



**CONTRACT DOCUMENTS AND  
SPECIFICATIONS  
FOR  
CENTRAL REGIONAL WWTF ROOF REPLACEMENT**

**BID NO. 2022041**

**IRC-1829**

PREPARED FOR  
THE BOARD OF COUNTY COMMISSIONERS  
INDIAN RIVER COUNTY, FLORIDA

PETER D. O'BRYAN, CHAIRMAN  
JOE EARMAN, VICE CHAIRMAN  
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JEFFREY R. SMITH, CLERK OF COURT AND COMPTROLLER  
DYLAN REINGOLD, COUNTY ATTORNEY

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## SECTION – 00100 Advertisement for Bids

**BOARD OF COUNTY COMMISSIONERS**

1801 27<sup>th</sup> Street  
Vero Beach, Florida 32960

**ADVERTISEMENT FOR BIDS  
INDIAN RIVER COUNTY**

Sealed bids will be received by Indian River County until **2:00 P.M. on Tuesday, September 20, 2022.** Each bid shall be submitted in a sealed envelope and shall bear the name and address of the bidder on the outside and the words “**Central Regional WWTF Roof Replacement “and Bid No. 2022041.**” Bids should be addressed to Purchasing Division, Room B1-301, 1800 27th Street, Vero Beach, Florida 32960. All bids will be opened publicly and read aloud at 2:00 P.M. All bids received after 2:00 P.M., on the day specified above, will not be accepted or considered.

**INDIAN RIVER COUNTY BID NO. 2022041**

**PROJECT DESCRIPTION:** *The proposed project is located at 3550 49<sup>th</sup> Street (Central Regional WWTF) and generally consists of the removal, disposition and replacement of approximately 13,198 square feet of warrantable roofing.*

All material and equipment furnished and all work performed shall be in strict accordance with the plans, specifications, and contract documents pertaining thereto. Detailed specifications are available at: [www.demandstar.com](http://www.demandstar.com) or at [www.ircgov.com/departments/budget/purchasing](http://www.ircgov.com/departments/budget/purchasing) under “Current Solicitations”.

All bidders shall submit one (1) original and one (1) copy of the Bid Proposal forms provided within the specifications. Please note that the questionnaire must be filled out completely including the financial statement. BID SECURITY must accompany each Bid, and must be in the form of an AIA Document A310 Bid Bond, properly executed by the Bidder and by a qualified surety, or a certified check or a cashier’s check, drawn on any bank authorized to do business in the State of Florida. Bid Security must be in the sum of not less than **Five Percent (5%)** of the total amount of the bid, made payable to Indian River County Board of County Commissioners. In the event the Contract is awarded to the Bidder, Bidder will enter in a Contract with the County and furnish the required 100% Public Construction Bond and certificates of insurance within the timeframe set by the County. If Bidder fails to do so, the Bid Security shall be retained by the County as liquidated damages and not as penalty.

The County reserves the right to delay awarding of the Contract for a period of **ninety (90)** days after the bid opening, to waive informalities in any bid, or reject any or all bids in whole or in part with or without cause/or to accept the bid that, in its judgement, will serve the best interest of Indian River County, Florida. The County will not reimburse any Bidder for bid preparation costs.

Interested bidders may visit the project site (3550 49th Street) on September 6, 7, or 8, between 7 a.m. and 2 p.m. after checking in at the Central Plant Office.

INDIAN RIVER COUNTY

By: Jennifer Hyde  
Purchasing Manager

For Publication in the Indian River Press Journal  
Date: August 26, 2022

For: Indian River Press Journal

Please furnish tear sheet and Affidavit of Publication to:

INDIAN RIVER COUNTY  
PURCHASING DIVISION  
1800 27th Street  
Building "B"  
Vero Beach, FL 32960

**\*\* END OF SECTION \*\***

## SECTION 00200 – Instructions to Bidders

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## SECTION 00200 – Instructions to Bidders

### ARTICLE 1 - DEFINED TERMS

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1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:

- A. Bidder--The individual or entity who submits a Bid directly to OWNER.
- B. Issuing Office--The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
- C. Successful Bidder--The lowest responsible Bidder submitting a responsive Bid to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.
- D. ENGINEER – References County Engineer or their designee.

### ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

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- 2.01 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement for Bids or Invitation to Bid may be obtained from the Issuing Office.
- 2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

### ARTICLE 3 - QUALIFICATIONS OF BIDDERS

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- 3.01 To demonstrate Bidder's qualifications to perform the Work, within five days of OWNER's request Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be called for below.
  - A. Bidder must have at least five years' experience in the construction of similar projects of this size and larger.
  - B. Bidder must have successfully constructed, as prime CONTRACTOR, at least three projects similar in scope to this project.
  - C. Bidder must have good recommendations from at least three clients similar to the OWNER.
  - D. The Bidder's superintendent and assistants must be qualified and experienced in similar projects in all categories.
  - E. Bidder must be able to provide evidence of authority to conduct business in the jurisdiction in which the project is located.

- 3.02 Each bid must contain evidence of Bidder's qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the contract.
- 3.03 The OWNER reserves the right to reject bids from Bidders that are unable to meet the listed required qualifications.
- 3.04 Bidder must be registered with and use, at their sole expense, the Department of Homeland Security's E-Verify system ([www.e-verify.gov](http://www.e-verify.gov)) to confirm the employment eligibility of all newly hired employees, as required by Section 448.095, F.S.. Owner, contractor, and subcontractors may not enter into a contract unless each party to the contract registers with and uses the E-Verify system. Contractor is responsible for obtaining proof of E-Verify registration for all subcontractors. This requirement applies to any provider of services or goods.
- 3.05 Bidder must hold a current registration as a General Contractor in the State of Florida and be registered as a roofing contractor with the Indian River County Building Division.

#### ARTICLE 4 - EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

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##### 4.01 Subsurface and Physical Conditions

###### A. The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Bidding Documents.

2. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in paragraph 4.01.A will be made available by OWNER to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 4.02 of the General Conditions has been identified and established in paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.

##### 4.02 Underground Facilities

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to OWNER and ENGINEER by OWNERS of such Underground Facilities, including OWNER, or others.

##### 4.03 Hazardous Environmental Condition

A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that ENGINEER has used in preparing the Bidding Documents.



B. Copies of reports and drawings referenced in paragraph 4.03.A will be made available by OWNER to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which Bidder is entitled to rely as provided in paragraph 4.06 of the General Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any “technical data” or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in paragraph 4.06 of the General Conditions.

4.05 Upon a request directed to the Purchasing Division ([purchasing@ircgov.com](mailto:purchasing@ircgov.com) or (772) 226-1416), OWNER will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.06 “This paragraph has been deleted intentionally”

4.07 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, including any Addenda and the other related data identified in the Bidding Documents;

**B. VISIT THE SITE AND BECOME FAMILIAR WITH AND SATISFY BIDDER AS TO THE GENERAL, LOCAL, AND SITE CONDITIONS THAT MAY AFFECT COST, PROGRESS, AND PERFORMANCE OF THE WORK;**

C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work;

D. carefully study all reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and carefully study all reports and drawings of a Hazardous Environmental Condition, if any, at the Site which have been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions;

E. obtain and carefully study (or assume responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (overhead, surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including any specific means, methods, techniques, sequences, and procedures of

construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;

F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;

G. become aware of the general nature of the work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

I. promptly give ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by ENGINEER is acceptable to Bidder; and

J. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by ENGINEER are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

## ARTICLE 5 - PRE-BID CONFERENCE

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5.01 The date, time, and location for the Pre-Bid conference, if any, is specified in the Advertisement for Bids. Representatives of OWNER and ENGINEER will be present to discuss the Project. Oral statements may not be relied upon and will not be binding or legally effective.

## ARTICLE 6 - SITE AND OTHER AREAS

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6.01 The Site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Bidding Documents.

## ARTICLE 7 - INTERPRETATIONS AND ADDENDA

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7.01 CONE OF SILENCE. Potential bidders and their agents shall not communicate in any way with the Board of County Commissioners, County Administrator or any County staff other than Purchasing personnel in reference or relation to this solicitation. This restriction shall be effective from the time of bid advertisement until the Board of County Commissioners meets to authorize award. Such communication may result in disqualification.

7.02 All questions about the meaning or intent of the Bidding Documents are to be submitted to PURCHASING ([purchasing@ircgov.com](mailto:purchasing@ircgov.com)) in writing. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be issued by Addenda mailed or delivered to all parties through the Issuing Office as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.03 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER or ENGINEER.

## ARTICLE 8 - BID SECURITY

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8.01 Each Bid must be accompanied by Bid Security made payable to OWNER in the amount of five percent of the Bidder's maximum base bid price and in the form of a certified check; cashier's check; or an AIA Document A310 Bid Bond issued by a surety meeting the requirements of Paragraph 5.01 of the General Conditions. The Bid Bond shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. The Surety must be authorized to issue surety bonds in Florida. The Bidder shall require the attorney-in-fact who executes any Bond, to affix to each a current certified copy of their Power of Attorney, reflecting such person's authority as Power of Attorney in the State of Florida. Further, at the time of execution of the Contract, the Successful Bidder shall for all Bonds, provide a copy of the Surety's current valid Certificate of Authority issued by the United States Department of the Treasury under 31 United States Code sections 9304-9308. The Surety shall also meet the requirements of paragraphs 5.01 and 5.02 of the General Conditions.

8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be retained by the owner. The Bid Security of other Bidders whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the earlier of seven days after the Effective Date of the Agreement or 91 days after the Bid opening, whereupon Bid Security furnished by such Bidders will be returned.

8.03 Bid Security of other Bidders whom OWNER believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

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## ARTICLE 9 - CONTRACT TIMES

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9.01 The number of calendar days within which, or the dates by which, the Work is to be (a) Substantially Completed and (b) also completed and ready for final payment are set forth in the Agreement.

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## ARTICLE 10 - LIQUIDATED DAMAGES

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10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

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## ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

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11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ENGINEER, application for such acceptance will not be considered by ENGINEER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by ENGINEER is set forth in the General Conditions and may be supplemented in the General Requirements.

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## ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

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12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to OWNER in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to OWNER a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by OWNER. If OWNER or ENGINEER, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, OWNER may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, without an increase in the Bid.

12.02 If apparent Successful Bidder declines to make any such substitution, OWNER may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which OWNER or ENGINEER makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in paragraph 6.06 of the General Conditions.

12.03 CONTRACTOR shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom CONTRACTOR has reasonable objection.

ARTICLE 13 - PREPARATION OF BID

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13.01 The Bid form is included with the Bidding Documents. Only the bid form provided by OWNER is acceptable (Bidders are not to recreate or modify the bid form). ***Bids not submitted on the bid form(s) shall be rejected, as will bids submitted on rewritten, recreated or modified bid forms.***

13.02 All blanks on the Bid form shall be completed by printing in ink or by typewriter and the Bid signed. A Bid price shall be indicated for each section, Bid item, alternative, adjustment unit price item, and unit price item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.

13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.

13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown below the signature.

13.06 A Bid by an individual shall show the Bidder's name and official address.

13.07 A Bid by a joint venture shall be executed by each joint venturor in the manner indicated on the Bid form. The official address of the joint venture must be shown below the signature.

13.08 All names shall be typed or printed in ink below the signatures.

13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid form.

13.10 The address and telephone number for communications regarding the Bid shall be shown.

13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number or county registration number for the state or county of the Project, if any, shall also be shown on the Bid form.

13.12 All supporting information requested in the Bid Form must be furnished. Do not leave any questions or requests unanswered.

13.13 In accordance with Florida Statutes Section 218.80, the "Public Bid Disclosure Act", Indian River County as OWNER is obligated to disclose all license, permit, impact, or inspection fees that are payable to Indian River County in connection with the construction of the Work by the accepted bidder. All permit, impact, or inspection fees payable to Indian River County in connection with the work on this County project will be paid by Indian River County, with the exception of re-inspection fees. The Bidder shall not include ANY PERMIT, IMPACT, NOR INSPECTION FEES payable to **Indian River County** in the bid.

13.14 CONTRACTOR shall furnish all labor, materials, equipment and incidentals necessary to perform additional work not covered on the Contract Drawings. The **FORCE ACCOUNT/CONTINGENCY ALLOWANCE** is intended as a contingency for unforeseen work. Lump sum amount for **FORCE ACCOUNT/CONTINGENCY ALLOWANCE** work is included in the bid schedule. The value of force account work will be determined in accordance with Article 12 of the General Conditions.

#### ARTICLE 14 - BASIS OF BID; EVALUATION OF BIDS

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##### 14.01 Unit Price

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule. Omission of unit prices where required will result in disqualification of the bid.

B. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid for the item. The final quantities and Contract Price will be determined in accordance with paragraph 11.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

14.02 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in paragraph 11.02 of the General Conditions.

