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# BID DOCUMENTS

MARCH 18, 2016

## ROOF RENOVATIONS 690 MAINE AVENUE BANGOR, MAINE

CITY OF BANGOR  
73 HARLOW STREET  
BANGOR, MAINE 04401

PROJECT MANUAL

JOB #16048

Prepared by:



CARPENTER ASSOCIATES  
Consulting Engineers  
687 STILLWATER AVENUE  
OLD TOWN, MAINE 04468



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**ADVERTISEMENT FOR BIDS**

**Debbie Cyr  
Purchasing Director  
City of Bangor  
73 Harlow Street  
Bangor, ME 04401  
(207) 992-4253**

Separate sealed BIDS for the **690 Maine Avenue – Roof Renovations** for the **City of Bangor** will be received by the Owner at the Purchasing Department, 73 Harlow Street, Bangor, Maine until **2:00 P.M.** local time **April 1, 2016**, and then at the said office publicly opened and read aloud.

An electronic version of the plans and specifications can be obtained by visiting the City of Bangor's website at [www.bangormaine.gov/proposals](http://www.bangormaine.gov/proposals).

A hard copy of these documents is available for viewing at the office of the engineer: **Carpenter Associates**, 687 Stillwater Avenue, Old Town, Maine.

A bid security will be required consisting of a 5 percent (5%) Bid Bond or a Certified Check in lieu of Bond, as well as a Performance Bond and Payment Bond, each in the amount of 100% of the value of the work are required. Performance and Payment Bonds may be waived in lieu of a single payment upon completion.

**Scope of Work Summary:**

Contractor shall install a new EPDM rubber roof system over the existing standing seam roof at 690 Maine Avenue, Bangor, Maine. Work shall include minor patching and repair of existing standing seam, insulation, blocking, cover board, 60 mil EPDM membrane roofing, and flashing. The roof size is approximately 150' x 200'. Work also includes fabrication and installation of shrouds to protect existing and proposed ductwork entering the building side wall. The completion date is May 31, 2016.

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## INFORMATION TO BIDDERS

### 1. PROPOSAL

Each proposal shall be made on the original form provided in the Contract Specifications and delivered in a sealed envelope, plainly marked Bid for:

### ROOF RENOVATIONS 690 MAINE AVENUE, BANGOR, MAINE

and delivered as follows:

Prior to 2:00 PM local time on April 1, 2016 at:           PURCHASING DEPARTMENT  
73 Harlow Street, Bangor, Maine

### 2. CONTRACT DOCUMENTS

These drawings and specifications may not be reproduced in whole or in part under any circumstances without the expressed permission of the Engineer.

### 3. DISCREPANCIES

In case of a difference between the stipulated amount of the proposal written in words and the stipulated amount written in figures, the stipulated amount stated in written words shall govern.

### 4. MODIFICATIONS

Proposals shall not contain any recapitulations of the work to be done. Alternate proposals will not be considered unless called for. Oral proposals or modification will not be considered.

### 5. EXAMINATION OF CONTRACT DOCUMENTS AND VISIT TO SITE

Before submitting a proposal, bidders shall carefully examine the drawings, read the specifications, and the other Contract Documents, shall visit the site of work, and shall fully inform themselves as to all existing conditions and limitations, and shall include in the proposal a sum to cover the cost of all items included in the Contract Documents.

### 6. DELIVERY OF PROPOSALS

Proposals shall be delivered by the time and to the place stipulated. It is the sole responsibility of the Bidder to see that his Proposal is received in proper time. Any proposal received after the scheduled closing time for receipt of proposals shall be returned to the Bidder unopened.

### 7. WITHDRAWAL

Any Bidder may withdraw his Proposal, either personally or by the telegraphic or written request, at any time prior to the scheduled closing time for receipt of Proposals.

8. OPENINGS

Proposals will be opened and publicly read aloud at the time and place set forth in the Advertisement for Bids.

9. AWARD OR REJECTION

The Contract will be awarded to the lowest qualified, responsible Bidder complying with these instructions and with the Advertisement for Bids. The Owner reserves the right to reject any and all Proposals and to waive any formality or technicality in any Proposal or to accept any proposal in the interest of the Owner. No bidder may withdraw his proposal for a period of 30 days after the date of opening thereof.

10. ALL TAXES AND MISCELLANEOUS CHARGES

All applicable taxes and all other charges such as freight and handling charges shall also be included in the amount of the Proposal. **The Owner is exempt from all Local, State and Federal Taxes.**

11. INTERPRETATION OF DOCUMENTS

If any person contemplating submitting a Proposal is in doubt as to the true meaning of any part of the drawings, Specifications or other Contract Documents, or finds discrepancies in or omissions from the drawings or Specifications, he may submit to the Engineer a request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the documents will be made only by Addendum duly issued and a copy of the Addendum will be mailed or delivered to each person receiving a set of the Contract Documents. Neither the Owner nor the Engineer will be responsible for any other explanations or interpretations of the Contract Documents.

12. ADDENDA

Any Addenda issued during the time of bidding, or forming a part of the Contract Documents loaned to the Bidder for the preparation of his Proposal, shall be covered in the Proposal, and shall be made a part of the Contract. Receipt of each Addendum shall be acknowledged in the Proposal. No Addenda will be issued within 24 hours prior to the opening of bids.

13. BIDDERS INTERESTED IN MORE THAN ONE PROPOSAL

No person, firm, or corporation shall be allowed to make, file, or to be interested in more than one Proposal for the same work, unless alternate Proposals are called for. A person, firm, or corporation who has submitted a subproposal to a Bidder, or who has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a subproposal or quoting prices to other Bidders.

14. WORKER'S COMPENSATION

The Contractor shall take out and maintain during the life of this Contract, Worker's Compensation Insurance in accordance with the laws of the State of Maine; they shall require all subcontractors to similarly provide Worker's Compensation Insurance for all their employees at the site of the project. See General Conditions of the Contract.

15. PUBLIC LIABILITY INSURANCE

The Contractor and each subcontractor performing labor at the building site shall take out and maintain during the life of this Contract such Public Liability Insurance, and Property Damage Insurance as shall protect them from claims for damages for personal injury, accidental death, and property damage, which may arise from operations under this Contract. The amounts and limits of said insurance shall be as stated herein.

16. FIRE INSURANCE

The Owner shall effect and maintain fire insurance with extended coverage upon the structure and upon certain other materials as provided in the General Conditions of the Contract.

17. COMPLIANCE

All work is to be completed in strict compliance with all laws, ordinances, rules and regulations of competent public authority, and the Contractor (successful bidder) is to apply for and obtain all required permits, paying all fees therefor, and all other fees required by such public authority.

18. PREPARATION OF BIDS

Each bidder should prepare his proposal form included as part of this agreement in the following manner:

Base Bid: All Roofing work including, but not limited to, demolition, insulation, roofing, flashing, gutters, caulking, etc.

19. EQUAL EMPLOYMENT OPPORTUNITY

The BIDDER agrees to abide by the requirements under Executive Order No. 11246, relative to Equal Employment Opportunity for all persons without regard to race, color, religion, sex or national origin, and the implementing rules and regulations prescribed by the Secretary of Labor. These requirements are incorporated herein. The word "he" as used in these documents shall be interpreted to mean "he" or "she" equally and interchangeably.



 **AIA**® Document A310™ – 2010

**Bid Bond**

**CONTRACTOR:**  
*(Name, legal status and address)*

**SURETY:**  
*(Name, legal status and principal place of business)*

**OWNER:**  
*(Name, legal status and address)*

**BOND AMOUNT:**

**PROJECT:**  
*(Name, location or address, and Project number, if any)*

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_

_____	_____	_____
<i>(Witness)</i>	<i>(Contractor as Principal)</i>	<i>(Seal)</i>
_____	_____	_____
	<i>(Title)</i>	
_____	_____	_____
<i>(Witness)</i>	<i>(Surety)</i>	<i>(Seal)</i>
_____	_____	_____
	<i>(Title)</i>	

**CAUTION:** You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

 **AIA Document A107™ – 2007**

**Standard Form of Agreement Between Owner and Contractor for a Project  
of Limited Scope**

AGREEMENT made as of the \_\_\_\_\_ day of \_\_\_\_\_  
in the year \_\_\_\_\_  
*(In words, indicate day, month and year.)*

**BETWEEN** the Owner:  
*(Name, legal status, address and other information)*

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

and the Contractor:  
*(Name, legal status, address and other information)*

for the following Project:  
*(Name, location and detailed description)*

The Architect:  
*(Name, legal status, address and other information)*

The Owner and Contractor agree as follows.

Init.

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### ARTICLE 1 THE WORK OF THIS CONTRACT

The Contractor shall execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

### ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

*(Insert the date of commencement, if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)*

§ 2.2 The Contract Time shall be measured from the date of commencement.

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§ 2.3 The Contractor shall achieve Substantial Completion of the entire Work not later than ( ) days from the date of commencement, or as follows:  
(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)

Portion of the Work

Substantial Completion Date

, subject to adjustments of this Contract Time as provided in the Contract Documents.  
(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)

### ARTICLE 3 CONTRACT SUM

§ 3.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:  
(Check the appropriate box.)

- Stipulated Sum, in accordance with Section 3.2 below
- Cost of the Work plus the Contractor's Fee, in accordance with Section 3.3 below
- Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 3.4 below

(Based on the selection above, complete Section 3.2, 3.3 or 3.4 below.)

§ 3.2 The Stipulated Sum shall be (\$ ), subject to additions and deductions as provided in the Contract Documents.

§ 3.2.1 The Stipulated Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:  
(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

Init.

**§ 3.2.2** Unit prices, if any:

*(Identify and state the unit price, and state the quantity limitations, if any, to which the unit price will be applicable.)*

Item	Units and Limitations	Price per Unit (\$0.00)
------	-----------------------	-------------------------

**§ 3.2.3** Allowances included in the stipulated sum, if any:

*(Identify allowance and state exclusions, if any, from the allowance price.)*

Item	Price
------	-------

**§ 3.3 Cost of the Work Plus Contractor's Fee**

**§ 3.3.1** The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

**§ 3.3.2** The Contractor's Fee:

*(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)*

**§ 3.4 Cost of the Work Plus Contractor's Fee With a Guaranteed Maximum Price**

**§ 3.4.1** The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

**§ 3.4.2** The Contractor's Fee:

*(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)*

**§ 3.4.3 Guaranteed Maximum Price**

**§ 3.4.3.1** The sum of the Cost of the Work and the Contractor's Fee is guaranteed by the Contractor not to exceed (\$ \_\_\_\_\_), subject to additions and

deductions by changes in the Work as provided in the Contract Documents. Such maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the Owner.

*(Insert specific provisions if the Contractor is to participate in any savings.)*

Init.

§ 3.4.3.2 The Guaranteed Maximum Price is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

§ 3.4.3.3 Unit Prices, if any:

*(Identify and state the unit price, and state the quantity limitations, if any, to which the unit price will be applicable.)*

Item	Units and Limitations	Price per Unit (\$0.00)
------	-----------------------	-------------------------

§ 3.4.3.4 Allowances included in the Guaranteed Maximum Price, if any:

*(Identify and state the amounts of any allowances, and state whether they include labor, materials, or both.)*

Item	Allowance
------	-----------

§ 3.4.3.5 Assumptions, if any, on which the Guaranteed Maximum Price is based:

#### ARTICLE 4 PAYMENTS

##### § 4.1 Progress Payments

§ 4.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 4.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 4.1.3 Provided that an Application for Payment is received by the Architect not later than the \_\_\_\_\_ day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the \_\_\_\_\_ day of the \_\_\_\_\_ month. If an Application for Payment is received by the Architect after the date fixed above, payment shall be made by the Owner not later than \_\_\_\_\_ ( \_\_\_\_\_ ) days after the Architect receives the Application for Payment.

*(Federal, state or local laws may require payment within a certain period of time.)*

Init.

§ 4.1.4 Retainage, if any, shall be withheld as follows:

§ 4.1.5 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located. *(Insert rate of interest agreed upon, if any.)*

#### § 4.2 Final Payment

§ 4.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 18.2, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 the contractor has submitted a final accounting for the Cost of the Work, where payment is on the basis of the Cost of the Work with or without a guaranteed maximum price; and
- .3 a final Certificate for Payment has been issued by the Architect.

§ 4.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

### ARTICLE 5 DISPUTE RESOLUTION

#### § 5.1 Binding Dispute Resolution

For any claim subject to, but not resolved by, mediation pursuant to Section 21.3, the method of binding dispute resolution shall be as follows:

*(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, claims will be resolved in a court of competent jurisdiction.)*

- Arbitration pursuant to Section 21.4 of this Agreement
- Litigation in a court of competent jurisdiction
- Other: *(Specify)*

### ARTICLE 6 ENUMERATION OF CONTRACT DOCUMENTS

§ 6.1 The Contract Documents are defined in Article 7 and, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 6.1.1 The Agreement is this executed AIA Document A107-2007, Standard Form of Agreement Between Owner and Contractor for a Project of Limited Scope.

Init.

§ 6.1.2 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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§ 6.1.3 The Specifications:

*(Either list the Specifications here or refer to an exhibit attached to this Agreement.)*

Section	Title	Date	Pages
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§ 6.1.4 The Drawings:

*(Either list the Drawings here or refer to an exhibit attached to this Agreement.)*

Number	Title	Date
--------	-------	------

§ 6.1.5 The Addenda, if any:

Number	Date	Pages
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Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are enumerated in this Article 6.

§ 6.1.6 Additional documents, if any, forming part of the Contract Documents:

- .1 Exhibit A, Determination of the Cost of the Work, if applicable.
- .2 AIA Document E201™-2007, Digital Data Protocol Exhibit, if completed, or the following:
- .3 Other documents:  
*(List here any additional documents that are intended to form part of the Contract Documents.)*

Init.

