections, the General Contractor thereby accepts the conditions of this paragraph B in its entirety.

C. General Contractor produces "Progress Punch List Schedule" of subdivided project areas or systems to coordinate with construction sequence.

E. This Schedule will establish dates when each area will be substantially complete and ready for "Progress Punch List" inspection.

F. General Contractor submits "Progress Punch List Schedule" to Architect for review and comment.

G. Mutually agreeable "Progress Punch List Schedule" is established.

H. For each area or system, General Contractor submits to Architect and Owner “Request For Progress Punch List Inspection” per established "Progress Punch List Schedule" with "General Contractor’s Punch List" for that area or system.
   1. Notification includes date when inspection is requested. Notification will be issued a minimum of 2 days prior to requested inspection date.
   2. Should Architect consider the Work to be less than substantially complete, the Architect will promptly notify the General Contractor in writing, listing incomplete or defective Work.
      a. The General Contractor shall take immediate steps to remedy deficiencies.
      b. The General Contractor will then send a second written certification that work is substantially complete.
      c. If the Architect considers the area or system substantially complete, the Architect will re-inspect the area or system.
   3. Not later than 5 days of the requested inspection date, the Architect will amend the “General Contractor’s Punch List with additional observations and return it electronically to the General Contractor as the “Progress Punch List.”
      a. Architect’s Progress Punch List will include room name, room number, date of inspection, and observation.
      b. General Contractor completes "Progress Punch List" for each area with item numbers, building zone, Punch List item completion date, and subcontractor added and distributes to the Architect.
      c. "Progress Punch List" for each area is compiled into a comprehensive "Master Progress Punch List" as each area is completed.
      d. The "Master Progress Punch List" will be maintained and managed by the General Contractor.
      e. General Contractor to coordinate with Architect for sign-off of completed "Master Progress Punch List" items after sign-off by subcontractor and General Contractor.
I. At the time of Project Substantial Completion, remaining "Master Progress Punch List" items and any additional Punch List items are compiled into and become “The Punch List” with anticipated completion dates and attached to The Certificate of Substantial Completion.

1.4 RE-INSPECTIONS FEES:

A. When the Architect is caused to perform more than the following inspections due to failure of Work to comply with the Contract Documents and or a single date of Substantial Completion or incomplete work, the General Contractor, through the Owner will compensate the Architect for such additional services on an hourly basis. The hourly fees will be in accordance with the schedule of fees and charges appended to the Architect-Owner Agreement, or in the absence thereof, the hourly rate in effect at the time of the multiple Progress Punch List Inspection Requests.

B. The following represent the inspections for which time is allocated in the Architect’s fee:

1. Progress Punch List Inspection:
   a. The Architect will append observations to the General Contractor’s written and typed Punch List.

2. Substantial Completion Punch List Inspection:
   a. The Architect will review corrections called for in the combined General Contractor’s Punch List with the appended observations by the Architect.

3. Final Completion Inspection:
   a. The Architect’s final inspection immediately prior to the Certificate of Final Completion.

C. Costs for additional inspections will be billed to the Owner by the Architect. Such amounts will be deducted from the Contract Sum payable to the General Contractor.

1. The Architect will notify both the Owner and General Contractor prior to making additional inspections.

1.5 PROJECT RECORD DOCUMENTS:

A. Project Record Documents are not As-Built Documents. (See below of As-Built Documents).

B. Documents and Samples on the Site:

1. General Contractor to keep on file at job site one complete set of up-to-date Contract Documents, including drawings and specifications, addenda, shop drawings and product data, testing data, change orders, field orders, and other modifications.

2. At Substantial Completion, these documents and samples shall be referred to as the Project Record Documents.
3. During Construction, store Project Record Documents neatly and securely, in files or on racks, clearly indexed by trade activity or Specification Section.

4. Do not use Project Record Documents for construction purposes.

C. On the Project Record Documents, legibly mark significant field changes such as following, using colored pencils, or felt-tipped pens, assigning a different color to each trade.
   1. Require Fire Protection, Mechanical Plumbing, Fire Detection, Voice Data and Electrical trades to mark up their own work on these Record Documents.
      a. Drawings: Locations of concealed utilities, changes in field dimensions and details, changes resulting from change order or field order, and details not on original drawings.
      b. Keep mark-up Drawings set up to date.

D. The Architect may request to review the Project Record Documents at any time during the project.
   1. Submit the Project Record Documents as requested to Architect who shall, after review for completeness, not for content return them to the General Contractor.
   2. The General Contractor and its Sub-Contractors are solely responsible for the content and accuracy of the Project Record Documents.
   3. Keeping the Project Record Documents up to date is a requirement of the Contract and shall be considered when the Architect is reviewing Payment Requisitions.

1.6 AS-BUILT DOCUMENTS:

A. Obtain from the Architect, at the General Contractor’s expense, a clean set of As-Designed CAD files.

B. The General Contractor shall modify the As-Designed Documents to show all modifications, changes, decisions, clarifications, actual dimensions and locations, and similar information as recorded on the Project Record Drawings.

C. The General Contractor shall verify actual field conditions and make changes necessary to record actual construction in place.
   1. The General Contractor and Sub-Contractors from each trade shall be responsible for producing accurate As-Built drawings of Work.

D. As-Built Document Submittal Requirements:
   1. The General Contractor shall collect As-Built Documents from all subcontractors, review documents for completeness.
   2. The General Contractor shall compile all subcontractor As-Built Documents into one complete set in electronic format.
3. The General Contractor shall submit two blackline print sets and one electronic copy of the As-Built Documents to the Architect for review.

4. The Architect shall review the As-Built Document submittal for format only.

5. The General Contractor and his Sub-Contractors is solely responsible for the content and accuracy of the As-Built Documents.

6. Submit As-Built Documents to the Owner in the following quantities:
   a. Owner: Two hard copies and one electronic copy.

1.7 OPERATION AND MAINTENANCE MANUALS, SPARE PARTS, AND WARRANTIES

A. Prior to Substantial Completion, submit to the Architect the intended table of contents of the Operation and Maintenance (O&M) Manuals that the General Contractor intends to submit to the Owner.
   1. Upon acknowledgement by the Architect that the intended table of contents is complete, reasonable organized, and satisfies the Specifications, submit a draft of the Operation and Maintenance Manuals, list of warranties, and list of spare parts.
   2. Generally, include operation and maintenance information for all items of equipment, and maintenance information for all products which may require special care, such as carpet, special finishes, whether or not not a submittal is specifically required by the technical sections of these Specifications.
      a. Include CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT PLAN as identified in Section 01 35 46.
      b. Include instructions for installation, start-up, operation, inspections, maintenance, parts lists, and data sheets.
      c. On manufacturer's printed literature, where the literature covers more than one model, indicate by check-mark or circle in ink the correct model number and data for the model number.

B. Organize the Operation and Maintenance Manuals as follows:
   1. Bind in 3-ring binders with vinyl cover.
   2. Cover and Spine:
      a. Identify each volume number (i.e. 1 of 12) on front and spine with typed or printed title "OPERATION AND MAINTENANCE MANUAL," title of Project, date, identity of subject matter covered in each particular volume.
      b. On spine, place information so it reads "right side up" when the binder cover faces up.
   3. Inside Cover/Title Page:
      a. Repeat information on the cover and identify the General Contractor
   4. Table of Contents:
      a. For each volume, arranged in CSI Division and Section as per the Specification order, neatly typewritten.
      b. Organize information by systems, following the sequence of the Table of Contents of the Project Manual.
5. Separate products and system within the binder by tabbed and labeled dividers.
6. If binder contains information on products or systems from more than one Division of the Specifications, provide separate labeled tab for each Division.
7. For each item or system, include the name, address and phone number of the subcontractor who furnished and/or installed the equipment, the name(s) and telephone numbers of the subcontractor's representative to be contacted in the event of an emergency, and the name, address and phone number of the nearest service facility authorized by the manufacturer.
8. List of extended or special warranties, with a summary of the duration of the warranty.
   a. This information shall immediately follow the Table of Contents.
9. List of spare parts incorporated in appropriate divisions.

C. Require each manufacturer to prepare/provide information on its own products. In those instances where equipment or controls are job-assembled by a subcontractor, then require that subcontractor to prepare maintenance instructions.

D. Information for complex systems, such as the elevator, may be separately bound. Include a tabbed divider for the system and insert a page directing the reader to the separate volume; or include a clear cross reference in the table of contents.

E. Warranties and Guarantees:
   1. Assemble one fully executed copy of each warranty, bond, and service and maintenance contract.
   2. Warranties required are specified in the respective Specification sections.

F. Submittal:
   1. Submit one review copy of the fully compiled O&M Manual in final form to the Architect.
   2. The Architect will review for completeness and organization only.
      a. The content accuracy and detail of the O&M Manual is solely the responsibility of the General Contractor.

1.8 ATTIC STOCK, SPARE PARTS, AND MAINTENANCE MATERIALS AS SPECIFIED

A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual Specification Sections.
   1. Where Attic Stock, Spare Parts, and Maintenance Materials, are specified, identify the following in the O&M Manual:
      a. Description
      b. Quantity
      c. Detail
      d. Spare parts shall be neatly wrapped or packaged in standard sizes and clearly labeled with content and date.
B. Deliver to Project site and place in location as directed by Owner.
   1. Obtain approval from the Owner prior to Final Completion.
   2. Approval will be in the form of the fully executed Provide Attic Stock Certification.

C. Provide Attic Stock Certification.
   1. Insert Provide Attic Stock Certification in O&M Manual in the position of this Section 01 77 20.

1.9 OWNER TRAINING:

A. Where Specifications require that General Contractor provide training for the Owner's personnel, provide such training in accordance with this Article and prior to the date of Substantial Completion.

B. General Contractor shall provide a training schedule.

C. Schedule training at least seven days in advance, and at a time convenient for the Owner, when the appropriate trainees will be available.

D. Provide for the Owner's use, a draft of the relevant Operations and Maintenance Manual (O&M Manual) during training.

E. Record the training sessions on video for subsequent use by the Owner.

F. When training is complete, prepare and submit to the Architect for the Owner's records, a report of the training.
   1. Include project name, name and address of the General Contractor and of the Sub-Contractor or individual providing the training, brief description of the item or system which was the subject of the training, dates, times and duration of the training, and names and job identification or title of Owner's personnel in attendance.
   2. Briefly report on activities or events occurring during the training period, describing problems or questions that arose (if any) and how these were resolved.

G. Provide Executed Training Certificate.
   1. Execute Training Certificate and insert in the O&M Manual in the position of this Section 01 77 20.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF SECTION
<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Product/Item</th>
<th>Prepared By</th>
<th>To</th>
<th>When</th>
<th>Spec Ref.</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Certificate of Substantial Completion</td>
<td>Architect</td>
<td>Contractor</td>
<td>Concludes Substantial Completion Phase</td>
<td>Section 01 77 20; Para 1.2.G.</td>
<td>Must be preceded by a request form the Contractor. See Item #24.</td>
</tr>
<tr>
<td>2</td>
<td>Certifications, Testing Reports, Preliminary Balancing Reports</td>
<td>Contractor</td>
<td>Architect</td>
<td>Substantial Completion or later if agreeable by Architect</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Submit not later than 14 calendar days after receipt of Certificate of Substantial Completion is received from Architect. Absence of a Report will be recorded as an Exception after the date of Substantial Completion.</td>
</tr>
<tr>
<td>3</td>
<td>Short form Commissioning Reports</td>
<td>Contractor</td>
<td>Architect</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Commissioning shall be complete prior to Substantial Completion</td>
</tr>
<tr>
<td>4</td>
<td>Changeover Documentation related to Owner’s Occupancy and Use, (including final meter readings if applicable)</td>
<td>Contractor</td>
<td>Owner</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Architect will review, but not for accuracy.</td>
</tr>
<tr>
<td>5</td>
<td>Application for Reduction of Retainage and Consent of Surety</td>
<td>Contractor</td>
<td>Owner/Architect</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Earlier application will be considered based on Contractor performance.</td>
</tr>
<tr>
<td>6</td>
<td>List of items to be corrected and List of items to be completed prior to Final Completion</td>
<td>Contractor</td>
<td>Architect</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>To be Submitted as Contractor’s “Punch List” (Submitted along with request to Architect for Substantial Completion). Contractor’s Punch List List of Incomplete Work shall be submitted immediately after last sub-contractor is retained. May be submitted loose to Architect. Architect will return loose warrants to be included in O&amp;M manuals.</td>
</tr>
</tbody>
</table>
| 7       | Copy of Each Special Warranty in the name of the Owner, endorsed by the Contractor | Contractor        | Owner               | Substantial Completion            | Section 01 77 20; Para 1.2.D. | Complete Checklist of Activities and Deliverables required for Substantial Completion and Final Completion. List of completed work shall be submitted immediately after last sub-contractor is retained. When punch list work is submitted together at the time of Request for Substantial Completion from the Contractor. 

**SUBSTANTIAL COMPLETION - PROCEDURES MATRIX**

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Product/Item</th>
<th>Prepared By</th>
<th>To</th>
<th>When</th>
<th>Spec Ref.</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Draft Operation and Maintenance Manuals</td>
<td>Contractor</td>
<td>Architect</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Architect to review and comment.</td>
</tr>
<tr>
<td>9</td>
<td>Training Report</td>
<td>Contractor</td>
<td>Owner/Architect</td>
<td>Must be completed prior to receipt of Certificate of Occupancy.</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Requires sign-off by Owner</td>
</tr>
<tr>
<td>10</td>
<td>Complete Checklist of Activities and Deliverables required for Substantial Completion and Final Completion.</td>
<td>Contractor</td>
<td>Architect</td>
<td>Checklist and schedule shall be submitted immediately after last sub-contractor is retained.</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Checklist to include schedule with milestones.</td>
</tr>
<tr>
<td>11</td>
<td>TypedList of Major Subcontractors and Supplier with addresses and Emergency Telephone Numbers</td>
<td>Contractor</td>
<td>Owner/Architect</td>
<td>List shall be submitted immediately after last sub-contractor is retained, and updated at Substantial Completion.</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Part of O &amp; M Manual</td>
</tr>
<tr>
<td>12</td>
<td>Project Record Documents</td>
<td>Contractor</td>
<td>Architect</td>
<td>Record Drawings shall be completed by Substantial Completion. Obtain As Designed Drawings from Architect.</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Obtain As-Designed drawing file from Architect at Substantial Completion to serve as a base for the As-Built Drawings. Submit As-Built drawings not less than 14 calendar days before the date of Final Completion.</td>
</tr>
<tr>
<td>13</td>
<td>Written statement from the Contractor regarding hazardous materials</td>
<td>Contractor</td>
<td>Architect</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Architect will verify that a statement regarding hazardous materials has been provided prior to issuing Certificate of Substantial Completion.</td>
</tr>
<tr>
<td>14</td>
<td>List of closed exceptions</td>
<td>Architect</td>
<td>Contractor</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>To obtain Final Completion, all exceptions must be closed.</td>
</tr>
<tr>
<td>15</td>
<td>Arrange with Owner for Changeover from Construction Keying to Permanent Final Keying</td>
<td>Contractor</td>
<td>Owner</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Coordinate with Owner Facility Manager.</td>
</tr>
<tr>
<td>16</td>
<td>Architect receives request for Substantial Completion from Contractor. Contractor's Punch list and List of Incomplete Work is submitted together at the time of Request for Substantial Completion from the Contractor.</td>
<td>Contractor</td>
<td>Architect</td>
<td>To Initiate Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.D.</td>
<td>Request for Substantial Completion is a precedent for item #1.</td>
</tr>
<tr>
<td>17</td>
<td>Architect (and Owner if Owner wishes) Reviews Completed Work.</td>
<td>Owner/Architect</td>
<td>N/A</td>
<td>Within One Week after Receipt of Notification required under Item 14, above. Prior to issuance of G704.</td>
<td>Section 01 77 20; Para 1.2.B.</td>
<td>Review is predicated on receipt of Contractor’s Punch List and List of Incomplete Work.</td>
</tr>
<tr>
<td>18</td>
<td>Architect appends a list of items to be completed or corrected (Punch List) to the Contractor’s Punch List. List is compiled as determined by review.</td>
<td>Architect</td>
<td>Contractor</td>
<td>Upon notification (multiple notifications may be appropriate)</td>
<td>Section 01 77 20; Para 1.2.G.</td>
<td>Architect and CM to agree on format and management in advance.</td>
</tr>
<tr>
<td>19</td>
<td>Architect prepares a Certificate of Substantial Completion AIA G-704</td>
<td>Architect</td>
<td>Owner/Contractor</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.G.</td>
<td>Signed by CM, Owner and Architect. See specific action items regarding Insurance; Security; Maintenance; Heat/HVAC; Utilities; and Damage.</td>
</tr>
<tr>
<td>20</td>
<td>Contractor Completes Punch List Work in accordance with agreed-on Schedule that is part of the Architect prepared Certificate of Substantial Completion.</td>
<td>Contractor</td>
<td>Architect</td>
<td>Completion of all Punch List work and Incomplete work is a prerequisite for Final Completion</td>
<td>Section 01 77 20; Para 1.2.G.</td>
<td>All punch list work managed by Contractor based on written punch list.</td>
</tr>
<tr>
<td>21</td>
<td>If Architect determines that Work is Less than Substantially Complete, Architect will notify Contractor in Writing Listing Incomplete or Defective Work.</td>
<td>Architect</td>
<td>Contractor</td>
<td>Will delay Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.H.</td>
<td>See Remark above.</td>
</tr>
<tr>
<td>22</td>
<td>Remove construction facilities and temporary controls (except those that are required to complete incomplete work)</td>
<td>Contractor</td>
<td>During Substantial Completion</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.J.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Architect will verify that Project Record Documents are complete and accurate.</td>
<td>Architect</td>
<td>CM</td>
<td>During Substantial Completion, prior to issuing a certificate of Substantial Completion</td>
<td>Section 01 77 20; Para 1.2.K.</td>
<td></td>
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<td>Ref. No.</td>
<td>Product/Item</td>
<td>Prepared By</td>
<td>To</td>
<td>When</td>
<td>Spec Ref.</td>
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<td>24</td>
<td>Submit written certification to the Architect that the Project or designation portion thereof, has achieved Substantial Completion. Include Contractor's Punch List and List of Incomplete Work: Refer to Article 9 of AIA Document A201, General Conditions of the Contract of Construction.</td>
<td>Contractor</td>
<td>Architect</td>
<td>If accepted by the Architect, will initiate Substantial Completion.</td>
<td>Section 01 77 20; Para 1.2.F.</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Complete “Punch List” items recognized as an exception to substantial completion.</td>
<td>Contractor</td>
<td>Substantial Completion</td>
<td>Section 01 77 20; Para 1.3.G.</td>
<td>Refer to Item #6</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Architect will re-inspect work to determine whether it is complete.</td>
<td>Architect</td>
<td></td>
<td>Section 01 77 20; Para 1.3 &amp; 1.4</td>
<td></td>
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</tbody>
</table>
PART 1 - GENERAL

1.1 SUMMARY

A. This section specifies requirements for Project Closeout / Final Completion, including:
   1. Final Completion.
   2. Final Completion Inspections.
   3. Final As-Built Documents.