14.03 The Bidder's attention is called to the fact that any estimate of quantities of work to be done and materials to be furnished under the Specifications as shown on the Bid Schedule, or elsewhere, is approximate only and not guaranteed. The OWNER does not assume any responsibility that the final quantities shall remain in strict accordance with the estimated quantities, nor shall the Bidder plead misunderstanding or deception because of such estimate of quantities or of the character, location of the work, or other conditions pertaining thereto.

#### ARTICLE 15 - SUBMITTAL OF BID

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15.01 The Bid form is to be completed and submitted with the Bid security and the following data:

- A. Sworn Statement under Section 105.08, Indian River County Code, on Disclosure of Relationships.
- B. Qualifications Questionnaire.
- C. List of Subcontractors.
- D. Certification Regarding Prohibition Against Contracting with Scrutinized Companies
- E. Roof Manufacturer's Acknowledgement

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project Title and Bid Number (and, if applicable, the designated portion of the Project for which the Bid is submitted), Bid Number, the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If mail or other delivery system sends a Bid, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to Indian River County, Purchasing Division, 1800 27<sup>th</sup> Street, Vero Beach, Florida, 32960.

#### ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID

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16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

16.02 If within 48 hours after Bids are opened any Bidder files a duly signed written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

#### ARTICLE 17 - OPENING OF BIDS

---

17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

#### ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

---

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but OWNER may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

#### ARTICLE 19 - AWARD OF CONTRACT

---

19.01 OWNER reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. OWNER further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible. OWNER may also reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder. OWNER also reserves the right to waive all technicalities and informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder. The County will not reimburse any Bidder for bid preparation costs. Owner reserves the right to cancel the award of any Contract at any time before the execution of such Contract by all parties without any liability to the Owner. For and in

consideration of the Owner considering Bids submitted, the Bidder, by submitting its Bid, expressly waives any claim to damages, of any kind whatsoever, in the event the Owner exercises its right to cancel the award in accordance herewith.

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

19.03 In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating Bidders, OWNER will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

19.05 OWNER may conduct such investigations as OWNER deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

19.06 If the Contract is to be awarded, OWNER will award the Contract to the Bidder whose Bid is in the best interests of the Project.

19.07 OWNER has no local ordinance or preferences, as set forth in FS 255.0991 (2) in place, therefore no preference prohibited by that section will be considered in the acceptance, review or award of this bid.

19.08 Any actual or prospective bidder or proposer who is aggrieved in connection with the bidding and/or selection process may protest to the OWNER's Purchasing Manager. The protest shall be submitted in writing to the Purchasing Manager within seven (7) calendar days after the bidder or proposer knows or should have known of the facts giving rise to the protest.

19.09 CONTRACTOR certifies that it and its related entities as defined by Florida law are not on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725 of the Florida Statutes, and are not engaged in a boycott of Israel. In addition, if this agreement is for goods or services of one million dollars or more, CONTRACTOR certifies that it and its related entities as defined above by Florida law are not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to Section 215.473 of the Florida Statutes and are not engaged in business operations in Cuba or Syria.

OWNER may terminate this Contract if CONTRACTOR is found to have submitted a false certification as provided under section 287.135(5), Florida Statutes, been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or been engaged in business operations in Cuba or Syria, as defined by section 287.135, Florida Statutes.

OWNER may terminate this Contract if CONTRACTOR, including all wholly owned subsidiaries, majority-owned subsidiaries, and parent companies, that exist for the purpose of making profit, is found to have been placed on the Scrutinized Companies that Boycott Israel List or is engaged in a boycott of Israel as set forth in section 215.4725, Florida Statutes.



Accordingly, firms responding to this solicitation shall return with their response an executed copy of the attached "Certification Regarding Prohibition Against Contracting With Scrutinized Companies." Failure to return this executed form with submitted bid/proposal/statement of qualifications will result in the response being deemed non-responsive and eliminated from consideration.

## ARTICLE 20 - CONTRACT SECURITY AND INSURANCE

---

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth OWNER's requirements as to Public Construction Bond and insurance. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required insurance certificate(s) and Bond, unless the Bond has been waived due to the total contract being less than \$100,000.

## ARTICLE 21 - SIGNING OF AGREEMENT

---

21.01 When OWNER gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within fifteen (15) days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER.

21.02 OWNER shall return one fully signed counterpart to Successful Bidder.

21.03 Should Bidder to whom the Contract has been awarded refuse or fail to complete the requirements of Article 21.01 above, the additional time in calendar days, required to correctly complete the documents will be deducted, in equal amount, from the Contract time. Or, the OWNER may elect to revoke the Award and the OWNER shall hold the Bid Bond for consequential damages incurred, and the Contract may be awarded as the OWNER desires.

**\*\* END OF SECTION \*\***

**SECTION 00300 – Bid Package Contents****THIS PACKAGE CONTAINS:**

| <u>SECTION TITLE</u>   | <u>SECTION NUMBER</u> |
|--|-----------------------|
| Bid Form   | 00310                 |
| Bid Bond   | 00430                 |
| Sworn Statement on Disclosure of Relationships                                     | 00452                 |
| Qualifications Questionnaire   | 00456                 |
| List of Subcontractors   | 00458                 |
| Certification Regarding Prohibition Against Contracting with Scrutinized Companies | 00460                 |
| Roof Manufacturer's Acknowledgement  | 00462                 |

**SUBMIT ONE (1) ORIGINAL AND ONE (1) COPY OF THIS COMPLETE PACKAGE WITH YOUR BID**

**\* \* END OF SECTION \* \***

**SECTION 00310 – Bid Form**

**PROJECT IDENTIFICATION:**

Project Name: Central Regional WWTF Roof Replacement  
 County Project Number: IRC-1829  
 Bid Number: 2022041  
 Project Address: 3550 49<sup>th</sup> St  
Vero Beach, FL 32967  
 Project Description: *The proposed project is located at 3550 49<sup>th</sup> Street (Central Regional WWTF) and generally consists of the removal, disposition and replacement of approximately 13,198 square feet of warrantable roofing.*

THIS BID IS SUBMITTED TO: INDIAN RIVER COUNTY  
 1800 27<sup>th</sup> Street  
 VERO BEACH, FLORIDA 32960

**1.01** The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**2.01** Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. The Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER.

**3.01** In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

| <u>Addendum Date</u> | <u>Addendum Number</u> |
|----------------------|------------------------|
| _____                | _____                  |
| _____                | _____                  |
| _____                | _____                  |

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazardous Environmental Condition, if any, which have been identified in the Supplementary Conditions as provided in paragraph

## 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

I. Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by ENGINEER is acceptable to Bidder.

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

**4.01** Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

[The remainder of page intentionally left blank]

## ITEMIZED BID SCHEDULE

**PROJECT NAME: Central Regional WWTF Roof Replacement**

**PROJECT NO. IRC-1829      BID NO. 2022041      FM NO. N/A**

**BIDDER'S Name:**

| Item No.                          | Description                         | Unit  | Quantity | Unit Price | Amount      |
|-----------------------------------|-------------------------------------|-------|----------|------------|-------------|
| 1                                 | MOBILIZATION                        | LS    | 1.0      |            |             |
| 2                                 | ROOF SECTIONS A1 AND A2             | LS    | 1.0      |            |             |
| 3                                 | ROOF SECTIONS B1, B2, B3 AND B4     | LS    | 1.00     |            |             |
| 4                                 | ROOF SECTION C1                     | LS    | 1.00     |            |             |
| 5                                 | ROOF SECTION C2                     | LS    | 1.0      |            |             |
| 6                                 | REPLACE DETERIORATED PLYWOOD DECK   | SF    | 2,500.0  |            |             |
| 7                                 | REPLACE DETERIORATED WOOD BLOCKING  | BD FT | 300.0    |            |             |
| 8                                 | FORCE ACCOUNT/CONTINGENCY ALLOWANCE |       |          |            | \$10,000.00 |
| <b>TOTAL PROJECT BID AMOUNT =</b> |                                     |       |          |            |             |

LS=Lump Sum   AC=Acre   EA=Each   CY=Cubic Yard   SY=Square Yard   TN=Ton   LF=Linear Foot   AS=Assembly   BD FT = Board Foot

**NOTE: IF THERE IS A DISCREPANCY BETWEEN THE PLANS (SUMMARY OF PAY ITEMS) AND THE ITEMIZED BID SCHEDULE, THE BID SCHEDULE WILL BE UTILIZED FOR BIDDING PURPOSES.**

**TOTAL PROJECT BID AMOUNT IN WORDS**

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**5.01** Bidder shall complete the Work in accordance with the Contract Documents for the price(s) contained in the Bid Schedule:

- A. The Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.
- B. The Owner reserves the right to omit or add to the construction of any portion or portions of the work heretofore enumerated or shown on the plans. Furthermore, the Owner reserves the right to omit in its entirety any one or more items of the Contract without forfeiture of Contract or claims for loss of anticipated profits or any claims by the Contractor on account of such omissions.
- C. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided. The quantities actually required to complete the contract and work may be less or more than so estimated, and, if so, no action for damages or for loss of profits shall accrue to the Contractor by reason thereof.
- D. Unit Prices have been computed in accordance with paragraph 11.03.B of the General Conditions.

**6.01** Bidder agrees that the Work will be substantially completed and ready for final payment in accordance with paragraph 14.07.B of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

**6.02** Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified, which shall be stated in the Agreement.

**7.01** The following documents are attached to and made a condition of this Bid:

- A. Itemized Bid Schedule;
- B. Required Bid security in the form of \_\_\_\_\_;
- C. Sworn Statement under Section 105.08, Indian River Code, on Disclosure of Relationships;
- D. Qualifications Questionnaire;
- E. List of Subcontractors;
- F. Certification Regarding Prohibition Against Contracting with Scrutinized Companies
- G. Roof Manufacturer's Acknowledgement

**8.01** The terms used in this Bid with initial capital letters have the meanings indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

SUBMITTED on \_\_\_\_\_, 20\_\_.

State Contractor License No. \_\_\_\_\_

If Bidder is:

**An Individual**

Name (typed or printed): \_\_\_\_\_

By: \_\_\_\_\_ (SEAL)  
*(Individual's signature)*

Doing business as: \_\_\_\_\_

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

Email: \_\_\_\_\_

**A Partnership**

Partnership Name: \_\_\_\_\_ (SEAL)

By: \_\_\_\_\_  
*(Signature of general partner -- attach evidence of authority to sign)*

Name (typed or printed): \_\_\_\_\_

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

Email: \_\_\_\_\_

**A Corporation**

Corporation Name: \_\_\_\_\_ (SEAL)

State of Incorporation: \_\_\_\_\_

Type (General Business, Professional, Service, Limited Liability): \_\_\_\_\_

By: \_\_\_\_\_  
*(Signature -- attach evidence of authority to sign)*

Name (typed or printed): \_\_\_\_\_

Title: \_\_\_\_\_

(CORPORATE SEAL)

Attest \_\_\_\_\_  
*(Signature of Corporate Secretary)*

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

Email: \_\_\_\_\_

Date of Qualification to do business is \_\_\_\_\_.

**A Joint Venture**

Joint Venture Name: \_\_\_\_\_

(SEAL)

By: \_\_\_\_\_  
*(Signature of joint venture partner -- attach evidence of authority to sign)*

Name (typed or printed): \_\_\_\_\_

Title: \_\_\_\_\_

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

Email: \_\_\_\_\_

Joint Venture Name: \_\_\_\_\_

(SEAL)

By: \_\_\_\_\_  
*(Signature -- attach evidence of authority to sign)*

Name (typed or printed): \_\_\_\_\_

Title: \_\_\_\_\_

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

Email: \_\_\_\_\_

Phone and FAX Number, and Address for receipt of official communications:

\_\_\_\_\_

\_\_\_\_\_

(Each joint venturor must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

**\*\* END OF SECTION \*\***



**SECTION 00430 – Bid Bond**

The document form entitled “AIA Document A310 Bid Bond” is recommended

END OF SECTION

**SECTION 00452 – Sworn Statement on Disclosure of Relationships**

**SWORN STATEMENT UNDER SECTION 105.08, INDIAN RIVER COUNTY CODE, ON DISCLOSURE OF RELATIONSHIPS**

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement MUST be submitted with Bid, Proposal or Contract No. 2022041  
for **Central Regional WWTF Roof Replacement**

2. This sworn statement is submitted by: \_\_\_\_\_

\_\_\_\_\_

(Name of entity submitting Statement)

whose business address is:

\_\_\_\_\_

3. My name is \_\_\_\_\_  
(Please print name of individual signing)

and my relationship to the entity named above is \_\_\_\_\_

4. I understand that an “affiliate” as defined in Section 105.08, Indian River County Code, means:

The term “affiliate” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of the entity.

5. I understand that the relationship with a County Commissioner or County employee that must be disclosed as follows:

Father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, daughter-in-law, son-in-law, brother-in-law, sister-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, or grandchild.

6. Based on information and belief, the statement, which I have marked below, is true in relation to the entity submitting this sworn statement. [Please indicate which statement applies.]

\_\_\_\_\_ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, have any relationships as defined in section 105.08, Indian River County Code, with any County Commissioner or County employee.