## **ARTICLE 7 GENERAL PROVISIONS**

### **§ 7.1 The Contract Documents**

The Contract Documents are enumerated in Article 6 and consist of this Agreement (including, if applicable, Supplementary and other Conditions of the Contract), Drawings, Specifications, Addenda issued prior to the execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

### **§ 7.2 The Contract**

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than the Owner and the Contractor.

### **§ 7.3 The Work**

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

### **§ 7.4 Instruments of Service**

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

### **§ 7.5 Ownership and Use of Drawings, Specifications and Other Instruments of Service**

**§ 7.5.1** The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

**§ 7.5.2** The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

### **§ 7.6 Transmission of Data in Digital Form**

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmission, unless otherwise provided in the Agreement or in the Contract Documents.

## **ARTICLE 8 OWNER**

### **§ 8.1 Information and Services Required of the Owner**

**§ 8.1.1** The Owner shall furnish all necessary surveys and a legal description of the site.

**§ 8.1.2** The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

**§ 8.1.3** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 9.6.1, the Owner shall secure and pay for other necessary approvals, easements,

assessments and charges required for the construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

#### **§ 8.2 Owner's Right to Stop the Work**

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents, or repeatedly fails to carry out the Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order is eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

#### **§ 8.3 Owner's Right to Carry Out the Work**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner, without prejudice to any other remedy the Owner may have, may correct such deficiencies and may deduct the reasonable cost thereof, including Owner's expenses and compensation for the Architect's services made necessary thereby, from the payment then or thereafter due the Contractor.

### **ARTICLE 9 CONTRACTOR**

#### **§ 9.1 Review of Contract Documents and Field Conditions by Contractor**

**§ 9.1.1** Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

**§ 9.1.2** Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 8.1.1, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies, or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents.

**§ 9.1.3** The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

#### **§ 9.2 Supervision and Construction Procedures**

**§ 9.2.1** The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters.

**§ 9.2.2** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

#### **§ 9.3 Labor and Materials**

**§ 9.3.1** Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

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

**§ 9.3.3** The Contractor may make a substitution only with the consent of the Owner, after evaluation by the Architect and in accordance with a Modification.

#### **§ 9.4 Warranty**

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation or normal wear and tear under normal usage.

#### **§ 9.5 Taxes**

The Contractor shall pay sales, consumer, use and other similar taxes that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

#### **§ 9.6 Permits, Fees, Notices, and Compliance with Laws**

**§ 9.6.1** Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as other permits, fees, licenses and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

**§ 9.6.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

#### **§ 9.7 Allowances**

The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. The Owner shall select materials and equipment under allowances with reasonable promptness. Allowance amounts shall include the costs to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Allowance amounts shall not include the Contractor's costs for unloading and handling at the site, labor, installation, overhead, and profit.

#### **§ 9.8 Contractor's Construction Schedules**

**§ 9.8.1** The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

**§ 9.8.2** The Contractor shall perform the Work in general accordance with the most recent schedule submitted to the Owner and Architect.

#### **§ 9.9 Submittals**

**§ 9.9.1** The Contractor shall review for compliance with the Contract Documents and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in coordination with the Contractor's construction schedule and in such sequence as to allow the Architect reasonable time for review. By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them; (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so; and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. The Work shall be in accordance with approved submittals.

**§ 9.9.2** Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents.

#### **§ 9.10 Use of Site**

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

#### **§ 9.11 Cutting and Patching**

The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

#### **§ 9.12 Cleaning Up**

The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus material from and about the Project.

#### **§ 9.13 Royalties, Patents and Copyrights**

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

#### **§ 9.14 Access to Work**

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

#### **§ 9.15 Indemnification**

**§ 9.15.1** To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 9.15.1.

**§ 9.15.2** In claims against any person or entity indemnified under this Section 9.15 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 9.15.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

### **ARTICLE 10 ARCHITECT**

**§ 10.1** The Architect will provide administration of the Contract and will be an Owner's representative during construction, until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

**§ 10.2** The Architect will visit the site at intervals appropriate to the stage of the construction to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 10.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 10.4 Based on the Architect's evaluations of the Work and of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 10.5 The Architect has authority to reject Work that does not conform to the Contract Documents and to require inspection or testing of the Work.

§ 10.6 The Architect will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 10.7 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect will make initial decisions on all claims, disputes and other matters in question between the Owner and Contractor but will not be liable for results of any interpretations or decisions rendered in good faith.

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

§ 10.9 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

#### **ARTICLE 11 SUBCONTRACTORS**

§ 11.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site.

§ 11.2 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of the Subcontractors or suppliers for each of the principal portions of the Work. The Contractor shall not contract with any Subcontractor or supplier to whom the Owner or Architect has made reasonable written objection within ten days after receipt of the Contractor's list of Subcontractors and suppliers. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 11.3 Contracts between the Contractor and Subcontractors shall (1) require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract Documents, assumes toward the Owner and Architect, and (2) allow the Subcontractor the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Contract Documents, has against the Owner.

#### **ARTICLE 12 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

§ 12.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under conditions of the contract identical or substantially similar to these, including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such claim as provided in Article 21.

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

§ 12.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work or defective construction of a separate contractor.

#### **ARTICLE 13 CHANGES IN THE WORK**

§ 13.1 By appropriate Modification, changes in the Work may be accomplished after execution of the Contract. The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, with the Contract Sum and Contract Time being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Owner, Contractor and Architect, or by written Construction Change Directive signed by the Owner and Architect.

§ 13.2 Adjustments in the Contract Sum and Contract Time resulting from a change in the Work shall be determined by mutual agreement of the parties or, in the case of a Construction Change Directive signed only by the Owner and Architect, by the Contractor's cost of labor, material, equipment, and reasonable overhead and profit, unless the parties agree on another method for determining the cost or credit. Pending final determination of the total cost of a Construction Change Directive, the Contractor may request payment for Work completed pursuant to the Construction Change Directive. The Architect will make an interim determination of the amount of payment due for purposes of certifying the Contractor's monthly Application for Payment. When the Owner and Contractor agree on adjustments to the Contract Sum and Contract Time arising from a Construction Change Directive, the Architect will prepare a Change Order.

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

§ 13.4 If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be equitably adjusted as mutually agreed between the Owner and Contractor; provided that the Contractor provides notice to the Owner and Architect promptly and before conditions are disturbed.

#### **ARTICLE 14 TIME**

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

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

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

§ 14.4 The date of Substantial Completion is the date certified by the Architect in accordance with Section 15.4.3.

§ 14.5 If the Contractor is delayed at any time in the commencement or progress of the Work by changes ordered in the Work, by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties or any causes beyond the Contractor's control, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine, subject to the provisions of Article 21.

#### **ARTICLE 15 PAYMENTS AND COMPLETION**

##### **§ 15.1 Applications for Payment**

§ 15.1.1 Where the Contract is based on a Stipulated Sum or the Cost of the Work with a Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values, allocating the entire Contract Sum to the various portions of the Work, prepared in such form and supported by such data to

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substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used in reviewing the Contractor's Applications for Payment.

**§ 15.1.2** With each Application for Payment where the Contract Sum is based upon the Cost of the Work, or the Cost of the Work with a Guaranteed Maximum Price, the Contractor shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner to demonstrate that cash disbursements already made by the Contractor on account of the Cost of the Work equal or exceed (1) progress payments already received by the Contractor, less (2) that portion of those payments attributable to the Contractor's Fee; plus (3) payrolls for the period covered by the present Application for Payment.

**§ 15.1.3** Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

**§ 15.1.4** The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or other encumbrances adverse to the Owner's interests.

## **§ 15.2 Certificates for Payment**

**§ 15.2.1** The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 15.2.3.

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

**§ 15.2.3** The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 15.2.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 15.2.1. If the Contractor and the Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 9.2.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

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

### § 15.3 Progress Payments

§ 15.3.1 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to sub-subcontractors in similar manner.

§ 15.3.2 Neither the Owner nor Architect shall have an obligation to pay or see to the payment of money to a Subcontractor except as may otherwise be required by law.

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

### § 15.4 Substantial Completion

§ 15.4.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 15.4.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 15.4.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. When the Architect determines that the Work or designated portion thereof is substantially complete, the Architect will issue a Certificate of Substantial Completion which shall establish the date of Substantial Completion, establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 15.4.4 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

### § 15.5 Final Completion and Final Payment

§ 15.5.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions stated in Section 15.5.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 15.5.2 Final payment shall not become due until the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees.

- § 15.5.3 The making of final payment shall constitute a waiver of claims by the Owner except those arising from
- .1 liens, claims, security interests or encumbrances arising out of the Contract and unsettled;
  - .2 failure of the Work to comply with the requirements of the Contract Documents; or
  - .3 terms of special warranties required by the Contract Documents.

§ 15.5.4 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## ARTICLE 16 PROTECTION OF PERSONS AND PROPERTY

### § 16.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

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

The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons and property and their protection from damage, injury or loss. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 16.1.2 and 16.1.3, except for damage or loss attributable to acts or omissions of the Owner or Architect or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 9.15.

### § 16.2 Hazardous Materials

§ 16.2.1 The Contractor is responsible for compliance with the requirements of the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents, and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shutdown, delay and start-up.

§ 16.2.2 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area, if in fact, the material or substance presents the risk of bodily injury or death as described in Section 16.2.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 16.2.3 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

## ARTICLE 17 INSURANCE AND BONDS

§ 17.1 The Contractor shall purchase from, and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, insurance for protection from claims under workers' compensation acts and other employee benefit acts which are applicable, claims for damages because of bodily injury, including death,

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and claims for damages, other than to the Work itself, to property which may arise out of or result from the Contractor's operations and completed operations under the Contract, whether such operations be by the Contractor or by a Subcontractor or anyone directly or indirectly employed by any of them. This insurance shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater, and shall include contractual liability insurance applicable to the Contractor's obligations under Section 9.15. Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. Each policy shall contain a provision that the policy will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

#### **§ 17.2 Owner's Liability Insurance**

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

#### **§ 17.3 Property Insurance**

**§ 17.3.1** Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance on an "all-risk" or equivalent policy form, including builder's risk, in the amount of the initial Contract Sum, plus the value of subsequent modifications and cost of materials supplied and installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 15.5 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 17.3.1 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and sub-subcontractors in the Project.

**§ 17.3.2** The Owner shall file a copy of each policy with the Contractor before an exposure to loss may occur. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

**§ 17.3.3** The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 12, if any, and any of their subcontractors, sub-subcontractors, agents and employees for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to Section 17.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 12, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

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

#### **§ 17.4 Performance Bond and Payment Bond**

**§ 17.4.1** The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

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

#### **ARTICLE 18 CORRECTION OF WORK**

§ 18.1 The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense, unless compensable under Section A.2.7.3 in Exhibit A, Determination of the Cost of the Work.

§ 18.2 In addition to the Contractor's obligations under Section 9.4, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 15.4.3, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty.

§ 18.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 8.3.

§ 18.4 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 18.5 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Article 18.

#### **ARTICLE 19 MISCELLANEOUS PROVISIONS**

##### **§ 19.1 Assignment of Contract**

Neither party to the Contract shall assign the Contract without written consent of the other, except that the Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

##### **§ 19.2 Governing Law**

The Contract shall be governed by the law of the place where the Project is located, except, that if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 21.4.

##### **§ 19.3 Tests and Inspections**

Tests, inspections and approvals of portions of the Work required by the Contract Documents or by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating the costs to the Contractor.

##### **§ 19.4 Commencement of Statutory Limitation Period**

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the period specified by applicable law, but in any case not

more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 19.4.

## **ARTICLE 20 TERMINATION OF THE CONTRACT**

### **§ 20.1 Termination by the Contractor**

If the Architect fails to certify payment as provided in Section 15.2.1 for a period of 30 days through no fault of the Contractor, or if the Owner fails to make payment as provided in Section 4.1.3 for a period of 30 days, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

### **§ 20.2 Termination by the Owner for Cause**

**§ 20.2.1** The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

**§ 20.2.2** When any of the above reasons exists, the Owner, upon certification by the Architect that sufficient cause exists to justify such action, may, without prejudice to any other remedy the Owner may have and after giving the Contractor seven days' written notice, terminate the Contract and take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**§ 20.2.3** When the Owner terminates the Contract for one of the reasons stated in Section 20.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**§ 20.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

### **§ 20.3 Termination by the Owner for Convenience**

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

## **ARTICLE 21 CLAIMS AND DISPUTES**

**§ 21.1** Claims, disputes and other matters in question arising out of or relating to this Contract, including those alleging an error or omission by the Architect but excluding those arising under Section 16.2, shall be referred initially to the Architect for decision. Such matters, except those waived as provided for in Section 21.8 and Sections 15.5.3 and 15.5.4, shall, after initial decision by the Architect or 30 days after submission of the matter to the Architect, be subject to mediation as a condition precedent to binding dispute resolution.

**§ 21.2** If a claim, dispute or other matter in question relates to or is the subject of a mechanic's lien, the party asserting such matter may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

**§ 21.3** The parties shall endeavor to resolve their disputes by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with their Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. The request may be made concurrently with the binding dispute resolution but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is

stayed pursuant to this Section, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 21.4 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any claim, subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association, in accordance with the Construction Industry Arbitration Rules in effect on the date of this Agreement. Demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 21.5 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation; (2) the arbitrations to be consolidated substantially involve common questions of law or fact; and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 21.6 Any party to an arbitration may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described in the written Consent.

§ 21.7 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

**§ 21.8 Claims for Consequential Damages**

The Contractor and Owner waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 20. Nothing contained in this Section 21.8 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

This Agreement entered into as of the day and year first written above.

\_\_\_\_\_  
OWNER (Signature)

\_\_\_\_\_  
CONTRACTOR (Signature)

\_\_\_\_\_  
(Printed name and title)

\_\_\_\_\_  
(Printed name and title)

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.