1.2 FINAL COMPLETION:

A. General Contractor shall submit written certification to the Architect that the Project has been completed in accordance with the Contract Documents, including punch list items, and is ready for Final Inspection.

1.3 ARCHITECT’S FINAL INSPECTION

A. The Architect will make a single final inspection within one week after receipt of the General Contractor’s certification, or as otherwise agreed upon in specific instances.

B. Should the Architect consider that the Project has achieved Final Completion in accordance with the Contract Documents:
   1. The Architect will ask the General Contractor to make Project closeout submittals required for Final Completion.

C. Should the Architect consider that the Project has not achieved Final Completion:
   1. The Architect will immediately notify the General Contractor stating reasons, and the General Contractor shall immediately complete the Work, request inspection, and otherwise comply with this Contract.

1.4 CLOSEOUT SUBMITTALS:

A. The General Contractor shall prepare closeout submittals and submit to the Owner with a copy to the Architect prior to Final Completion, allowing sufficient time for Owner review in accordance with a mutually agreeable schedule:
   1. Final As-Built Documents.
   2. Final balancing reports.
   3. Project warranties (guarantees) and maintenance agreements, assembled in binders in accordance with Section 01 77 20, “SUBSTANTIAL COMPLETION”.
   4. Final completed Project Operation and Maintenance Manuals assemble in binders in accordance with Section 01 77 20, “SUBSTANTIAL COMPLETION”.

01 77 30
PROJECT CLOSE-OUT and FINAL COMPLETION
Page 1 of 3
5. Spare parts neatly wrapped or packaged in standard sizes and clearly labeled.
6. Building location survey for new construction, if required by local authority or the Owner.
7. Certificate of insurance for products and completed operations.
8. Consent of Sureties to Final Payment for Performance and Payment Bonds furnished under this Contract.
9. An affidavit that all bills and indebtedness connected with the Work have been paid.
10. Waivers of lien from all subcontractors and suppliers, or a bond satisfactory to the Owner indemnifying Owner against all liens or other claims.
11. Proof that taxes, fees and similar obligations have been paid.
12. Additional changeover documentation which may be required by Owner's lender and Owner's property insurer.
13. All Approved Submittals organized by Specification Sections.
15. Comprehensive list documenting manufacturer, model number and color for all building finishes, loose furniture and system furniture (if any) installed as part of the General Contractor's work on the project.
16. Comprehensive list documenting all lamps and ballasts installed on the project.
17. A final written statement from the General Contractor certifying that all hazardous materials associated with the work performed or brought to the jobsite by construction personnel as required to execute the work has been removed and/or disposed of properly.
   a. Provide a list of any hazardous materials that will be turned over to the Owner as Attic Stock.
   b. Do not submit the same statement required during Substantial Completion.
18. The General Contractor shall provide a list of material and equipment bought under the General Conditions. The Owner shall have the right to take possession of this material and equipment. The General Contractor shall have the option to purchase the material and equipment at the Owner’s discretion.

B. Complete all incomplete work recognized as an exception to Substantial Completion (“Punch-List” items).

C. Remove remaining construction facilities and temporary controls.

D. Re-clean, if necessary, to standards specified in in Section 01 74 00 “PROGRESS AND FINAL CLEANING”.
   1. Remove surplus materials and rubbish.

E. The Architect will re-inspect as part of Final Completion Inspection to determine whether it is complete.

F. Submit Final Application for Payment to the Owner.
G. The Architect’s signature to the Final Application for Payment identifies successful Final Completion and closes out the Project.

1. Upon successful Final Completion, the Architect will issue a Letter of Final Completion to both the Owner and the General Contractor with a copy retained for the Architect’s files.

1.5 FINAL COMPLETION CLOSEOUT PROCEDURES MATRIX

A. The Project Closeout / Final Completion Closeout Procedures Matrix will be reviewed with the Contractor at the time of Substantial Completion.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF SECTION
<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Product/Item</th>
<th>Developed By</th>
<th>To</th>
<th>When</th>
<th>Spec Ref.</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>1</td>
<td>Contractor shall submit written certification to the Architect that the Project has been completed in accordance with the Contract Documents, including punch list items, and is ready for final completion.</td>
<td>Contractor</td>
<td>Architect</td>
<td>Final Completion</td>
<td>Section 01 77 30; Para 1.2A</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>If Architect determines that Project has achieved final completion in accordance with the contract documents, the architect will ask the contractor to make project closeout submittals.</td>
<td>Architect</td>
<td>Contractor</td>
<td>Prior to Final Completion</td>
<td>Section 01 77 30; Para 1.2.B.1.</td>
<td>Architect to make written request of CM for final closeout documents</td>
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<tr>
<td>3</td>
<td>If Architect determines that the Project has not achieved final completion, Architect will notify contractor in writing stating the reasons.</td>
<td>Architect</td>
<td>Contractor</td>
<td>Prior to Final Completion</td>
<td>Section 01 77 30; Para 1.2.B.2.</td>
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<tr>
<td>4</td>
<td>Prepare Closeout Submittals and submit to Architect prior to end of final completion allowing sufficient time for review (mutually agreeable schedule)</td>
<td>Contractor</td>
<td>Architect</td>
<td>Submit in advance of Final Completion such that Architect has sufficient time to review and comment. Allow for re-submittals as required.</td>
<td>Section 01 77 30; Para 1.2.C.</td>
<td>Organize into indexed and labeled 3-ring binders with matching spines and covers. Include cross-referenced tables of contents. Organize by CSI Section.</td>
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<td>a. As-Built Documents</td>
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<td>b. Final Balancing Reports</td>
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<td>c. Project Warranties (Guarantees) and Maintenance Agreements made out in the name of the Owner.</td>
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<td>d. Completed Project Operation and Maintenance Manuals</td>
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<td>e. Spare Parts (if any) delivered to Owner.</td>
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<td>f. Building Location Survey</td>
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<td>g. Certificate of Insurance for Products and Completed Operations</td>
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<td>h. Consent of Sureties to Final Payment for Performance and Payment Bonds</td>
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<td>i. Affidavit that all bills and indebtedness connected with work has been paid.</td>
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<td>j. Waivers of lien from all subcontractors and suppliers, or at option of the Owner a Lien Waiver Bond indemnifying Owner against all liens or other claims.</td>
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<td>k. Proof that taxes, fees, and other obligations have been paid by the Contractor.</td>
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<td>l. Additional changeover documentation required by Owner, Owner's lender, and Owner's property insurer.</td>
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<td></td>
<td>m. Approved submittals organized by specification section</td>
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<td></td>
<td>n. Attic stock certification (if any).</td>
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<td>o. Comprehensive list documenting manufacturer, model number and color for all building finishes, loose furniture and system furniture installed on the project.</td>
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<td></td>
<td>p. Comprehensive list documenting all lamps and ballasts installed on the project.</td>
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<td></td>
<td>q. Written statement from the Contractor regarding hazardous materials.</td>
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<tr>
<td>5</td>
<td>Complete Incomplete Work recognized as an exception to Substantial Completion (&quot;Punch List&quot; items). The Architect will re-inspect to determine whether it is complete.</td>
<td>Contractor</td>
<td>Final Completion</td>
<td>Section 017 7 30; Para 1.2D</td>
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</tr>
<tr>
<td>6</td>
<td>Warranties for Work cited as Not Substantially Complete shall commence when work is accepted as substantially complete</td>
<td>Contractor</td>
<td>Owner</td>
<td>Final Completion</td>
<td>Section 01 77 20; Para 1.2.I.</td>
<td>All other warranties begin at substantial completion.</td>
</tr>
<tr>
<td>Ref. No.</td>
<td>Product/Item</td>
<td>Developed By</td>
<td>To</td>
<td>When</td>
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<tr>
<td>7</td>
<td>Remove remaining construction facilities and temporary controls.</td>
<td>Contractor</td>
<td></td>
<td></td>
<td>Section 01 77 30; Para 1.2.E.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Re-clean (if necessary) to Standards for Final Cleaning. Remove Surplus Materials and Rubbish.</td>
<td>Contractor</td>
<td></td>
<td></td>
<td>Section 01 77 30; Para 1.2.F.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Submit list of material and equipment bought under the General Conditions. The Owner shall have the right to take possession of this material. The Contractor shall have the option to purchase the material and equipment at the Owner's discretion.</td>
<td>Contractor</td>
<td>Architect</td>
<td>Final Completion</td>
<td>Section 01 77 30; Para 1.2.C.17</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Remove Construction Sign</td>
<td>Contractor</td>
<td></td>
<td>Immediately Prior to the Conclusion of the work</td>
<td></td>
<td>Contractor shall arrange for legal disposal of Construction Sign</td>
</tr>
<tr>
<td>11</td>
<td>Submit Final Application for payment.</td>
<td>Contractor</td>
<td>Architect</td>
<td>Final Completion</td>
<td>Section 01 77 30; Para 1.2.G and Section 01 29 00</td>
<td>Include Contractor's request for final retainage</td>
</tr>
<tr>
<td>12</td>
<td>Sign Final requisition and submit Architect's Final Completion Letter.</td>
<td>Architect</td>
<td>Contractor and Owner</td>
<td>Conclusion of the Project</td>
<td>Section 01 77 30; Para 1.2.G and Section 01 29 00</td>
<td>Architect's signature on the Final Application for Payment identifies successful Final Completion and closes out the Project. The Architect's Final Completion Letter is a non contractual formality</td>
</tr>
</tbody>
</table>
PART I - GENERAL

1.01 GENERAL PROVISIONS

A. General Conditions, Supplementary Conditions and applicable parts of Division 1 form a part of this specification and the Contractor shall consult them in detail for instructions.

B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.02 RELATED WORK UNDER OTHER SECTIONS

A. Environmental Procedures

1.03 DESCRIPTION OF WORK

A. The work includes the complete removal and disposal of all asbestos containing materials (ACM) as indicated in Part 3 of this Section.

B. The General Contractor shall retain the services of a Massachusetts licensed asbestos abatement contractor and shall include in his scope of work all required services included in Part 3.

1.04 POTENTIAL ASBESTOS HAZARD & DEBRIS

A. Where in the performance of the work, workers, supervisory personnel, subcontractors, or consultants may encounter, disturb, or otherwise function in the immediate vicinity of any identified ACM, take appropriate continuous measures as necessary to protect all building occupants from the potential hazard of exposure to airborne asbestos. Such measures shall include the procedures and methods described herein, and compliance with regulations of applicable federal, state and local agencies.

B. If the Contractor failed to comply with the requirements of the specifications, the Owner’s Representative (Industrial Hygienist) may present a written stop of work order. The Contractor must immediately and automatically stop all work until authorized in writing by the Industrial Hygienist to commence work. All costs related to delays shall be at the Contractor’s expense.

1.05 DEFINITIONS

A. Abatement: Procedures to control fiber release from ACM. Includes encapsulation, enclosure, and removal.

B. Air Monitoring: The process of measuring the fiber content of a specific volume of air in a stated period.

C. Area Monitoring: Sampling of asbestos fiber concentrations within the asbestos control area and outside the asbestos control area, which is representative of the airborne concentrations of asbestos fibers, which may reach the breathing zone.
D. Asbestos: The name given to several naturally occurring hydrated mineral silicates that possess a unique crystalline structure are incombustible and are separable into fibers. Asbestos includes Chrysotile, Crocidolite, Amosite, Anthophyllite, and Actinolite.

E. ACM: Any material containing more than 1% or greater by weight of asbestos of any type or mixture of types. State laws may vary in their definition of asbestos containing material.

F. Barrier: Any surface that seals off the work area to inhibit the movement of fibers.

G. Critical Barrier: A solid, asbestos impermeable partition erected to constitute a work area closure; the outer perimeter of an asbestos work area, usually erected across corridors or other open spaces to complete containment.


I. Enclosure: All herein specified procedures necessary to complete enclosure of all ACM behind airtight, impermeable, permanent barriers.

J. Friable Asbestos Material: Material that contains more than one percent asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

K. HEPA Filter: A High Efficiency Particulate Absolute (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in length.

L. Industrial Hygienist: An industrial hygienist certified in the Commonwealth of Massachusetts to perform air monitoring.

M. Removal: All herein specified procedures necessary to strip all ACM from the designated areas and to dispose of these materials at an acceptable site.

N. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.

O. Visible Emissions: Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

P. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and by afterwards disposing of these cleaning tools as asbestos contaminated waste.

Q. Work Area: Any area indicated on the Drawings as asbestos abatement areas or as areas containing friable asbestos material.

R. Worker Decontamination Enclosure System: A decontamination enclosure system for workers, typically consisting of a clean room, a shower room, and an equipment room.
1.06 STOP WORK

A. If the Owner or the Industrial Hygienist presents a written stop work order, immediately and automatically stop all work. Do not recommence work until authorized in writing by the Industrial Hygienist and or Designer.

1.07 CONTRACTOR'S USE OF THE EXISTING BUILDING

A. always Keep existing driveways and entrances serving the premises clear and available to the Owner and his employees. Do not use these areas for parking or storage of materials, unless authorized in writing by the Owner.

B. Smoking or open fires will not be permitted within the building enclosure or on the premises.

1.08 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. Provide a full time Site Supervisor for work under this Section with all appropriate state licenses, who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel and disposal procedures. This person is the Competent Person in accordance with 29 CFR 1926 for the Contractor and is the Contractor's representative responsible for compliance with all applicable federal, state and local regulations, particularly those relating to ACM. This person shall have completed a course at an EPA Training Center or equivalent certificate course in asbestos abatement procedures, have had a minimum of two years on the job training and meet all additional requirements set forth in 29 CFR 1926 for a Competent Person.

B. The Site Supervisor must be certified by the State of Massachusetts. Asbestos Contractor shall provide proof of such certification to the Industrial Hygienist not less than 10 days prior to commencing any work.

1.09 SPECIAL REPORTS

A. Except as otherwise indicated, submit special reports directly to the Industrial Hygienist within one day of occurrence requiring special report, with copies to all others affected by the occurrence.

B. When an event of unusual and significant nature occurs at the site (examples: failure of negative pressure system, rupture of temporary enclosures, unauthorized entry into work areas), prepare and submit a special report listing date and time of event, chain of events, persons participating, response by Contractor’s personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise the Industrial Hygienist in advance at earliest possible date.

C. Prepare and submit special reports of significant accidents, at the site and anywhere else work is in progress related to this project. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.
1.10 CONTINGENCY PLAN

A. Prepare a contingency plan for emergencies including fire, accident, power failure or any other event that may require modification of decontamination or work area isolation procedures. Include in the plan specific procedures for decontamination or work area isolation. A copy of the plan shall be submitted to and approved by the Industrial Hygienist prior to any work being done.

B. Post in the clean room of the decontamination unit and in the Contractor's office trailer telephone numbers and locations of emergency services including but not limited to fire, ambulance, doctor, hospital and police.

1.11 PERMITS AND NOTIFICATIONS

A. Secure necessary permits in conjunction with asbestos removal, hauling, and disposition and provide timely notification as may be required by federal, state, regional, and local authorities. Notify the Department of Environmental Protection (DEP) and the Massachusetts Department of Labor Standards (DLS) and provide copies of the notification to the Industrial Hygienist, Industrial Hygienist and the State Environmental Regulatory Agency 10 working days (Document Submission Date) prior to commencement of the work.

B. No later than the Document Submission Date, notify the local fire, police and Health Departments, in writing, of proposed asbestos abatement work. Advise the fire department of the nature of the asbestos abatement work, and the necessity that all firefighting personnel who may enter the work site in the case of fire wear self-contained breathing apparatus. Provide one copy of the notices to the Industrial Hygienist prior to commencing the work.

C. No later than the Document Submission Date, submit proof satisfactory to the Industrial Hygienist that all required permits, site location, and arrangements for transport and disposal of asbestos containing or contaminated materials, supplies, and the like have been obtained.

1.12 SAFETY COMPLIANCE

A. Comply with laws, ordinances, rules, and regulations of federal, state, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials.

B. Comply with the applicable requirements of the current issue of 29CFR 1926.1101 and 40CFR 61, Subparts A and B. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the work.

1.13 RESPIRATOR PROGRAM

A. Establish a respirator program by ANSI Z88.2 and 29 CFR 1926.1101 (h), I926.l03, and I910.134.
1.14 PERSONNEL PROTECTION

A. Prior to commencement of work, workers shall be instructed in and shall be knowledgeable of the hazards of asbestos exposure; use and fitting of respirators; use of showers; entry and exit from work areas, and all aspects of work procedures and protective measures.

B. All asbestos abatement workers shall receive training and shall be accredited per 40 CFR 763.90(g). Training and accreditation shall be in accordance with 40 CFR 763, Appendix C to Subpart E. Training shall also be provided to meet the requirements of OSHA Regulations contained in 29 CFR l926.

C. Prior to the start of work, the Asbestos Contractor shall provide medical examinations for all employees in accordance with 29CFR 1926.1101 (m). All employees hired by the Asbestos Contractor after start of work shall have medical examinations in accordance with this paragraph before being put to work.

D. Maintain complete and accurate records of employee's medical examinations, during employment and make records of the required medical examinations available for inspection and copying to: The Assistant Secretary of OSHA, the Director of The National Institute for Occupation Safety and Health (NIOSH), authorized representatives of either of them, and an employee's physician upon the request of the employee or former employee.