\_\_\_\_\_ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents, who are active in management of the entity have the following relationships with a County Commissioner or County employee:

| Name of Affiliate<br>or entity | Name of County Commissioner<br>or employee | Relationship |
|--------------------------------|--|--------------|
| _____                          | _____                                      | _____        |
| _____                          | _____                                      | _____        |
| _____                          | _____                                      | _____        |

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

\_\_\_\_\_  
(Date)

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Sworn to (or affirmed) and subscribed before me by means of  physical presence or  online notarization, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_ (name of person making statement).

\_\_\_\_\_  
(Signature of Notary Public - State of Florida)  
(Print, Type, or Stamp Commissioned Name of Notary Public)

who is personally known to me or  who has produced \_\_\_\_\_ as identification.

**\*\* END OF SECTION \*\***

## SECTION 00456 – Qualifications Questionnaire

NOTICE: THE OWNER RETAINS THE DISCRETION TO REJECT THE BIDS OF NON-RESPONSIBLE BIDDERS.

**Documentation Submitted with Project No: IRC-1829**

**Project Name: Central Regional WWTF Roof Replacement**

1. Bidder's Name / Address: \_\_\_\_\_  
\_\_\_\_\_
2. Bidder's Telephone & FAX Numbers: \_\_\_\_\_  
\_\_\_\_\_
3. Licensing and Corporate Status:
  - a. Is Contractor License current? \_\_\_\_\_
  - b. Bidder's Contractor License No: \_\_\_\_\_  
[Attach a copy of Contractor's License to the bid]
  - c. Attach documentation from the State of Florida Division of Corporations that indicates the business entity's status is active and that lists the names and titles of all officers.
4. Number of years the firm has performed business as a Contractor in construction work of the type involved in this contract: \_\_\_\_\_
5. What is the last project OF THIS NATURE that the firm has completed?  
\_\_\_\_\_  
\_\_\_\_\_
6. Has the firm ever failed to complete work awarded to you? \_\_\_\_\_  
  
[If your answer is "yes", then attach a separate page to this questionnaire that explains the circumstances and list the project name, Owner, and the Owner's telephone number for each project in which the firm failed to complete the work.]
7. Has the firm ever been assessed liquidated damages? \_\_\_\_\_  
  
[If your answer is "yes", then attach a separate page to this questionnaire that explains the circumstances and list the project name, Owner, and the Owner's telephone number for each project in which liquidated damages have been assessed.]
8. Has the firm ever been charged by OSHA for violating any OSHA regulations? \_\_\_\_\_  
  
[If your answer is "yes", then attach a separate page to this questionnaire that explains the circumstances and list the project name, Owner, and the Owner's telephone number for each project in which OSHA violations were alleged.]
9. Has the firm implemented a drug-free workplace program in compliance with Florida Statute 287.087? \_\_\_\_\_

(In the case of a tie, preference will be given to businesses with drug-free workplace programs)

10. Has the firm ever been charged with noncompliance of any public policy or rules?  
\_\_\_\_\_

[If your answer is "yes", then attach a separate page to this questionnaire that explains the circumstances and list the project name, Owner, and the Owner's telephone number for each project.]

11. Attach to this questionnaire, a notarized financial statement and other information that documents the firm's financial strength and history.

12. Has the firm ever defaulted on any of its projects? \_\_\_\_\_

[If your answer is "yes", then attach a separate page to this questionnaire that explains the circumstances and list the project name, Owner, and the Owner's telephone number for each project in which a default occurred.]

13. Attach a separate page to this questionnaire that summarizes the firm's current workload and that demonstrates its ability to meet the project schedule.

14. Name of person who inspected the site of the proposed work for the firm:

Name: \_\_\_\_\_ Date of Inspections: \_\_\_\_\_

15. Name of on-site Project Foreman: \_\_\_\_\_

Number of years of experience with similar projects as a Project Foreman: \_\_\_\_\_

16. Name of Project Manager: \_\_\_\_\_

Number of years of experience with similar projects as a Project Manager: \_\_\_\_\_

17. State your total bonding capacity: \_\_\_\_\_

18. State your bonding capacity per job: \_\_\_\_\_

19. Please provide name, address, telephone number, and contact person of your bonding company:

\_\_\_\_\_  
\_\_\_\_\_

[The remainder of this page was left blank intentionally]

19. Complete the following table for SIMILAR projects:

| Name of Project | Date Completed | Owner | Contact Person: Name/<br>Email Address/Phone | Original Contract Amount | Final Contract Amount |
|-----------------|----------------|-------|--|--------------------------|-----------------------|
|                 |                |       |  |                          |                       |
|                 |                |       |  |                          |                       |
|                 |                |       |  |                          |                       |
|                 |                |       |  |                          |                       |
|                 |                |       |  |                          |                       |
|                 |                |       |  |                          |                       |
|                 |                |       |  |                          |                       |

**SECTION 00458 – List of Subcontractors**

The Bidder **MUST** list below the name and address of each Subcontractor who will perform work under this Contract in excess of one-half percent of the total bid price, and shall also list the portion of the work which will be done by such Subcontractor. After the opening of Bids, additions, changes or substitutions will not be allowed unless approved by Indian River County after a request for such a change has been submitted in writing by the Contractor, which shall include reasons for such request. Subcontractors must be properly licensed and hold a valid Certificate of Competency.

Documentation Submitted with Project No. IRC-1829 for Central Regional WWTF Roof Replacement

|     | <b>Work to be Performed</b> | <b>Subcontractor's Name/Address</b> | <b>Portion of Work (%)</b> |
|-----|-----------------------------|-------------------------------------|----------------------------|
| 1.  |                             |                                     |                            |
| 2.  |                             |                                     |                            |
| 3.  |                             |                                     |                            |
| 4.  |                             |                                     |                            |
| 5.  |                             |                                     |                            |
| 6.  |                             |                                     |                            |
| 7.  |                             |                                     |                            |
| 8.  |                             |                                     |                            |
| 9.  |                             |                                     |                            |
| 10. |                             |                                     |                            |
| 11. |                             |                                     |                            |
| 12. |                             |                                     |                            |
| 13. |                             |                                     |                            |
| 14. |                             |                                     |                            |

Note: Attach additional sheets if required.

**\*\* END OF SECTION \*\***

**SECTION 00460 – CERTIFICATION REGARDING PROHIBITION AGAINST CONTRACTING WITH SCRUTINIZED COMPANIES**

I hereby certify that neither the undersigned entity, nor any of its wholly owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates of such entities or business associations, that exists for the purpose of making profit have been placed on the Scrutinized Companies that Boycott Israel List created pursuant to s. 215.4725 of the Florida Statutes, or are engaged in a boycott of Israel.

In addition, if this solicitation is for a contract for goods or services of one million dollars or more, I hereby certify that neither the undersigned entity, nor any of its wholly owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates of such entities or business associations, that exists for the purpose of making profit are on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473 of the Florida Statutes, or are engaged in business operations in Cuba or Syria as defined in said statute.

I understand and agree that the County may immediately terminate any contract resulting from this solicitation upon written notice if the undersigned entity (or any of those related entities of respondent as defined above by Florida law) are found to have submitted a false certification or any of the following occur with respect to the company or a related entity: (i) it has been placed on the Scrutinized Companies that Boycott Israel List, or is engaged in a boycott of Israel, or (ii) for any contract for goods or services of one million dollars or more, it has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or it is found to have been engaged in business operations in Cuba or Syria.

Name of Respondent: \_\_\_\_\_

By: \_\_\_\_\_  
(Authorized Signature)

Title: \_\_\_\_\_

Date: \_\_\_\_\_



**BOARD OF COUNTY COMMISSIONERS**



Month xx, 2022

via Email

Company

**Attn:**

Address

Address

Email address

**NOTICE OF AWARD**

**Reference:** Indian River County Bid No. 2022041  
**Project Name:** CENTRAL REGIONAL WWTF ROOF REPLACEMENT

Dear Mr./Ms. :

It is my pleasure to inform you that on [DATE] the Board of County Commissioners awarded the above-referenced project to your company. The following documents are required before the applicable County department can issue a "Notice to Proceed" letter.

1. Public Construction Bond (unrecorded) in the amount of **100%** of the award amount (**\$.....**).
2. Two Signed Copies of Enclosed Agreement.
3. Certificate of Insurance indicating coverage required by Article 5 of the General Conditions (section 00700 of the bid documents) and Supplemental Conditions (Section 00800 of the bid documents). Certificate(s) **must name Indian River County as additional insured** and must provide for a 30-day Notice of Cancellation.
4. W-9.

The Public Construction Bond must be executed in accordance with section 255.05(1)(a), Florida Statutes. Please submit the Bond, W-9, the Certificate(s) of Insurance and two fully-executed copies of the enclosed agreement to this office at the address provided below no later than [Due **DATE (15 days from award)**]. Failure to comply with the established deadline for submittal of required documents may be grounds for cancellation of award.

Thank you for your prompt attention and if you have any questions, please do not hesitate to contact our office.

Sincerely,

Jennifer Hyde  
Purchasing Manager

cc: Utilities Department

**Office of Management and Budget • Purchasing Division**  
1800 27<sup>th</sup> Street, Vero Beach, Florida 32960 • (772) 226-1416 • Fax: (772) 770-5140  
E-mail: [purchasing@ircgov.com](mailto:purchasing@ircgov.com)

**SECTION 00520 Agreement (Public Works)**

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[The Remainder of THIS Page WAS LEFT BLANK INTENTIONALLY]

## SECTION 00520 Agreement (Utilities)

**THIS AGREEMENT** is by and between INDIAN RIVER COUNTY, a Political Subdivision of the State of Florida organized and existing under the Laws of the State of Florida, (hereinafter called OWNER)

and \_\_\_\_\_  
(hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

### **ARTICLE 1 - WORK**

1.01 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

***The proposed project is located at 3550 49<sup>th</sup> Street (Central Regional WWTF) and generally consists of the removal, disposition and replacement of approximately 13,198 square feet of warrantable roofing.***

### **ARTICLE 2 - THE PROJECT**

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Project Name: **CENTRAL REGIONAL WWTF ROOF REPLACEMENT**  
Bid Number: **2022041**  
Project Address: **3550 49<sup>th</sup> Street, Vero Beach, FL 32967**

### **ARTICLE 3 - ENGINEER**

3.01 The Indian River County Public Works Department is hereinafter called the ENGINEER and will act as OWNER's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

### **ARTICLE 4 - CONTRACT TIMES**

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Days to Achieve Substantial Completion, Final Completion and Final Payment*

A. The Work will be substantially completed on or before the **270th** calendar day after the date when the Contract Times commence to run as provided in paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions on or before the **300th** calendar day after the date when the Contract Times commence to run.

4.03 *Liquidated Damages*

- A. CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. Liquidated damages will commence for this portion of work. The parties also recognize the delays, expense, and difficulties involved in proving in a legal proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER **\$566.00** for each calendar day that expires after the time specified in paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER **\$566.00** for each calendar day that expires after the time specified in paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

**ARTICLE 5 - CONTRACT PRICE**

5.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents, an amount in current funds equal to the sum of the amounts determined pursuant to paragraph 5.01.A and summarized in paragraph 5.01.B, below:

- A. For all Work, at the prices stated in CONTRACTOR's Bid, attached hereto as an exhibit.
- B. THE CONTRACT SUM subject to additions and deductions provided in the Contract:

Numerical Amount: \$ \_\_\_\_\_

Written Amount: \_\_\_\_\_

**ARTICLE 6 - PAYMENT PROCEDURES**

6.01 *Submittal and Processing of Payments*

- A. CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions and the Contract Documents.

6.02 *Progress Payments.*

- A. The OWNER shall make progress payments to the CONTRACTOR on the basis of the approved partial payment request as recommended by ENGINEER in accordance with the provisions of the Local Government Prompt Payment Act, Florida Statutes section 218.70 et. seq. The OWNER shall retain five percent (5%) of the payment amounts due to the CONTRACTOR until final completion and

acceptance of all work to be performed by CONTRACTOR under the Contract Documents.

6.03 *Pay Requests.*

- A. Each request for a progress payment shall be submitted on the application provided by OWNER and the application for payment shall contain the CONTRACTOR'S certification. All progress payments will be on the basis of progress of the work measured by the schedule of values established, or in the case of unit price work based on the number of units completed.

6.04 *Paragraphs 6.02 and 6.03*

do not apply to construction services work purchased by the County as OWNER which are paid for, in whole or in part, with federal funds and are subject to federal grantor laws and regulations or requirements that are contrary to any provision of the Local Government Prompt Payment Act. In such event, payment and retainage provisions shall be governed by the applicable grant requirements and guidelines.

6.05 *Acceptance of Final Payment as Release.*

- A. The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER from all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with the work under this Contract and for every act and neglect of the OWNER and others relating to or arising out of the work. Any payment, however, final or otherwise, shall not release the CONTRACTOR or its sureties from any obligations under the Contract Documents or the Public Construction Bond.