# AIA Document A312™ – 2010

## Performance Bond

**CONTRACTOR:**

*(Name, legal status and address)*

**SURETY:**

*(Name, legal status and principal place of business)*

**OWNER:**

*(Name, legal status and address)*

**CONSTRUCTION CONTRACT**

Date:

Amount:

Description:

*(Name and location)*

**BOND**

Date:

*(Not earlier than Construction Contract Date)*

Amount:

Modifications to this Bond:  None  See Section 16

**CONTRACTOR AS PRINCIPAL**

Company: *(Corporate Seal)*

**SURETY**

Company: *(Corporate Seal)*

Signature: \_\_\_\_\_  
Name  
and Title:

*(Any additional signatures appear on the last page of this Performance Bond.)*

Signature: \_\_\_\_\_  
Name  
and Title:

*(FOR INFORMATION ONLY — Name, address and telephone)*

**AGENT or BROKER:**

**OWNER'S REPRESENTATIVE:**

*(Architect, Engineer or other party:)*

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

AIA Document A312-2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

- .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and
- .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

#### § 14 Definitions

§ 14.1 **Balance of the Contract Price.** The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 **Construction Contract.** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 **Contractor Default.** Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

*(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)*

**CONTRACTOR AS PRINCIPAL**

**SURETY**

Company: \_\_\_\_\_  
*(Corporate Seal)*

Company: \_\_\_\_\_  
*(Corporate Seal)*

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_  
Address \_\_\_\_\_

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_  
Address \_\_\_\_\_

**CAUTION:** You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.



# AIA<sup>®</sup> Document A312<sup>™</sup> – 2010

## Payment Bond

**CONTRACTOR:**

*(Name, legal status and address)*

**SURETY:**

*(Name, legal status and principal place of business)*

**OWNER:**

*(Name, legal status and address)*

**CONSTRUCTION CONTRACT**

Date:

Amount:

Description:

*(Name and location)*

**BOND**

Date:

*(Not earlier than Construction Contract Date)*

Amount:

Modifications to this Bond:     None             See Section 18

**CONTRACTOR AS PRINCIPAL**

Company:                            *(Corporate Seal)*

**SURETY**

Company:                            *(Corporate Seal)*

Signature: \_\_\_\_\_

Name  
and Title:

*(Any additional signatures appear on the last page of this Payment Bond.)*

Signature: \_\_\_\_\_

Name  
and Title:

*(FOR INFORMATION ONLY — Name, address and telephone)*

**AGENT or BROKER:**

**OWNER'S REPRESENTATIVE:**

*(Architect, Engineer or other party:)*

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

AIA Document A312–2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

§ 14 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

## § 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

§ 16.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

*(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)*

**CONTRACTOR AS PRINCIPAL**

**SURETY**

Company:

*(Corporate Seal)*

Company:

*(Corporate Seal)*

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Address \_\_\_\_\_

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Address \_\_\_\_\_

**CAUTION:** You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

## SECTION 00 72 00

### GENERAL CONDITIONS

#### 1. STATEMENT OF WORK

The work consists of furnishing all (or specified part of) plant, labor, equipment, materials, and services for this project.

#### 2. COMMENCEMENT AND COMPLETION

The Contractor will be required to commence work under this Contract within 10 days after the date of receipt by him of notice to proceed and to complete the work ready for use by the Owner on or before the indicated date of completion.

#### 3. DRAWINGS

The work shall conform to the drawings prepared by Carpenter Associates, Old Town, Maine.

#### 4. INTENT OF SPECIFICATIONS AND DRAWINGS

The intent of the specifications and drawings is to prescribe a complete work which the Contractor or Subcontractor undertakes to do in full compliance with the Contract Documents. If there is any apparent contradiction or ambiguity between the drawings and specifications, the Contractor shall bring the fact to the attention of the Engineer or Owner and shall obtain a decision as to the true meaning or intention before proceeding with the portion of the work affected. All work that is called for in only the specification or only in the drawings shall be performed by the Contractor as if described in both, and should any work be required which is not denoted in the specifications or drawings but which is nevertheless necessary for the proper carrying out of the intent thereof, the Contractor shall perform all such work as fully as if it were particularly described.

#### 5. MATERIAL REFERRED TO BY NAME

Specific reference in the specification or drawings to any article, device, product, material, fixture, form, or type of construction, etc., by name, make or catalog number shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition, and the Contractor may request approval by the Engineer of any article, product, material, fixture, form, or type of construction presumed equal to that named.

#### 6. SAMPLES

The Contractor shall furnish for approval, with reasonable promptness, all samples as directed by the Engineer. The Engineer shall review and approve such samples, with reasonable promptness, for general conformity with the design concept of the project and compliance with the information provided in the Contract Documents. The subsequent work shall be in accord with the approved samples.

#### 7. QUALITY OF WORK

The work shall be executed in the best and most workmanlike manner by qualified, careful, and efficient tradesmen. Unless otherwise specified all materials to be incorporated in the work shall be new, unused, and of recent manufacture.

8. SAFETY

The General Contractor, shall at all times, maintain the necessary barricades, fences, guards, lights and signs, to make the construction site safe for all workmen, the Owner and his representatives, as well as the general public who might be in and around the construction site.

9. CLEANING UP

The Contractor shall at all times keep the construction area, including storage areas used by himself free from accumulations of waste material or rubbish from and about the premises. All tools, scaffolding, equipment, and materials not to become the property of the Owner shall be removed from the site on completion of the Contract. The entire premises shall be left in a clean "ready for occupancy" condition.

10. COMPLETION DATE

**The project shall be substantially complete on or before the date indicated in the Bid Form.**

11. OWNER'S RIGHT TO DO WORK

The Owner reserves the right to do additional work in connection with the project during the time the work under this Contract is in progress.

12. DEFINITIONS

Owner: **City of Bangor  
73 Harlow Street  
Bangor, Maine 04401  
Phone (207) 992-4253**

Engineer: **Carpenter Associates  
687 Stillwater Avenue  
Old Town, Maine 04468  
Phone (207) 827-8001**

Project Engineer: **Randy Bragg, P.E.**

Architect: The word Architect, if used in these documents shall be interpreted as meaning Engineer as heretofore defined.

13. INSURANCE

The Contractor shall arrange insurance for the minimum limits indicated and shall maintain the below listed coverage's throughout the period of performance.

	<u>LIMITS</u>
A. Workers' Compensation Insurance	Statutory
Employer's Liability Insurance	\$100,000. each accident \$500,000. disease - policy unit \$100,000. disease - each employee
B. Comprehensive General Liability (Public Liability)	

- |                                |                          |
|--------------------------------|--------------------------|
| Insurance including:           |                          |
| General Liability              | \$1,000,000. aggregate   |
| Products, Completed Operations | \$1,000,000. aggregate   |
| Personal & Advertising Injury  | \$ 500,000.              |
| Each Occurrence                | \$ 500,000.              |
| Fire Damage                    | \$ 50,000. any one fire  |
| Medical Expense                | \$ 5,000. any one person |
- C. Automobile Liability Insurance  
(owned, hired, & non-owned):
- |                                 |                                    |
|---------------------------------|------------------------------------|
| Bodily Injury & Property Damage | \$1,000,000. combined single limit |
|---------------------------------|------------------------------------|
- D. The Contractor shall provide a waiver of any rights of subrogation that the Contractor may have against the Owner, its agents, or its employees.
- E. Before any of the work is started under the contract, the Contractor shall file with the Engineer a certificate of insurance containing the following information in respect to all insurance carried:
- (1) Name of insurance company, policy number, and expiration date;
  - (2) The coverage's required and the limits on each including the amount of deductible or self-insured retention's (which shall be for the account of the Contractor);
  - (3) A statement indicating that the Owner shall receive thirty (30) days notice of cancellation or significant modification of any of the policies which may affect the Owner's interest; and
  - (4) The Owner as an additional insured (except Workers' Compensation Insurance).
- F. If any of the work performed under the contract includes blasting, excavating, pile driving, or caisson work; moving, shoring, underpinning, razing, or demolition of any structure or removal or rebuilding of any structural support thereof, or any subsurface or underground work, the Comprehensive General Liability Insurance policy shall include coverage for the explosion, collapse, and underground hazards.
- G. The Owner shall purchase and maintain Builder's Risk Insurance and shall name the Contractor as additionally insured.

#### 14. TIMING AND COORDINATION OF THE WORK

The work shall be started within 10 days of the receipt of a "Notice to Proceed" and completed on or before the date specified in the Agreement. Activities of the Owner will be coordinated to allow the successful bidder to have the necessary access to the work area. Contractor access to all areas of Bangor International Airport requires a security clearance and badges. This process may take several days to complete.

## 15. LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE CONTRACT ON TIME

Time is an essential element of the Contract and it is important that the work be pressed vigorously to completion. The cost to the Owner for providing other facilities, administration of the Contract, inspection, and supervision will be increased as the time to complete the work is lengthened. The work to be performed under this Contract shall be completed and ready for occupancy on the indicated date of completion; otherwise, the Contractor agrees that, from the compensation otherwise to be paid, the Owner may retain the sum of **\$300.00** for each day thereafter, Sundays and holidays included, that the work remains incomplete, which sum is agreed upon as a proper measure of liquidated damages which the Owner will sustain per diem by the failure of the undersigned Contractor to complete the work as above stipulated. If a delay is caused by acts of the Owner or its authorized agents, or by strikes, walkouts, floods, fires, or other causes beyond the control of the Contractor, no liquidated damages will accrue during the delay, and the completion date shall be extended for an equivalent period covering said delay without liquidated damages, provided that the Contractor notifies the Owner in writing of each delay within 24 hours of its occurrence.

## 16. EQUAL EMPLOYMENT OPPORTUNITY

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

- A. 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, and recruitment or recruitment advertising; layoff or termination rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- B. 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 with out regard to race, color, religion, sex, or national origin.
- C. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and to the rules, regulations, and relevant orders of the Secretary of Labor.

## 17. INDEMNIFICATION

- A. The Contractor shall indemnify, defend, and hold harmless the Owner from and against all claims and actions, and all expenses incidental to such claims or actions, based upon or arising out of damage to property or injuries to persons or other tortuous acts caused or contributed to by the Contractor or anyone acting under its direction or control or in its behalf in the course of its performance under this Agreement, provided the Contractor's aforesaid indemnity and hold harmless agreement shall not be applicable to any liability based upon the sole negligence of the Owner.
- B. The Contractor hereby expressly agrees that (he, she, or it) will defend, indemnify, and hold the City of Bangor harmless from any and all claims made or asserted by the Contractor's agents, servants, or employees arising out of the Contractor's activities under this Contract.

For this purpose, the Contractor hereby expressly waives any and all immunity it may have under Maine's Workers Compensation Act in regard to such claims made or asserted by the Contractor's agents, servants, or employees. The indemnification provided under this paragraph shall extend to and include any and all cost incurred by the City of Bangor to answer, investigate, defend, and settle all such claims, including but not limited to the City of Bangor's costs for attorneys fees, expert and other witness fees, the cost of investigators, and payment in full of any and all judgments rendered in favor of the Contractor's agents, servants, or employees against the City of Bangor in regard to claims made or asserted by such agents, servants, or employees.

18. CONSENT DECREE

“All contractors and subcontractors are hereby notified that the City of Bangor has entered into a Consent Decree with the United States and the State of Maine. For the purposes of the Consent Decree, contractors and subcontractors are deemed agents of the City. Any and all work performed by contractors and subcontractors must conform with the terms of the Consent Decree. Contractors must familiarize themselves with the contents of the document and must make the document available to all subcontractors. This document is available electronically at [http://www.bangormaine.gov/filestorage/318/350/7758/ENV\\_ENFORCEMENT.PDF](http://www.bangormaine.gov/filestorage/318/350/7758/ENV_ENFORCEMENT.PDF) or in hard-copy in the City of Bangor’s Engineering Department.”

SECTION 01 00 00  
**GENERAL REQUIREMENTS**

**PART 1 - GENERAL**

1.1 SCOPE OF WORK:

- A. This statement shall apply to all sections of these specifications: All of the provisions of the CONTRACT AGREEMENT shall be a part of these specifications. The General Contractor and each Subcontractor shall fully inform himself of these documents before proceeding with any work.
- B. All permits and licenses necessary for the prosecution of the work shall be secured and paid for by the Contractor.
- C. The General Contractor shall be responsible for himself as well as his Subcontractors to prevent damage in all areas of finished work. Any damaged areas shall be repaired and refinished in a new condition before leaving the project.
- D. The work consists of all supervision, labor, equipment, and material to complete the project in strict accordance with these specifications and drawings.
- E. The General Contractor shall be responsible for the following temporary facilities:

All necessary temporary buildings such as office, toilets, shops, and storage facilities.

Temporary Toilet Facilities

Toilet facilities shall be provided by the General Contractor. It shall be his responsibility to keep a clean sanitary condition at all times.

Temporary Light and Power

Temporary power is available for incidental electrical use (not for heating or welding) by the Contractor at no cost.

Temporary Water

A temporary water connection for the work shall be provided by the General Contractor with the Contractor paying all costs for the necessary temporary connection and any water extensions on the site along with the cost of water during construction.

Temporary Heat

Provide and pay all costs to furnish all necessary temporary heat required to carry out the building project in accordance with these drawings and specifications.

1.2 SCHEDULE OF VALUES

- A. Submit schedule on AIA Form G703. Contractor's standard form or electronic media printout will be considered.
- B. Submit Schedule of Values in duplicate within 10 days after date established in Notice to Proceed.