E. Provide personnel exposed to airborne concentrations of asbestos fibers with fire retardant disposable protective whole-body clothing, head coverings, gloves, and foot coverings. Provide gloves to protect hands. Make sleeves secure at the wrists and make foot coverings secure at the ankles using tape. Asbestos Contractor shall require and monitor the use of complete protective clothing. A competent person designated by the Asbestos Contractor in accordance with 29CFR 1926.1101 shall periodically examine protective clothing worn by employees in the work area for rips or tears. When rips or tears are detected, they shall be immediately mended or replaced.

F. Provide goggles to personnel engaged in asbestos operations when the use of a full-face respirator is not required.

G. Provide authorized visitors with suitable protective clothing, headgear, eye protection and footwear, whenever they are required to enter the work area, to a maximum of 3 changes for 3 visitors per day. One of the sets of protective clothing shall be available for full time use by the Industrial Hygienist.

H. Provide all persons with personally issued and marked respiratory equipment approved by NIOSH and OSHA. The appropriate respiratory protection shall be selected according to the most recent Massachusetts regulations.

I. Once all visible asbestos material has been removed during decontamination, cartridge type respirators will be allowed during the final cleanup provided the measured airborne concentrations do not exceed 0.1 fibers per cubic centimeter. Where respirators with disposable filters are employed, provide enough filters for replacement to the worker or applicable regulation.
J. If the permissible respirators fail to provide enough protection against volatile emitted by any sealant used, the services of a qualified industrial hygienist will be procured, at the Asbestos Contractor's expense, to determine proper respiratory protection. The Owner and Industrial Hygienist will not be liable for the cost of increased respiratory protection.

K. Select respirators from those approved by the Mine Safety and Health Administration (MSHA), Department of Labor, or the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services. All personnel wearing negative pressure respirators shall have respirator fit tests within the last six months and signed statements shall be available.

1.15 REFERENCE STANDARDS

A. Unless otherwise indicated, all referenced standards shall be the latest edition available at the time of bidding. Requirements of this Section shall in no way invalidate the minimum requirements of the referenced standards. Comply with the provisions of the following codes and standards, except as otherwise shown or specified. Where conflict among requirements or with this Section exists, the more stringent requirements shall apply.

B. U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA) requirements, which govern asbestos abatement work or hauling and disposal of asbestos waste materials.

C. U.S. Environmental Protection Agency (EPA) requirements, which govern asbestos abatement work or hauling and disposal of asbestos waste materials.

D. U.S. Department of Environmental Protection (DEP) and the Massachusetts Department of Labor Standards (DLS).

1.16 SUBMITTALS

A. No work shall commence until the Contractor submit an emailed completed submittals not less 10-working days prior to commencement of the work. The submittals shall include the following:

1. Submit all licenses and certification required.
2. Submit written evidence that the landfill to be used for disposal of asbestos is approved for disposal of asbestos by the EPA.
3. Submit all required items previously listed.
4. Secure necessary permits in conjunction with asbestos removal, hauling, and disposition and provide timely notification as may be required by federal, state, regional, and local authorities. Notify the Department of Environmental Protection (DEP) and the Massachusetts Department of Labor Standards (DLS) and provide copies of the notification.
5. Notify the local fire, police and Health Departments, in writing, of proposed asbestos abatement work. Advise the fire department of the nature of the asbestos abatement work, and the necessity that all firefighting personnel who may enter the work site in the case of fire wear self-contained breathing apparatus. Provide one copy of the notices.
6. Submit proof that all required permits, site location, and arrangements for transport and disposal of asbestos containing or contaminated materials, supplies, and the like have been obtained.
7. The Contractor shall submit a plan for managing the waste including all collection, storage, disposal and decontamination practices/waste disposal.
8. Submit medical examinations for all employees in accordance with 29CFR 1926.1101 (m). All employees hired by the Asbestos Contractor after start of work shall have medical examinations in accordance with this paragraph before being put to work.
9. Provide MSDS for all used products on this Project.
10. Submit the negative pressure system. Do not begin work until the Designer approves the submittal. Include in the submittal at a minimum:
   a. Number of negative air machines required and the calculations necessary to determine the number of machines.
   b. Description of projected airflow within the work area and methods required providing adequate airflow in all portions of the work area.
   c. Location of machines in the work area.
   d. Location of pressure differential measurement equipment.
   e. Manufacturers product data on equipment used to monitor pressure differential.
11. Submit for approval the form of security and safety log, which will be maintained on the project.
12. Submit written evidence that the landfill to be used for disposal of asbestos is approved for disposal of asbestos by the Department of Environmental Protection.
13. Submit proof that training requirements as specified in 29CFR 1926.1101 (k) (3) and by appropriate state agencies has been complied with.
14. Submit a description of the plans for construction of decontamination enclosure systems and for isolation of the work areas in compliance with this specification and all applicable regulations.
15. Submit a detailed schedule including work dates, work shift time, number of employees, dates of start and completion of all work activities (including mobilization, work area preparation, asbestos abatement, inspection and clearance monitoring, each phase of refinishing, and final inspections). Schedule shall be updated with each partial payment request.

1.17 REPORTING

A. Maintain on site a daily log documenting the dates and time of the following items, as well as other significant events:

   1. Minutes of meetings: purpose, attendees, and brief discussion
   2. Visitations: authorized and unauthorized
   3. Personnel: by name, entering and leaving the work area
   4. Special or unusual events
   5. Personnel air monitoring tests and results

B. Documentation with confirmation signature of the Industrial Hygienist of the following:

   1. Inspection of work area preparation prior to start of removal and daily thereafter.
   2. Removal of any polyethylene barriers.
   3. Removal of waste materials from work area and transport and disposal at approved site.
   4. Decontamination of equipment.
   5. Waste Shipment Records. No final payment will be approved until all above documents have been submitted.

C. Provide two bound copies of this log to the Industrial Hygienist with the application for final payment.
1.18 AIR MONITORING

A. Throughout the entire removal and cleaning operations, air monitoring will be conducted to ensure that the Asbestos Contractor is complying with the EPA and OSHA regulations and any applicable state and local government regulations. The Owner will provide an Industrial Hygienist (Universal Environmental Consultants) to take air samples at the job site at no cost to the Asbestos Contractor.

B. The purpose of the Industrial Hygienist’s air monitoring will be to detect faults in the work area isolation such as:
   1. Contamination of the building outside of the work area with airborne asbestos fibers,
   2. Failure of filtration or rupture in the negative pressure system,
   3. Contamination of the exterior of the building with airborne asbestos fibers.
   4. Should any of the above occur the Asbestos Contractor should immediately cease asbestos abatement activities until the fault is corrected! Work shall not recommence until authorized by the Industrial Hygienist.

C. The Industrial Hygienist will monitor airborne fiber counts in the work area. The purpose of this air monitoring will be to detect airborne fiber counts higher than the Action Level of 0.1- f/cc which may significantly challenge the ability of the work area isolation procedures to protect the balance of the building from contamination by airborne fibers.

D. The Asbestos Contractor shall be responsible for providing his/her own personnel monitoring within the work area in accordance with CFR l926.1101.

1.19 AIRBORNE FIBER COUNTS

A. If any air sample taken outside of the work area exceeds the base line (background) conducted by UEC? Immediately and automatically stop all work. If this air sample was taken inside the building and outside of critical barriers around the work area, immediately erect new critical barriers to isolate the affected area from the balance of the building.
   1. Respiratory protection shall be worn in affected area.
   2. Leave critical barriers in place until completion of work and ensure that the operation of the negative pressure system in the work area results in a flow of air from the balance of the building into the affected area.
   3. After certification of visual inspection in the work area, remove critical barriers separating the work area from the affected area.
   4. A final inspection after removal of poly shall be completed by the Asbestos Contractor’s Supervisor and the Industrial Hygienist.

B. The following procedure shall be used to resolve any disputes regarding fiber types when work has been stopped due to excessive airborne fiber counts. "Airborne Fibers" referred to above include all fibers regardless of composition as counted in the NIOSH 7400 Procedure. If work has stopped due to high airborne fiber counts, air samples will be secured in the same area by the Industrial Hygienist for analysis by Transmission Electron microscopy (TEM). Airborne Fibers counted in samples analyzed by TEM shall be only asbestos fibers, but of any diameter and length. Subsequent to analysis by TEM the number of "Airborne Fibers" shall be determined by multiplying the number of fibers, regardless of composition, counted by the NIOSH 7400 procedure by a number equal to asbestos fibers counted divided by all fibers counted in the TEM analysis.
C. If TEM is used to arrive at the basis for determining "Airborne Fiber" counts in accordance with the above paragraph, and if the average of airborne asbestos fibers in all samples taken outside the work area exceeds the base line, then the cost of such sampling and analysis will be born by the Asbestos Contractor.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Plastic Sheet: 6 mil minimum thickness, unless otherwise specified.

B. Tape: Capable of sealing joints of adjacent sheets of plastic and for attachment of plastic sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under dry and wet conditions, including use of amended water. Provide tape, which minimizes damage to surface finishes.

C. Cleaning Materials: Use materials recommended by manufacturer of surface to be cleaned. Use cleaning materials only on surfaces recommended by the cleaning material manufacturer.

2.02 EQUIPMENT

A. Supply the required number of asbestos air filtration units to the site in accordance with these specifications.

2.03 DANGER SIGNS AND LABELS

A. Display danger signs at each location where airborne concentrations of asbestos fibers may be in excess of 0.01 fibers/cc. Post signs at such a distance from such a location so that an employee may read the signs and take necessary protective steps before entering the area marked by the signs.

B. The sign shall also contain a pictorial representation of possible danger or hazard, such as a skull and cross bone, or other suitable warning as approved by the Industrial Hygienist. Sign shall meet the requirements of 29CFR 1926.200. A sample of the signs to be used shall be submitted to the Industrial Hygienist for approval prior to beginning work area preparation.

C. Affix danger labels to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers.

PART 3 - EXECUTION

3.01 SCOPE OF WORK:

<table>
<thead>
<tr>
<th>Location</th>
<th>Type of ACM</th>
<th>Approximate Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior</td>
<td>Window Wall System</td>
<td>110 Total</td>
</tr>
</tbody>
</table>
Specific Notes:
1. It’s the Asbestos Contractor’s responsibility to inspect the site and confirm condition prior to the submission of his/her bid package. It is also the Asbestos Contractor’s responsibility to review the demolition drawings, notes and phasing configurations.
2. panels, screens, windows, doors, glass, glass blocks, multiple layer of frames, sash, casings, sills, louvers, unit vents grille, shims, fasteners, anchors, sealant, flashing, etc. Wire-brush all adjacent surfaces to insure the complete removal of caulking. Framing and glazing caulking was found to contain asbestos and assumed to contain >1 ppm of PCB’s.
3. The Asbestos Contractor shall seal the interior of the windows with 2 layers of polyethylene sheeting and shall remove upon completion.

3.02 JOB CONDITIONS

A. Do not commence asbestos abatement work until:
   1. Arrangements have been made for disposal of waste at an acceptable site. Submittal shall be made no later than the Document Submission Date.
   2. Arrangements have been made for containing and disposal of wastewater resulting from wet stripping or filtering through a 5-micron filter.

B. All materials resulting from abatement work, except as specified otherwise shall become the property of the Asbestos Contractor and shall be disposed of as specified herein.

C. Pre-clean all areas prior to commencement of any work.

D. Clean all routes used to transport waste.

3.03 INSPECTION AND PREPARATION

A. Examine the areas and conditions under which asbestos will be abated and notify the Industrial Hygienist in writing of conditions detrimental to the proper and timely completion of the work.

B. Before any work commences, post danger signs in and around the Work Area to comply with 29CFR 1926.1101 (k) (l) per federal and state regulations.

3.04 WORK PROCEDURE

A. Perform asbestos related work in accordance with 29CFR 1926.1101 and as specified herein. Use wet removal procedures. Personnel shall wear and utilize protective clothing and equipment as specified herein. Personnel of other trades not engaged in the removal and demolition of asbestos shall not be exposed at any time to airborne concentrations of asbestos unless all the personnel protection provisions of this specification are complied with by the trade personnel. Provide and post, in the Equipment Room and the Clean Room, the decontamination and work procedures to be followed by workers, as described hereinafter.
B. Each worker and authorized visitor shall, upon entering the job site, remove street clothes in the Clean Change Room and put on a respirator and clean protective clothing before entering the equipment room or the work area. All workers shall remove gross contamination before leaving the work area. All clothing such as coveralls, head covers, boots shall be removed and properly disposed of before leaving equipment room. With the exception of bathing suites and respirators, the workers shall proceed to the Shower Room. Under the shower, respirators shall be removed and cleaned. Cleaned respirators shall be placed in suitable clean plastic bags and carried by employees to Clean Room. Soap, towels shall be furnished by the Asbestos Contractor. The Asbestos Contractor shall maintain proper sanitary conditions. The Asbestos Contractor's designated competent person shall insure that these practices are being adhered to.

C. Following showering and drying off, each worker and authorized visitor shall dispose of towels as contaminated waste and proceed directly to the Clean Change Room and dress in clean clothes at the end of each day's work, or before eating, smoking, or drinking. Before re-entering the work area from the Clean Change Room, each worker and authorized visitor shall put on the applicable respirator and shall dress in clean protective clothing. Contaminated work footwear shall be stored in the equipment room when not in use in the work area. Upon completion of asbestos abatement, dispose of footwear as contaminated waste.

D. Contaminated work footwear shall be stored in the equipment room when not in use in the work area. Upon completion of asbestos abatement, dispose of footwear as contaminated waste or double bag for use at next site.

E. Workers removing waste containers from the Equipment Decontamination Enclosure shall enter the holding area from outside wearing a respirator and dressed in clean coveralls. No worker shall use this system to leave or enter the washroom or the work area.

F. Workers shall be fully protected with respirators and protective clothing immediately prior to the first disturbance of asbestos containing or contaminated materials and until final cleanup is completed. This includes the removal of any equipment in contact with ACM such as lights, HVAC grills and other related structures.

3.05 CONTROL ACCESS:

A. Permit access to the work area only through the Decontamination Unit. All other means of access shall be closed off, warning signs displayed on the clean side of the sealed access.

B. Large openings such as open doorways and passageways shall be sealed as a critical barrier. The critical barrier shall constitute the outmost boundary of the asbestos abatement work area.

C. Plastic sheeting on open framing is not a suitable critical barrier. All cracks, seams, and openings in critical barriers shall be caulked or otherwise sealed, to prevent the movement of asbestos fibers out.
3.06 REMOVAL OF ASBESTOS CONTAINING MATERIALS

A. Thoroughly wet ACM to be removed prior to stripping to reduce fiber dispersal into the air. Accomplish wetting by a fine spray (mist) of amended water or removal Encapsulant. Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for water or removal Encapsulant to penetrate material thoroughly. If a removal Encapsulant is used, apply in strict accordance with manufacturer’s written instructions.

B. Mist work area continuously with amended water whenever necessary to reduce airborne fiber levels.

C. Remove saturated ACM in small sections from all areas. Do not allow material to dry out. As it is removed, simultaneously pack material while still wet into disposal bags. Twist neck of bags bend over and seal with minimum three wraps of duct tape. Clean outside and move to wash down station adjacent to material decontamination unit.

3.06 WORK AREA CLEARANCE

A. The work is complete when the work area is visually clean and airborne fiber levels have been reduced to the level specified below. When this has occurred, the Asbestos Contractor will notify the Industrial Hygienist that the area is ready for clearance.

B. The number and volume of air samples taken, and analytical methods used by the Industrial Hygienist will be in accordance with applicable regulations.

3.07 DISPOSAL OF ACM AND ASBESTOS CONTAMINATED WASTE

A. To prevent exceeding available storage capacity on site, remove sealed and labeled containers of asbestos waste and dispose of such containers at an authorized disposal site in accordance with the requirements of disposal authority.

B. Comply with 29 CFR 1926.1101.

C. Seal all asbestos and asbestos contaminated waste material with double thickness 6-mil, sealable plastic bags. Label the bags; transport and dispose of all in accordance with the applicable OSHA and EPA regulations. At the conclusion of the job, place all polyethylene material, tape, cleaning material and clothing in the plastic lined drum. Seal, correctly label, and dispose of as asbestos waste material.

D. Transport the bags to the approved waste disposal site. Asbestos Contractor shall obtain trip tickets at the landfill to document disposal of asbestos containing materials. A form shall be signed, not initialed, by all parties. Copies of all trip tickets shall be submitted to the Industrial Hygienist.

E. If a rental vehicle is used to transport asbestos waste, Asbestos Contractor shall provide to the vehicle’s owner a written statement as to the intended use of the vehicle. A copy of such notice, signed by the vehicle owner, shall be provided to the Industrial Hygienist prior to transporting materials in the vehicle. Two layers of 6-mil plastic sheet shall be placed on the floor and walls of the rental vehicle prior to loading any containers of asbestos waste.
F. Consider wastewater from showers and sinks to be contaminated waste and dispose of in accordance with this Section, unless water has been filtered through a 5-micron filter.

3.08 DISPOSAL OF NON-CONTAMINATED WASTE:

A. Remove from the site all non-contaminated debris and rubbish resulting from demolition operations. Transport materials removed from demolished areas and dispose of off site in a legal manner.

B. During progress of work, clean site and public properties, and dispose of waste materials, debris, and rubbish. Provide on-site containers for collection of waste materials, debris, and rubbish. Remove waste materials, debris, and rubbish from site and legally dispose of at public or private dumping areas off Owner’s property.

3.09 FINAL CLEAN UP

A. Employ experienced workers or professional cleaners for final cleaning. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials, from exposed to view interior and exterior finished surfaces. Polish surfaces so designated.