**ARTICLE 7 - INDEMNIFICATION**

7.01 CONTRACTOR shall indemnify OWNER, ENGINEER, and others in accordance with paragraph 6.20 (*Indemnification*) of the General Conditions to the Construction Contract.

**ARTICLE 8 - CONTRACTOR'S REPRESENTATIONS**

8.01 In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

- A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. CONTRACTOR has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating

to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which have been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

- E. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto
- F. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- G. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- I. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.
- J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- K. Contractor is registered with and will use the Department of Homeland Security's E-Verify system ([www.e-verify.gov](http://www.e-verify.gov)) to confirm the employment eligibility of all newly hired employees for the duration of this agreement, as required by Section 448.095, F.S. Contractor is also responsible for obtaining proof of E-Verify registration for all subcontractors.

## **ARTICLE 9 - CONTRACT DOCUMENTS**

### 9.01 *Contents*

- A. The Contract Documents consist of the following:
  - 1. This Agreement (pages 00520-1 to 00520-9, inclusive);
  - 2. Notice to Proceed (page 00550-1);
  - 3. Public Construction Bond (pages 00610-1 to 00610-3, inclusive);

4. Sample Certificate of Liability Insurance (page 00620-1);
5. Contractor's Application for Payment (pages 00622-1 to 00622-6 inclusive);
6. Certificate of Substantial Completion (pages 00630-1 to 00630-2, inclusive);
7. Contractor's Final Certification of the Work (pages 00632-1 to 00632-2, inclusive);
8. Professional Surveyor & Mapper's Certification as to Elevations and Locations of the Work (page 00634-1);
9. General Conditions (pages 00700-1 to 00700-38, inclusive);
10. Supplementary Conditions (pages 00800-1 to 00800-12, inclusive);
11. Project Manual for Project IRC-1829 dated June 17, 2022, including drawings R1, R2, D1 and D2;
12. Addenda (if applicable \_\_\_\_\_);
13. Appendices to this Agreement (enumerated as follows):
  - Appendix A – Indian River County Building Division Permit Fee Schedule
14. CONTRACTOR'S BID (pages 00310-1 to 00310-6, inclusive);
15. Bid Security (page 00430-1);
16. Sworn Statement Under Section 105.08, Indian River County Code, on Disclosure of Relationships (pages 00452-1 to 00452-2, inclusive);
17. Qualifications Questionnaire (page 00456-1 to 00456-2, inclusive);
18. List of Subcontractors (page 00458-1);
19. Certification Regarding Prohibition Against Contracting with Scrutinized Companies (page 00460-1);
20. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
  - a) Written Amendments;
  - b) Work Change Directives;
  - c) Change Order(s);

## **ARTICLE 10 - MISCELLANEOUS**

### 10.01 *Terms*

- A. Terms used in this Agreement will have the meanings indicated in the General Conditions.

#### 10.02 *Assignment of Contract*

- A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

#### 10.03 *Successors and Assigns*

- A. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

#### 10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

#### 10.05 *Venue*

- A. This Contract shall be governed by the laws of the State of Florida. Venue for any lawsuit brought by either party against the other party or otherwise arising out of this Contract shall be in Indian River County, Florida, or, in the event of a federal jurisdiction, in the United States District Court for the Southern District of Florida.

#### 10.06 *Public Records Compliance*

- A. Indian River County is a public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law. Specifically, the Contractor shall:
  - (1) Keep and maintain public records required by the County to perform the service.
  - (2) Upon request from the County's Custodian of Public Records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119 or as otherwise provided by law.
  - (3) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the County.
  - (4) Upon completion of the contract, transfer, at no cost, to the County all public records in possession of the Contractor or keep and maintain public records required by the County to



perform the service. If the Contractor transfers all public records to the County upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the County, upon request from the Custodian of Public Records, in a format that is compatible with the information technology systems of the County.

**B. IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:**

**(772) 226-1424**

**[publicrecords@ircgov.com](mailto:publicrecords@ircgov.com)**

**Indian River County Office of the County Attorney**

**1801 27<sup>th</sup> Street**

**Vero Beach, FL 32960**

C. Failure of the Contractor to comply with these requirements shall be a material breach of this Agreement.

[The remainder of this page was left blank intentionally]

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or on their behalf.

This Agreement will be effective on \_\_\_\_ day \_\_\_\_\_ of 20\_\_\_\_ (the date the Contract is approved by the Indian River County Board of County Commissioners, which is the Effective Date of the Agreement).

**OWNER:**

**CONTRACTOR:**

INDIAN RIVER COUNTY \_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_  
Peter D. O'Bryan, Chairman

By: \_\_\_\_\_  
(Contractor)

By: \_\_\_\_\_  
Jason E. Brown, County Administrator

(CORPORATE SEAL)

Attest \_\_\_\_\_

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

By: \_\_\_\_\_  
Dylan Reingold, County Attorney

Address for giving notices:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Jeffrey R. Smith, Clerk of Court and Comptroller

License No. \_\_\_\_\_  
(Where applicable)

Attest: \_\_\_\_\_  
Deputy Clerk

Agent for service of process: \_\_\_\_\_

(SEAL)

Designated Representative:  
Name: Rich Meckes  
Title: Utilities Operations Manager  
1800 27th Street  
Vero Beach, Florida 32960  
(772) 226-3423  
rmeckes@ircgov.com

Designated Representative:  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Phone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_

(If CONTRACTOR is a corporation or a partnership, attach evidence of authority to sign.)

**\*\* END OF SECTION \*\***

**SECTION 00550 – Notice to Proceed**

Dated

TO:

\_\_\_\_\_  
(BIDDER)

ADDRESS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Contract For:

**Central Regional WWTF Roof Replacement**

(Insert name of Contract as it appears in the Contract Documents)

IRC Bid No. **2022041**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
You are notified that the Contract Times under the above contract will commence to run on \_\_\_\_\_. By that date, you are to start performing your obligations under the Contract Documents. The contract has allocated **270** calendar days for Substantial Completion of this project and **300** calendar days for Final Completion. In accordance with Article 4 of the Agreement the date of Substantial Completion is \_\_\_\_\_ and the date of readiness for final payment is \_\_\_\_\_.

CONTRACTOR shall not commence work under this Contract until he has obtained all insurance required under Article 5 and such insurance has been delivered to the OWNER and approved by the OWNER, nor shall the CONTRACTOR allow any Subcontractor to commence work on his subcontract until all similar insurance required of the Subcontractor has been so obtained and approved. All such insurance shall remain in effect until final payment and at all times thereafter when CONTRACTOR may be correcting, removing or replacing *defective Work* in accordance with Article 13.

Also, before you may start any Work at the Site, you must:  
(add other requirements, if applicable)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
INDIAN RIVER COUNTY  
(OWNER)

By: \_\_\_\_\_  
(AUTHORIZED SIGNATURE)

\_\_\_\_\_  
(TITLE)

## **SECTION 00610 - Public Construction Bond**

### **INSTRUCTION FOR PUBLIC CONSTRUCTION BOND**

The front or cover page to the required public construction payment and performance bond shall contain the information required by Fla. Stat. 255.05(1)(a), and be substantially in the format shown on the first page following this instruction.

The Public Construction Bond shall be in the form suggested by Fla. Stat. 255.05(3) as shown on the second page following this instruction.

A Power of Attorney from a surety insurer authorized to do business in Florida, authorizing the signature of the Attorney in Fact who executes the Public Construction Bond shall accompany that Bond.

**Public Work  
F.S. Chapter 255.05 (1)(a)  
Cover Page**

**THIS BOND IS GIVEN TO COMPLY WITH SECTION 255.05 OR SECTION 713.23 FLORIDA STATUTES, AND ANY ACTION INSTITUTED BY A CLAIMANT UNDER THIS BOND FOR PAYMENT MUST BE IN ACCORDANCE WITH THE NOTICE AND TIME LIMITATION PROVISIONS IN SECTION 255.05(2) OR SECTION 713.23 FLORIDA STATUTES.**

BOND NO: \_\_\_\_\_

CONTRACTOR NAME: \_\_\_\_\_

CONTRACTOR ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

CONTRACTOR PHONE NO: \_\_\_\_\_

SURETY COMPANY NAME: \_\_\_\_\_

SURETY PRINCIPAL  
BUSINESS ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

SURETY PHONE NO: \_\_\_\_\_

OWNER NAME: \_\_\_\_\_

OWNER ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

OWNER PHONE NO: \_\_\_\_\_

OBLIGEE NAME: \_\_\_\_\_  
**(If contracting entity is different from  
the owner, the contracting public entity)**

OBLIGEE ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

OBLIGEE PHONE NO: \_\_\_\_\_

BOND AMOUNT: \_\_\_\_\_

CONTRACT NO:  
**(If applicable)** \_\_\_\_\_

DESCRIPTION OF WORK: \_\_\_\_\_  
\_\_\_\_\_

PROJECT LOCATION: \_\_\_\_\_  
\_\_\_\_\_

LEGAL DESCRIPTION:  
**(If applicable)** \_\_\_\_\_

**FRONT PAGE**

**All other bond page(s) are deemed subsequent to this page regardless of any page number(s) that may be printed thereon.**

PUBLIC CONSTRUCTION BOND

Bond No. \_\_\_\_\_  
(enter bond number)

BY THIS BOND, We \_\_\_\_\_, as Principal and \_\_\_\_\_, a corporation, as Surety, are bound to \_\_\_\_\_, herein called Owner, in the sum of \$\_\_\_\_\_, for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the contract dated \_\_\_\_\_, \_\_\_\_\_, between Principal and Owner for construction of \_\_\_\_\_, the contract being made a part of this bond by reference, at the times and in the manner prescribed in the contract; and
2. Promptly makes payments to all claimants, as defined in Section [255.05\(1\)](#), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the contract; and
3. Pays Owner all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a default by Principal under the contract; and
4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this bond is void; otherwise it remains in full force.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section [255.05\(2\)](#), Florida Statutes.

Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes does not affect Surety's obligation under this bond.

DATED ON \_\_\_\_\_,

\_\_\_\_\_  
(Name of Principal)

By \_\_\_\_\_  
(As Attorney in Fact)

\_\_\_\_\_  
(Name of Surety)

## SECTION 620 – Sample Certificate of Liability Insurance

|   |   |
|---|---|
| <b>CERTIFICATE OF LIABILITY INSURANCE</b> |   |
| <b>PRODUCER</b>                           | THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. |
|   | COMPANIES AFFORDING COVERAGE  |
| <b>INSURED</b>                            | COMPANY A -   |
|   | COMPANY B -   |
|   | COMPANY C -   |
|   | COMPANY D -   |
|   | COMPANY E -   |

### COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED NOTWITHSTANDING ANY REQUIREMENT TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN THE INSURANCE ACCORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE   | POLICY NUMBER | POLICY EFFECTIVE DATE (MM/DD/YY) | POLICY EXPIRATION DATE (MM/D/YY) | LIMITS                                       |              |     |
|----------|---|---------------|----------------------------------|----------------------------------|--|--------------|-----|
| A        | GENERAL LIABILITY<br><input type="checkbox"/> COMMERCIAL GENERAL LIABILITY<br><input type="checkbox"/> CLAIMS MADE - <input type="checkbox"/> OCCUR<br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>                           |               |                                  |                                  | EACH OCCURRENCE                              | \$ 1,000,000 |     |
|          |   |               |                                  |                                  | FIRE DAMAGE (Any One Fire)                   | \$ 50,000    |     |
|          |   |               |                                  |                                  | MED. EXP. (Any One Person)                   | \$ 5,000     |     |
|          |   |               |                                  |                                  | PERSONAL & ADV INJURY                        | \$ 1,000,000 |     |
|          |   |               |                                  |                                  | GENERAL AGGREGATE                            | \$ 1,000,000 |     |
|          |   |               |                                  |                                  | PRODUCTS – COMP/OP AGG.                      | \$ 1,000,000 |     |
|          |   |               |                                  |                                  |  | \$           |     |
| A        | AUTOMOBILE LIABILITY<br><input type="checkbox"/> ANY AUTO<br><input type="checkbox"/> ALL OWNED AUTOS<br><input type="checkbox"/> SCHEDULED AUTOS<br><input type="checkbox"/> HIRED AUTOS<br><input type="checkbox"/> NON-OWNED AUTOS<br><input type="checkbox"/><br><input type="checkbox"/> |               |                                  |                                  | COMBINED SINGLE LIMIT (Ea. Occurrence)       | \$ 1,000,000 |     |
|          |   |               |                                  |                                  | BODILY INJURY (Per Person)                   | \$           |     |
|          |   |               |                                  |                                  | BODILY INJURY (Per Accident)                 | \$           |     |
|          |   |               |                                  |                                  | PROPERTY DAMAGE                              | \$           |     |
|          | GARAGE LIABILITY<br><input type="checkbox"/><br><input type="checkbox"/>  |               |                                  |                                  | AUTO ONLY – EA ACCIDENT                      | \$           |     |
|          |   |               |                                  |                                  | OTHER THAN                                   | EA ACC       | \$  |
|          |   |               |                                  |                                  |  | AUTO ONLY    | AGG |
| A        | EXCESS LIABILITY<br><input type="checkbox"/> CLAIMS MADE<br><input type="checkbox"/> DEDUCTIBLE<br><input type="checkbox"/> RETENTION \$  |               |                                  |                                  | EACH OCCURRENCE                              | \$           |     |
|          |   |               |                                  |                                  | AGGREGATE                                    | \$           |     |
|          |   |               |                                  |                                  |  | \$           |     |
|          |   |               |                                  |                                  |  | \$           |     |
| A        | WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY<br><br>THE PROPRIETOR/PARTNERS/ EXECUTIVE OFFICERS ARE: <input type="checkbox"/> INCL <input type="checkbox"/> EXCL  |               |                                  |                                  | <input type="checkbox"/> WC STATUTORY LIMITS |              |     |
|          |   |               |                                  |                                  | E.L. EACH ACCIDENT                           | \$ 100,000   |     |
|          |   |               |                                  |                                  | E.L. DISEASE – EA                            | \$ 500,000   |     |
|          |   |               |                                  |                                  | E.L. DISEASE-POLICY LIMIT                    | \$ 100,000   |     |
|          | OTHER: BUILDER'S RISK   |               |                                  |                                  | FULL REPLACEMENT COST OF THE WORK            |              |     |