### 1.3 APPLICATIONS FOR PAYMENT

- A. Submit four copies of each application on AIA Forms G702 and G703 to the Engineer five days prior to the monthly on-site progress meetings.
- B. Form G703 shall be brought up to date with each requisition indicating percentage of completion for each item listed.
- C. Payment Period: Monthly on date established in the pre-construction conference. Requisitions will be reviewed by the Engineer within three days of receipt.
- D. Retainage: 5% retainage will be withheld from each monthly requisition until Substantial Completion of the work. Upon substantial Completion retainage may or may not be reduced.
- E. Waiver of Lien: Requisitions shall be accompanied by a waiver of "Right of Mechanics Lien" for the full amount of payment for the preceding requisition. Final payment shall not be released until:
  - 1. An unconditional Waiver of Lien has been received from the General Contractor for the entire project amount.
  - 2. An unconditional Waiver of Lien has been received from each major subcontractor or supplier.

## **PART 2 - PRODUCTS**

### 2.1 THE WORK INCLUDES:

- A. Demolition
- B. Miscellaneous cutting and patching
- C. Roof penetrations
- D. Insulation and cover board
- E. EPDM rubber roofing
- F. Blocking and flashing

This is only a general description and does not purport to describe the project completely.

## **PART 3 - EXECUTION**

### 3.1 SUPERVISION

The General Contractor shall provide an on-site superintendent who shall be responsible for all work being done and shall have subcontract work under his control.

### 3.2 RUBBISH AND TRASH REMOVAL

The Contractor shall remove all trash and waste material and deposit same in a location and in a manner as directed by the proper municipal officials. The Contractor shall make himself familiar with all regulations for Municipal Waste and deposit trash and waste materials in conformance with the regulations and directives. The Contractor shall pay all required charges or fees for his use of the Disposal Facilities.

### 3.3 LIMITS OF WORK

The limit of work is the area shown on the Plans. All work shall be contained in this area unless express approval is obtained from the Owner.

### 3.4 AS-BUILT DRAWINGS

A set of clean drawings with all changes clearly marked in red shall be kept on the job at all times and turned over to the Engineer upon completion.

### 3.5 REVIEW OF WORK

The review of construction and approval of payments to the Contractor will be carried out by the Project Engineer or Representative.

### 3.6 STORAGE OF MATERIALS

The Contractor shall make provision for storage of all materials outside of the building. No materials will be allowed to be stored within the buildings.

### 3.7 CLOSURE OF THE BUILDING DURING RENOVATION WORK

The Contractor shall be responsible for keeping the building weather tight, walls and roof, during the construction process to prevent property damage by the weather elements.

### 3.8 BUILDING SECURITY

The Contractor shall be responsible for making the building secure and prevent the entrance or damage by unauthorized persons at all times.

### 3.9 COORDINATION OF WORK WITH OWNER

The Contractor shall be responsible for coordinating his work with the Owner to minimize the interference of this work with the daily operations. Every effort shall be made to schedule work to create the least possible disruption.

The Contractor shall supply the Owner with a complete schedule of work at least 30 days in advance of any work. The Contractor shall confirm the work schedule with the Owner.

### 3.10 PROTECTION OF BUILDING, FINISHES, ETC.

The General Contractor shall be responsible for himself as well as his Subcontractors to prevent damage in all areas of finish work.

### 3.11 LANGUAGE, BEHAVIOR AND SMOKING

The Contractor will be performing work while Staff and Students are present on site. Lewd remarks, offensive language, and the like will not be allowed or tolerated. There is also a strict policy of **NO SMOKING** the property that will be enforced.

### 3.12 TESTING

All testing of materials as herein specified will be at the expense of the General Contractor. Additional testing may be required to substantiate the quality of substituted products or materials or of materials believed by the Engineer to be defective.

### 3.13 RESTORATION OF SITE

Roadways, lawns, shrubs, pavements, curbs, and fences that are broken, damaged, settled, or otherwise damaged as a result of receiving, handling, storage of materials, or of the performance of any work under this Contract, shall be fully restored to the satisfaction of the authorities having jurisdiction and the Project Engineer.

### 3.14 FINAL CLEANING

At the time of project close out, clean or re-clean the Work to the condition expected from a normal, commercial building cleaning and maintenance program. Complete the following cleaning operations **before the Engineer's inspection for certification of substantial completion.**

- Remove non-permanent protection and labels.
- Clean exposed finishes.
- Remove debris.
- Sweep and wash paved areas.
- Police yards and grounds.

### 3.15 APPROVAL OF MATERIAL

Unless otherwise specified, all testing of materials and equipment shall be performed by the Contractor. Such tests shall be made whenever required by the Engineer to give satisfactory proof of compliance of the materials and equipment with the requirements of the specifications. **No material containing asbestos shall be used or considered for this project.**

### 3.16 LINES AND GRADES

The Contractor shall lay out his work from base lines and benchmarks and shall be responsible for all measurements in connection therewith. The Contractor shall, at his own expense, furnish all stakes, templates, platform, equipment, and labor, including engineering surveys that may be required in setting and cutting or laying out any part of the work.

### 3.17 GUARANTEE

The Contractor shall guarantee that all work installed by himself is free from any and all defects in workmanship and materials in that all apparatus will develop the capacities and characteristics specified. He further guarantees that if, during a period of one year from the date of completion and acceptance of his work, any such defect in workmanship, material, or performance appear, such defects will be remedied by himself without cost to the Owner.

### 3.18 PROTECTION OF MATERIAL, STRUCTURES AND WORK

The Contractor shall at all times protect and preserve all materials, supplies, and equipment of every description (including property which may be Owner furnished or owned and stored at the construction site), existing structures including utilities, and all work performed. The Contractor shall determine the exact location of all utilities before commencing work and agrees to be fully responsible for any and all damages which might be occasioned by the contractor's failure to exactly locate and preserve any and all underground utilities.

SECTION 01 33 00  
**SUBMITTAL PROCEDURES**

**PART 1 - GENERAL**

1.1 **SECTION INCLUDES**

- A. Submittal procedures.
- B. Construction schedules.
- C. Proposed products list.
- D. Shop drawings and product data.
- E. Manufacturers' instructions.
- F. Manufacturers' Certificates.
- G. Samples.
- H. Design data.
- I. Test reports.
- J. Engineer Stamp.

1.2 **SUBMITTAL PROCEDURES**

- A. Transmit each submittal with Contractor transmittal form.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or Supplier, pertinent Drawing sheet and detail number(s), and Specification Section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite the Project, and deliver to Engineer at business address. Coordinate submission of related items.
- F. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- G. Revise and resubmit submittals when changes occur; identify all changes made since previous submittal.
- H. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- I. Provide space for Contractor and Engineer review stamps and review comments.

- J. Submittals shall be completed by specification section unless previously agreed to by the Engineer. Partial submissions shall be returned to the Contractor marked “REJECTED”.

### 1.3 PROPOSED PRODUCTS LIST

Submit complete list of major products proposed for use, with name of manufacturer and trade name of each product.

### 1.4 SHOP DRAWINGS AND PRODUCT DATA

- A. Submit a minimum of four (4) hard copies of each submittal which will be reviewed by Engineer. Three (3) copies will be retained by the Engineer with one copy being returned to the contractor.
- B. Product Data for Review:
  - 1. Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
  - 2. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES above.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers’ standard data to provide information specific to this project.
- D. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. Prepare shop drawings to scale sufficiently large to show all pertinent aspects of the item and method of connection to other work. Submit minimum four blue/black line prints. Three prints will be retained by the Engineer.
- F. Product Data for Project Close-out: Submitted for the Owner’s benefit after project completion.
- G. After review, distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01 77 00 Closeout Procedures.

### 1.5 MANUFACTURERS’ INSTRUCTIONS

- A. Submit manufacturers’ printed instructions for delivery, storage, assembly, installation, adjusting, and finishing.
- B. Identify conflicts between manufacturers’ instructions and Contract Documents.

### 1.6 MANUFACTURERS’ CERTIFICATES

- A. When specified in individual Specification Sections, submit manufacturers’ certificates to Engineer for review, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

#### 1.7 SCHEDULE

Within fifteen (15) days after signing the Contract, the Contractor shall submit a schedule sufficiently detailed so that actual progress may be easily compared with scheduled progress. Submit revised schedules as requested, identifying changes since previous version. Submit a chart with separate line for each section of work, identifying first work day of each week. Show complete sequence of construction by activity. Indicate estimated percentage of completion for each item of work at each submission.

#### 1.8 SAMPLES

Submit product samples upon the request of the Engineer.

#### 1.9 ENGINEER STAMP

- A. Approved: Final Unrestricted Release. Work may proceed, provided it complies with the Contract Documents.
- B. Make Corrections Noted: Final but Conditional Release. Work may proceed, provided it complies with the notations and corrections on submittals and with Contract Documents. Engineer's comments shall be considered a part of the original submittal.
- C. Revise and Resubmit: Returned for Resubmittal. Do not proceed with the work at the site or allow submittal at site. Fabrication in shop or factory may proceed on items not affected by the Engineer's comments only. Revise submittal in accordance with notations thereon, and resubmit without delay to obtain a different action.
- D. Rejected: Where submittal is returned for other reasons with Engineer's explanation included.

### **PART 2 – PRODUCTS**

Not used.

### **PART 3 - EXECUTION**

Not used.

SECTION 01 77 00  
**CLOSEOUT PROCEDURES**

**PART 1 - GENERAL**

1.1 **REQUIREMENTS INCLUDED**

Administrative provisions for Substantial Completion and for final acceptance.

1.2 **SUBSTANTIAL COMPLETION**

- A. When Contractor considers work, or designated portion of work, is substantially complete, submit written notice with list of items to be completed or corrected.
- B. Should Owner inspection find work is not substantially complete, Owner will promptly notify Contractor in writing, listing observed deficiencies.
- C. Contractor shall remedy deficiencies and send a second written notice of substantial completion.
- D. When Owner finds work is substantially complete, Owner will prepare a Certificate of Substantial Completion in accordance with provisions of the General Conditions.

1.3 **FINAL COMPLETION**

- A. When Contractor considers work is complete, submit written certification that:
  - 1. Contract Documents have been reviewed.
  - 2. Work has been inspected for compliance with Contract Documents.
  - 3. Work has been completed in accordance with Contract Documents and deficiencies listed with Certificate of Substantial Completion have been corrected.
  - 4. Equipment and systems have been tested, adjusted and balanced and are fully operational.
  - 5. Operation of systems has been demonstrated to Owner's personnel.
  - 6. Work is complete and ready for final inspection.
- B. Should Owner inspection find work incomplete, Owner will promptly notify Contractor in writing, listing observed deficiencies.
- C. Contractor shall remedy deficiencies and send a second certification of final completion.
- D. When Owner finds work is complete, Owner will consider closeout submittals.

1.4 **CLOSEOUT SUBMITTALS**

- A. Operation and maintenance data.
- B. Warranties and bonds.
- C. Spare parts and maintenance Materials.

- D. Project record documents.
- E. Keys and keying schedule.
- F. Evidence of payment and Releases of Lien.

1.5 APPLICATION FOR FINAL PAYMENT

Submit application for final payment in accordance with provisions of Conditions of the Contract.

1.6 GUARANTEE

- A. Neither the final requisition for payment nor any provision in the Contract Documents nor partial or entire use or occupancy of the building by the Owner shall constitute an acceptance of work done in accordance with the Contract Documents or relieve the Contractor of liability in respect to express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within one year from the date of final acceptance unless a longer period is specified. The Owner will give notice of observed defects with reasonable promptness.
- B. The Contractor shall be responsible for all work and the guarantee thereof. In the case of disputes between subcontractors as to fault of problems, it is up to the Contractor to resolve these disputes or accept the cost of repair or replacement himself or herself without cost to the Owner.

SECTION 02 40 00  
**DEMOLITION, CUTTING AND PATCHING**

**PART 1 - GENERAL**

1.1 **RELATED DOCUMENTS**

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division –1 Specification sections, apply to work of this section.

1.2 **SCOPE OF WORK**

This work includes, but is not limited to, the following items:

- A. Cutting, patching and flashing new equipment roof penetrations.
- B. Cutting and patching floor and roof penetrations for electrical conduits.
- C. Roof walkways.

1.3 **SUBMITTALS**

Develop proposed methods and operations of demolition with Engineer and owner for review prior to start of work. Include in schedule coordination for any necessary shut-off, capping, and continuation of utility services as required.

1.4 **JOB CONDITIONS**

- A. **Occupancy**: Spaces to be demolished will be vacated and discontinued in use prior to start of work.
- B. **Condition of Structures**: Owner assumes no responsibility for actual condition of spaces to be demolished. Conditions existing at time of inspection for bidding purposes will be maintained by the Owner in so far as practicable.
- C. **Traffic**: Conduct demolition operations and removal of debris to ensure minimum interference with walk paths, and other adjacent occupied or used facilities.
- D. **Protections**: Ensure safe passage of persons around area of demolition. Conduct operations to prevent injury to adjacent buildings, structures, other facilities, and persons.
- E. **Damages**: Promptly repair damages caused to adjacent facilities by demolition operations at no cost to Owner.
- F. **Utility Services**: Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations.

**PART 2 - PRODUCTS**

2.1 **GENERAL**

Provide materials as required to remove specified items.

## 2.2 ROOF PATCHING

Materials for the roofing and flashing system shall be compatible with the existing roof and approved by the Engineer.

## 2.3 INTERIOR PATCHING

Materials shall match existing areas surrounding the new work.

# **PART 3 - EXECUTION**

## 3.1 DEMOLITION

- A. Pollution Controls: Use temporary enclosures to limit dust and dirt rising and scattering in air to lowest practical level. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations, as directed by Engineer or governing authorities. Return adjacent areas to condition existing prior to start of work.
- B. Demolition: Dismantle items indicated completely and remove from site. Use such methods as required to complete work within limitations of governing regulations.
- C. Disposal of Demolished Materials: Remove from site debris, rubbish, and other materials resulting from demolition operations. Transport materials removed from demolished structures and dispose of off site in accordance with local requirements.