END OF SECTION
**CH1900284**

**CHAIN OF CUSTODY**

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Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

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**Town/City:** Needham, MA  Building Name: WICKS Library

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<table>
<thead>
<tr>
<th>Sample</th>
<th>Result</th>
<th>Description of Material</th>
<th>Sample Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>window frame caulk</td>
<td>EAST SIDE</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>window frame caulk</td>
<td>WEST SIDE</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>window frame caulk</td>
<td>WEST SIDE</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>window frame caulk</td>
<td>South win wall</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>exterior paint</td>
<td>South win wall</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>exterior window</td>
<td>South win wall</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>exterior window</td>
<td>EAST SIDE</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>exterior window</td>
<td>EAST SIDE</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>exterior panel under window</td>
<td>South win wall</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>exterior panel</td>
<td>South side living</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>exterior panel</td>
<td>South entrance</td>
</tr>
</tbody>
</table>

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**Reported By:** [Signature]  **Date:** 2-9-19  
**Received By:** [Signature]  **Date:** 2/18/19, 1:50 pm

**Due Date:** 24-hr.
# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

<table>
<thead>
<tr>
<th>Sample</th>
<th>Description</th>
<th>Appearance</th>
<th>% Fibrous</th>
<th>Non-Asbestos</th>
<th>% Non-Fibrous</th>
<th>Asbestos % Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>East Side Exterior - Window Frame Caulk</td>
<td>Gray</td>
<td>Non-Fibrous</td>
<td>Homogeneous</td>
<td>97% Non-fibrous (Other)</td>
<td>3% Chrysotile</td>
</tr>
<tr>
<td>2</td>
<td>West Side Exterior - Window Frame Caulk</td>
<td>Gray</td>
<td>Non-Fibrous</td>
<td>Homogeneous</td>
<td>98% Non-fibrous (Other)</td>
<td>2% Chrysotile</td>
</tr>
<tr>
<td>3</td>
<td>West Side Exterior - Window Frame Caulk</td>
<td>Gray</td>
<td>Non-Fibrous</td>
<td>Homogeneous</td>
<td>97% Non-fibrous (Other)</td>
<td>3% Chrysotile</td>
</tr>
<tr>
<td>4</td>
<td>South Win Wall Exterior - Window Frame Caulk</td>
<td>Gray</td>
<td>Fibrous</td>
<td>Homogeneous</td>
<td>92% Non-fibrous (Other)</td>
<td>8% Chrysotile</td>
</tr>
<tr>
<td>5</td>
<td>South Win Wall Exterior - Exterior Glaze</td>
<td>Gray</td>
<td>Non-Fibrous</td>
<td>Homogeneous</td>
<td>98% Non-fibrous (Other)</td>
<td>2% Chrysotile</td>
</tr>
<tr>
<td>6</td>
<td>South Win Wall Exterior - Interior Window Glaze (for Exterior Window)</td>
<td>Tan</td>
<td>Non-Fibrous</td>
<td>Homogeneous</td>
<td>98% Non-fibrous (Other)</td>
<td>2% Chrysotile</td>
</tr>
<tr>
<td>7</td>
<td>East Side Exterior - Interior Window Glaze (for Exterior Window)</td>
<td>Gray</td>
<td>Non-Fibrous</td>
<td>Homogeneous</td>
<td>97% Non-fibrous (Other)</td>
<td>3% Chrysotile</td>
</tr>
<tr>
<td>8</td>
<td>East Side Exterior - Interior Window Glaze (for Exterior Window)</td>
<td>Tan</td>
<td>Non-Fibrous</td>
<td>Homogeneous</td>
<td>98% Non-fibrous (Other)</td>
<td>2% Chrysotile</td>
</tr>
<tr>
<td>9</td>
<td>Under Window South Win Wall - Exterior Glaze for Marble Panel</td>
<td>Gray</td>
<td>Non-Fibrous</td>
<td>Homogeneous</td>
<td>97% Non-fibrous (Other)</td>
<td>3% Chrysotile</td>
</tr>
<tr>
<td>10</td>
<td>Under Window South Side, Library - Exterior Glaze for Marble Panel</td>
<td>Gray</td>
<td>Non-Fibrous</td>
<td>Homogeneous</td>
<td>97% Non-fibrous (Other)</td>
<td>3% Chrysotile</td>
</tr>
<tr>
<td>11</td>
<td>Under Window South @ Entrance - Exterior Glaze for Marble Panel</td>
<td>Gray</td>
<td>Non-Fibrous</td>
<td>Homogeneous</td>
<td>97% Non-fibrous (Other)</td>
<td>3% Chrysotile</td>
</tr>
</tbody>
</table>
EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP. NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Weymouth, MA NVLAP Lab Code 600217-0, MA AA000244, RI AAL-112
PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to Demolition and removal of selected portions of buildings and structures down to sound substrate and as required for new Work. Refer to the Drawings for additional requirements.

1. Salvage of existing items to be reused or turned over to the Owner. See Drawings.

2. Removal and legal disposal of demolished materials off site. Except those items specifically designated to be relocated, reused, or turned over to the Owner, all existing removed materials, items, trash and debris shall become property of the Demolition Sub-contractor and shall be completely removed from the site and legally disposed of at its expense.

3. Demolition and removal work shall properly prepare for alteration work and new construction to be provided under the Contract.

4. Scheduling and sequencing operations without interruption to utilities serving occupied areas. If interruption is required, obtain written permission from the utility company and the Owner. Provide temporary services as necessary to serve occupied and usable facilities when permanent utilities must be interrupted, or schedule interruption when the least amount of inconvenience will result.

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:

1. Section 01 50 00 - GENERAL REQUIREMENTS for Temporary Facilities and Controls:
   a. Maintenance of access, cleaning during construction, dust and noise control.

2. Section 01 74 19 - CONSTRUCTION WASTE MANAGEMENT:
   a. Waste management and recycling.

3. Section 02 82 13 - ASBESTOS ABATEMENT AND RELATED WORK:
   a. Removal, handling and disposal of asbestos-containing materials.
5. HEATING, VENTILATING AND AIR CONDITIONING associated with HVAC ductwork at inboard side of window system:
   a. Disconnecting, capping and otherwise making inactive existing mechanical services in areas where demolition and removal work is required. Mechanical tradesmen will disconnect, cap, inactivate and lower to floor such items where required to be removed. Removal and storage of such materials shall be then done under this Section 02 41 13 – SELECTIVE DEMOLITION.
   b. Disconnect and reinstallation of HVAC equipment temporarily interrupted during construction.

6. Other Hazardous Material Remediation.
   a. Remediation of hazardous material other than mold and mildew remediation will be completed under this contract per Section 02 82 13 - ASBESTOS ABATEMENT AND RELATED WORK in advance of start of demolition work.
   b. Existing conditions mold and mildew remediation will be executed in accordance with best practices.

1.3 DEFINITIONS

A. “Remove”: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

B. “Remove and Salvage”: Detach items from existing construction and deliver them to the Owner ready for reuse, at a location designated by the Owner. Protect from weather until accepted by Owner.

C. “Remove and Reinstall”: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated. Protect from weather until reinstallation.

D. “Existing to Remain”: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain property of the Owner as applicable.

B. Marble slabs making up the existing mezzanine toilet partitions shall remain the property of the Owner.
C. Carefully remove each item or object in a manner to prevent damage and deliver promptly to a location acceptable to the Owner.

1.5 SUBMITTALS

A. Schedule of Selective Demolition Activities: Indicate the following:
   1. Detailed sequence of selective demolition and removal work, with early and late starting and finishing dates for each activity. Ensure Owner's on-site operations are uninterrupted if applicable.
   2. Interruption of utility services. Indicate how long utility services will be interrupted.
   3. Coordination for shutoff, capping, and continuation of utility services.
   4. Use of existing elevator and existing stairs:
      a. There is presently no elevator in the building
      b. Stairs shall be protected from damage during demolition.
      c. Damage caused shall be repaired at no expense to the Owner
   5. Locations of proposed dust- and noise-control temporary partitions and means of egress, including for other occupants affected by selective demolition operations.
   6. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
   7. Means of protection for items to remain and items in path of waste removal from building.

B. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged, and turned over the Owner.

C. Pre-demolition Video: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations. Comply with Section 01 33 00 - SUBMITTAL PROCEDURES. Submit before Work begins.

D. Landfill Records: Provide trip tickets (receipts) indicating receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.
   1. Comply with submittal requirements in Section 01 74 19 - CONSTRUCTION WASTE MANAGEMENT.

1.6 QUALITY ASSURANCE

A. Examination of Existing Conditions: The General Contractor and Demolition Sub-Contractor shall examine the Contract Drawings for demolition and removal requirements and provisions for new work. Verify all existing conditions and dimensions before commencing work. The General Contractor and Demolition Sub-Contractor shall visit the site and examine the existing conditions as they find them and shall inform themselves of the character, extent and type of
demolition and removal work to be performed. Submit any questions regarding the extent and character of the demolition and removal work in the manner and within the time period established for receipt of such questions during the bidding period.

B. Demolition Sub-Contractor: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

C. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

D. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

E. Standards: Comply with ANSI A10.6 and NFPA 241.

F. Pre-demolition Conference: Conduct conference at Project site to comply with requirements in Division 1. Review methods and procedures related to selective demolition including, but not limited to, the following:
   1. Inspect and discuss condition of construction to be selectively demolished.
   2. Review structural load limitations of existing structure.
   3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
   4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
   5. Review areas where existing construction is to remain and requires protection.

G. Cutting:
   1. Cut surfaces so that there is minimal difference between existing and new surfaces when patched.
   2. All cuts at the edge of demolished areas to be clean, straight and true.

H. Shoring:
   1. This Demolition Sub-Contractor is responsible for the design and installation of all shoring
   2. Shoring shall be designed by a professional structural engineer registered in the Commonwealth of Massachusetts with stamp and signature indicating same.

I. Demolition Sub-Contractor Qualifications:
   1. Five (5) years documented experience successfully performing demolition of the type, scale and complexity indicated for this project.
2. Only licensed or specialized trade technicians shall demolish Fire Protection, Plumbing, Heating, Ventilating, Air Conditioning, Electrical services, systems and equipment.

J. Regulations:
1. Comply with Regulations of the
   a. Massachusetts Building Code including all appendices
   b. Requirements of the EPA
   c. Requirements of the Town of Watertown, Massachusetts.

2. Standards:
   1. ANSI A10.6
   2. NFPA 241

K. Protection:
1. Erect protection for pedestrians and vehicular traffic.
2. Provide temporary barricades to limit access to demolition areas.
3. Protect all existing construction to remain.
4. Protect all adjacent property from damage.

1.7 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
E. Engage a professional engineer registered in the Commonwealth of Massachusetts to survey the condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.

F. Survey of Existing Conditions: Record existing conditions by use of preconstruction video.
   1. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work.
   2. Make permanent record of measurements, materials, and construction details required to make exact reproduction.

G. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
   1. Arrange to shut off indicated utilities with utility companies and Owner.
   2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
   3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing. Where entire wall is to be removed, existing services/systems may be removed with removal of the wall.
   4. Prior to commencing cutting work in existing surfaces, take all precautionary measures to assure that mechanical and electrical services to the particular area have been made inactive. Coordinate with Fire Protection, Plumbing, HVAC, and Electrical Sub-contractors. Only licensed tradesmen of that particular trade shall disconnect and cap existing mechanical and electrical items that are to be removed, abandoned and/or relocated.
   5. If, during the process of cutting work, existing utility lines are encountered which are not indicated on the Drawings, regardless of their condition, immediately report such items to the Architect. Do not proceed with work in such areas until instructions are issued by the Architect. Continue work in other areas.
3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
   1. Comply with requirements for access and protection specified in Section 01 50 00 - TEMPORARY FACILITIES and CONTROLS.
   2. Maintain adequate passage to and from all exits at all times. Before any work is done which significantly alters access or egress patterns, consult with the Architect and obtain approval of code required egress. Under no condition block or interfere with the free flow of people at legally required exits, or in any way alter the required condition of such exits.

B. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
   1. Strengthen or add new supports when required during progress of selective demolition.
   2. Remove temporary shoring, bracing and structural supports when no longer required.
   3. Post warning signs and place barricades as applicable during placement and removal of temporary shoring.

C. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area(s).
   1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction. Provide temporary barricades as required to limit access to demolition areas.
   2. Protect existing site improvements, appurtenances, and landscaping to remain.

D. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
   1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.

3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.

5. Maintain adequate ventilation when using cutting torches.

6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.

7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.

8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

9. Dispose of demolished items and materials promptly. Comply with requirements in Section 01 74 19 - CONSTRUCTION WASTE MANAGEMENT.

B. Removed and Salvaged Items:
   1. Clean salvaged items.
   2. Pack or crate items after cleaning. Identify contents of containers.
   3. Store items in a secure area until delivery to Owner.
   4. Transport items to storage area designated by the Owner.
   5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:
   1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
   2. Pack or crate items after cleaning and repairing. Identify contents of containers.
   3. Protect items from damage during transport and storage.
   4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

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

E. Items for Re-use and Preservation of Existing Surfaces to Remain:
   1. The General Contractor and Demolition Sub-Contractor shall inspect closely each item specifically designated to be relocated, reused, or turned over to the Owner prior to its removal, and immediately report damages and defects to the Architect and the Owner. The General Contractor shall be responsible for any subsequent damage to the same other than latent defects not readily apparent from close inspection, and shall bear responsibility for its repair or same replacement as directed by the Architect, to the satisfaction of the Owner.
   2. Unless special surface preparation is specified under other Specification Sections, leave existing surfaces that are to remain in a condition suitable to receive new materials and/or finishes.

3.5 PROTECTION OF PUBLIC AND PROPERTY

A. Provide all measures required by federal, state and municipal laws, regulations, and ordinances for the protection of surrounding property, the public, workmen, and Owner’s employees during all demolition and removal operations. Measures are to be taken, but not limited to installation of sidewalks, sheds, barricades, fences, warning lights and signs, trash chutes and temporary lighting.

B. Protect all walks, roads, streets, curbs, pavements, trees and plantings, on and off premises, and bear all costs for correcting such damage as directed by the Architect, and to the satisfaction of the Owner.

C. Demolition shall be performed in such a manner that will insure the safety of adjacent property. Protect adjacent property from damage and protect persons occupying adjacent property from injuries which might occur from falling debris or other cause and so as not to cause interference with the use of other portions of the building, of adjacent buildings or the free access and safe passage to and from the same.

D. Every precaution shall be taken to protect against movement or settlement of the building, of adjacent buildings, sidewalks, roads, streets, curbs and pavements. Provide and place at the General Contractor’s own expense, all necessary bracing and shoring in connection with demolition and removal work.

E. Remove portions of structures with care by using tools and methods that will not transfer heavy shocks to existing and adjacent building structures, both internal and external of the particular work area.
F. Provide and maintain in proper condition, suitable fire resistive dust barriers around areas where interior demolition and removal work is in progress. Dust barriers shall prevent the dust migration to adjacent areas. Remove dust barriers upon completion of major demolition and removal in the particular work area.

3.7 DISCOVERY of OTHER HAZARDOUS MATERIALS

A. If hazardous materials, such as chemicals, asbestos-containing elements or materials not specifically identified in this specification section, lead paint-containing elements or materials not specifically identified in this specification section, or other hazardous materials are discovered during the course of the work, cease work in affected area only and immediately notify the Architect and the Owner of such discovery. Do not proceed with work in such areas until instructions are issued by the Architect. Continue work in other areas.

B. If unmarked containers are discovered during the course of the work, cease work in the affected area only and immediately notify the Architect and the Owner of such discovery. Do not proceed with work in such areas until instructions are issued by the Architect. Take immediate precautions to prohibit endangering the containers integrity. Continue work in other areas.

3.8 CUTTING

A. Perform all cutting of existing surfaces in a manner which will ensure a minimal difference between the cut area and new materials when patched. Use extreme care when cutting existing surfaces containing concealed utility lines which are indicated to remain and bear full responsibility for repairing or replacement of all such utilities that are accidentally damaged.

B. Provide a flush saw cut edge where pavement, curb and concrete removals abut new construction work or existing surfaces to remain undisturbed.

3.9 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Comply with requirements of Section 01 74 19 - CONSTRUCTION WASTE MANAGEMENT and the following:
   1. Do not allow demolished materials to accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
   3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
B. Burning: Do not burn demolished materials.

3.10 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Premises shall be left in a clean condition and ready to accept alteration work and new construction.

END OF SECTION
PART 1 – GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within "DIVISION 01 - GENERAL REQUIREMENTS" which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Wood Blocking and Nailing
2. Plywood Backer Panels, if any
3. Cants.
4. Furring.
5. Grounds.
6. Plywood Roof Sheathing

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
1. Section 02 41 13 - SELECTIVE DEMOLITION
2. Section 08 53 50 - POLYMER WINDOWS

1.3 REFERENCE STANDARDS

A. U. S. Department of Commerce Product Standards:
1. DOC PS 1, "Construction and Industrial Plywood."
2. DOC PS 2, "Performance Standard for Wood-Based Structural Use Panels."

B. American Plywood Association Standards:
2. APA E30, "Residential and Commercial."

C. Inspection Agencies, Abbreviations used:
1. SPIB - Southern Pine Inspection Bureau.
2. WWPA - Western Wood Products Association.
3. WCLIB - West Coast Lumber Inspection Bureau.
D. American Wood Preservers Association:
1. AWPA C9: Plywood - Preservative Treatment by Pressure Process.
2. AWPA C20: Structural Lumber - Fire-Retardant Treatment by Pressure Process.
4. AWPA M4: Standard for the Care of Preservative Treated Wood Products.

1.4 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials, both before and after exposure to elevated temperatures when tested according to ASTM D 5516 and ASTM D 5664.

B. Material certificates for dimensional lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use as well as design values approved by the Board of Review of American Lumber Standards Committee.

C. Research reports or evaluation reports required under Quality Assurance.

D. Product Data: Submit manufacturer's printed product data, specifications, standard details, installation instructions, use limitations and recommendations for each material used. Provide certifications that materials and systems comply with specified requirements. Product data for the following products:
1. Engineered wood products.
2. Metal framing anchors.
3. Construction adhesives.

E. Shop Drawings: Provide large scale shop drawings for fabrication, installation and erection of all parts of the work. Provide plans, elevations, and details of anchorages, connections and accessory items. Provide installation templates for work installed by others. Show all interfaces and relationships to work of other trades. Shop drawings showing location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
Connectors shall be selected by the Contractor and submitted to the Architect for approval.

1. Show details full size.
2. Show locations and sizes of blocking and nailers, including concealed blocking and reinforcing specified in other Sections.