DESCRIPTION OF OPERATIONS/LOCATIONS VEHICLES/SPECIAL ITEMS

|   |  |  |
|---|--|--|
| <b>CERTIFICATE HOLDER</b>   | <b>ADDITIONAL INSURED; INSURER LETTER:</b> | <b>CANCELLATION</b>  |
| ADDITIONAL INSURED:<br>INDIAN RIVER COUNTY<br>1801 27 <sup>TH</sup> STREET, VERO BEACH, FL 32960-3388 |  | SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT. FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES. |
|   |  | AUTHORIZED REPRESENTATIVE  |

**SECTION 00622 – Contractor’s Application for Payment  
Central Regional WWTF Roof Replacement**

Application for Payment No. \_\_\_\_\_  
For Work Accomplished through the period of \_\_\_\_\_ through \_\_\_\_\_

To: Indian River County (OWNER)  
From: \_\_\_\_\_ (CONTRACTOR)  
Project No. IRC-1829  
Bid No.: 2022041

**1) Attach detailed schedule and copies of all paid invoices.**

|           |  |           |              |
|-----------|--|-----------|--------------|
| 1.        | Original Contract Price:                                       | \$        | _____        |
| 2.        | Net change by Change Orders and Written Amendments (+ or -):   | \$        | _____        |
| 3.        | Current Contract Price (1 plus 2):                             | \$        | _____        |
| 4.        | Total completed and stored to date:                            | \$        | _____        |
| 5.        | Retainage (per Agreement):                                     |           |              |
|           | 5% of completed Work:  |           |              |
|           | _____ % of retainage:  | \$        | _____        |
|           | Total Retainage:   | \$        | _____        |
| 6.        | Total completed and stored to date less retainage (4 minus 5): | \$        | _____        |
| 7.        | Less previous Application for Payments:                        | \$        | _____        |
| <b>8.</b> | <b>DUE THIS APPLICATION (6 MINUS 7):</b>                       | <b>\$</b> | <b>_____</b> |

**CONTRACTOR'S CERTIFICATION:**

**UNDER PENALTY OF PERJURY**, the undersigned CONTRACTOR certifies that (1) the labor and materials listed on this request for payment have been used in the construction of this Work; (2) payment received from the last pay request has been used to make payments to all subcontractors, laborers, materialmen and suppliers except as listed on Attachment A, below; (3) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to OWNER indemnifying OWNER against any such Lien, security interest or encumbrance); (4) all Work covered by this Application for Payment is in accordance with the Contract Documents and not defective; and (5) If this Periodic Estimate is for a Final Payment to project or improvement, I further certify that all persons doing work upon or furnishing materials or supplies for this project or improvement under this foregoing contract have been paid in full, and that all taxes imposed by Chapter 212 Florida Statutes, (Sales and Use Tax Act, as Amended) have been paid and discharged, and that I have no claims against the OWNER.

Attached to or submitted with this form are:

1. Signed release of lien forms (partial or final as applicable) from all subcontractors, laborers, materialmen and suppliers except as listed on Attachment A, together with an explanation as to why any release of lien form is not included;



2. Updated Construction Schedule per [Specification Section 01310](#).

Dated \_\_\_\_\_

By: \_\_\_\_\_  
(CONTRACTOR – must be signed by  
an Officer of the Corporation)

\_\_\_\_\_  
Print Name and Title

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Sworn to (or affirmed) and subscribed before me by means of  physical presence or  online  
notarization, this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_, by \_\_\_\_\_  
(name of person making statement).

\_\_\_\_\_  
(Signature of Notary Public - State of Florida)  
(Print, Type, or Stamp Commissioned Name of Notary Public)

who is personally known to me or  who has produced  
\_\_\_\_\_ as identification.

**Please remit payment to:**

**Contractor's Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_

\*\*\*\*\*

[The remainder of this page was left blank intentionally]

**SURETY'S CONSENT OF PAYMENT TO CONTRACTOR:**

The Surety, \_\_\_\_\_

\_\_\_\_\_, a corporation, in accordance with Public Construction Bond Number \_\_\_\_\_, hereby consents to payment by the OWNER to the CONTRACTOR, for the amounts specified in this CONTRACTOR'S APPLICATION FOR PAYMENT.

**TO BE EXECUTED BY CORPORATE SURETY:**

Attest:

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Corporate Surety

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Address

BY: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

(Affix Corporate SEAL)

STATE OF FLORIDA  
COUNTY OF INDIAN RIVER

Before me, a Notary Public, duly commissioned, qualified, and acting, personally appeared \_\_\_\_\_, to me well known or who produced \_\_\_\_\_ as identification, who being by me first duly sworn upon oath, says that he/she is the \_\_\_\_\_ for and that he/she has been authorized by \_\_\_\_\_ it to approve payment by the OWNER to the CONTRACTOR of the foregoing Contractor's Application for Payment. Subscribed and sworn to before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public, State of \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

\*\*\*\*\*

[The remainder of this page was left blank intentionally]

**CERTIFICATION OF PROJECT MANAGER:**

I certify that I have reviewed the above and foregoing Periodic Estimate for Partial Payment; that to the best of my knowledge and belief it appears to be a reasonably accurate statement of the work performed and/or material supplied by the Contractor. I am not certifying as to whether or not the Contractor has paid all subcontractors, laborers, materialmen and suppliers because I am not in a position to accurately determine that issue.

Dated \_\_\_\_\_

\_\_\_\_\_  
SIGNATURE

**CERTIFICATION OF INSPECTOR:**

I have checked the estimate against the Contractor's Schedule of Amounts for Contract Payments and the notes and reports of my inspections of the project. To the best of my knowledge, this statement of work performed and/or materials supplied appears to be reasonably accurate, that the Contractor appears to be observing the requirements of the Contract with respect to construction, and that the Contractor should be paid the amount requested above, unless otherwise noted by me. I am not certifying as to whether or not the Contractor has paid all subcontractors, laborers, materialmen and suppliers because I am not in a position to accurately determine that issue.

Dated \_\_\_\_\_

\_\_\_\_\_  
SIGNATURE

\*\*\*\*\*

[The Remainder of This Page Was Left Blank Intentionally]

**ATTACHMENT A**

- 1. List of all subcontractors, laborers, materialmen and suppliers who have not been paid from the payment received from the last Pay Request and the reason why they were not paid (attach additional pages as necessary):**

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- 2. List of all subcontractors, laborers, materialmen and suppliers for which a signed release of lien form (partial or final as applicable) is not included with this Pay Request, together with an explanation as to why the release of lien form is not included (attach additional pages as necessary):**

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**SECTION 00630 – Certificate of Substantial Completion**

Date of Issuance: \_\_\_\_\_, 20\_\_\_\_

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---

OWNER: Indian River County  
CONTRACTOR: \_\_\_\_\_  
CONTRACT FOR: Central Regional WWTF Roof Replacement  
Project No.: IRC-1829  
FM No.: N/A

Project Description: ***The proposed project is located at 3550 49<sup>th</sup> Street (Central Regional WWTF) and generally consists of the removal, disposition and replacement of approximately 13,198 square feet of warrantable roofing.***

OWNER's Bid No. 2022041

---

---

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

To: \_\_\_\_\_  
OWNER

And To: \_\_\_\_\_  
CONTRACTOR

---

---

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, CONTRACTOR and ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

\_\_\_\_\_  
DATE OF SUBSTANTIAL COMPLETION

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by CONTRACTOR within 30 calendar days of the above date of Substantial Completion.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties and guarantees shall be as follows:

OWNER:

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---

CONTRACTOR:

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The following documents are attached to and made a part of this Certificate:

*[For items to be attached see definition of Substantial Completion as supplemented and other specifically noted conditions precedent to achieving Substantial Completion as required by Contract Documents.]*

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This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of CONTRACTOR's obligation to complete the Work in accordance with the Contract Documents.

---

---

Executed by ENGINEER on: \_\_\_\_\_ (Date).

ENGINEER: \_\_\_\_\_

By: \_\_\_\_\_  
(Authorized Signature)

CONTRACTOR accepts this Certificate of Substantial Completion on \_\_\_\_\_ (date).

CONTRACTOR: \_\_\_\_\_

By: \_\_\_\_\_  
(Authorized Signature)

OWNER accepts this Certificate of Substantial Completion on \_\_\_\_\_ (date).

OWNER: INDIAN RIVER COUNTY \_\_\_\_\_

By: \_\_\_\_\_  
(Authorized Signature)

**\* \* END OF SECTION \* \***

**SECTION 00632 - CONTRACTOR'S FINAL CERTIFICATION OF  
THE WORK**  
(TO ACCOMPANY CONTRACTOR'S FINAL APPLICATION FOR PAYMENT)

PROJECT NAME: Central Regional WWTF Roof Replacement  
PROJECT NO: IRC-1829

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Personally before me the undersigned officer, authorized by the laws of said state to administer oaths, comes \_\_\_\_\_, who on oath says: That he is the CONTRACTOR with whom Indian River County, Florida, a political subdivision of said state, did on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, enter into a contract for the performance of certain work, more particularly described as follows:

***The proposed project is located at 3550 49<sup>th</sup> Street (Central Regional WWTF) and generally consists of the removal, disposition and replacement of approximately 13,198 square feet of warrantable roofing.***

UNDER PENALTY OF PERJURY, affiant further says that said construction has been completed and the Contract therefore fully performed and final payment is now due and that all liens of all firms and individuals contracting directly with or directly employed by such CONTRACTOR have been paid in full EXCEPT:

| Name  | Description/Amount |
|-------|--------------------|
| _____ | _____              |
| _____ | _____              |

who have not been paid and who are due the amount set forth.

Affiant further says that:

1. CONTRACTOR has reviewed the Contract Documents.
2. CONTRACTOR has reviewed the Work for compliance with the Contract Documents.
3. CONTRACTOR has completed the Work in accordance with the Contract Documents.
4. All equipment and systems have been tested in the presence of the ENGINEER or his representative and are fully operational with no defects or deficiencies except as listed below.

\_\_\_\_\_



- 
- 
5. The Work is complete and ready for final acceptance by the OWNER.
  6. CONTRACTOR hereby certifies that it has no claims against the OWNER.

(Corporate Seal)

---

(Contractor)

By: \_\_\_\_\_

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Sworn to (or affirmed) and subscribed before me by means of  physical presence or  online notarization, this \_\_\_\_\_ day \_\_\_\_\_ of 20\_\_\_\_, by \_\_\_\_\_

\_\_\_\_\_  
(name of person making statement).

---

(Signature of Notary Public - State of Florida)  
(Print, Type, or Stamp Commissioned Name of Notary Public)

who is personally known to me or  who has produced  
\_\_\_\_\_ as identification.