## 3.2 ROOF PATCHING

New roof penetrations shall have a watertight seal to the existing roof system.

SECTION 06 10 00  
**CARPENTRY**

**PART 1 - GENERAL**

1.1 **DESCRIPTION**

Work Included: provide and install, unless otherwise indicated below, all carpentry and millwork required for a complete and finished project, to include but not be limited to, the following:

- A. All wood framing, blocking, and furring.
- B. All millwork, trim, and other finish woodwork.

1.2 **QUALITY ASSURANCE**

Provide sufficient workers and supervisors who shall be present at all times during execution of this portion of the Work, and who shall be thoroughly familiar with the type of construction involved and the materials and techniques specified.

1.3 **PRODUCT HANDLING**

A. **Protection:**

1. Store all materials in such a manner as to ensure proper ventilation and drainage, and to protect against damage and the weather.
2. Keep all materials clearly identified with all grade marks legible. Keep all damaged material clearly identified as damaged, and store separately to prevent its inadvertent use.
3. Do not allow installation of damaged or otherwise non-complying material.
4. Use all means necessary to protect the installed work and materials of all other trades.

B. **Replacements:**

In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost to the Owner.

**PART 2 - PRODUCTS**

2.1 **WOOD**

A. **General:** All lumbers and plywood shall bear grade and trademarks under whose rules it is produced and a mark of mill identification. All lumber shall be kiln dried. Finished lumbers shall not exceed 12%; framing lumbers shall not exceed 18%. All lumber shall be free of stains, animal life, blemishes, be sound, well manufactured, and free of warp within limits of grading rules. All lumbers shall be dressed finish. All wood shall be pressure treated, ACQ arsenic free.

B. **Rough Carpentry:** Use Eastern Spruce, Norway Pine, or Douglas Fir.

1. For beams, headers, rafters, and joists, use lumber with minimum bending stress of 1,200 psi and modulus of elasticity 1,400,000 psi.
2. For studs, sills, plates, and blocking, use construction grade lumber.

## 2.2 FASTENING PRODUCTS

Use non-corrosive nails, screws, bolts, anchors, and similar items of type and sizes sufficient to draw and secure members in place. For nailing all siding materials use deformed shank nails ONLY.

## 2.3 OTHER MATERIALS

All other materials, not specifically described but required for a complete and operable installation of the work of this Section, shall be new, first quality of their respective kinds, and subject to the approval of the Engineer.

# PART 3 - EXECUTION

## 3.1 INSPECTION

Examine the areas and conditions where work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

## 3.2 WORKMANSHIP

A. General: All carpentry shall produce joints true, tight, and well nailed, with all members assembled in accordance with the Drawings and with all pertinent Codes and Regulations.

B. Selection of Lumber Pieces:

1. Carefully select all members. Select individual pieces so that knots and obvious defects will not interfere with placing bolts, proper nailing, or making connections.
2. Cut out and discard all defects that will render a piece unable to serve its intended function. Lumber may be rejected by the Engineer, whether or not it has been installed, for excessive warp, twist, bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.

## 3.3 GENERAL FRAMING

A. General:

1. In addition to all framing operations normal to fabrication and erection indicated on the Drawings, install all backing required for work of other trades.
2. Set all horizontal or sloped members with crown up.
3. Do not notch, bore, or cut members for pipes, ducts, conduits, or other reasons except as shown on the Drawings or as specifically approved in advance by the Engineer.

B. Bearings:

1. Make all bearings full unless otherwise indicated on the Drawings.

2. Finish all bearing surfaces on which structural members are to rest so as to give sure and even support. Where framing members slope, cut or notch the ends as required to give uniform bearing surface.

### 3.4 STUD WALLS AND PARTITIONS

- A. Studs: Make all studs single length, unspliced, and platform framed, unless indicated otherwise on the Drawings.
- B. Corners and Intersections: Unless otherwise indicated on the Drawings, frame all corners and intersections with three or more studs and all required bearing for wall finish.

### 3.5 ALIGNMENT

On all framing members to receive a finished wall or ceiling, align the finish subsurface to vary not more than 1/8 inch from the plane of surfaces of adjacent framing and furring members.

### 3.6 INSTALLATION OF PLYWOOD SHEATHING

- A. Placement:
  1. Place all plywood with face grain perpendicular to supports and continuously over at least two supports, except where otherwise specifically indicated on the Drawings.
  2. Center joints accurately over supports. Unless otherwise specifically shown on the Drawings, stagger the end joints of plywood panels to achieve a minimum of continuity of joints.
  3. For roof sheathing, use H-clips at unsupported edge joints.
- B. Protection of plywood: Protect all plywood from moisture by use of all required waterproof coverings until the plywood has in turn been covered with the next succeeding component or finish.

### 3.7 FASTENING

- A. Nailing:
  1. Provide penetration into the piece receiving the point of not less than 1/2 the length of the nail or spike provided, however, that 16d nails may be used to connect two pieces of two inch nominal thickness. (Plywood sub-floor 8d galvanized nails.)
  2. Do all nailing without splitting wood. Pre-bore as required. Replace all split members.
- B. Bolting:
  1. Drill holes 1/16 inch larger in diameter than the bolts being used. Drill straight and true from one side only. Bolt threads shall not bear on wood. Use washers under head and nut where both bear on wood; use washers under all nuts.
- C. Screws:
  1. For lag screws and wood screws, pre-bore holes same diameter as root of thread; enlarge holes to shank diameter for length of shank. Screw, do not drive, all lag screws and wood screws.

### 3.8 INSTALLATION

- A. Install the work plumb, level, true and straight with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'0" for plumb and level countertops; and with 1/16" maximum offset in flush adjoining, 1/8" maximum offsets in revealed adjoining surfaces.
- B. Scribe and cut work to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
- C. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum lengths of lumber available) to the greatest extent possible. Stagger joints in adjacent and related members. Cope at returns, miter at corners, to produce tight fitting joints with full surface contact throughout length of joint. Use scarf joints for end-to-end joints. Make exterior joints water-resistant by careful fitting. Apply flat grain lumber with bark side exposed to weather.
- D. Anchor finish carpentry work to anchorage devices or blocking built-in or directly attached to substrates. Secure to grounds stripping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation. Except where prefinished matching fasteners heads are required, use fine finishing nails for exposed nailings, countersunk and filled flush with finished surface, and matching final finish where transparent is indicated.

### 3.9 CLEANING UP

- A. General:
  - 1. Keep the premises in a neat, safe, and orderly condition at all times during execution of this portion of the Work, free from accumulation of sawdust cut ends, and debris.
- B. Sweeping:
  - 1. At the end of each working day, and more often if necessary, thoroughly sweep all surfaces where refuse from this portion of the Work has settled.
  - 2. Remove the refuse to the area of the job site set aside for its storage.
  - 3. Upon completion of this portion of the Work, thoroughly broom clean all surfaces.

SECTION 07 53 23  
**EPDM ROOF SYSTEM**

(ROOF MEMBRANE, ROOF INSULATION,  
ROOF FLASHING AND ACCESSORIES)

**PART I - GENERAL**

1.1 SCOPE

The General Provisions of the Contract including the Conditions of the Contract (General, Supplementary, and Other Conditions) and Division 1 as appropriate apply to work specified in this section.

1.2 WORK INCLUDED

- A. Remove existing flashings, insulation, roofing, and unused blocking and curbing.
- B. Inspect roof decks and penetrations for damage. Repair minor damage as required.
- C. Inspect roof deck for signs of water damage and/or mold and mildew. Notify Engineer immediately upon finding any of these items.
- D. Provide labor, materials, equipment, and supervision necessary to complete the installation of an EPDM Rubber Roofing System.
- E. The extent of the EPDM Roofing System is shown on the drawings. The system is hereby defined to include all components of the EPDM Rubber Roofing System necessary to provide a watertight, primary roofing membrane intended for weather exposure.
- F. Removal of any material on the existing roof containing asbestos fibers and the proper disposal of this as a hazardous material.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Demolition, Cutting and Patching.
- B. Carpentry.

1.4 QUALITY ASSURANCE

- A. Roofing system applicator shall be approved in writing by the manufacturer and be able to substantiate at least two years of experience installing this material.
- B. The complete roofing project shall be inspected by the manufacturer. A twenty-year watertight warranty and a twenty-year material and labor warranty will be issued to the owner by the primary manufacturer of the EPDM sheeting.
- C. The roof shall be classified by Underwriter's Laboratories, Inc. as a Class "A" sheathing material for use in construction of Class "A" roof coverings.
- D. The roof system shall be classified as a Factory Mutual 1-90 System with a minimum wind speed capacity meeting local code wind speed of 90 mph.

- E. There shall be no deviation from this specification without prior written approval of the Engineer.
- F. Certify that the new roofing materials contain no asbestos fibers or other known hazardous material.
- G. Comply with all Local, State and Federal requirements for use of materials containing volatile organic compounds.

#### 1.5 SUBMITTALS

- A. The following product data shall be submitted to the Engineer:
  - 1. Complete materials list of all items proposed to be furnished and installed under this Section.
  - 2. Manufacturer's specifications and other data required to demonstrate compliance with specified requirements.
  - 3. Tapered Insulation Layout Drawings.
  - 4. Sample Warranty.
  - 5. Samples of membrane and metals with color options and all fasteners.
  - 6. The manufacturer's recommended methods of installation, when approved by the Engineer, will become the basis for inspecting and accepting or rejecting actual installation procedures used on the Work.

#### 1.6 PRODUCT DELIVERY STORAGE AND HANDLING

- A. Deliver materials in original unopened containers.
- B. Containers shall show manufacturer's name, brand name, and installation instructions.
- C. All materials except the membrane must be stored between 60°F. and 80°F. If exposed to lower temperatures, the materials must be restored to 60°F. before using.
- D. All materials except the membrane must be stored in a dry area.
- E. Membrane rolls shall be stored lying down on pallets.

#### 1.7 PROJECT SITE CONDITIONS

- A. The roof deck shall be free of water, ice, or snow, and shall be dry before roofing is installed.
- B. Splicing of the membrane shall not be done during rain or snow.
- C. There is no temperature limitation on the installation of the EPDM membrane.
- D. The membrane or accessories must not be exposed to a constant temperature in excess of 180° F. Petroleum products, oils, fats, and steam must not be allowed to vent on the roofing system. Maximum roof slope is 2/12. Wood nailers treated with creosote or asphaltic preservatives are not acceptable.
- E. The Contractor should take care during application and storage that overloading of deck structure does not occur.

## 1.8 WARRANTY

A representative of the manufacturer shall inspect the installation of the roofing system. Upon approval, a twenty-year total system labor and material watertight warranty, with no dollar limit and a 90 mph wind speed warranty shall be issued by the primary manufacturer of the EPDM sheeting. The warranties will be in effect when the manufacturer is notified of completion. Warranties from fabricators, agents, or installers will not constitute compliance with these warranty requirements.

## PART 2 - PRODUCTS

### 2.1 GENERAL

System components shall be products of a single manufacturer compatible to membrane manufacturer.

### 2.2. MEMBRANE (Base Bid – 60 mil, 20-year System equal to Firestone RubberGard LS-FR):

- A. EPDM Rubber Roofing membrane or approved equal. .060 Inches thick and the largest sheet possible as determined by job condition. EPDM (Ethylene Propylene Diene Monomer) compounded elastomer shall conform to ASTM D 4637, Type 1, Class U and the following minimum physical properties:

<b>Property</b>	<b>Test Method</b>	<b>ASTM</b>	<b>Typical Values</b>
		<b>Performance</b>	
		<b>Minimum</b>	<b>60 mil</b>
Thickness, min			
Sheet-overall	ASTM D 412	0.0405 in (1.016 mm) 0.054 in (1.372 mm)	0.059 in (1.499 mm)
Tensile strength, min	ASTM D 412 (Die C)	1305 psi (9.0 MPa)	1454 psi (10.0 MPa)
Elongation, ultimate, min	ASTM D 412 (Die C)	300%	622%
Tensile set, max	ASTM D 412 Method A, (Die C)	10%	2.18%
Tear resistance, min	ASTM D 624 (Die C)	150 lbf/in (26.3 kN/m)	216 lbf (38.4 kN/m)
Brittleness point, max	ASTM D 2137	-49 °F (-45 °C)	-49 °F (-45 °C)
Ozone resistance, no cracks	ASTM D 1149	Pass	Pass
Heat Aging:	ASTM D 573		
Tensile strength, min	ASTM D 412 (Die C)	1205 psi (8.3 MPa)	1490 psi (10.3 MPa)
Elongation, ultimate, min	ASTM D 412 (Die C)	200%	322%
Tear resistance, min	ASTM D 624 (Die C)	125 lbf/in (21.9 kN/m)	179 lbf/in (31.3 kN/m)
Linear dimensional change, max	ASTM D 1204	±1.0%	-0.32%
Water absorption, max, mass %	ASTM D 471	+8, -2%	+1.51%
Factory seam strength, min	ASTM D 816 Method B (Modified)	50 lbf/in (8.8 kN/m) or Sheet Failure	Sheet Failure
Weather resistance:			
Visual inspection	ASTM D 518	Pass	Pass
PRFSE, min	ASTM D 518	30%	53%
Elongation, ultimate, min	ASTM D 412 (Die C)	200%	255%

- B. Roof assembly to be by one of the following approved manufacturers:

1. Firestone Roofing System – RubberGard EPDM Roofing System.
2. Carlisle Syntec, Inc. – Sure Seal EPDM Roof System.
3. John Manville Roofing Systems – EPDM Roofing System.
4. Verisco, Inc. – Versigard EPDM Roof System.
5. GenFlex Roofing System – EPDM Roofing System.