F. Field Measurements: Take field measurements before preparation of shop drawings and fabrication. Do not delay progress of the job. If field measurements are not possible prior to fabrication, allow for field cutting and fitting.

1.5 QUALITY ASSURANCE

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

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

C. Lumber Grading and Control Marks: Provide lumber with each piece factory-marked with grade stamp of applicable inspection agency evidencing compliance with grading rule requirements and identifying grading agency, species, stress grade level, moisture content at time of surfacing, and mill.
   1. For exposed lumber furnish pieces with grade stamps applied to ends or back of each piece; or omit grade stamps entirely and provide certificates of grade compliance issued by inspection agency.

D. Construction Panel Standards: Comply with PS 1 for plywood construction panels and, for products not manufactured under PS 1 provisions, with APA PRP-108.
   1. Furnish construction panels that are each factory-marked with APA trademark evidencing compliance with grade requirements.

E. Fire-Retardant Treated Wood: Treat according to specified AWPA standards. Obtain each type of fire-retardant chemical from one source, and each type of treated wood product from one source. Mark each piece with appropriate classification marking of Underwriter's Laboratories, U.S. Testing, Timber Products Inspection, Inc., or other qualified testing and inspecting agency acceptable to authorities having jurisdiction.

F. Pressure-Preservative Treated Wood: Treat according to specified AWPA standards. Mark each treated item with the AWPB (American Wood Preservers Bureau) or SPIC (Southern Pine Inspection Bureau) Quality Mark.
G. Model Code Evaluation/Research Reports: Where model code evaluation/research reports are required by authorities having jurisdiction as evidence of compliance with the building code in effect for this Project, provide products for which such evaluation reports exist. Reports may be required for the following items:
1. Metal framing anchors.
2. Powder driven fasteners.
3. Fire-retardant-treated wood.

H. Installer Qualifications: Arrange for rough carpentry work including framing by a firm that can demonstrate successful experience for rough carpentry and framing of projects similar in type and quality to those required for this Project.

I. Fasteners shall comply with ESR 1539/NER-272.

J. Wind Uplift: For fastening of roof sheathing at roof areas, provide fastener types, sizes, and spacing in conformance with Factory Mutual Windstorm Resistance Classification I-90. Mechanical fasteners for insulation shall be FM-approved for FM 1-90 installation, threaded, non-corroding.

1.6. COORDINATION

A. Work under this section shall be properly coordinated with the work of other sections to assure the steady progress of all the work of the Contract.

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

1.7 DELIVERY, STORAGE, AND HANDLING

A. Materials when delivered to site shall be stacked and stored above the ground under protective coverings or indoors in such manner as to insure proper drainage, ventilation, and protection. No kiln dried materials shall be placed in the building until concrete and masonry work have been completed, and are sufficiently dry.

B. Rough carpentry materials shall be stored on elevated piles to allow for air circulation below and tipped in one direction to effectively drain moisture. Lumber shall be wrapped completely, including bottoms, in waterproof tarps. Tarps shall be tied down to protect against wind blow-off.

C. Should delays in Project be anticipated, lumber shall be stored in covered storage trailers.
D. Do not leave any newly installed wood blocking exposed. Cover and protect all new wood daily with the new roof system, or other suitable covering approved by the Architect.

1.8 PROJECT CONDITIONS

A. Environmental Limitations: Obtain and comply with wood Manufacturer’s and Installer’s coordinated advice for optimum temperature and humidity conditions for wood during its storage.

B. Weather Limitations: Proceed with installation of exterior woodwork only when existing and forecasted weather conditions will permit work to be performed and at least one coat of specified finish to be applied without exposure to rain, snow, or dampness.

C. Field Measurements: Where woodwork is indicated to be fitted to other construction, check actual dimensions of other construction by accurate field measurements before fabrication, and show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
   1. Verify locations of concealed framing, blocking, and reinforcements that support woodwork by accurate field measurements before being enclosed. Record measurements on final shop drawings.
   2. Where field measurements cannot be made without delaying the Work, guarantee dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site and coordinate construction to ensure that actual dimensions correspond to guaranteed dimensions.

PART 2 – PRODUCTS

2.1 MATERIALS, GENERAL

A. 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. Where exposed or semi-exposed, wood members shall be selected for best possible appearance from the grade of stock specified.
   1. Lumber shall be surfaced four sides (S4S) and shall bear the grade and trademark of the association under whose rules it is produced, and a mark of mill identification.
   2. Lumber shall be furnished in longest practical lengths with respect to each intended use, and single length pieces shall be used wherever possible.

B. Plywood shall conform to the requirements of APA Design/Construction Guide, Residential and Commercial, and be Structural 1 rated sheathing.
C. Pressure Preservative Treated Lumber for Above Ground Use: Pressure preservative treat lumber above ground and in contact with metal and concrete in conformance with AWPA C2. Provide pressure preservative treated lumber with a minimum net retention of 0.25 pcf. Dry lumber to maximum moisture content of 19% after treatment. Use only waterborne preservatives which conform to AWPA P5. Creosote preservatives are not acceptable.

1. Pressure preservative treat lumber in contact with ground in compliance with AWPA C2 with a minimum net retention of 0.40 pcf. Treatment shall be ACQ or approved substitute.

D. Fire-Retardant Treated Plywood for Exterior Use: Where indicated or required, provide plywood sheathing UL fire-retardant treated with treatment which yields a flame spread of not more than 25 when tested in conformance with ASTM E 84, conforms to AWPA C 27 for Exterior Type, and has successfully passed a rain test conforming to ASTM D 2898. Kiln dry after treatment to a maximum moisture content of 15%.

E. General Carpentry Material Schedule shall be as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Grade/Rating</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumber 2&quot; nominal thickness or greater</td>
<td>No. 2 Structural or Better</td>
<td>Spruce-Hemlock-Fir</td>
</tr>
<tr>
<td>Lumber less than 2&quot; nominal thickness</td>
<td>No. 2 Common</td>
<td>Spruce-Hemlock-Fir</td>
</tr>
<tr>
<td>Plywood Sheathing</td>
<td>APA Rated sheathing Exposure 1, APA C-D plugged, exterior glue</td>
<td>Group 1 Species</td>
</tr>
<tr>
<td>Treated Wood</td>
<td>ACQ 0.40 pcf Pressure Treated, SPC Select and No. 1 Grade, kiln-dried following treatment</td>
<td>Southern Pine</td>
</tr>
</tbody>
</table>
F. Fire Retardant Treated Lumber for Interior Use: Where indicated, provide lumber located at interior of building fire retardant treated in conformance with AWPA C20, Type A. Provide fire retardant treatment which, yields a flame spread rating of not more than 25 when tested in accordance with ASTM E 84 kiln dried after treatment to maximum moisture content of 19%.

G. Adhesive for glued construction shall conform to APA Performance Specification AFG-01.

H. Plywood Roof Sheathing
1. Plywood shall conform to U.S. Product Standard PS 1-95 and shall carry the grade trademark of The Engineered Wood Association - APA. Only APA BC EXT or APA AC EXT grades are acceptable.
2. Plywood with solid, plugged cross bands under the face veneer.
   a. Unacceptable Grades, including APA C-D EXT, APA C-C EXT, Exposure 1 markings, oriented strand board (OSB), waferboard, southern yellow pine and Lauan or Mahogany plywood are not acceptable.
3. Plywood Grading: Comply with Product Standard PS 1, "Construction and Industrial Plywood".
4. Certification and Marking: The producer shall include a Certificate of Inspection with each shipment. Grade mark each panel in compliance with applicable standards of Product Standard PS 1.
5. Moisture Content: Provide plywood which has been seasoned by kiln drying to a moisture content not to exceed 19%.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process: Comply with AWPA C2 (lumber) and AWPA C9 (plywood) and the following for woodwork items indicated to receive pressure preservative treatment. Mark each treated item with the AWPB or SPIB Quality Mark Requirements.
1. Preservative Chemicals: Pressure-impregnate woodwork with preservative chemicals acceptable to authorities having jurisdiction and containing no arsenic or chromium. Use chemical formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants in solution to distinguish treated material from untreated material.
2. Pressure-treat above ground items with preservatives to a minimum retention of 0.25 lb/cu. ft. (4.0 kg/cu. m). Kiln-dry lumber and plywood to a maximum moisture content, respectively, of 19 and 15 percent.

B. Extent of Treatment: As indicated on Drawings or required by regulation or Authorities Having Jurisdiction.
2.3 FIRE-RETARDANT-TREATED MATERIALS

A. General: Where indicated, use materials impregnated with fire-retardant chemical formulations indicated by a pressure process or other means acceptable to authorities having jurisdiction to produce products with fire-test-response characteristics specified.

B. Fire-Retardant Chemicals: Use chemical formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants in solution to distinguish treated material from untreated material.

C. Fire-Retardant-Treated Lumber: Comply with the following:
   1. Organic-Resin-Based Formulation: Exterior type per AWPA C20, consisting of organic resin solution, relatively insoluble in water, thermally set in wood by kiln drying.
   2. Mill lumber before treatment and implement special procedures during treatment and drying processes that prevent lumber from warping and developing discolorations from drying sticks or other causes, marring, and other defects affecting appearance of treated woodwork.
   3. Kiln-dry material before and after treatment to levels required for untreated material.
   4. Discard treated material that does not comply with requirements of referenced woodworking standard. Do not use twisted, warped, bowed, discolored, or otherwise damaged or defective material.
   5. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:
      a. Exterior Fire-X; American Wood Treaters, Inc.
      b. Exterior Fire-X; Hoover Treated Wood Products, Inc.

D. Extent of Treatment: As indicated on Drawings or required by regulation or Authorities Having Jurisdiction.

2.4 INSTALLATION MATERIALS

A. Blocking, Shims, and Nailers: Fire-retardant-treated softwood lumber, kiln dried to less than 15 percent moisture content.

B. Screws: Select material, type, size, and finish required for each use, nonferrous metal or hot-dip galvanized, unless otherwise indicated. Comply with ASME B18.6.1 for applicable requirements.
   1. For metal framing supports, provide screws as recommended by metal-framing support manufacturer.

C. Nails: Select material, type, size, and finish required for each use. Comply with Fed. Spec. FF-N-105 for applicable requirements.
D. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous metal or hot-dip galvanized anchors and inserts, unless otherwise indicated. Provide toothed steel or lead expansion bolt devices for drilled-in-place anchors.

2.5 ROUGH HARDWARE

A. 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 same. Rough hardware shall comply in all respects with requirements of the governing laws and codes.

B. Rough hardware items for use at roof framing, blocking, nailers, etc., and other exterior uses, and to be exposed in the finished interior work, shall be hot-dip galvanized zinc or cadmium-plated steel, or stainless steel in accordance with ASTM A 153, or non-ferrous, as indicated or as approved by Architect. Galvanizing shall conform to ASTM A 153. Concealed interior nails shall be bright. Other concealed items shall be cadmium plated or zinc chromate plated. Rough hardware items shall be of appropriate type and of proper capacity and size as required for each specific application.

C. Unless otherwise called out, wood framing, blockings, nailers, etc., of 2 in. nominal thickness or greater shall be bolted to back-up material with 1/2 in. bolts (galvanized at exterior locations and at roofs) located 4 in. from ends and splices, and spaced not greater than 32 in. on center along lengths of the members, to develop positive and secure anchorage to the back-up material. Nails shall be of sufficient length to penetrate the receiving member a minimum of 1-1/2 in.

D. Unless otherwise called out, wood framing, nailers, furring, etc., less than 2 in. nominal thickness shall be secured to back-up material by use of appropriate fasteners located 4 in. from ends and spaced not greater than 16 in. on center along lengths of the members. Type and length of fastening devices shall be such as to develop positive and secure anchorage to the back-up material.

2.6 METAL CONNECTORS AND ANCHORS FOR WOOD AND TIMBER

A. Provide all metal connectors and anchors for wood and timber connections and anchorage as indicated or as required by applicable Codes and Standards and acceptable to local authorities having jurisdiction.

B. Unless otherwise indicated metal connectors and anchors shall be manufactured by the following, or approved equal:
C. Metal Connectors and Anchors: Metal connectors and anchoring devices shall be recognized by most product evaluation agencies and shall meet applicable Codes. Agencies that recognize products include ICC-ES (formerly ICBO, BOCA, SBCCI).

1. Provide prefabricated 16 gauge galvanized steel joist hangers, anchors, and ties manufactured by The Simpson Strong-Tie Company, or equivalent products manufactured by USP, Heckman Building Products or Harlem Metal Products, Inc.

2. Provide minimum 18 gauge galvanized steel post anchors, timber connectors, joist hangers and supports, hurricane tie-downs and plywood nailing clips as indicated on Drawings, manufactured by The Simpson Strong-Tie Company, Heckman Building Products, Inc., United Steel Products Company, Teco, or approved equal.

D. Finish on Metal Connectors and Anchors:

1. Generally Metal connectors used in interior environments to be shop finished with applied corrosion resistant coating or galvanized.

2. Metal connectors in contact with treated lumber materials in an exterior wet environment:
   a. Hot dipped galvanized per ASTM A 653 total both sides. Minimum coating for galvanizing shall be 1.85 oz. zinc per sq. ft. equal to Simpson Strong-Tie ‘ZMAX’ (G185).
   b. Products that are 14 ga. and thicker shall be hot dipped galvanized per ASTM A 123 total both sides. Minimum coating for galvanizing shall be 2.0 oz. zinc per sq. ft. equal to Simpson Strong-Tie ‘Hot Dip Galvanized HDG.
   c. Fasteners to be used with these products shall meet specifications of ASTM A 153.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

A. Discard units of material with defects that impair quality of carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.

B. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
C. Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.

D. Fastening: Securely attach rough carpentry work to substrate by anchoring and fastening as indicated.
1. Fastening of rough carpentry work shall conform to requirements of the governing laws and codes.
2. Where nailing is indicated, use common wire nails, unless otherwise indicated.
3. Countersink nail heads on exposed carpentry work and fill holes.
4. Select fasteners of size that will not penetrate members where opposite side is exposed or will receive finish materials.
5. Install fasteners without splitting wood; predrill as required. Securely attach carpentry work as indicated and according to applicable codes and recognized standards.
6. Wood shall be secured to wood substrates and other wood to wood connection with nails spaced 12 in. on center maximum staggered along the centerline of the member being installed. All nail heads must be flush with the top surface.
7. Nailing of plywood sheathing shall be in strict accordance with the published specifications and recommendations of the APA - The Engineered Wood Association (f/k/a American Plywood Association).
   a. Plywood roof sheathing shall be nailed at 4 in. o.c. at edges and 8 in. o.c. at intermediate supports, or as indicated on the Structural Drawings.
   b. All plywood sheathing shall be blocked at edges or where approved, plywood clips may be used.
8. Plywood roof sheathing: Install as indicated on the Drawings and as recommended by overlayment (Metal roofing) manufacturer.

E. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to relative humidity conditions existing during time of fabrication and in installation areas.

F. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
1. Edges of solid-wood (lumber) members 3/4 inch thick or less: 1/16 inch.
2. Edges of rails and similar members more than 3/4 inch thick: 1/8 inch.

G. Complete fabrication, including assembly, finishing, and hardware application, before shipment to Project site to maximum extent possible. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

H. Shop-cut openings, to maximum extent possible, to receive hardware, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Smooth
edges of cutouts and seal edges with a water-resistant coating suitable for exterior applications.

3.2 ROUGH CARPENTRY WORK

A. 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 clearly 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.

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

C. Discard units of material which are unsound, warped, bowed, twisted, improperly treated, not adequately seasoned, or too small to fabricate with minimum number of joint or optimum jointing arrangements, or which are of defective quality with respect to surfaces or sizes.

D. Refer to FM Data Sheet 1-49 concerning spacing requirements for perimeter blocking anchorage. All anchors and fasteners that attach wood blocking to the structure shall have their spacing halved for an 8 ft. length away from all exterior corners of the perimeter.

E. Butt joints in wood shall be flush to provide a smooth, uniform line with no irregularities.

F. Built-up blocking shall have butt joints staggered 4 in. minimum layer to layer. The minimum length of any individual piece of woodwork shall be 12 in. All lengths of woodwork shall have a minimum of four fasteners.

G. 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. Counter-bore for bolt heads, nuts, and washers where required to avoid interference with other materials.

H. Engineered Lumber: Fastening (nailing or bolting) of LVL, PSL, and I-joist (AJS) and Rim Board members shall be in accordance with all codes and in accordance with the engineered lumber manufacturer’s recommended details and instructions. Where required, provide backup calculations for all connections and fastenings. Refer to Structural Drawings.

I. Structural members shall be full-length without splices, and spaced not farther than 16 in. on center, except as may be otherwise specifically indicated on the Drawings.
J. Wood framing members shall be one-piece full length for maximum strength. Wood blockings, edgings, nailers, etc., shall be installed as indicated or specified and shall be furnished in not less than 12 ft. lengths, except where shorter lengths are required.

K. Wood blockings, nailers, edgings, etc., shall be installed as indicated or specified and shall be furnished in lengths not less than 12 ft., except where shorter lengths are required.
   1. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
   2. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

L. Install all wood grounds required at gypsum wallboard work, including those required by other trades to properly attach their work, such as grounds to assure proper lines and levels and for attachment of fixtures, louvers, grilles, registers, diffusers, etc. Do not, however, include fixture support blockings at steel stud framed or furred gypsum wallboard finished walls or partitions as work of this Section.

M. If nailing, drilling, or powder-driving into concrete or masonry causes puncturing of conduits, pipes, ducts, etc., embedded in such work, repair all damage so caused.

N. Miscellaneous Items: Install all rough carpentry work and other miscellaneous items throughout, as indicated on the Drawings and as required to satisfactorily complete the entire work, whether or not each and every required piece is specifically indicated on the Drawings.

3.4 COMPLETION

A. Just prior to completion of work of this Section, inspect work in the company of Architect and make adjustments and corrections to work leaving operating parts in perfect operating condition, all jointing to adjacent material tight, all surfaces without blemishes or stains, all work properly executed and complete, and all defects and damaged work replaced or corrected.