+ + END OF SECTION + +

**SECTION 00942 – Change Order Form**

DATE OF ISSUANCE: \_\_\_\_\_

EFFECTIVE DATE: \_\_\_\_\_

OWNER: Indian River County

CONTRACTOR \_\_\_\_\_

Project: **CENTRAL REGIONAL WWTF ROOF REPLACEMENT**

OWNER's Project No. **IRC-1829**

OWNER'S Bid No. 2022041

You are directed to make the following changes in the Contract Documents:

Description:

Reason for Change Order:

Attachments: (List documents supporting change)

| CHANGE IN CONTRACT PRICE:   |          |
|---|----------|
| Description   | Amount   |
| Original Contract Price   | \$ _____ |
| Net Increase (Decrease) from previous Change Orders No. _____ to _____: | \$ _____ |
| Contract Price prior to this Change Order:                              | \$ _____ |
| Net increase (decrease) of this Change Order:                           | \$ _____ |
| Contract Price with all approved Change Orders:                         | \$ _____ |

| CHANGE IN CONTRACT TIMES                                   |                 |
|--|-----------------|
| Description  | Time            |
| Original Contract Time:                                    | (days or dates) |
| Substantial Completion:                                    | _____           |
| Final Completion:  | _____           |
| Net change from previous Change Orders No. _____ to _____: | (days)          |
| Substantial Completion:                                    | _____           |
| Final Completion:  | _____           |
| Contract Time prior to this Change Order:                  | (days or dates) |
| Substantial Completion:                                    | _____           |
| Final Completion:  | _____           |
| Net increase (decrease) this Change Order:                 | (days or dates) |
| Substantial Completion:                                    | _____           |
| Final Completion:  | _____           |
| Contract Time with all approved Change Orders:             | (days or dates) |
| Substantial Completion:                                    | _____           |
| Final Completion:  | _____           |

|                        |
|------------------------|
| ACCEPTED:              |
| By:                    |
| CONTRACTOR (Signature) |
| Date:                  |

|                      |
|----------------------|
| RECOMMENDED:         |
| By:                  |
| ENGINEER (Signature) |
| Date:                |

|                   |
|-------------------|
| APPROVED:         |
| By:               |
| OWNER (Signature) |
| Date:             |

**SECTION 00948 – Work Change Directive**

---

DATE OF ISSUANCE: \_\_\_\_\_ EFFECTIVE DATE: \_\_\_\_\_

---

OWNER: Indian River County  
 CONTRACTOR \_\_\_\_\_  
 Project: **CENTRAL REGIONAL WWTF ROOF REPLACEMENT**  
 OWNER's Project No. **IRC-1829** OWNER'S Bid No. **2022041**

You are directed to proceed promptly with the following changes:

Description:

Reason for Change Order:

Attachments: (List documents supporting change)

---

If OWNER or CONTRACTOR believe that the above change has affected Contract Price any Claim for a Change Order based thereon will involve one or more of the following methods as defined in the Contract Documents.

Method of determining change in Contract Prices

- Unit Prices
- Lump Sum
- Other: \_\_\_\_\_
- By Change Order:

Estimated increase (decrease) of this Work Change Directive  
 \$ \_\_\_\_\_

If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Method of determining change in Contract Times

- Contractor's Records
- Engineer's Records
- Other: \_\_\_\_\_
- By Change Order:

Estimated increase (decrease) in Contract Times:

Substantial Completion: \_\_\_\_\_ days;  
 Ready for Final Completion: \_\_\_\_\_ days.

If the change involves an increase, the estimated time is not to be exceeded without further authorization.

|                        |
|------------------------|
| ACCEPTED:              |
| By:                    |
| CONTRACTOR (Signature) |
| Date:                  |

|                      |
|----------------------|
| RECOMMENDED:         |
| By:                  |
| ENGINEER (Signature) |
| Date:                |

|                   |
|-------------------|
| APPROVED:         |
| By:               |
| OWNER (Signature) |
| Date:             |

**\*\* END OF SECTION\*\***

STANDARD  
GENERAL CONDITIONS  
OF THE  
CONSTRUCTION CONTRACT

Prepared by

**ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE**

and

Issued and Published Jointly By

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*a practice division of the*  
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AMERICAN CONSULTING ENGINEERS COUNCIL

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# GENERAL CONDITIONS

## ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

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### 1.01 *Defined Terms*

A. Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between OWNER and CONTRACTOR covering the Work.

3. *Application for Payment*--The form acceptable to ENGINEER which is to be used by CONTRACTOR during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

7. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, Bid security form, if any, and the Bid form with any supplements.

8. *Bonds*--Performance and payment bonds and other instruments of security.

9. *Change Order*--A document recommended by ENGINEER which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by OWNER or CONTRACTOR seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A

demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the OWNER and CONTRACTOR concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*--The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

13. *Contract Price*--The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.

15. *CONTRACTOR*--The individual or entity with whom OWNER has entered into the Agreement.

16. *Cost of the Work*--See paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by CONTRACTOR. Shop Drawings and other CONTRACTOR submittals are not Drawings as so defined.



18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *ENGINEER*--The individual or entity named as such in the Agreement.

20. *ENGINEER's Consultant*--An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

~~21. *Field Order*--A written order issued by ENGINEER which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.~~

22. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

23. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

24. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

25. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

28. *Notice of Award*--The written notice by OWNER to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.

29. *Notice to Proceed*--A written notice given by OWNER to CONTRACTOR fixing the date on which

the Contract Times will commence to run and on which CONTRACTOR shall start to perform the Work under the Contract Documents.

30. *OWNER*--The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.

31. *Partial Utilization*--Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

32. *PCBs*--Polychlorinated biphenyls.

33. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

34. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.

35. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

36. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

37. *Resident Project Representative*--The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.

40. *Site*--Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, including rights-of-way and easements for access thereto, and

such other lands furnished by OWNER which are designated for the use of CONTRACTOR.

41. *Specifications*--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

42. *Subcontractor*--An individual or entity having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.

43. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

44. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

45. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

46. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

47. *Unit Price Work*--Work to be paid for on the basis of unit prices.

48. *Work*--The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

49. *Work Change Directive*--A written statement to CONTRACTOR issued on or after the

Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

50. *Written Amendment*--A written statement modifying the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the nonengineering or nontechnical rather than strictly construction-related aspects of the Contract Documents.

## 1.02 Terminology

### A. Intent of Certain Terms or Adjectives

1. Whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of ENGINEER as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.10 or any other provision of the Contract Documents.

### B. Day

1. The word "day" shall constitute a calendar day of 24 hours measured from midnight to the next midnight.

### C. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents or does not meet the requirements of any inspection,

reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.04 or 14.05).

#### D. *Furnish, Install, Perform, Provide*

~~1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.~~

~~2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.~~

~~3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.~~

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of CONTRACTOR, "provide" is implied.

E. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## ARTICLE 2 - PRELIMINARY MATTERS

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### 2.01 *Delivery of Bonds*

A. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish.

### 2.02 *Copies of Documents*

A. OWNER shall furnish to CONTRACTOR up to ten copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

### 2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the ninetieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

### 2.04 *Starting the Work*

A. CONTRACTOR shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

### 2.05 *Before Starting Construction*

A. *CONTRACTOR's Review of Contract Documents:* Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity, or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless CONTRACTOR knew or reasonably should have known thereof.

B. *Preliminary Schedules:* Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for its timely review:

1. a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; and

3. a preliminary schedule of values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the

Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

~~C. Evidence of Insurance: Before any Work at the Site is started, CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with Article 5.~~

#### 2.06 Preconstruction Conference

~~A. Within 20 days after the Contract Times start to run, but before any Work at the Site is started, a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.05.B, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.~~

#### 2.07 Initial Acceptance of Schedules

A. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to review for acceptability to ENGINEER as provided below the schedules submitted in accordance with paragraph 2.05.B. CONTRACTOR shall have an additional ten days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to CONTRACTOR until acceptable schedules are submitted to ENGINEER.

1. The progress schedule will be acceptable to ENGINEER if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance will not impose on ENGINEER responsibility for the progress schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefor.

2. CONTRACTOR's schedule of Shop Drawing and Sample submittals will be acceptable to ENGINEER if it provides a workable arrangement for reviewing and processing the required submittals.

3. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

### ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

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#### 3.01 Intent

A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to OWNER.

C. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in Article 9.

#### 3.02 Reference Standards

A. *Standards, Specifications, Codes, Laws, and Regulations*

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents, or employees any duty or authority to supervise or direct the performance

of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

### 3.03 Reporting and Resolving Discrepancies

#### A. Reporting Discrepancies

1. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once. CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as required by paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.04; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known thereof.

#### B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

### 3.04 Amending and Supplementing Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways: (i) a Written Amendment; (ii) a Change Order; or (iii) a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways: ~~(i) a Field Order;~~ (ii) ENGINEER's approval of a Shop Drawing or Sample; or (iii) ENGINEER's written interpretation or clarification.

### 3.05 Reuse of Documents

A. CONTRACTOR and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the Work under a direct or indirect contract with OWNER: (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER or ENGINEER's Consultant, including electronic media editions; and (ii) shall not reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaption by ENGINEER. This prohibition will survive final payment, completion, and acceptance of the Work, or termination or completion of the Contract. Nothing herein shall preclude CONTRACTOR from retaining copies of the Contract Documents for record purposes.

## ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS

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### 4.01 Availability of Lands

A. OWNER shall furnish the Site. OWNER shall notify CONTRACTOR of any encumbrances or restrictions not of general application but specifically related to use of the Site with which CONTRACTOR must comply in performing the Work. OWNER will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If CONTRACTOR and OWNER are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in OWNER's furnishing the Site, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

B. Upon reasonable written request, OWNER shall furnish CONTRACTOR with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and OWNER's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

#### 4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER, or any of ENGINEER's Consultants with respect to:

1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

#### 4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled to rely as provided in paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *ENGINEER's Review:* After receipt of written notice as required by paragraph 4.03.A, ENGINEER will promptly review the pertinent condition, determine the necessity of OWNER's obtaining additional exploration or tests with respect thereto, and advise OWNER in writing (with a copy to CONTRACTOR) of ENGINEER's findings and conclusions.

#### C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in CONTRACTOR's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.08 and 11.03.

2. CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR made a final commitment to OWNER in respect of Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for CONTRACTOR prior to CONTRACTOR's making such final commitment; or

c. CONTRACTOR failed to give the written notice within the time and as required by paragraph 4.03.A.

3. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in paragraph 10.05. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by CONTRACTOR on or in connection with any other project or anticipated project.

#### 4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities, including OWNER, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and CONTRACTOR shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including OWNER, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

#### B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility.

2. If ENGINEER concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, OWNER or CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

#### 4.05 *Reference Points*

A. OWNER shall provide engineering surveys to establish reference points for construction which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point or property monument

is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

#### 4.06 Hazardous Environmental Condition at Site

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the ENGINEER in the preparation of the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER or any of ENGINEER's Consultants with respect to:

1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

D. If CONTRACTOR encounters a Hazardous Environmental Condition or if CONTRACTOR or anyone for whom CONTRACTOR is responsible creates a Hazardous Environmental Condition, CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area

affected thereby (except in an emergency as required by paragraph 6.16); and (iii) notify OWNER and ENGINEER (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. CONTRACTOR shall not be required to resume Work in connection with such condition or in any affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by CONTRACTOR, either party may make a Claim therefor as provided in paragraph 10.05.

F. If after receipt of such written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in paragraph 10.05. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.E shall obligate OWNER to indemnify any



individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.F shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of paragraphs 4.02, 4.03, and 4.04 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

## ARTICLE 5 - BONDS AND INSURANCE

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### 5.01 *Performance, Payment, and Other Bonds*

~~A. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents.~~

B. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

C. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to

meet the requirements of paragraph 5.01.B, CONTRACTOR shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the requirements of paragraphs 5.01.B and 5.02.

### 5.02 *Licensed Sureties and Insurers*

A. All Bonds and insurance required by the Contract Documents to be purchased and maintained by OWNER or CONTRACTOR shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

### 5.03 *Certificates of Insurance*

A. CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to purchase and maintain. ~~OWNER shall deliver to CONTRACTOR, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by CONTRACTOR or any other additional insured) which OWNER is required to purchase and maintain.~~

### 5.04 *CONTRACTOR's Liability Insurance*

A. CONTRACTOR shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed by CONTRACTOR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance so required by this paragraph 5.04 to be purchased and maintained shall:

1. with respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.07, 6.11, and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the

certificates of insurance furnished by the CONTRACTOR pursuant to paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when CONTRACTOR may be correcting, removing, or replacing defective Work in accordance with paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and CONTRACTOR shall furnish OWNER and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to OWNER and any such additional insured of continuation of such insurance at final payment and one year thereafter).

#### 5.05 *OWNER's Liability Insurance*

~~—A. In addition to the insurance required to be provided by CONTRACTOR under paragraph 5.04, OWNER, at OWNER's option, may purchase and maintain at OWNER's expense OWNER's own liability insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.~~

#### 5.06 *Property Insurance*

~~A. Unless otherwise provided in the Supplementary Conditions, OWNER shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:~~

~~1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;~~

~~2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism~~

~~and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;~~

~~3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);~~

~~4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER;~~

~~5. allow for partial utilization of the Work by OWNER;~~

~~6. include testing and startup; and~~

~~7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR, and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.~~

~~B. OWNER shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.~~

~~C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with paragraph 5.07.~~

D. OWNER shall not be responsible for purchasing and maintaining any property insurance specified in this paragraph 5.06 to protect the interests of CONTRACTOR, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of

loss within such identified deductible amount will be borne by CONTRACTOR, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

~~E. If CONTRACTOR requests in writing that other special insurance be included in the property insurance policies provided under paragraph 5.06, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. Prior to commencement of the Work at the Site, OWNER shall in writing advise CONTRACTOR whether or not such other insurance has been procured by OWNER.~~

#### 5.07 Waiver of Rights

A. OWNER and CONTRACTOR intend that all policies purchased in accordance with paragraph 5.06 will protect OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued.