- C. Flashing Membrane: Perimeter flashing and flashing around vents, skylights, etc., shall be done with EPDM flashing using the longest pieces practical. Splice shall extend at least three inches beyond the fasteners which attach the membrane to the horizontal surface. All flashings and terminations shall be done in accordance with the manufacturer's standard details. Flash all penetrants (pipes, conduits, etc.) passing through the membrane with molded pipe flashings where possible. Where molded pipe flashings cannot be installed, use field fabricated pipe seals.
- D. Daily Seal: Exercise care to ensure that water does not flow beneath any completed sections of roof. Temporarily seal loose edge of membrane as recommended by membrane manufacturer whether weather is threatening or not.
- E. Bonding Adhesive:  
As supplied and recommended by the membrane manufacturer. Adhesives, primers, and sealants shall comply with V.O.C. limits established by authorities having jurisdiction and in accordance with all Federal, State, and Local regulations.
- F. Seam Tape: As supplied and recommended by the membrane manufacturer.

### 2.3 ACCESSORY PRODUCTS AND RELATED MATERIALS

- A. Prefabricated Details: Inside or outside corners, vent stack flashings, and T-joint covers.
- B. Anchor Bar: 14 gauge galvanized steel bar, channel shaped, punched 1 inch on center, for use as a 4 foot perimeter bar.
- C. Aluminum Flashing/Cladding: Shall be .040" thick aluminum with colored Kynar 500<sup>®</sup> finish to be selected from standard colors. (Brake formed only)
- D. Wood Nailers: Wood nailers shall be installed at the perimeter of the entire roof and around such other roof projections and penetrations as specified on project drawings. Height of nailers shall be matched to that of the insulation thickness being used.
  - 1. Wood nailers shall be construction grade #2 or better lumber. Creosote or asphaltic-treated lumber is not acceptable.
  - 2. Wood nailers shall conform to Factory Mutual's Loss Prevention Data 1-49.
  - 3. All wood shall have a maximum moisture content of 19% by weight on a dry weight basis.
- E. Plywood: When bonding directly to plywood, a minimum standard 1/2" smooth surfaced exterior grade plywood with exterior grade glue shall be used. Plywood shall have a maximum moisture content of 19% by weight on a dry weight basis.
- F. Vapor Retarder: Material to be approved in writing by vapor retarder manufacturer for intended use. Vapor retarders are to be compatible with insulation and other accessories. Any of the following are accepted asphalt base sheet vapor retarders for adhered membrane applications:
  - 1. Vaporbar GB Base Sheet (coated base sheet) as manufactured by Celotex Corp.
  - 2. GAFGLAS #75 Base Sheet as manufactured by GAF Corp.
- G. Sealant: Silicone to comply with Federal specifications TTS-001543. Sealant primer as recommended by manufacturer.

- H. Roof Drains - Retrofit: Provide new roof drains for all existing drain locations shown on drawings. Re-use existing drain pipes. Clean existing drain pipes of any visible blockage. Roof drain equal to:
1. OlyFlow Hercules RetroDrain as manufactured by OMG Roofing Products, with one-piece spun aluminum body, sump, cast aluminum alloy strainer and clamping ring. Drain stem size and type as required to accommodate field conditions.
  2. RAC Deluxe RetroDrain System as manufactured by OMG Roofing Products, with aluminum body, sump, clamping ring, and strainer. Drain stem size and type as required to accommodate field conditions.
  3. RAC Vandal Resistant Deluxe RetroDrain System as manufactured by OMG Roofing Products, with aluminum body, sump, clamping ring, and strainer.
- I. Roof Drains - New:
1. Provide new roof drains for all existing and new drain locations as sized and shown on the drawings. Re-use existing drain pipes. Clean existing drain pipes of any visible blockage.
  2. Roof drain shall be Zurn Z-100-ERC cast iron roof drain with large sump and flange, removable combined high dome and sediment cup, flashing clamp and deck clamp, vandal resistant.
  3. All roof drains shall be provided with 4 pound per square foot sheet lead flashing, extending a minimum of 10 inches beyond the outer dimensions of the roof drain in all directions.
- J. Roof Drains – Existing: Existing roof drains shall be re-used as indicated on the drawings. Remove, reinstall, and modify as required to accommodate new work. Provide and install new cast metal strainer dome on existing drain.
- K. High Density Polyiso Cover Board: High density (100 psi) (minimum) polyisocyanurate core laminated double-coated glass mat facers: ½" thick; R-2.5; equal to Firestone Iso-Gard HD™.
- L. Fire Barrier Roof Board: Fiberglass-mat faced, silicone-treated gypsum core sheathing board, 4' x 8' x 1/4" thick, 1.1-1.2 lb./sq. ft., 40 lbf. minimum flexural strength - ASTM C473, flute span per ASTM E661, 50 perms maximum permeance - ASTM E96, <10% water absorption – ASTM C1177. Subject to compliance with requirements and equal to: Georgia Pacific's Dens-Deck Gypsum Roof Board. Panels shall not exceed 4' x 4' in size for hot asphalt or adhered attachment.
- Provide Dens-Deck only in areas as required by manufacturer and to comply with UL 790: Class A Fire Hazard Classification.**
- M. Fiberboard: High density fiberboard conforming to federal specification LLL-1535B Class E ASTM C 208 (sheathing).
- N. Cants: Wood or polysio cants. Sizes as shown or required.
- O. Scuppers: .040 Aluminum.
- P. Foam Insulation Adhesive: Single component, moisture cured, solvent free polyurethane adhesive; Insta-Stik™ Quick Set Commercial Roofing Adhesive as manufactured by Dow Chemical Company, or equivalent, by roof system manufacturer.

- Q. Daily Seal: Exercise care to ensure that water does not flow beneath any completed sections of roof. Temporarily seal loose edge of membrane as recommended by membrane manufacturer whether weather is threatening or not.
- R. Walkway Pad: Black rubber dimpled walkway pad - 30" x 30" x 0.30" thick with factory applied seam tape, equal to Firestone QuickSeam Walkway Pad as shown on drawings or specified.
- S. Gutter System: Industrial gutter system shall be Metal-Era Seal – Tite IG1-C7 series as indicated on the drawings, constructed of .063" Kynar finish aluminum with all required components and accessories for a complete system to include heavy gauge gutter straps, drainage bars, mitered corners, downspouts, end caps, expansion joints, support brackets, etc.
- T. Metal Coping System: Coping system shall be Metal-Era Perma-Tite coping as indicated on the drawings, constructed of .040" Kynar finish aluminum, with all required components and accessories to include coping cover, splice plates, anchor clips, fasteners, end caps, mitered corners, support clips, etc.
- U. Leaded-Coated Copper: Hussey Copper Ltd. 16 oz. (.0216"), conforming to ASTM B101 standard.
- V. Coated Copper: Revere Copper Products 16 oz. (.0216"), Freedom Gray™ Alloy conforming to ASTM B370 standard.
- W. Pipe Stand: Pillow block pipe stand Model No. 1.5, capable of supporting 1.9" outside diameter piping or conduit, as manufactured by Miro Industries, Inc. (800-768-6978).
- X. Scuttle Ladder: Folding aluminum ladder of mill finish 6061-T6 aluminum alloy. 3" wide flat steps mounted on 12" centers. 15-3/4" width with mounting bracket/slide assembly. Solid rubber feet mounted at 70° angle. Ladder equal to: Alcoa Series 460, height as required.
- Y. Roof Scuttle: Curb opening 2'-6" X 3'-0". 14 gauge galvanized steel cover and curb base with 22 gauge galvanized steel liner. 12" high curb with 3-1/2" wide flange. Neoprene draft seal gasket. 1" rigid fiber insulation surrounding base. Spring latch with inside/outside turn handles and padlock hasps. Furnish and install as per manufacturers recommendations. Equal to Bilco #S-20, or Babcock-Davis.
- Z. Roof Anchor Post: Provide new single point roof anchor posts secured to the roof/deck/structure in locations indicated on the drawings. Anchor posts shall be single point, energy absorbing design for use on membrane/built-up roofing system, equal to Miller Fusion™ Roof Anchor Post #X10030/X10031 with all required accessories.

## 2.4 INSULATION

- A. Roof Insulation (Rigid): Polyisocyanurate roof insulation meeting ASTM Standard C1289, Type II, Class 1, UL Classified, FM Class 1 approved, 20 psi compressive strength, and included in roof system manufacturer's warranty. LTTR aged R-value = 6.8 per 1.2" of thickness. Thickness of insulation is as indicated herein and shown on drawing. Firestone ISO 95+ GL or equal.
- B. Where specified or required insulation shall be installed as a separation layer over the existing substrate and/or to obtain the desired thermal value.
  - 1. Insulation shall be a Factory Mutual Class 1 fire rated, 1-90 uplift approved board.

2. Insulation shall meet all identified code/insurance requirements.
3. Insulation shall be approved in writing by insulation manufacturer for intended use, and for use with EPDM membrane materials.
4. Insulation panels shall not exceed 4' x 8' in size for mechanical attachment or ballasted applications and maximum 4'x4' in size for hot asphalt or adhesive attachment.
5. Insulation system thickness shall be as indicated on the drawings. Insulation systems R Value shall be R30 minimum
6. Insulation shall have a compressive strength of 20-psi minimum.
7. Tapered Insulation
  - a. All flat or filler insulation panels shall have facing materials identical to the tapered panels.
  - b. The tapered insulation system shall have a minimum slope of 1/8" per foot or as indicated on drawings.
  - c. The tapered insulation system shall have a minimum thickness of 2" and a minimum average "R" value of R30.
  - d. The tapered insulation used as crickets shall have a minimum slope of 1/4" per foot, or as indicated on the drawings.

C. Insulation manufacturer's warranty.

1. The insulation manufacturer shall send warranty in writing to the roofing contractor and membrane manufacturer, and the Engineer shall receive a copy of its recommendations for the use of the product, including:
  - a. Name of specific project.
  - b. Statements which express the warranty conditions for the successful performance of their insulation for the duration of the warranty.
  - c. Recommended procedures for attachment of insulation to deck, including quantity density, and/or spacing.
  - d. Approval for use of adhesives for bonding membrane directly to insulation board.

## 2.5 INSULATION ATTACHMENT

A. The following fasteners are accepted for poured-in-place and pre-cast concrete deck construction:

1. Firestone Heavy Duty #15 Fasteners or Tapcon Concrete Screws as manufactured by ITW Buildex, or approved equal, to be used in conjunction the manufacturer's stress distribution plates.
2. Firestone Concrete Drive Fasteners or Striker Concrete Anchors as manufactured by ITW Buildex, or approved equal, to be used in conjunction with the manufacturer's plastic stress distribution plates.
3. Firestone Concrete Drive Fasteners or Rawl Spike Drive as manufactured by Rawl Plug Co., or approved equal, to be used in conjunction with the manufacturer's stress distribution plates.
4. Firestone All-Purpose #14 Fastener or Olympic #14-10 Concrete Deck Screw as manufactured by Olympic Manufacturing Group, Inc., or approved equal.

5. Type III steep asphalt, conforming to ASTM D312-71 (77), for use with insulations which accept asphalt attachment.
6. Foam adhesive as previously specified.

**NOTE: Type of asphalt shall be compatible with deck slope.**

- B. Insulation attachment shall be a combination of mechanical attachment for base/tapered layers and adhesive attachment for top/flat layer. Refer to details on drawings.
- C. Fastener Manufacturers Warranty:
  1. Fasteners shall be Factory Mutual approved and meet F.M. Standard 4470 for corrosion resistance.
  2. Fastener manufacturer shall warranty the performance of the fastener for the duration of the roof system warranty.
  3. Fastener shall be approved in writing by fastener manufacturer for intended use.
  4. For "non penetrating fastener" pullout tests shall be performed by the fastener manufacturer. The results of these tests, plus a statement by the fastener manufacturer concerning the fasteners' suitability for the intended job, and installation instructions shall be submitted to the roofing contractor and Engineer prior to the job start.

## 2.6 MISCELLANEOUS FASTENERS AND ANCHORS

All fasteners shall be of the same type as metal being secured. In general all fasteners, anchors, nails, straps, shall be of zinc or cadmium plated steel, galvanized, or stainless steel. All fasteners and anchors shall have a minimum embedment of 1-1/4 inches and shall be approved for such use by the fastener manufacturer. Fasteners for attachment of metal to wood blocking shall be annular ring nails. Fasteners for attachment of metal to masonry shall be expansion type fasteners. All fasteners shall meet Factory Mutual Standard 4470 for corrosion resistance.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Follow manufacturer's installation instructions for a fully adhered roof system.
- B. Demolition:
  1. Remove the existing roofing in sections to be replaced including insulation to the bare roof deck.
  2. Remove all materials from the site and dispose of in accordance with the general conditions.
  3. Remove all roof accessories as may be shown on the drawing and patch roof deck to match existing.

### 3.2 DECK PREPARATION

The roof deck and existing roof construction must be structurally sound to provide support for the new roof system. The structure and deck must be capable of withstanding expected wind uplift forces created at fastening points. Fastener pullout tests are required to verify deck condition and fastener pullout values.

#### A. Re-Roofing with Removal of Existing Roofing

General Criteria: All existing roofing, base flashing, deteriorated wood blocking or deteriorated metal flashings shall be removed. Remove only that amount of roofing and flashing which can be made watertight with new materials during a one-day period or on set of inclement weather. Replacement unit prices indicated on the bid form shall include removal and disposal of the existing materials plus the purchase and installation of new.

##### 1. Steel Deck:

- a. All rusted or deteriorated decking shall be brought to the attention of the Engineer to determine acceptance and treatment or replacement. All rusted metal shall be treated with rust-inhibiting paint and sections which have rusted through shall be completely removed and replaced. Deck attachment shall conform to FM Data Sheet I-28 or local code requirements.