3.5 CLEAN UP

A. As work progresses, and at the end of each day's work, remove scraps of wood, loose fasteners, and other debris; sweep clean; and leave the work area safe and free of debris such as screws and nails that may damage other Work in place.
PART 1 – GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
   1. Interior wood finish casework

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
   1. Section 06 10 00 - ROUGH CARPENTRY for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
   2. Section 09 21 10 - GYPSUM BOARD ASSEMBLIES

1.3 REFERENCES

A. Cellular PVC Exterior Trim
   1. ASTM D792 - Density and Specific Gravity of Plastics by Displacement.
   2. ASTM D570 - Water Absorption of Plastics.
   5. ASTM D1761 - Mechanical Fasteners in Wood.
   7. ASTM D256 - Determining the Pendulum Impact Resistance of Plastics.
   9. ASTM D635 - Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.

1.4 SUBMITTALS
A. Product Data: For each type of product specified, including hardware and accessories, and finishing materials and processes.
   1. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.

B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large scale details, attachment devices, and other components.
   1. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
   2. Show locations and sizes of cutouts and holes for plumbing fixtures, electrical components and other items installed in architectural woodwork.
   3. Show veneer leaves with dimensions, grain direction, exposed face, and identification numbers indicating the flitch and sequence within the flitch for each leaf.

C. Samples for Verification:
   1. Lumber with or for transparent finish, not less than 5 inches wide by 12 inches long for each species and cut, finished on 1 side and 1 edge.

D. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

E. Qualification Data: For Installer and fabricator.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance. Shop is a certified participant in AWI's Quality Certification Program.

B. Installer Qualifications: Certified participant in AWI's Quality Certification Program.

C. Source Limitations: Engage a qualified woodworking firm to assume undivided responsibility for production of interior architectural woodwork with sequence-matched wood veneers.

D. Quality Standard: Unless otherwise indicated, comply with AWI/AWMAC/WI's "Architectural Woodwork Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.
   1. Provide AWI Quality Certification Program labels and certificates indicating that woodwork, including installation, complies with requirements of grades specified.
E. Fire-Test-Response Characteristics: Where fire-retardant materials or products are indicated, provide materials and products with specified fire-test-response characteristics as determined by testing identical products per test method indicated by UL, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify with appropriate markings of applicable testing and inspecting agency in the form of separable paper label or, where required by authorities having jurisdiction, imprint on surfaces of materials that will be concealed from view after installation.

F. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
   1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

G. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01.

1.5 DELIVERY, STORAGE, AND HANDLING

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

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
   1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.
   2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

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

PART 2 – PRODUCTS

2.1 MATERIALS

A. Recycled Content of Medium-Density Fiberboard and Particleboard: Provide products with an average recycled content so postconsumer recycled content plus one-half of pre-consumer recycled content is not less than 25%.

B. Certified Wood: Materials shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

C. General: Provide materials that comply with requirements of AWI/AWMAC/WI's "Architectural Woodwork Standards" for each type of woodwork and quality grade specified, unless otherwise indicated.

D. Wood Veneers and Lumber: Provide AWI Premium Grade materials and workmanship.
1. Provide AWI Lumber Grade 1 and AWI Grade A Veneer, book-matched, minimum 6 inch face veneer width. Kiln dry to 6-8 percent moisture content. Components shall be free of defects and sapwood. Match adjacent pieces for color and grain pattern.
2. Single-Source Requirement for Wood Veneers and Solids: Intent is to provide wood which matches as closely as possible throughout the project. Provide wood veneers and solids from the same distributor, and from the same flitches and solids sources to the greatest extent possible.

E. Wood Species and Cut for Transparent Finish: Stained - match existing.

F. Wood Species for Opaque Finish: Any closed-grain hardwood.

G. Wood Products: Comply with the following:
1. Recycled Content of Medium-Density Fiberboard and Particleboard: Provide products with recycled content.
5. Softwood Plywood: DOC PS 1, Medium Density Overlay.

a. Fasteners:
i. Fasteners designed for wood trim and wood siding (thin shank, blunt point, full round head).

ii. Fastener material: Stainless steel.

iii. Shape: Staples, small brads and wire nails are not acceptable as fastening members.

iv. Length: Fasteners shall be long enough to penetrate the solid wood substrate a minimum of 1 1/2”.

v. Standard gun nail meeting the requirements above are acceptable.

vi. Fastener spacing:
   • Place two (2) fasteners per every framing member or spaced not more than 24 inches o.c. for trim-boards applications.
   • Place one (1) fastener per every framing member or spaced not more than 24 inches o.c. for molding.
   • Trim-boards 12” or wider, as well as sheets, will require additional fasteners.
   • Fasteners shall be installed no more than 2” from the end of each piece.

vii. Fastener substrate: Fastened into a flat, solid substrate. Do not fasten into hollow or uneven areas.

viii. Pre-drilling is typically not required unless a large fastener is used or product is installed in low temperatures.

b. Adhesives:
   i. Glue all PVC to PVC joints such as window surrounds, long fascia runs, etc. with a cellular PCV glue, to prevent joint separation.
   ii. Use glue intended for Exterior Cellular PVC trim. Do not use other types of PVC adhesive products
   iii. The glue joint shall be secured with a fastener and/or clamped on each side of the joint to allow adequate bonding time.
   iv. Cellular PVC trim glue has a working time of 10 minutes and will fully cure in 24 hours.
   v. Surfaces to be glued should be smooth, clean and in complete contact with each other.

c. Sealants:
   i. Urethane sealant
   ii. Polyurethane based sealants without silicone
   iii. Acrylic based sealants without silicone.

2.2 FIRE-RETARDANT-TREATED MATERIALS

A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this Article, which are acceptable to authorities having jurisdiction, and with fire test-response characteristics specified.
1. Do not use treated materials that do not comply with requirements of referenced woodworking standard or that are warped, discolored, or otherwise defective.
2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
3. Identify fire-retardant-treated materials with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.

B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Comply with performance requirements of AWPA C20 (lumber) and AWPA C27 (plywood). Use the following treatment type:

2. Mill lumber before treatment and implement special procedures during treatment and drying processes that prevent lumber from warping and developing discolorations from drying sticks or other causes, marring, and other defects affecting appearance of treated woodwork.
3. Kiln-dry materials before and after treatment to levels required for untreated materials.

C. Fire-Retardant Particleboard: Panels complying with the following requirements, made from softwood particles and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 25 or less per ASTM E 84.

2.3 MISCELLANEOUS MATERIALS

A. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln dried to less than 15 percent moisture content.

B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed steel or lead expansion sleeves for drilled-in-place anchors.

C. Adhesives, General: Do not use adhesives that contain urea formaldehyde.

D. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

1. Wood Glues: 30 g/L.
2. Contact Adhesive: 80 g/L.
3. Special Purpose Contact Adhesive: 250 g/L.
2.4 FABRICATION, GENERAL

A. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.

B. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.

C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:

D. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

E. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
   1. Seal edges of openings in countertops with a coat of varnish.

2.5 INTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH

A. Grade: Custom.

B. Wood Species and Cut: As specified hereinabove.
   1. Provide split species on trim that faces areas with different wood species, matching each face of woodwork to species and cut of finish wood surfaces in areas finished.

C. For trim items wider than available lumber, use veneered construction. Do not glue for width.

D. For rails wider or thicker than available lumber, use veneered construction. Do not glue for width or thickness.

E. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.

F. Assemble casings in plant except where limitations of access to place of installation require field assembly.
PART 3 – EXECUTION

3.1 PREPARATION

A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.

B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and back-priming.

3.2 INSTALLATION

A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.

B. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.

C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.

D. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

E. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer’s written instructions, including those for adhesives used to install woodwork.

F. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.

G. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 60 inches long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.

1. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base if finished.

2. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.
3.3 ADJUSTING AND CLEANING

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

B. Clean, lubricate, and adjust hardware.

C. Clean woodwork on exposed and semi-exposed surfaces.

D. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION
PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Flashing and Sheet Metal

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
1. Section 07 92 00 - JOINT SEALANTS for caulking and sealing.
2. Section 08 53 50 - POLYMER WINDOWS

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):
2. ASTM A653/A653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or A653M Zinc-iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
3. ASTM A924/A924M Specifications for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
5. ASTM B32 Specification for Solder Metal.
7. ASTM B306 Specification for Copper Drainage Tube (DWV).
8. ASTM B370 Specification for Copper Sheet and Strip for Building Construction.

B. Federal Specification (FS):
2. FS TT-S-1543 Sealing Compound: Silicone Rubber Base (For Calking, Sealing and Glazing in Buildings and Other Structures).


1.4 SUBMITTALS

A. Comply with Section 01 33 00 - Submittal Procedures.

B. Shop Drawings and Product Data:
   1. Submit detailed Shop Drawings of metal flashing and sheet metalwork, including shapes, fastening, terminations and installation details.
   2. Manufacturers' product data for materials and manufactured items.
   3. Initial Selection Samples: Submit samples showing complete range of colors, textures, and finishes available for each exposed material used.
      a. Sheet metal for all exposed flashing, minimum 4 in. long.

1.5 QUALITY ASSURANCE

A. Flashing and sheet metalwork shall be fabricated and installed in accordance with SMACNA Architectural Sheet Metal Manual.

B. Except where otherwise indicated, comply with minimum thickness or gage requirements as specified in SMACNA Architectural Sheet Metal Manual.

C. Source: For each material type required for the work of this section, provide primary materials which are the product of one manufacturer. Provide secondary or accessory materials which are acceptable to the manufacturers of the primary materials.

D. Thermal Movement: Provide systems and connections which allow for thermal movement resulting from ambient temperature range of 120°F.

E. Material Compatibility: Provide flashing and sheet metal materials that are compatible with one another and with adjacent materials under conditions of service and application required, based on documentation, testing and field experience.

F. Provide base flashings, perimeter flashings, detail flashings and component
materials that comply with requirements and recommendations in FMG 1-49 Loss Prevention Data Sheet for Perimeter Flashings; FMG 1-29 Loss Prevention Data Sheet for Above Deck Roof Components; NRCA Roofing and Waterproofing Manual for Construction Details and SMACNA Architectural Sheet Metal Manual for Construction Details, as applicable.

G. Pre-Installation Conference
   1. Convene at least one week prior to commencing Work of this section and other Building Envelope sections.
   2. Ensure all contractors responsible for creating a continuous plane of water tightness are present.

1.6 COORDINATION

A. Coordinate, flashing, work with trim, sheathing, siding, veneers, air/vapor barrier, foundation waterproofing and drainage systems, windows, doors, louvers, vents, roofing, and other adjoining work to provide a leak-proof, secure, and non-corrosive installation.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Galvanized Sheet Metal: Standard galvanized steel sheet, meeting requirements of ASTM A653/A653M and ASTM A924/A924M, as applicable, with minimum zinc coating of 1.25 ounces per square foot and 0.2 percent copper bearing, and mill phosphatized for maximum paint adherence. Where sheet metal gage is not indicated, provide 24 gage.

B. Stainless Steel: Stainless steel sheet for architectural applications, meeting the requirements of ASTM A167, Type 304 or Type 316, with No. 4 finish. Where stainless steel sheet gage is not indicated, provide 24 gage.

C. Aluminum:
   1. Provide ASTM B 209, alloy 3003, temper H14 aluminum for aluminum flashing, and related work, where indicated on Drawings.
   2. Finish shall be two-coat 70% Kynar 500.
   3. Color as selected by the Architect. From manufacturer’s standard offering.
   4. Unless otherwise indicated, provide the following minimum thicknesses:
      a. Miscellaneous Flashing: 0.040 in. (unless otherwise noted).
D. Self-Adhering Sheet Membranes
1. **For use where introduction of bituminous material will not cause an interaction with adjacent coatings, weather barriers, water barrier, vapor barriers, tapes, foams and plastics:**
   a. Material: Cold applied, self-adhering membrane composed of an innovative and proprietary rubberized asphalt adhesive and interwound with a disposable release sheet. An embossed, slip resistant surface is provided on the high performance film with UV barrier properties.
   b. Membrane Thickness: 40 mils (1.02 mm) per ASTM D3767 Method A.
   c. Membrane Tensile Strength: MD 33 lbf/in, CD 31 lbf/inch per ASTM D412 Die C Modified.
   d. Membrane Elongation: 250% per ASTM D412 Die C Modified.
   e. Low Temperature Flexibility: Unaffected at -20°F per ASTM D1970.
   f. Adhesion to Plywood: 5.0 lb/in. width per ASTM D903.
   g. Maximum Permeance: 0.05 perms per ASTM E96.
   h. Maximum Material Weight Installed: 0.22 pounds/sq.ft. per ASTM D461.
   i. Service Temperature: 240°F per ASTM D1204
   j. Adhesive: Rubberized asphalt adhesive containing post-consumer recycled content, contains no calcium carbonate, sand or fly ash.
   k. Exposure: Can be left exposed for a maximum of 120 days from date of installation per ASTM G90 – EMMAqua test.
   m. Code and Standards Compliance: Grace Ice and Water Shield HT meets the following requirements:
      i. ASTM D1970.
      ii. ICC-ES AC 48 Acceptance Criteria for Roof underlayments for use in Severe Climate Areas.
2. For use adjacent to coatings, weather barriers, water barrier, vapor barriers, tapes, foams and plastics which are sensitive to bituminous and petroleum/solvent based materials:
   c. Thickness:
      i. Carrier Film: 4 mils.
      ii. Polymeric Membrane: 56 mils.
d. Tensile Strength, ASTM D412, Die C:
   i. Carrier Film: 5,900 psi (40.71 MPa) minimum.
   ii. Polymeric Membrane: 460 psi (3.23 MPa) minimum.

e. Elongation, ASTM D412, Die C: Polymeric Membrane: 971 % minimum.

f. Peel Adhesion, ASTM D903: 11.8 lbf/in. (2068 N/m).

g. Lap Adhesion, ASTM D1876: 8.62 lbf/in. (1508 N/m)

h. Water Vapor Permeability, ASTM E96, Method B: 0.036 perms.

i. Water Absorption, ASTM D570: 0.1 percent, 72 hours maximum.

j. Resistance to Hydrostatic Head: Equivalent to 230.9 feet of water.


l. Exposure to Fungi, Soil Test: Pass, 16 weeks.

m. Color:
   i. Carrier Film: White.
   ii. Polymeric Membrane: Black.

2.2 ACCESSORIES

A. Fasteners:
   1. Fasteners: Stainless steel fasteners meeting corrosion resistance requirements, designed for fastening flashing to substrate.
   2. Use the following guide to determine fastener compatibility:

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<th>Aluminum &amp; Aluminum Alloys</th>
<th>Steel &amp; Cast Iron</th>
<th>Brasses, Coppers, Bronzes &amp; Monel</th>
<th>Martensitic Stainless Type 410</th>
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07 60 00
FLASHING AND SHEET METAL
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Brasses, Coppers, Bronzes & Monel

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Martensitic Stainless Type 410

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Stainless Type 302/304, 303, 305

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Compatibility Chart KEY:

1. The corrosion of the base metal is not increased by the fastener.
2. The corrosion of the base metal is marginally increased by the fastener.
3. The corrosion of the base metal is considerably increased by the fastener.
4. The plating on the fastener is rapidly consumed, leaving the bare fastener metal.
5. Corrosion of the fastener is increased by the base metal.

Note: Surface treatment and environment can significantly alter activity.

B. Counterflashings and Reglets

1. Basis-of-Design Product: MM Systems or a comparable product by one of the following:
   a. Fry Reglet Corporation.
   c. Metal-Era, Inc.

2. Counterflashings: Manufactured units in lengths not exceeding 12 feet designed to snap into reglets and compress against base flashings with joints lapped, from the following exposed metal in thickness indicated:
   a. Aluminum, 0.063 inch (1.6 mm) thick.
   b. Reglets: Manufactured units formed to provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashings indicated with factory-mitered and welded corners and junctions, from the following exposed metal in thickness indicated:
      i. Aluminum, 0.063 inch (1.6 mm) thick.

C. Elastomeric Sealant: Generic type recommended by manufacturer of metal and fabricator of components being sealed.

D. Adhesives: Type recommended by flashing or sheet metal manufacturer for
waterproof/weather-resistant seaming and adhesive application of flashing sheet.

E. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of work, matching or compatible with material being installed, noncorrosive, size and gage required for performance.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:

B. Verify that openings and penetrations are in place set, and secured in place.

C. Verify that wood blocking, curbs, and nailers are securely anchored.

D. Verify that barrier systems that will be connected to the flashings or will be protected by the sheet metal are coordinated with the work of this section.

3.2 FLASHINGS - GENERAL

A. Flashings: Except as otherwise shown on the approved shop drawings or specified herein, the workmanship of sheet metal flashing 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 and the roof shingle manufacturer.

3.3 COUNTER FLASHINGS

A. Coordinate installation of counter flashings with installation of base flashings.

1. Insert counter flashings in reglets or receivers and fit tightly to base flashings.

2. Extend counter flashings over base flashings. Lap counter flashing joints and bed with elastomeric sealant.

3. Install reglets at locations indicated securely anchored in position.
3.4 ADJUST AND CLEAN

A. Replace all damaged flashings.
B. Remove debris not part of extra stock from Project site.

3.5 PROTECTING AND CLEANING

A. Protect flashing systems from damage and wear during remainder of construction period.
B. Correct deficiencies in or remove flashing system that does not comply with requirements, repair substrates, and repair or reinstall flashing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
C. Clean adjacent construction if needed using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION
PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
   1. Joint sealants and fillers.

B. This Section includes joint sealants for the applications specified with the products in this Section and as indicated on Drawings.

C. Related Work: The following items are not included in this Section and are specified under the designated Sections:
   1. Section 08 53 50 - POLYMER WINDOWS.
   2. Section 09 21 16 - GYPSUM BOARD ASSEMBLIES for sealing perimeter joints of gypsum board partitions to reduce sound transmission.

1.3 PERFORMANCE REQUIREMENTS

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

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

1.4 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

C. Qualification Data: For Installer.
E. Preconstruction Field Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on preconstruction testing specified in "Quality Assurance" Article.

F. Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
   1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
   2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

G. Field Test Report Log: For each elastomeric sealant application.

H. Product Test Reports: Based on comprehensive testing of product formulations performed by a qualified testing agency, indicating that sealants comply with requirements.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer’s authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.