B. OWNER waives all rights against CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for:

~~1.—loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to OWNER's property or the Work caused by, arising out of, or resulting from fire or other peril whether or not insured by OWNER; and~~

~~2.—loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by OWNER during partial utilization pursuant to paragraph 14.05, after Substantial Completion pursuant to paragraph 14.04, or after final payment pursuant to paragraph 14.07.~~

~~C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against CONTRACTOR, Subcontractors, ENGINEER, or ENGINEER's Consultants and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them.~~

#### 5.08 *Receipt and Application of Insurance Proceeds*

~~A. Any insured loss under the policies of insurance required by paragraph 5.06 will be adjusted with OWNER and made payable to OWNER as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.08.B. OWNER shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.~~

~~B. OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, OWNER as fiduciary shall give bond for the proper performance of such duties.~~

#### 5.09 *Acceptance of Bonds and Insurance; Option to Replace*

~~A.—If either OWNER or CONTRACTOR has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.~~

#### 5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

### ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

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#### 6.01 *Supervision and Superintendence*

A. CONTRACTOR shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of OWNER or ENGINEER in the design or specification of a specific means, method, technique, sequence, or procedure of

construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.

#### 6.02 Labor; Working Hours

A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without OWNER's written consent (which will not be unreasonably withheld) given after prior written notice to ENGINEER.

#### 6.03 Services, Materials, and Equipment

A. Unless otherwise specified in the General Requirements, CONTRACTOR shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier,

except as otherwise may be provided in the Contract Documents.

#### 6.04 Progress Schedule

A. CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.07 as it may be adjusted from time to time as provided below.

1. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.07) proposed adjustments in the progress schedule that will not result in changing the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of Article 12. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

#### 6.05 Substitutes and "Or-Equals"

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to ENGINEER for review under the circumstances described below.

1. "Or-Equal" Items: If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment ENGINEER determines that: (i) it

is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

b. CONTRACTOR certifies that: (i) there is no increase in cost to the OWNER; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

## 2. Substitute Items

a. If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR.

c. The procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d, as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.

d. CONTRACTOR shall first make written application to ENGINEER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use

of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute item. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute item.

*B. Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.05.A.2.

*C. Engineer's Evaluation:* ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.05.A and 6.05.B. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until ENGINEER's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." ENGINEER will advise CONTRACTOR in writing of any negative determination.

*D. Special Guarantee:* OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

*E. ENGINEER's Cost Reimbursement:* ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 6.05.A.2 and 6.05.B and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of

ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.

F. *CONTRACTOR's Expense*: CONTRACTOR shall provide all data in support of any proposed substitute or "or-equal" at CONTRACTOR's expense.

#### 6.06 Concerning Subcontractors, Suppliers, and Others

A. CONTRACTOR shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to OWNER as indicated in paragraph 6.06.B), whether initially or as a replacement, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to OWNER in advance for acceptance by OWNER by a specified date prior to the Effective Date of the Agreement, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. CONTRACTOR shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by OWNER of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

C. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other individual or entity, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR.

E. CONTRACTOR shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with ENGINEER through CONTRACTOR.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.06, the agreement between the CONTRACTOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, CONTRACTOR will obtain the same.

#### 6.07 *Patent Fees and Royalties*

A. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. To the fullest extent permitted by Laws and Regulations,

CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees or agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

#### 6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto, such as plant investment fees.

#### 6.09 *Laws and Regulations*

A. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

B. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work may be the subject of an adjustment in Contract Price or Contract Times. If OWNER and CONTRACTOR are

unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in paragraph 10.05.

#### 6.10 *Taxes*

- A. CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.
- B. OWNER qualifies for state and local sales tax exemption in the purchase of all material and equipment.

#### 6.11 *Use of Site and Other Areas*

##### A. *Limitation on Use of Site and Other Areas*

1. CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant, and the officers, directors, partners, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.



B. *Removal of Debris During Performance of the Work:* During the progress of the Work CONTRACTOR shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work CONTRACTOR shall clean the Site and make it ready for utilization by OWNER. At the completion of the Work CONTRACTOR shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

#### 6.12 Record Documents

A. CONTRACTOR shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to ENGINEER for OWNER.

#### 6.13 Safety and Protection

A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for

removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury, or loss to any property referred to in paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

#### 6.14 Safety Representative

A. CONTRACTOR shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

#### 6.15 Hazard Communication Programs

A. CONTRACTOR shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

#### 6.16 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, CONTRACTOR is obligated to act to

prevent threatened damage, injury, or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If ENGINEER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued.

#### 6.17 Shop Drawings and Samples

A. CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. All submittals will be identified as ENGINEER may require and in the number of copies specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show ENGINEER the services, materials, and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.17.E.

B. CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers, and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.17.E. The numbers of each Sample to be submitted will be as specified in the Specifications.

C. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER as required by paragraph 2.07, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

#### D. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. all materials with respect to intended use, fabrication, shipping, handling, storage,

assembly, and installation pertaining to the performance of the Work;

c. all information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto; and

d. CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.

3. At the time of each submittal, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

#### E. ENGINEER's Review

1. ENGINEER will timely review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER. ENGINEER's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. ENGINEER's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. ENGINEER's review and approval of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of each submittal as required by paragraph 6.17.D.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.17.D.1.

#### F. Resubmittal Procedures

1. CONTRACTOR shall make corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

#### 6.18 Continuing the Work

A. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.04 or as OWNER and CONTRACTOR may otherwise agree in writing.

#### 6.19 CONTRACTOR's General Warranty and Guarantee

A. CONTRACTOR warrants and guarantees to OWNER, ENGINEER, and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be defective. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, Suppliers, or any other individual or entity for whom CONTRACTOR is responsible; or

2. normal wear and tear under normal usage.

B. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release

of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents:

1. observations by ENGINEER;
2. recommendation by ENGINEER or payment by OWNER of any progress or final payment;
3. the issuance of a certificate of Substantial Completion by ENGINEER or any payment related thereto by OWNER;
4. use or occupancy of the Work or any part thereof by OWNER;
5. any acceptance by OWNER or any failure to do so;
6. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER;
7. any inspection, test, or approval by others; or
8. any correction of defective Work by OWNER.

#### 6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:

1. is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom; and

2. is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of an individual or entity indemnified hereunder or

whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.

B. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of CONTRACTOR under paragraph 6.20.A shall not extend to the liability of ENGINEER and ENGINEER's Consultants or to the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

## ARTICLE 7 - OTHER WORK

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### 7.01 *Related Work at Site*

A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to CONTRACTOR prior to starting any such other work; and
2. if OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in paragraph 10.05.

B. CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the other work with OWNER's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

C. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to so report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent defects and deficiencies in such other work.

### 7.02 *Coordination*

A. If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
2. the specific matters to be covered by such authority and responsibility will be itemized; and
3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility for such coordination.

## ARTICLE 8 - OWNER'S RESPONSIBILITIES

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### 8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through ENGINEER.

### 8.02 *Replacement of ENGINEER*

A. In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer to whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER.

### 8.03 *Furnish Data*

A. OWNER shall promptly furnish the data required of OWNER under the Contract Documents.

### 8.04 *Pay Promptly When Due*

A. OWNER shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.02.C and 14.07.C.

### 8.05 *Lands and Easements; Reports and Tests*

A. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.01 and 4.05. Paragraph 4.02 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by ENGINEER in preparing the Contract Documents.

### 8.06 *Insurance*

A. OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

### 8.07 *Change Orders*

A. OWNER is obligated to execute Change Orders as indicated in paragraph 10.03.

### 8.08 *Inspections, Tests, and Approvals*

A. OWNER's responsibility in respect to certain inspections, tests, and approvals is set forth in paragraph 13.03.B.

### 8.09 *Limitations on OWNER's Responsibilities*

A. The OWNER shall not supervise, direct, or have control or authority over, nor be responsible for, CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. OWNER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

### 8.10 *Undisclosed Hazardous Environmental Condition*

A. OWNER's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in paragraph 4.06.

### 8.11 *Evidence of Financial Arrangements*

A. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

## ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

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### 9.01 *OWNER'S Representative*

A. ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and will not be changed without written consent of OWNER and ENGINEER.

### 9.02 *Visits to Site*

A. ENGINEER will make visits to the Site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR's executed Work. Based on information obtained during such visits and observations, ENGINEER, for the benefit of OWNER, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will

conform generally to the Contract Documents. On the basis of such visits and observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defective Work.

B. ENGINEER's visits and observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.10, and particularly, but without limitation, during or as a result of ENGINEER's visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work.

### 9.03 *Project Representative*

A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.10 and in the Supplementary Conditions. If OWNER designates another representative or agent to represent OWNER at the Site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

### 9.04 *Clarifications and Interpretations*

A. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a written clarification or interpretation, a Claim may be made therefor as provided in paragraph 10.05.

### 9.05 *Authorized Variations in Work*

A. ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ~~These may be accomplished by a Field~~

~~Order and will be binding on OWNER and also on CONTRACTOR, who shall perform the Work involved promptly. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of a Field Order, a Claim may be made therefor as provided in paragraph 10.05.~~

### 9.06 *Rejecting Defective Work*

A. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, or that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the Work as provided in paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

### 9.07 *Shop Drawings, Change Orders and Payments*

A. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraph 6.17.

B. In connection with ENGINEER's authority as to Change Orders, see Articles 10, 11, and 12.

C. In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

### 9.08 *Determinations for Unit Price Work*

A. ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR the ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). ENGINEER's written decision thereon will be final and binding (except as modified by ENGINEER to reflect changed factual conditions or more accurate data) upon OWNER and CONTRACTOR, subject to the provisions of paragraph 10.05.

### 9.09 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Times will be referred

initially to ENGINEER in writing, in accordance with the provisions of paragraph 10.05, with a request for a formal decision.

B. When functioning as interpreter and judge under this paragraph 9.09, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to this paragraph 9.09 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.07) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

#### 9.10 *Limitations on ENGINEER's Authority and Responsibilities*

A. Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by ENGINEER shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. ENGINEER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

C. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this paragraph 9.10 shall also apply to ENGINEER's Consultants, Resident Project Representative, and assistants.

## ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

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### 10.01 *Authorized Changes in the Work*

A. Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in paragraph 10.05.

### 10.02 *Unauthorized Changes in the Work*

A. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in paragraph 3.04, except in the case of an emergency as provided in paragraph 6.16 or in the case of uncovering Work as provided in paragraph 13.04.B.

### 10.03 *Execution of Change Orders*

A. OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:

1. changes in the Work which are: (i) ordered by OWNER pursuant to paragraph 10.01.A, (ii) required because of acceptance of defective Work under paragraph 13.08.A or OWNER's correction of defective Work under paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of

any written decision rendered by ENGINEER pursuant to paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.18.A.

#### 10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility. The amount of each applicable Bond will be adjusted to reflect the effect of any such change.

#### 10.05 *Claims and Disputes*

A. *Notice:* Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to ENGINEER and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the ENGINEER and the other party to the Contract within 60 days after the start of such event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to ENGINEER and the claimant within 30 days after receipt of the claimant's last submittal (unless ENGINEER allows additional time).

B. *ENGINEER's Decision:* ENGINEER will render a formal decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. ENGINEER's written decision on such Claim, dispute, or other matter will be final and binding upon OWNER and CONTRACTOR unless:

1. an appeal from ENGINEER's decision is taken within the time limits and in accordance with the dispute resolution procedures set forth in Article 16; or

2. if no such dispute resolution procedures have been set forth in Article 16, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within 30 days after the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.

C. If ENGINEER does not render a formal decision in writing within the time stated in paragraph 10.05.B, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. No Claim for an adjustment in Contract Price or Contract Times (or Milestones) will be valid if not submitted in accordance with this paragraph 10.05.

### ARTICLE 11 - COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

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#### 11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to CONTRACTOR will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in paragraph 11.01.B.

~~1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Such employees shall include without limitation superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full~~



~~time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.~~

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

3. Payments made by CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER, who will then determine, with the advice of ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equip-

ment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of CONTRACTOR.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.

i. When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim.

j. When all the Work is performed on the basis of cost-plus, the costs of premiums for all Bonds and insurance CONTRACTOR is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by CONTRACTOR, whether at the Site or in CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.01.A.1 or specifically covered by paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the CONTRACTOR's fee.

2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site.

3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.

4. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.01.A and 11.01.B.

C. *CONTRACTOR's Fee:* When all the Work is performed on the basis of cost-plus, CONTRACTOR's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change

Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, CONTRACTOR's fee shall be determined as set forth in paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to paragraphs 11.01.A and 11.01.B, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

## 11.02 Cash Allowances

A. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

1. the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

B. Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

## 11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER subject to the provisions of paragraph 9.08.

B. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

C. OWNER or CONTRACTOR may make a Claim for an adjustment in the Contract Price in accordance with paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
2. there is no corresponding adjustment with respect any other item of Work; and
3. if CONTRACTOR believes that CONTRACTOR is entitled to an increase in Contract Price as a result of having incurred additional expense or OWNER believes that OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

## ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

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### 12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03 ); or
2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 12.01.C.2); or
3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not

reached under paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 12.01.C).