### 3.3 SUBSTRATE PREPARATION

- A. A proper substrate shall be provided to receive the EPDM Membrane in an adhered system.
- B. The roofing contractor shall inspect the roofing surface for defects such as excessive surface roughness, contaminated surfaces, structurally unsound substrates, etc., that will adversely affect the quality of work.
- C. The substrate shall be clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil and grease. Roofing shall not start until all defects have been corrected.
- D. All roof surfaces shall be free of water, ice, and snow.

### 3.4 VAPOR RETARDER INSTALLATION

General Criteria:

An accepted 2-ply base sheet vapor retarder shall be adhered to the deck with full mopping of type III steep asphalt at a minimum rate of 25 lbs. per 100 square feet. The vapor retarder shall be installed in accordance with the manufacturer's instructions.

### 3.5 WOOD NAILERS

- A. Install continuous wood nailers at the perimeter of the entire roof and around roof projections and penetrations as specified on project drawings.
- B. Nailers shall be anchored to resist a minimum force of 200 pounds per lineal foot in any direction. A 1/2-inch space shall be provided between nailer lengths. Individual nailer lengths shall not be less than 3 feet long. Fastener spacing shall be a maximum of 3 feet on center. Fasteners shall be installed within 6 inches of each end. Spacing and fastener embedment shall conform to Factory Mutual Loss Prevention Data 1-49.

- C. Thickness shall be as required to match substrate or insulation height.
- D. Any existing woodwork which is to be reused shall be firmly anchored in place (shall resist a minimum force of 200 pounds per lineal foot in any direction) and free of rot. Only woodwork designated to be reused in detail drawings shall be left in place and all other woodwork shall be removed.

### 3.6 INSULATION INSTALLATION

#### A. General Criteria

1. Insulation shall be installed according to insulation manufacturer's instructions.
2. Insulation shall be neatly cut to fit around penetrations and projections.
3. Install insulation in a minimum of two layers with staggered joints except on areas specified as tapered, or as otherwise indicated.
4. Install tapered insulation in accordance with insulation manufacturer's shop drawings, approved by Engineer.
5. Install tapered insulation around roof drains creating a minimum 2' X 2' drain sump.
6. Do not install more insulation board than can be covered with membrane by the end of the day, or onset of inclement weather.
7. Insulation shall be a maximum of 4' x 8' in size for mechanical attachment and maximum 4' x 4' in size for adhesive or hot asphalt attachment.
8. Insulation attachment shall be a combination of mechanical attachment for base/tapered layers and adhesive attachment for top/flat layer. Refer to detail on drawings.
9. Mechanical Attachment:
  - a. Insulation shall be mechanically fastened to the deck with accepted fasteners and plates at a rate of one fastener for every 2 square feet or according to the insulation manufacturer's, Factory Mutual's and membrane manufacturer's recommendations for fastening rates and patterns.
  - a. Fasteners are to be installed in accordance with fastener manufacturer's recommendations. Fasteners are to have minimum penetration into structural deck recommended by fastener manufacturer.
  - b. Use fastener tools with a depth locator as recommended or supplied by fastener manufacturer to ensure proper installation.
  - c. Mechanical attachment methods may be used for concrete deck only as preapproved by the Engineer.
10. Hot Asphalt Attachment:
  - a. Insulation shall be set into a continuous coat of hot Type III steep asphalt. Asphalt shall be applied to acceptable substrate or base sheet vapor retarder at a minimum rate of 25-30 lbs. per 100 sq. ft.

- b. Insulation shall be fully bonded to substrate or vapor retarder.

11. Foam Adhesive Attachment:

- a. Insulation shall be adhered to roof deck as required by adhesive manufacturer for the specified warranty.
- a. Contractor shall complete manufacturer pre-job qualification form.
- b. A Manufacturer's Representative shall be at the site at job startup to assist and train the Contractor on the proper use of the product.

3.7 MEMBRANE INSTALLATION

A. General:

- 1. Position roofing membrane over approved substrate without stretching.
- 2. Allow membrane to relax approximately one-half hour prior to splicing and flashing.
- 3. Apply adhesive and secure membrane.

B. Splicing:

- 1. Splice shall be three-inch minimum overlap, bonded with manufacturer's seam tape.
- 2. The edge of all splices shall be sealed with a bead of lap sealant prior to the end of each working day, as required by manufacturer's standard details.

3.8 METAL FLASHINGS

- A. Metal details, fabrication practices and installation methods shall conform to the applicable requirements of the following:
  - 1. Factory Mutual Loss Prevention Data sheet 1-49 (latest issue).
  - 2. Sheet Metal and Air Conditioning Contractors National Association Inc. (SMACNA) -- latest issue.
- B. Complete all metal work in conjunction with roofing and flashings so that a watertight condition exists daily.
- C. Metal shall be installed to provide adequate resistance to bending and allow for normal thermal expansion and contraction.
- D. Metal joints shall be watertight. Install matching metal joint covers on outside face of all edge metal joints. Secure joint covers with matching aluminum rivets.
- E. Metal flashings shall have a 4 inch minimum nailing flange and shall be fastened into solid wood blocking with fasteners of the same type with two rows of galvanized annular ring nails, 4 inches on center, staggered. Fasteners shall penetrate the wood nailer a minimum of 1-1/4 inch.

- F. Continuous metal hook strips are required if metal fascia exceeds 3 inches in depth. Hook strip is to be fastened 8" o.c., or as indicated on the drawings, into wood nailer or masonry wall. Hook shall be a minimum of 1" deep.

### 3.9 TEMPORARY CUT-OFF

- A. **All flashings shall be installed concurrently with the roof membrane in order to maintain a watertight condition as the work progresses.** When a break in the day's work occurs in the central area of a roof, a temporary waterstop shall be constructed to provide a 100% watertight seal. When work on the new system is suspended, the stagger of the insulation joints shall be maintained by installing partial fillers. The new membrane shall be carried into the waterstop. The waterstop shall be sealed to the deck and/or substrate so that water will not be allowed to travel under the new or existing roofing. The edge of the membrane shall be sealed in a continuous heavy application of roof cement of 6" girth.

When work resumes, the contaminated EPDM membrane shall be cut out. All sealant, contaminated membrane, insulation fillers, etc. shall be removed from the work area and disposed of off site. None of these materials shall be used in the new work.

- B. If inclement weather occurs while a temporary waterstop is in place, the contractor shall provide the labor necessary to monitor the situation to maintain a watertight condition.
- C. If any water is allowed to enter under the newly completed roofing, the affected area shall be removed and replaced at the contractor's expense.

### 3.10 MISCELLANEOUS

- A. Remove and replace metal flashing along edge of the roof where indicated on the drawings. Replace all decayed wood. (See Carpentry)
- B. Replace the roof deck after any roof accessories have been removed with material matching the original deck.
- C. Walkway Pad: Install pad to protect membrane from damage from walking traffic. Adhere pad to membrane in accordance with manufacturer's recommendations.

SECTION 07 71 23  
**GUTTERS & DOWNSPOUTS**  
**RESIDENTIAL**

**PART 1 - GENERAL**

1.1 GENERAL

Work Included: Furnish labor, materials, and equipment required to complete installation of Gutters and Downspouts and related work indicated on drawings or specified herein.

**PART 2 - PRODUCTS**

2.1 MATERIALS

- A. Gutters and downspouts shall be aluminum in the following thickness:
  - 1. Gutters - .032"
  - 2. Downspouts - .024"
  - 3. End Caps - .027"
- B. Sealing Material: Gutterseal by same manufacturer as the gutter and downspouts.
- C. Expansion Joint: Aluminum-neoprene type.
- D. Downspout Anchor: Aluminum die-casting

2.2 FINISHES

Exposed surfaces shall be colored baked enamel to be selected from standard colors.

2.3 ACCEPTABLE MANUFACTURERS

ALCOA or approved equal.

**PART 3 - EXECUTION**

3.1 WORKMANSHIP/ INSTALLATION

- A. Before starting work, verify governing dimensions at building; examine, clean, and repair if necessary any adjoining work on which this work is in any way dependent for its proper installation.
- B. Gutters and Downspouts shall be installed in accordance with manufacturer's instructions for Installing Aluminum Gutters and Downspouts, latest edition. Gutters shall be installed by using aprons and hangers or combination hangers so that movement is not restricted. (NOTE: Spikes and ferrules or brackets attached to outside periphery of the gutter will not be used.)
- C. Items not covered in this specification - as indicated on drawings or as required to provide a complete installation.

D. Neoprene-type expansion joints provided where necessary so that the work will not be distorted nor the fasteners overstressed from the expansion and contraction of the metal. Expansion joints should be used on all hip roof installations and on straight runs over 40 ft. in length.

### 3.2 FINAL CLEANING

Upon completion, the aluminum contractor shall clean the aluminum work in accordance with the manufacturer's specifications.

SECTION 07 92 00  
**JOINT SEALANTS**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS

Examine all other Sections of the Specifications for requirements affecting work of this Section.

1.2 SYSTEM DESCRIPTION

System performance to achieve moisture tight joint seals.

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with sealant manufacturer's requirements for preparation of surfaces and materials installation instructions.

B. Applicable standards:

1. Sealants shall comply with ANSI 116.1.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Do not install solvent curing sealants in enclosed building spaces.

B. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

**PART 2 - PRODUCTS**

2.1 SEALANTS

A. Sealants shall be suitable for the use intended and compatible with the materials to which they are applied and to any finish that may be applied over them. All sealants shall be gun applied.

B. Sealants, unless otherwise specified, shall be gun grade one-part sealants of the following type:

1. Polysulfide
2. Acrylic Latex
3. Polyurethane
4. Silicone Sealant
5. Non-Skinning Type Butyl Polymer

2.2 ACCESSORIES

A. PRIMER: Non-staining type, recommended by sealant manufacturer.

B. JOINT CLEANER: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

- C. JOINT FILLER: closed cell polyethylene foam rod; oversized 30 to 50 percent larger than joint width; manufactured by HBR.
- D. BOND BREAKER: Pressure sensitive tape recommended by sealant manufacturer to suit application.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION AND PREPARATION**

- A. Verify that joint openings are ready to receive work, and that joint measurements and surface conditions are as recommended by the sealant manufacturer.
- B. Remove loose materials and foreign matter that may impair adhesion of sealant.
- C. Verify that joint backing and release tapes are compatible with sealant.

#### **3.2 INSTALLATION**

- A. Install sealant in accordance with manufacturer's instructions.
- B. Measure joint dimensions and size materials to achieve required width/depth ratios.
- C. Install joint filler to achieve a neck thickness dimension no greater than 1/3 the joint width.
- D. Install bond breaker where joint filler is not used.
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Tool horizontal joints flat.



**CARPENTER ASSOCIATES**  
CONSULTING ENGINEERS  
687 STILLWATER AVENUE - OLD TOWN - MAINE 04468

**ROOF GENERAL NOTES:**

1. THE EXISTING ROOF SYSTEM CONSISTS OF STANDING SEEM METAL ROOFING AND APPROXIMATELY 9" OF FIBERGLASS INSULATION.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.
3. REMOVE AND REINSTALL, REPLACE AND/OR MODIFY TIE-INS TO EXISTING ROOF TO REMAIN, BUILDING WALL BASE FLASHING AND TRANSITIONS, PER ROOF SYSTEM MANUFACTURER INSTALLATION REQUIREMENTS AND AS APPROVED BY THE ENGINEER.
4. INSULATION SYSTEM ATTACHMENT SHALL BE A COMBINATION OF HOT ASPHALT ADHERED BASED LAYERS AND FOAM ADHESIVE ADHERED TOP LAYER. SEE ATTACHMENT DETAIL AND SPECS. MECHANICAL ATTACHMENT OF BASE LAYERS IS NOT ALLOWED UNLESS PRE-APPROVED BY THE ENGINEER.
5. ALL EDGE METAL SEAMS, TERMINATIONS, TRANSITIONS, ETC. SHALL BE SEALED WATER TIGHT AND SECURED WITH MATCHING FASTENERS.
6. REMOVE ALL CONSTRUCTION/DEMOLITION DEBRIS FROM ROOF DECK PRIOR TO INSTALLING NEW ROOF SYSTEM.
7. DUE TO THE SCALE OF THE DRAWINGS NOT ALL ROOF PENETRATIONS, FIXTURES OR EQUIPMENT MAY BE SHOWN. THE CONTRACTOR IS RESPONSIBLE TO FLASH ALL ROOF TOP EQUIPMENT AND PENETRATIONS, ETC. AS REQUIRED PER DETAILS AND MANUFACTURER REQUIREMENTS. REMOVE AND REINSTALL ALL FIXTURES AND EQUIPMENT AS REQUIRED FOR A COMPLETE SYSTEM.
8. POLYISO INSULATION R-VALUE SHALL BE DETERMINED USING THE LONG TERM THERMAL RESISTANCE (LTR) TEST METHODOLOGY. TAPERED INSULATION SYSTEM SHALL HAVE A MINIMUM AVERAGE R-VALUE OF 20 UNLESS OTHERWISE INDICATED.
9. FLASH ALL PENETRATIONS (PIPES, CONDUITS, ETC.) PASSING THROUGH MEMBRANE WITH MOLDED PIPE FLASHING WHERE POSSIBLE. WHERE MOLDED FLASHING CANNOT BE INSTALLED, USE FIELD FABRICATED PIPE SEAL, UNLESS NOTED OTHERWISE.
10. NOTIFY ENGINEER IMMEDIATELY UPON FINDING ANY DAMAGED ROOF DECK OR STRUCTURE.
11. EXISTING WOOD BLOCKING, INSULATION, METAL COPING CAP OR OTHER MATERIALS MAY BE REUSED ONLY AS APPROVED IN ADVANCE BY THE ENGINEER. ALL EXISTING DETERIORATED MATERIALS MUST BE REPLACED.
12. ANY CHANGES TO PLAN DETAILS MUST BE APPROVED IN ADVANCE BY THE ENGINEER.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS IN THE FIELD.
14. REMOVE ALL UNUSED EQUIPMENT.
15. PROVIDE REPLACEMENT FOR DUCT PROTECTION. REPLACE DUCT SHROUDS WITH NEW STEEL ANGLE FRAME AND THREE-SIDED 20 GAGE METAL TO PROTECT DUCTWORK. PROVIDE PROPER FLASHING, ETC. AND SEAL TO ENSURE WATER TIGHT.