B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

C. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
   1. For exterior metal panels, submit two samples of each finish color to manufacturer for testing. Obtain test certificate prior to proceeding with installation.
   2. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
   3. For materials failing tests, obtain joint-sealant manufacturer’s written instructions for corrective measures including use of specially formulated primers.
   4. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

D. Preconstruction Field-Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to Project joint substrates as follows:
1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.

2. Conduct field tests for each application indicated below:
   a. Each type of elastomeric sealant and joint substrate indicated.
   b. Each type of non-elastomeric sealant and joint substrate indicated.

3. Notify Architect seven days in advance of dates and times when test joints will be erected.
      i. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side.
      ii. Repeat procedure for opposite side.

4. Report whether sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.

5. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

E. Preinstallation Conference:
1. Convene at least one week prior to commencing Work of this section and other Building Envelope sections.
2. Ensure all contractors responsible for creating a continuous plane of water tightness are present.

1.6 PROJECT CONDITIONS

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

1.7 WARRANTY
A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
   1. Warranty Period: Two years from date of Substantial Completion.

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

C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
   1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
   2. Disintegration of joint substrates from natural causes exceeding design specifications.
   3. Mechanical damage caused by individuals, tools, or other outside agents.
   4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.

B. VOC Content of Interior Sealants: Provide interior sealants and sealant primers that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
   1. Architectural Sealants: 250 g/L.
   2. Sealant Primers for Nonporous Substrates: 250 g/L.
   3. Sealant Primers for Porous Substrates: 775 g/L.

C. Colors of Exposed Joint Sealants: As indicated by manufacturer's designations.

2.2 JOINT SEALANTS
A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

B. Stain-Test-Response Characteristics: Elastomeric sealants shall be non-staining to porous substrates. Provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

C. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.

D. Single-Component Neutral-Curing Silicone Sealant:
   1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
      a. GE Silicones; SilPruf NB SCS 9000,. Type: S, Grade: NS, Class: 50, Color: TBD.
      b. Substitutions: Not permitted.
      c. Extent of Use: Joints in exterior vertical and soffit surfaces.

E. Multicomponent Pourable Urethane Sealant:
   1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
      b. Meadows, W. R., Inc.; POURTHANE.
      c. Pecora Corporation; Urexpan NR-200.
      d. Tremco Inc.; THC-901.
      e. Bondaflex Technologies; PUR 2 SL
   2. Extent of Use: Joints in exterior horizontal surfaces.

F. Two-Component, Non-Sag, Polyurethane Elastomeric Sealant:
   1. Multi-Component Urethane: ASTM C 920, Type M, Grade NS, [Class 25] [Class 50]; Uses T, [NT], M, A, and O; two component, chemical curing, nonstaining, nonbleeding, color as selected.
   2. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
      a. Sikaflex® 2c NS EZ Mix
      b. Pecora Dynaflex™ Flexible Polyurethane Security Sealant
      c. Tremco Dymeric 240FC
F. Single-Component Mildew-Resistant Acid-Curing Silicone Sealant:
   1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
      a. Dow Corning Corporation; 786 Mildew Resistant.
      b. GE Silicones; Sanitary SCS1700.
      c. Tremco Inc.; Tremsil 200.
   2. Extent of Use: Sanitary joints at toilet rooms, including between fixtures and walls and at tile joints per TCNA 2012.

G. Latex Sealant: Comply with ASTM C 834, Type P, Grade NF.
   1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
      a. Bostik Findley; Chem-Calk 600.
      b. Pecora Corporation; AC-20+.
      c. Sonneborn, BASF Building Systems; Sonolac.
      d. Tremco Inc.; Tremflex 834.
      e. May National Bondaflex Sil-A 700
   2. Extent of Use: Non-moving joints at interior locations.

   1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
      b. Tremco Incorporated; Mono 555.
   2. Extent of Use: Joints at PVC trim and panels.

2.3 JOINT-SEALANT BACKING

A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26°F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to otherwise contribute to optimum sealant performance.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible
joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.4 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealant and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
   1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
   2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free
compressed air. Porous joint substrates include concrete, masonry and unglazed surfaces of ceramic tile.

3. Remove laitance and form-release agents from concrete.

4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following metal, glass, porcelain enamel and glazed surfaces of ceramic tile.

B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer’s written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer’s written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
   1. Remove excess sealant from surfaces adjacent to joints.
   2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
   3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

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

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion.

B. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION
PART 1  GENERAL

1.1. Summary

A. Provide all labor, material and equipment necessary to furnish and install polymer windows as shown on drawings and specifications herein. Window shapes and accessories as specified and detailed shall establish the type of units and materials to be used to provide the functional performance and aesthetic requirements desired. Details indicate the required depth and profile.

B. Window construction type: Polymer windows (CW Class).

C. Configurations of windows required: fixed

1.2. References

A. Publications listed below are part of this specification to the extent they are referenced. When publications are cited in these specifications by use of shortened names or by standard number alone, it must be understood that reference is made to the full publication and edition as listed here.


C. NFRC: National Fenestration Rating:
   a. 100: Procedure for Determining Fenestration Product U-Factors
   b. 200: Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence
   c. 500: Procedure for Determining Fenestration Product Condensation Resistance Values


E. E 413: Classification for Rating Sound Insulation

F. E 1332: Standard Classification for Rating Outdoor-Indoor Sound Attenuation


J. City of New York Department of Health Window Falls Prevention Program, Chapter 12-11, Specifications for Window Guards for Other Than Double Hung Windows

K. American Society of Civil Engineers: ASCE 7-10 Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 2010

1.3. Performance Requirements for CW class windows:

A. Windows shall meet a rating of CW – DP 50 specifications in accordance with ANSI/AAMA/NWWDA 101/I.S.2/A440-08/12.

B. Window Air Leakage, ASTM E 283: Window air leakage when tested at 6.27 psf (Fixed), shall be 0.06 cfm/ft2 (Fixed), or less.

C. Window Water Penetration, ASTM E 547 and ASTM E 331: No water penetration through window when tested under static pressure of 8.35 psf (Fixed)

D. Thermal Performance: Windows have been tested in accordance with the NFRC. The products were evaluated in full compliance with NFRC requirements. The windows, including glass and Polymer framing, shall have a thermal transmittance of:
   a. U-factor (Btu/hr/ft2/°F): Fixed: 0.26
   b. SHGC: Fixed: 0.38/0.47
   c. VT: Fixed: 0.60/0.65

1.4. Thermal Movement

A. Allow for thermal movement of the window based on site mean temperature +/-70F, window/element size and coefficient of linear expansion of Polymer.
   a. If non-white windows are chosen, allow for thermal movement of the window based on solar-heat absorption.

1.5. Acoustical Performance

A. Windows shall meet or exceed requirements of OITC, when tested in accordance to ASTM E 1332; or STC, when tested according to ASTM E 90. The windows, including glass and Polymer framing, shall have an acoustical performance of:

1.6. Submittals

A. Shop Drawings: Submit manufacturer's shop drawings, indicating dimensions, construction, component connections and locations, anchorage methods and
locations, hardware locations, and installation details.

B. Product Data: Submit manufacturer's product data, including installation instructions.

1.7. Delivery

A. A temporary covering shall protect exposed surfaces after completing fabrication of products.

B. Deliver in manufacturer’s original packaging with labels intact.

1.8. Storage and Handling

A. Products are heavy and fragile. Special care, sufficient manpower, tools, and equipment shall be used for unloading, transporting, warehousing, and installing the products. Two forklifts should be used to unload container on job site.

B. Industrial straps (at least 5,000 lbs.) MUST be used to unload large pallets.

C. Store window units in an upright position in a clean and dry storage area above ground to protect from weather.

D. Cover materials with tarpaulins or plastic hung on frames to provide air circulation and prevent contaminants from contacting polymer.

E. Remove all paper type wrappings and interleaving that are wet or which could become wet when unloading materials.

F. Glass must never be stored or transported in a horizontal/flat orientation.

G. Store crated glass in a cool, dry, and well-ventilated area where it will not be subject to rain or direct sun.

H. Minimize handling by scheduling shipments by floors and by initially locating crated products as close to their installation as possible.

I. Use mechanized window handling and installation equipment with vacuum suction cups for windows heavier than 150 lbs.

J. For a more information about storage and handling windows, refer to the complete and current instructions of manufacturer.
1.9. Warranty

A. The products supplied by Seller shall be free from material defects, in material and workmanship, for a period of **10** from the date of substantial completion of the project.

B. Clear insulating glass with stainless steel or warm edge spacers is warranted against seal failure resulting in visible obstruction through the glass for **10** years from the SOW date under the normal use conditions. Glass is warranted against stress cracks caused by manufacturing defects for one (1) year from the SOW date.

C. The laminated glass is warranted to be free of defects in materials and workmanship for products which use PVB interlayer which are warranted for a period of five (5) years, from the SOW date.

D. The polymer white profiles without laminate will resist cracking, peeling, chalking, blistering, flaking, and significant ultraviolet discoloration (greater than 6 Delta E) caused by natural environmental atmospheric conditions for the period of five (5) years from the SOW date.

E. The polymer laminated exterior finishes (using films) will resist cracking, peeling, chalking, delaminating, blistering, flaking, and significant ultraviolet discoloration (greater than 6 Delta E) caused by natural environmental atmospheric conditions for the period of **20** years.

F. Non-glass components are warranted to be free from manufacturing defects for **5** years from the SOW date.

PART 2 PRODUCTS

2.1. Manufacturer

A. Acceptable Manufacturers:
   b. YARO Windows + Doors: 84 Sherman St, Cambridge, MA 02140, Phone: (617) 433-9228
   c. Zola Windows: 1169 Hilltop Parkway #201, Steamboat Springs, CO; 303-578-0001

B. Basis of Design: INTUS Windows; **Supera CW**, fixed window.
2.2. Materials

A. Window system: INTUS Windows; Supera CW, fixed window.

B. Minimum Outside Nominal Wall Thickness:
   a. Primary frame and sash extrusions exterior walls: 0.106” (2.7mm)
   b. Secondary extrusions (e.g. glazing stops and closures): 0.059” (1.5mm)

C. Face dimensions (nominal): as indicated on Architectural Drawings.

D. Frame colors:
   1. Interior: white
   2. Exterior: white

E. The frames feature accessory grooves which allow for snap-in attachment of Polymer nailing flange, trim profile(s) and mulled window joint covers.

F. Window Sash and Frame shall be configured to receive glazing beads (stops) that snap into the interior side of the insulating glass.

G. Reinforcement:
   a. Galvanized steel shall be in size, configuration, and location within the window as indicated in the test reports and INTUS Windows Supera Reinforcement instructions.

H. Weather seals:
   a. Co-extruded polymer replaceable weather seals:
      i. Shapes, designs, and thickness as needed to satisfy performance requirements
      ii. Standard color: black

I. Glass:
   a. Glass shall comply with requirements of AAMA/WDMA/CSA 101.1.S.2/A440-05, Section 10.2
   b. Glazing type:
      a. South-facing Assembly:
         • Lower rectangular units: equal to INTUS 44.2T/20Ar/EN10T (tempered fixed spandrel), safety, enamel surface #6, double pane, warm edge spacer; STC=41, OITC= 33.
         • Upper rectangular units: equal to INTUS 44.2/20Ar/Prem10T (tempered fixed vision), safety, double pane, warm edge spacer; U=0.26, SHGC=0.47, Vt= 0.65, Condensation Resistance=57, STC=41, OITC= 33.
• Upper trapezoidal units: equal to INTUS 44.2/20Ar/Prem10T, double pane, warm edge spacer (non-tempered)

b. East-facing Assembly (Alternate #1):
   • Lower rectangular units: equal to INTUS 44.2T/20Ar/EN10T (tempered fixed spandrel), safety, enamel surface #6, double pane, warm edge spacer; STC=41, OITC=33.
   • Upper rectangular units: equal to INTUS 44.2/20Ar/Prem10T (tempered fixed vision), safety, double pane, warm edge spacer; U=0.26, SHGC=0.38, Vt=0.6, Condensation Resistance=62, STC=41, OITC=33.
   • Upper trapezoidal units: equal to INTUS 44.2/20Ar/Prem10T, double pane, warm edge spacer (non-tempered)

c. Glass type: low-e coated
d. Filling: Argon
e. Spacer: Warm edge spacer

2.3. Fasteners
   a. Exposed fasteners shall be selected to prevent galvanic reaction with any reinforcement materials fastened.
   b. Above criteria is applicable to screws used to secure internal reinforcement and to fasteners used in window mullion connections, if required.
   c. Avoid exposed fasteners to greatest extent possible.
   d. Where exposed fasteners are unavoidable in finished surfaces, use flathead countersunk Phillips head screws.
   e. Installation anchors must be approved by the responsible engineer/architect for the project.

2.4. Installation accessories:
   a. Mounting brackets and screws

2.5. Finish
   a. Protection:
      1. Provide film to protect exposed finished surfaces during shipment, storage, and installation whenever possible.
      2. Film shall not affect factory finish after finished component is installed and film is stripped, no residue, adhesive, or film covering, visual non-uniformity or other deleterious effects or substances shall remain on surfaces
      3. Factory applied protective film must be removed immediately after installation
      4. When cleaning agents/paint etc. are applied to the building the windows must be protected
PART 3 EXECUTION

3.1. Examination

a. Site Verification of Conditions: Before installation, examine window openings and adjacent building structure where windows will be applied for conditions that will prevent proper execution of this portion of Work and endanger permanency. Do not proceed with installation until defects have been corrected.

b. Verify sealant compatibility and adhesion to Polymer in conjunction with sealant manufacturer.

c. Acceptance of Condition: Beginning installation confirms acceptance of existing conditions.

3.2. Installation

a. General Requirements:

i. Comply with manufacturer’s instruction and recommendations for installation of work.

ii. Do not erect warped, bowed, deformed, or otherwise damaged or defaced members. Replace materials that are damaged during installation as directed.

iii. Set units level, plumb, and true to line, with uniform joints. Support units on shims and secure in place by approved installation anchors/fasteners that properly engage into supporting structure.

iv. Insulation must be used around the perimeter of the window in accordance with shop drawings and the insulation manufacturer’s guidelines. Insulation must allow for expansion and contraction of the installed window.

v. Flashing and other materials used around window opening shall be corrosion-resistant, non-staining, non-bleeding, and compatible with adjoining materials.

b. Erection Tolerances:

i. Variations from Plumb: +/- 1/8” maximum in window height

ii. Variations from Level: +/- 1/8” maximum in 10’ run, non-cumulative

3.3. Field Quality Control

a. Field Check for Water Leakage:

i. Newly installed fenestration product(s) shall be field tested in accordance with AAMA 502-12, "Voluntary Specification for Field Testing of Newly Installed Fenestration Products."

ii. AAMA 502-12 test shall be performed during construction, prior to an issuance of the building occupancy permit, but no later than six months after installation of
the fenestration products.

iii. Architect will determine the quantity and type(s) of window(s) to be tested.

iv. In case of water penetration take corrective action and re-test as necessary until the problem is resolved.

v. Default field test conditions are not the same as NAFS requirements for lab testing.

vi. Unless otherwise specified, water test shall be conducted at a static test pressure equal or less to 2/3 of the tested and rated laboratory performance per AAMA/WDMA/CSA 101/I.S. 2/A440.

vii. CW class windows shall be tested to a complete four-cycle water penetration resistance test in accordance with ASTM E547. Each complete cycle shall consist of 5 minutes with the pressure applied and 1 minute with the pressure released, during which the water spray is continuously applied. The total test duration shall be a minimum of 24 minutes.

viii. AW class windows shall be tested in accordance with ASTM E331. The test duration shall be 15 minutes.

ix. Unless otherwise specified the air test shall be conducted at 1.5 times of the tested and rated laboratory performance per AAMA/WDMA/CSA 101/I.S. 2/A440. Or minimum window performance grade rating as per AAMA/WDMA/CSA 101/I.S. 2/A440.

3.4. Adjusting

a. Weather seal contact shall be checked, and any required final hardware adjustment made for proper operation and performance of units.

b. Adjustments/maintenance should be made at least once per year.

3.5. Cleaning

a. Remove visible labels and adhesive residue according to manufacturer’s instruction.

b. Clean completed system in compliance with manufacturer’s recommendations, inside and out, promptly after erection and installation of glass and sealants. Remove excess glazing and joint sealants, dirt, and other substances from finished surfaces promptly after erection.

c. Remove protective material from prefinished surfaces.

d. Wash down exposed surfaces using a solution of mild detergent in warm water applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.

3.6. Protection

a. Institute protective measures and other precautions needed to assure Work will be without damage or deterioration, other than normal weathering, at time of acceptance.

b. Protect windows from damage by chemicals, solvents, paint or other construction operations that may cause damage.
PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
   1. Repair and infill of wall finish adjacent to interior of window wall system within the area of work as required by removal of existing components and to provide a tight finish around new window components and adjacent wood casework. Repairs and infill to be finished to a Level 4 finish and painted to match standard interior wall color.

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
   1. Section 02 41 13 SELECTIVE DEMOLITION for removal of portions of existing interior plaster wall finish to accommodate project intent.
   2. Section 09 90 00 PAINTING AND COATING for painting of new interior gypsum wallboard finish.

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance: Ensure substrates are firmly anchored to structural system above prior to installation of new repair components.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Written description of repair systems.

1.5 QUALITY ASSURANCE

A. Materials and installation procedures shall meet all requirements for joint treatment preparation and veneer plaster application as described in USG SA920 “plaster systems.”
B. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

C. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

D. Non-structural steel framing shall comply with ASTM C-645-11a.
   1. Non-structural steel framing members shall have a protective coating conforming to Specification A 653/A653M, G-40 minimum.
   2. No equivalent coatings allowed.
   3. G40e is not acceptable.

1.6 STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes.

B. Stack panels flat to prevent sagging.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install interior products until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
   1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
   2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 NON-LOAD-BEARING STEEL FRAMING, GENERAL

A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
   1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal, unless otherwise indicated.
   2. Protective Coating: Manufacturer's standard corrosion-resistant zinc coating, unless otherwise indicated.

2.2 STEEL FRAMING FOR FRAMED ASSEMBLIES
A. **Steel Studs and Runners: ASTM C 645.**
   1. Minimum Base-Metal Thickness: 0.0312 inch.