REVISIONS	NO.	DATE	BY	DESCRIPTION	

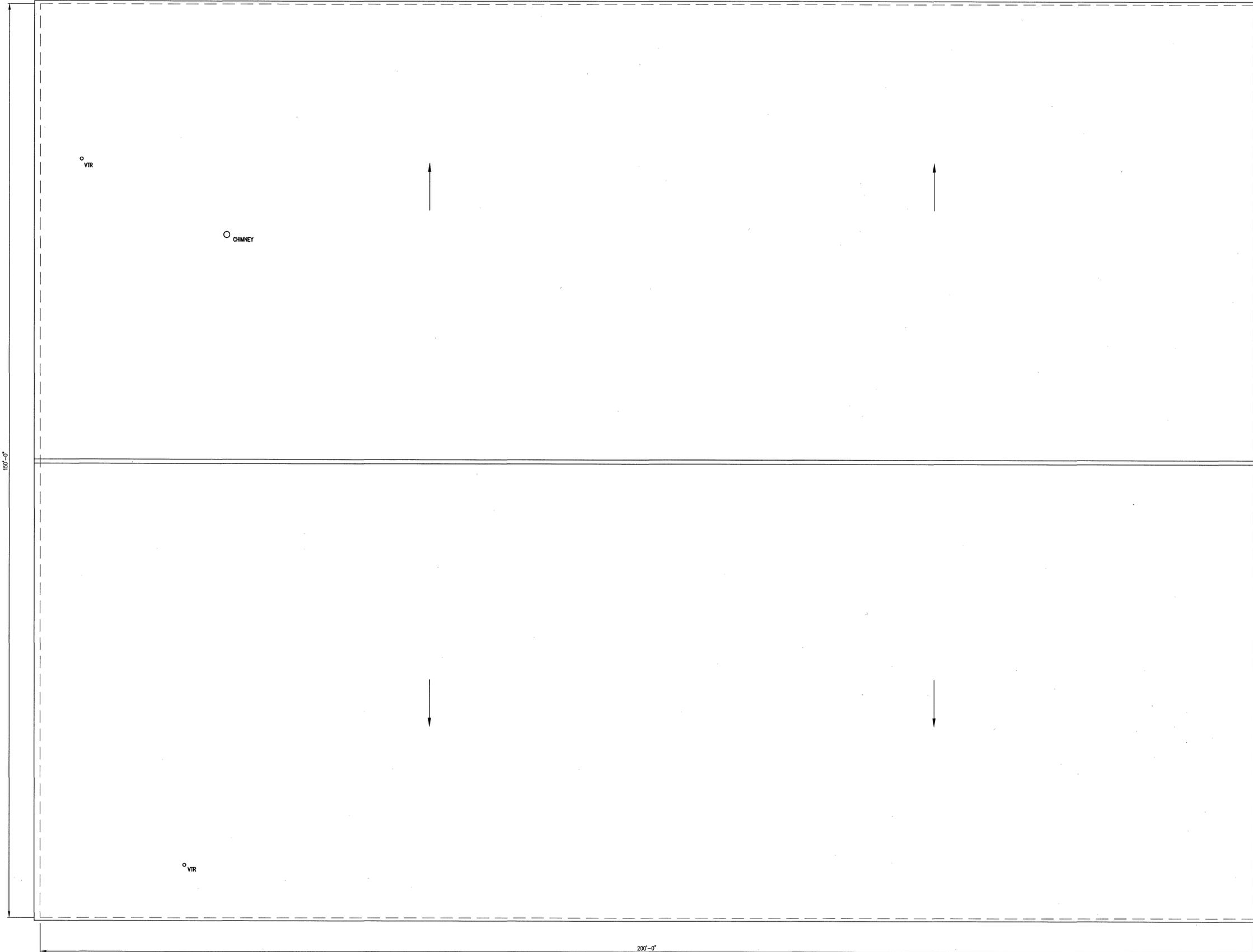


CITY OF BANGOR  
**ROOF RENOVATIONS**  
690 MAINE AVENUE BANGOR, MAINE  
**ROOF PLAN**

Drawn: AT  
Checked: RB  
Scale: AS NOTED  
Date: 03-11-2016  
Project No: 16048  
Sheet Number:

**1**

FOR BID  
3-18-2016



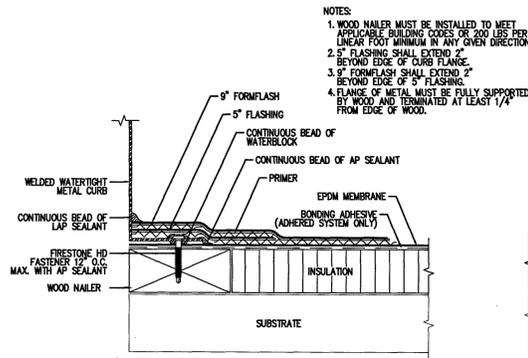
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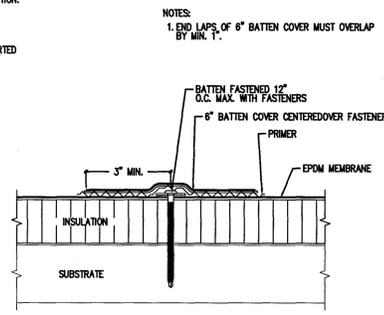
**ROOF PLAN**  
SCALE: 1/8" = 1'-0"

**ROOF LEGEND:**

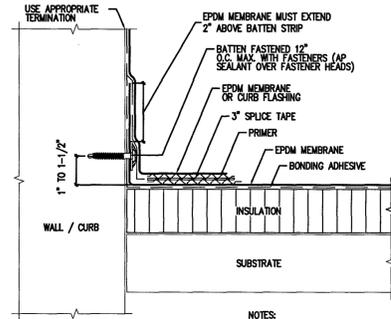
- ROOF TOP HVAC EQUIPMENT CURB
- o VTR PLUMBING VENT STACK THRU ROOF
- DIRECTION OF ROOF DECK PITCH
- RPF STRIP REINFORCED PERIMETER FLASHING STRIP / SEAM PLATE
- NIC NOT IN CONTRACT
- CRICKET



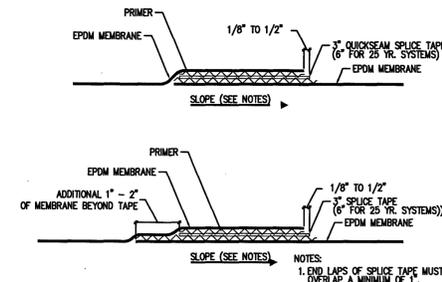
TYPICAL BASE TIE-IN AT WELDED WATERTIGHT CURB (FLANGES 2"-3")  
 NOT TO SCALE



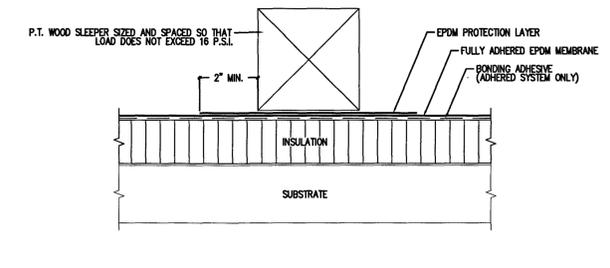
TYPICAL BATTEN COVER  
 NOT TO SCALE



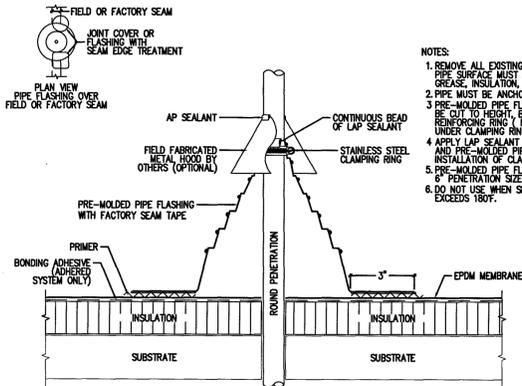
TYPICAL BASE TIE-IN WITH BATTEN FASTENED TO WALL / CURB  
 NOT TO SCALE



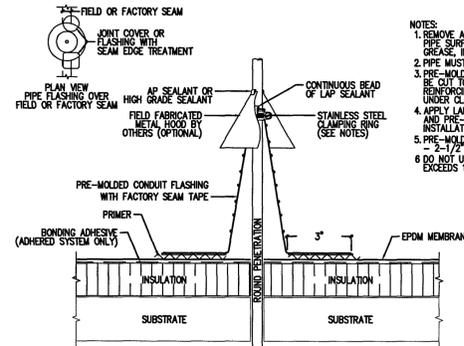
TYPICAL LAP SPLICE  
 NOT TO SCALE



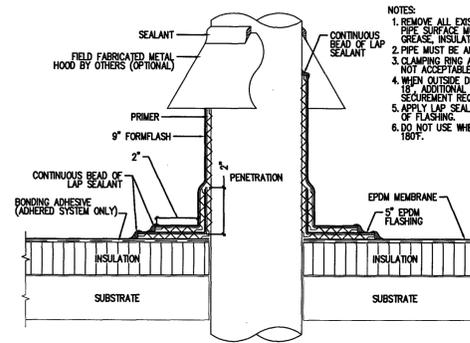
TYPICAL WOOD SLEEPER  
 NOT TO SCALE



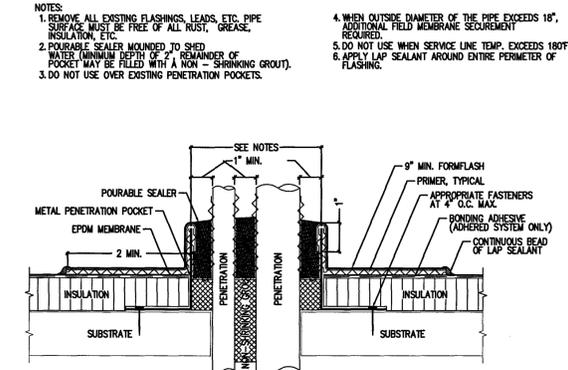
TYPICAL PENETRATION WITH PRE-MOLDED PIPE FLASHING  
 NOT TO SCALE



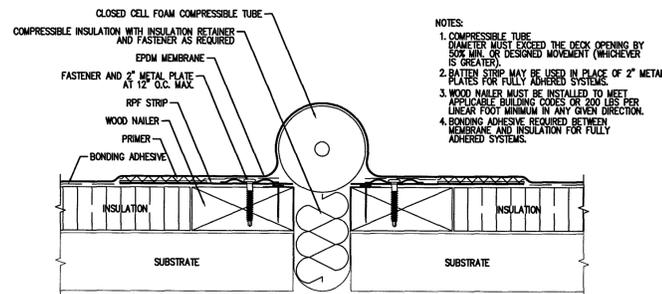
TYPICAL PENETRATION WITH PRE-MOLDED CONDUIT FLASHING  
 NOT TO SCALE



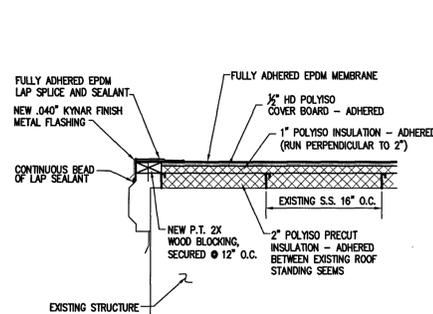
TYPICAL PENETRATION WITH FIELD FABRICATED FLASHING  
 NOT TO SCALE



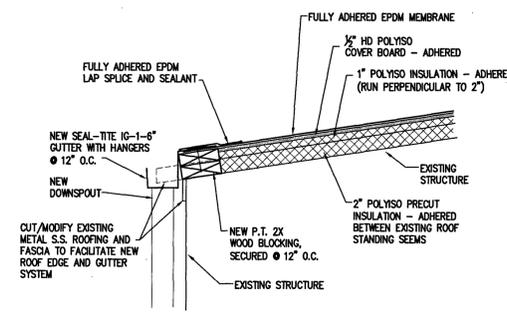
TYPICAL PENETRATION WITH METAL PITCH POCKET  
 NOT TO SCALE



TYPICAL EXPANSION JOINT (FIELD FABRICATED WITH RPF AND WOOD NAILER - ROOF TO WALL)  
 NOT TO SCALE



TYPICAL EDGE SECTION  
 NOT TO SCALE



TYPICAL /GUTTER/EDGE SECTION  
 NOT TO SCALE

NOTES:  
 1. PIPE AND EQUIPMENT SUPPORTS OR EQUIVALENT ARE RECOMMENDED IN PLACE OF WOOD SLEEPERS.  
 2. DO NOT INSTALL WOOD SLEEPERS OVER BATTEN STRIPS, FASTENER HEADS, METAL PLATES OR FIELD SEAMS.



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 687 STILLWATER AVENUE • OLD TOWN, MAINE 04468

NO.	DATE	BY	DESCRIPTION



CITY OF BANGOR  
**ROOF RENOVATIONS**  
 690 MAINE AVENUE BANGOR, MAINE  
**TYPICAL ROOF DETAILS**

Drawn: AT  
 Checked: RB  
 Scale: AS NOTED  
 Date: 03-15-2016  
 Project No: 16048  
 Sheet Number:

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**2**