B. **Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width required.**
   1. Minimum Base-Metal Thickness: 0.0312 inch.

D. **Cold-Rolled Channel Bridging: 0.0538-inch bare-steel thickness, with minimum 1/2-inch-wide flanges.**
   1. Depth: 1-1/2 inches.
   2. Clip Angle: Not less than 1-1/2 by 1-1/2 inches, 0.068-inch-thick, galvanized steel.

E. **Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.**

2.3 **INTERIOR GYPSUM BOARD**

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. USG Corporation.
   2. Georgia-Pacific (G-P) Gypsum LLC.

2.4 **TRIM ACCESSORIES**

A. **Interior Trim: ASTM C 1047.**
   1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
   2. Shapes:
      a. Cornerbead.
      b. Bullnose bead.
      c. LC-Bead: J-shaped; exposed long flange receives joint compound.
      d. Expansion (control) joint.
      e. Curved-Edge Cornerbead: With notched or flexible flanges.

B. **Aluminum Trim: Extruded accessories of profiles and dimensions indicated.**
   1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
      a. Fry Reglet Corp.
      b. Gordon, Inc.
      c. Pittcon Industries.
   2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221, Alloy 6063-T5.
   3. Finish: Corrosion-resistant primer compatible with joint compound and finish materials specified.
2.6 Joint Treatment Materials

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:
   1. Interior Gypsum Wallboard: Paper.

C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
   1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
   2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
   3. Fill Coat: For second coat, use setting-type, sandable topping compound.
   4. Finish Coat: For third coat, use setting-type, sandable topping compound.
   5. Skim Coat: For final coat of Level 4 finish, use setting-type, sandable topping compound.

2.7 Auxiliary Materials

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
   1. Use adhesives that have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
   1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
   2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

C. Acoustic Insulation: Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
   1. Between and around all other office, toilet, mechanical spaces, corridors. 3 1/2" un-faced fiberglass Sound Attenuation Batts.

D. Acoustical Sealant: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
   1. Use sealants that have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
2. Acoustical Sealant for Exposed and Concealed Joints:
   a. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
   b. USG Corporation.; SHEETROCK Acoustical Sealant.
3. Acoustical Sealant for Concealed Joints:
   a. Ohio Sealants, Inc.; Pro-Series SC-170 Rubber Base Sound Sealant
   b. Pecora Corp.; BA-98.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754. Also comply with requirements in ASTM C 840 that apply to framing installation.

B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

C. Install bracing at terminations in assemblies.

D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.3 INSTALLING FRAMED ASSEMBLIES

A. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.

B. Install studs so flanges within framing system point in same direction.

C. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.

2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on doorframes; install runner track section (for cripple studs) at head and secure to jamb studs.
   a. Install two studs at each jamb, unless otherwise indicated.
   b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly.
   c. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.

3. Other Framed Openings: Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.
   a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance rated assembly indicated.

5. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.

D. Direct Furring: Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.

3.4 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Form control and expansion joints with space between edges of adjoining gypsum panels.
F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
   1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
   2. Fit gypsum panels around ducts, pipes, and conduits.
   3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- wide joints to install sealant.

G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

3.5 APPLYING INTERIOR GYPSUM BOARD

A. Single-Layer Application:
   1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing, unless otherwise indicated.
   2. On partitions/walls, apply gypsum panels to minimize end joints.
   3. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
   4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

B. Multilayer Application:
   1. On ceilings, apply gypsum board indicated for base layers before applying base layers on walls/partitions; apply face layers in same sequence. Apply base layers at right angles to framing members and offset face-layer joints 1 framing member, 16 inches minimum, from parallel base-layer joints, unless otherwise indicated or required by fire-resistance rated assembly.
   2. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
   3. On Z-furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
   4. Fastening Methods: Fasten base layers and face layers separately to supports with screws.
C. Laminating to Substrate: Where gypsum panels are indicated as directly adhered to a substrate (other than studs, joists, furring members, or base layer of gypsum board), comply with gypsum board manufacturer’s written recommendations and temporarily brace or fasten gypsum panels until fastening adhesive has set.

3.6 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer’s written instructions.

B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.

C. Interior Trim: Install in the following locations:
   1. Cornerbead: Use at outside corners, unless otherwise indicated.
   2. LC-Bead: Use at exposed panel edges.
   3. Curved-Edge Cornerbead: Use at curved openings.

D. Aluminum Trim: Install as required where exposed to view.

3.7 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below:
   1. Level 1: Ceiling plenum areas and concealed areas not exposed to view.
   2. Level 2: Panels that are substrate for tile.
   3. Level 4: Panel surfaces that will be exposed to view (typical panels).
   4. Level 5: Where indicated on Drawings.

3.8 PROTECTION

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

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.

2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION
PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
   1. Field painting of exposed interior items and surfaces including gypsum board walls.
   2. Field Staining and coating interior wood surfaces
   3. Field application of transparent finishes
   4. Field painting of exposed exterior items and surfaces.
   5. Surface preparation for painting.

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
   1. Section 06 20 00 - FINISH CARPENTRY for shop priming of carpentry and finish items requiring painting or coating.
   2. Section 07 92 00 - JOINT SEALANTS for joint sealant materials and methods.
   3. Section 09 21 10 - GYPSUM BOARD ASSEMBLIES for surface preparation of gypsum board.

1.3 REFERENCES

A. SSPC-SP 1 - Solvent Cleaning.

B. SSPC-SP 2 - Hand Tool Cleaning.

C. SSPC-SP 3 - Power Tool Cleaning.

1.4 DEFINITIONS AND EXTENT

A. General: Standard coating terms defined in ASTM D 16 apply to this Section.
   1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
2. Eggshell refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
3. Semi-gloss refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
4. Full gloss refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.

B. This Section includes surface preparation and field painting of exposed exterior and interior items and surfaces.
   1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.

C. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.

D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
   1. Prefinished items include the following factory-finished components:
      a. Architectural woodwork.
      b. Acoustical wall panels.
      c. Toilet enclosures.
      d. Finished mechanical and electrical equipment.
      e. Light fixtures.
   2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:
      a. Furred areas.
      b. Ceiling plenums.
      c. Pipe spaces.
      d. Duct shafts.
   3. Finished metal surfaces include the following:
      a. Anodized aluminum.
      b. Stainless steel.
      c. Chromium plate.
      d. Copper and copper alloys.
      e. Bronze and brass.
   4. Operating parts include moving parts of operating equipment and the following:
      a. Valve and damper operators.
      b. Linkages.
      c. Sensing devices.

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d. Motor and fan shafts.

5. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

1.5 SUBMITTALS

A. Product Data: For each paint system indicated. Include block fillers and primers.
   1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer’s catalog number and general classification.
   2. Manufacturer’s Information: Manufacturer’s technical information, including label analysis and instructions for handling, storing, and applying each coating material.

B. Samples for Verification: For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.
   1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
   2. Provide a list of materials and applications for each coat of each Sample. Label each Sample for location and application.
   3. Submit two eight inch by 12 inch Samples for each type of finish coating for Architect’s review of color and texture only.

D. Qualification Data: For Applicator.

1.6 QUALITY ASSURANCE

A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

B. Source Limitations: Obtain fillers and primers for each coating system from the same manufacturer as the finish coats.

C. Mockups: Provide a full-coat benchmark finish sample for each type of coating and substrate required. Comply with procedures specified in PDCA P5. Duplicate finish of approved sample Submittals.
   1. Architect will select one room or surface to represent surfaces and conditions for application of each type of coating and substrate.
      a. Wall Surfaces: Provide samples on at least 100 sq. ft.
b. Small Areas and Items: Architect will designate items or areas required.

2. Apply benchmark samples, according to requirements for the completed Work, after permanent lighting and other environmental services have been activated. Provide required sheen, color, and texture on each surface.
   a. After finishes are accepted, Architect will use the room or surface to evaluate coating systems of a similar nature.

3. Final approval of colors will be from benchmark samples.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
   1. Product name or title of material.
   2. Product description (generic classification or binder type).
   3. Manufacturer's stock number and date of manufacture.
   4. Contents by volume, for pigment and vehicle constituents.
   5. Thinning instructions.
   6. Application instructions.
   7. Color name and number.
   8. VOC content.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45°F. Maintain storage containers in a clean condition, free of foreign materials and residue.
   1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

1.8 PROJECT CONDITIONS

A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90°F.

B. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95°F.

C. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5°F above the dew point; or to damp or wet surfaces.
   1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.
PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers

1. Basis of Design: Sherwin-Williams, which is located at: 101 Prospect Ave.; Cleveland, OH 44115; Mark T. Weiner, CSI-IIDA Office 401-245-5176 Email mark.t.weiner@sherwin.com.

2. Benjamin Moore

3. California Paints

2.2 PAINT MATERIALS, GENERAL

A. Paints and Coatings:

1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.

2. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color. Or follow manufacturer's product instructions for optimal color conformance.

B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

C. Coating Application Accessories: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

D. Color: Refer to Finish Schedule for paint colors, and as selected.

2.3 INTERIOR PAINT SYSTEMS

A. WOOD - (Walls, Ceilings, Doors, Trim):

1. Stain and Varnish System:
   a. Gloss Finish:
      1) 1st Coat: S-W WoodClassics 250 Stains.
      2) 2nd Coat: S-W WoodClassics Waterborne Polyurethane Varnish, A68 Series.
      3) 3rd Coat: S-W WoodClassics Waterborne Polyurethane Varnish, A68 Series (4 mils wet, 1.0 mil dry per coat).
   b. Satin Finish:
      1) 1st Coat: S-W WoodClassics 250 Stains.
      2) 2nd Coat: S-W WoodClassics Waterborne Polyurethane Varnish, A68 Series.
      3) 3rd Coat: S-W WoodClassics Waterborne Polyurethane Varnish, A68 Series (4 mils wet, 1.0 mil dry per coat).
B. DRYWALL - (Walls, Ceilings, Gypsum Board and similar items)
   1. Latex Systems:
      a. Eg-Shel / Satin Finish:
         1) 1st Coat: S-W ProMar 200 Zero VOC Interior Latex Primer, B28W2600 (4 mils wet, 1.5 mils dry).
         3) 3rd Coat: S-W ProMar 200 Zero VOC Latex Eg-Shel, B20-2600 Series (4 mils wet, 1.7 mils dry per coat).
      b. Eg-Shel / Satin Finish: Dark Colors
         1) 1st Coat: S-W Premium Wall & Wood Interior Latex Primer, B28W08111 (4 mils wet, 1.8 mils dry).
         2) 2nd Coat: S-W Emerald Interior Latex Satin, K37 Series.
         3) 3rd Coat: S-W Emerald Interior Latex Satin, K37 Series (4 mils wet, 1.7 mils dry per coat).

2.4 EXTERIOR PAINT SYSTEMS

   1. Latex Systems:
      a. Gloss Finish -
         1) 1st Coat: S-W Exterior Latex Wood Primer, B42W08041 (4.0 mils wet, 1.4 mils dry).
         3) 3rd Coat: S-W Resilience Exterior Latex Gloss, K44 Series (4.0 mils wet, 1.6 mils dry per coat).
      b. Satin Finish -
         1) 1st Coat: S-W Exterior Latex Wood Primer, B42W08041 (4.0 mils wet, 1.4 mils dry).
         3) 3rd Coat: S-W Resilience Exterior Latex Satin, K43 Series (4.0 mils wet, 1.6 mils dry per coat).
      c. Flat Finish
         1) 1st Coat: S-W Exterior Latex Wood Primer, B42W08041 (4.0 mils wet, 1.4 mils dry).
         2) 2nd Coat: S-W Resilience Exterior Latex Flat, K42 Series.
         3) 3rd Coat: S-W Resilience Exterior Latex Flat, K42 Series (4.0 mils wet, 1.6 mils dry per coat).

PART 3 - EXECUTION

3.1 EXAMINATION

B. Do not begin installation until substrates have been properly prepared; notify Architect of unsatisfactory conditions before proceeding. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Proceed with work only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.
D. Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

3.2 SURFACE PREPARATION

A. General: Surfaces shall be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion.
   1. Prior to attempting to remove mildew, it is recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions are advised.
   2. Remove mildew before painting by washing with a solution of 1 part liquid household bleach and 3 parts of warm water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with clean water and allow the surface to dry before painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.
   3. Remove items including but not limited to thermostats, electrical outlets, switch covers and similar items prior to painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
   4. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50 degrees F (10 degrees C), unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface and material temperatures must be 50 degrees F (10 degrees F) or higher to use low temperature products.

B. Aluminum: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.

C. Block (Cinder and Concrete): Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement, and hardeners. Concrete and mortar must be cured at least 30 days at 75 degrees F (24 degrees C). The pH of the surface should be between 6 and 9, unless the products are designed to be used in high pH environments. On tilt-up and poured-in-place concrete, commercial detergents and abrasive blasting may be necessary to prepare the surface. Fill bug holes, air pockets, and other voids with a cement patching compound.

D. Concrete, SSPC-SP13 or NACE 6: This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems. The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.

E. Cement Composition Siding/Panel:s: Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Pressure clean, if needed, with a minimum of 2100 psi pressure to remove all dirt, dust, grease, oil, loose particles, laitance, foreign material, and peeling or defective coatings. Allow the surface to dry thoroughly. The pH of the surface should be between 6 and 9, unless the products are designed to be used in high pH environments.

F. Copper and Stainless Steel: Remove all oil, grease, dirt, oxide and other foreign material by
G. Exterior Composition Board (Hardboard): Some composition boards may exude a waxy material that must be removed with a solvent prior to coating. Whether factory primed or unprimed, exterior composition board siding (hardboard) must be cleaned thoroughly and primed with an alkyd primer.

H. Drywall - Exterior: Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth and all dust removed prior to painting. Exterior surfaces must be spackled with exterior grade compounds.

I. Drywall - Interior: Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth and all dust removed prior to painting.

J. Galvanized Metal: Clean per SSPC-SP1 using detergent and water or a degreasing cleaner to remove greases and oils. Apply a test area, priming as required. Allow the coating to dry at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP16 is necessary to remove these treatments.

K. Plaster: Must be allowed to dry thoroughly for at least 30 days before painting, unless the products are designed to be used in high pH environments. Room must be ventilated while drying; in cold, damp weather, rooms must be heated. Damaged areas must be repaired with an appropriate patching material. Bare plaster must be cured and hard. Textured, soft, porous, or powdery plaster should be treated with a solution of 1 pint household vinegar to 1 gallon of water. Repeat until the surface is hard, rinse with clear water and allow to dry.

L. Steel: Structural, Plate, And Similar Items: Should be cleaned by one or more of the surface preparations described below. These methods are used throughout the world for describing methods for cleaning structural steel. Visual standards are available through the Society of Protective Coatings. A brief description of these standards together with numbers by which they can be specified follow.

1. Solvent Cleaning, SSPC-SP1: Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.

2. Hand Tool Cleaning, SSPC-SP2: Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before hand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.

3. Power Tool Cleaning, SSPC-SP3: Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before power tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.

4. White Metal Blast Cleaning, SSPC-SP5 or NACE 1: A White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.

5. Commercial Blast Cleaning, SSPC-SP6 or NACE 3: A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt,
dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.

6. Brush-Off Blast Cleaning, SSPC-SP7 or NACE 4: A Brush-Off Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.

7. Power Tool Cleaning to Bare Metal, SSPC-SP11: Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP1, Solvent Cleaning, or other agreed upon methods.

8. Near-White Blast Cleaning, SSPC-SP10 or NACE 2: A Near White Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.

9. High- and Ultra-High Pressure Water Jetting for Steel and Other Hard Materials: SSPC-SP12 or NACE 5: This standard provides requirements for the use of high- and ultra-high pressure water jetting to achieve various degrees of surface cleanliness. This standard is limited in scope to the use of water only without the addition of solid particles in the stream.

10. Water Blasting, SSPC-SP12/NACE No. 5: Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.

M. Vinyl Siding, Architectural Plastics, EIFS and Fiberglass: Clean vinyl siding thoroughly by scrubbing with a warm, soapy water solution. Rinse thoroughly. Do not paint vinyl siding with any color darker than the original color, unless the paint system features Sherwin-Williams VinylSafe technology. Painting with darker colors that are not Sherwin-Williams VinylSafe may cause siding to warp. Follow all painting guidelines of the vinyl manufacturer when painting. Only paint properly installed vinyl siding. Deviating from the manufacturer’s painting guidelines may cause the warranty to be voided.

N. Stucco: Must be clean and free of any loose stucco. If recommended procedures for applying stucco are followed, and normal drying conditions prevail, the surface may be painted in 30 days. The pH of the surface should be between 6 and 9, unless the products are designed to be used in high pH environments such as Loxon.

O. Wood: Must be clean and dry. Prime and paint as soon as possible. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth.
3.3 INSTALLATION

A. Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations.

B. Do not apply to wet or damp surfaces. Wait at least 30 days before applying to new concrete or masonry. Or follow manufacturer's procedures to apply appropriate coatings prior to 30 days. Test new concrete for moisture content. Wait until wood is fully dry after rain or morning fog or dew.

C. Apply coatings using methods recommended by manufacturer.

D. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.

E. Apply coatings at spreading rate required to achieve the manufacturer's recommended dry film thickness.

F. Regardless of number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.

G. Inspection: The coated surface must be inspected and approved by the Architect just prior to the application of each coat.

3.4 FIELD QUALITY CONTROL

A. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied:
   1. The Owner will engage a qualified independent testing agency to sample paint material being used. Samples of material delivered to Project will be taken, identified, sealed, and certified in the presence of Contractor.
   2. Testing agency will perform appropriate tests for the following characteristics as required by the Architect.
   3. The Architect may direct Contractor to stop painting if test results show material being used does not comply with specified requirements. Contractor shall remove noncomplying paint from Project site, pay for testing, and repaint surfaces previously coated with the noncomplying paint. If necessary, Contractor may be required to remove noncomplying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

3.5 CLEANING

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

A.  Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

B.  Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
   1.  After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.7  PAINT SCHEDULE

A.  Schedule: Provide products and number of coats specified. Use of manufacturer's proprietary product names to designate colors, materials, generic class, standard of quality and performance criteria and is not intended to imply that products named are required to be used to the exclusion of equivalent performing products of other manufacturers.

END OF SECTION