C. *CONTRACTOR's Fee*: The CONTRACTOR's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
  - a. for costs incurred under paragraphs 11.01.A.1 and 11.01.A.2, the CONTRACTOR's fee shall be 15 percent;
  - b. for costs incurred under paragraph 11.01.A.3, the CONTRACTOR's fee shall be five percent;
  - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
  - d. no fee shall be payable on the basis of costs itemized under paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
  - e. the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and
  - f. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

### 12.02 *Change of Contract Times*

A. The Contract Times (or Milestones) may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract

Times (or Milestones) shall be based on written notice submitted by the party making the claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. Any adjustment of the Contract Times (or Milestones) covered by a Change Order or of any Claim for an adjustment in the Contract Times (or Milestones) will be determined in accordance with the provisions of this Article 12.

#### 12.03 *Delays Beyond CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in paragraph 12.02.A. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

#### 12.04 *Delays Within CONTRACTOR's Control*

A. The Contract Times (or Milestones) will not be extended due to delays within the control of CONTRACTOR. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

#### 12.05 *Delays Beyond OWNER's and CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay.

#### 12.06 *Delay Damages*

A. In no event shall OWNER or ENGINEER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

1. delays caused by or within the control of CONTRACTOR; or
2. delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal

weather conditions, acts of God, or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

B. Nothing in this paragraph 12.06 bars a change in Contract Price pursuant to this Article 12 to compensate CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible.

### ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

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#### 13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which OWNER or ENGINEER has actual knowledge will be given to CONTRACTOR. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

#### 13.02 *Access to Work*

A. OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of OWNER, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's Site safety procedures and programs so that they may comply therewith as applicable.

#### 13.03 *Tests and Inspections*

A. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

~~B. OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:~~

~~1. for inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D below;~~

~~2. that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.B; and~~

~~3. as otherwise specifically provided in the Contract Documents.~~

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection or approval.

D. CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to OWNER and ENGINEER.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.

F. Uncovering Work as provided in paragraph 13.03.E shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

#### 13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.

B. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory

replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

#### 13.05 *OWNER May Stop the Work*

~~A. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.~~

#### 13.06 *Correction or Removal of Defective Work*

A. CONTRACTOR shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by ENGINEER, remove it from the Project and replace it with Work that is not defective. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

#### 13.07 *Correction Period*

~~A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for CONTRACTOR's use by OWNER or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be~~

~~defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced, and all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.~~

~~B. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.~~

C. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

D. CONTRACTOR's obligations under this paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

### 13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to ENGINEER's recommendation of final payment, ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to OWNER's evaluation of and determination to accept such defective Work (such costs to be approved by ENGINEER as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by

CONTRACTOR pursuant to this sentence. If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and OWNER shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

### 13.09 *OWNER May Correct Defective Work*

A. If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.06.A, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days written notice to CONTRACTOR, correct and remedy any such deficiency.

B. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors, and ENGINEER and ENGINEER's Consultants access to the Site to enable OWNER to exercise the rights and remedies under this paragraph.

C. All Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by OWNER in exercising the rights and remedies under this paragraph 13.09 will be charged against CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, OWNER may make a Claim therefor as provided in paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction,

removal, or replacement of CONTRACTOR's defective Work.

D. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies under this paragraph 13.09.

## ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

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### 14.01 *Schedule of Values*

A. The schedule of values established as provided in paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

### 14.02 *Progress Payments*

#### A. *Applications for Payments*

1. At least 20 days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect OWNER's interest therein, all of which must be satisfactory to OWNER.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the Work have been applied on account to discharge CONTRACTOR's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

#### B. *Review of Applications*

1. ENGINEER will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

2. ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's observations on the Site of the executed Work as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of ENGINEER's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.08, and to any other qualifications stated in the recommendation); and

c. The conditions precedent to CONTRACTOR's being entitled to such payment appear to have been fulfilled in so far as it is ENGINEER's responsibility to observe the Work.

3. By recommending any such payment ENGINEER will not thereby be deemed to have represented that: (i) inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents; or (ii) that there may not be other matters or issues between the parties that might entitle

CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

4. Neither ENGINEER's review of CONTRACTOR's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment, including final payment, will impose responsibility on ENGINEER to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to OWNER free and clear of any Liens.

5. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.02.B.2. ENGINEER may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Written Amendment or Change Orders;

c. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or

~~d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.~~

#### C. *Payment Becomes Due*

~~1. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of paragraph 14.02.D) become due, and when due will be paid by OWNER to CONTRACTOR.~~

#### D. *Reduction in Payment*

1. OWNER may refuse to make payment of the full amount recommended by ENGINEER because:

a. claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;

c. there are other items entitling OWNER to a set-off against the amount recommended; or

d. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02.B.5.c or paragraph 15.02.A.

2. If OWNER refuses to make payment of the full amount recommended by ENGINEER, OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action and promptly pay CONTRACTOR any amount remaining after deduction of the amount so withheld. OWNER shall promptly pay CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to OWNER's satisfaction the reasons for such action.

3. If it is subsequently determined that OWNER's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by paragraph 14.02.C.1.

#### 14.03 *CONTRACTOR's Warranty of Title*

A. CONTRACTOR warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

#### 14.04 *Substantial Completion*

A. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of



Substantial Completion. Promptly thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefore. ~~If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within 14 days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said 14 days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.~~

B. OWNER shall have the right to exclude CONTRACTOR from the Site after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

#### 14.05 *Partial Utilization*

A. Use by OWNER at OWNER's option of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the

Work, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.

1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

2. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

#### 14.06 *Final Inspection*

A. Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will promptly make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

#### 14.07 *Final Payment*

##### A. *Application for Payment*

1. After CONTRACTOR has, in the opinion of ENGINEER, satisfactorily completed all corrections identified during the final

inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04.B.7; (ii) consent of the surety, if any, to final payment; and (iii) complete and legally effective releases or waivers (satisfactory to OWNER) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

#### B. *Review of Application and Acceptance*

1. If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application for Payment to OWNER for payment. At the same time ENGINEER will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.09. Otherwise, ENGINEER will return the Application for Payment to CONTRACTOR, indicating in writing the reasons for refusing to recommend final

payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application for Payment.

#### C. *Payment Becomes Due*

~~1. Thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR.~~

#### 14.08 Final Completion Delayed

A. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

#### 14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by CONTRACTOR against OWNER other than those previously made in writing which are still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

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15.01 OWNER May Suspend Work

A. At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. ~~CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes a Claim therefor as provided in paragraph 10.05.~~

15.02 OWNER May Terminate for Cause

A. The occurrence of any one or more of the following events will justify termination for cause:

1. CONTRACTOR's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);
2. CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;
3. CONTRACTOR's disregard of the authority of ENGINEER; or
4. CONTRACTOR's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site, and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages

(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by OWNER arising out of or relating to completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and, when so approved by ENGINEER, incorporated in a Change Order. When exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

C. Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.03 OWNER May Terminate For Convenience

A. Upon seven days written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

1. for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
2. for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
3. for all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
4. for reasonable expenses directly attributable to termination.

B. CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

#### 15.04 *CONTRACTOR May Stop Work or Terminate*

A. If, through no act or fault of CONTRACTOR, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within 30 days after it is submitted, ~~or OWNER fails for 30 days to pay CONTRACTOR any sum finally determined to be due~~, then CONTRACTOR may, upon seven days written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Contract and recover from OWNER payment on the same terms as provided in paragraph 15.03. In lieu of terminating the Contract and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within 30 days after it is submitted, ~~or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due~~, CONTRACTOR may, seven days after written notice to OWNER and ENGINEER, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude CONTRACTOR from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping the Work as permitted by this paragraph.

### ARTICLE 16 - DISPUTE RESOLUTION

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#### 16.01 *Methods and Procedures*

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

### ARTICLE 17 - MISCELLANEOUS

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#### 17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in

person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

#### 17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

#### 17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

#### 17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Agreement.

#### 17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

**SECTION 00800 - SUPPLEMENTARY CONDITION TO THE  
GENERAL CONDITIONS**

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## SECTION 00800 - SUPPLEMENTARY CONDITIONS TO THE GENERAL CONDITIONS

### SC-1.00 Introduction

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 Edition) and other provisions of the Contract Documents as indicated below. All provisions, which are not so amended or supplemented, remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in the General Conditions.

### SC-1.01 Defined Terms

SC-1.01.A.20 *Add the following language to the end of GC 1.01.A.20.*

|                   |                       |
|-------------------|-----------------------|
| OWNER's Engineer: | REI Engineers         |
|                   | 857 County Road 1     |
|                   | Palm Harbor, FL 33683 |

SC-1.01.A.21. Delete paragraph GC 1.01.A.21 in its entirety.

### SC-1.02 Terminology

SC-1.02.D.1, 2, and 3 *Delete paragraphs GC-1.02.D.1, 2, and 3 in their entirety and insert the following paragraphs in their place:*

#### D. *Furnish, Install, Perform, Provide*

1. The word "furnish" shall mean to supply and deliver services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word "install" shall mean to put into use or place in final position services, materials, or equipment complete and ready for intended use.
3. The words "perform" or "provide" shall mean to furnish and install services, materials, or equipment complete and ready for intended use.

### SC-2.05 Before Starting Construction

SC-2.05.C. *Delete paragraph GC 2.05.C in its entirety and insert the following paragraph in its place:*

- C. Evidence of Insurance: CONTRACTOR shall not commence work under this Contract until he has obtained all insurance required under Article 5 and such insurance has been delivered to the OWNER and approved by the OWNER, nor shall the CONTRACTOR allow any Subcontractor to commence work on his subcontract until all similar insurance required of the Subcontractor has been so obtained and approved. All such insurance shall remain in effect until final payment and at all times thereafter when CONTRACTOR may be correcting, removing or replacing *defective* Work in accordance with Article 13.

### SC-2.06 Preconstruction Conference

SC-2.06 *Delete paragraph GC-2.06.A in its entirety and insert the following paragraph in its place:*

A. Immediately after awarding the contract, but before the CONTRACTOR begins work,

the Project Manager will call a preconstruction conference at a place the ENGINEER designates to establish an understanding among the parties as to the work and to discuss schedules referred to in paragraph 2.05.B, procedures for handling Shop Drawings and other submittals, and maintaining required records. Utility companies and others as appropriate will be requested to attend to discuss and coordinate work.

- B. Per the FDOT Standard Specifications for Road and Bridge Construction, the Contractor will certify to the Engineer the following:
1. A listing of on-site clerical staff, supervisory personnel and their pro-rated time assigned to the contract,
  2. Actual Rate for items listed in Table 4-3.2.1 (see below),
  3. Existence of employee benefit plan for Holiday, Sick and Vacation benefits and a Retirement Plan, and,
  4. Payment of Per Diem is a company practice for instances when compensation for Per Diem is requested.

Such certification must be made by an officer or director of the Contractor with authority to bind the Contractor. Timely certification is a condition precedent to any right of the Contractor to recover compensations for such costs, and failure to timely submit the certification will constitute a full, complete, absolute and irrevocable waiver by the Contractor of any right to recover such costs. Any subsequent changes shall be certified to the Engineer as part of the cost proposal or seven calendar days in advance of performing such extra work.

| FDOT Table 4-3.2.1  |   |
|---|---|
| Item  | Rate  |
| FICA  | Rate established by Law   |
| FUTA/SUTA   | Rate established by Law   |
| Medical Insurance   | Actual  |
| Holidays, Sick & Vacation Benefits  | Actual  |
| Retirement Benefits   | Actual  |
| Workers Compensation  | Rates based on the National Council on Compensation Insurance basic rates tables adjusted by Contractor's actual experience modification factor in effect at the time of the additional work or unforeseen work |
| Per Diem  | Actual but not to exceed State of Florida's rate  |
| Insurance*  | Actual  |
| *Compensation for Insurance is limited solely to General Liability Coverage and does not include any other insurance coverage (such as, but not limited to, Umbrella Coverage, Automobile Insurance, etc.). |   |

**SC-3.06 Coordination of Plans, Specifications, and Special Provisions**

SC-3.06 Add the following new paragraphs immediately after paragraph GC-3.05:

*SC-3.06 Coordination of Plans, Specifications, and Special Provisions*

- A. In case of discrepancy, the governing order of the documents shall be as follows:
1. Written Interpretations
  2. Addenda
  3. Specifications
  4. Supplementary Conditions to the General Conditions
  5. General Conditions
  6. Approved Shop Drawings

7. Drawings
  8. Referenced Standards.
- B. Written/computed dimensions shall govern over scaled dimensions.

### **SC-5.01 Performance, Payment and Other Bonds**

SC-5.01.A. *Delete paragraph GC-5.01.A in its entirety and insert the following paragraphs in its place:*

Within fifteen (15) days of receipt of the Contract Documents for execution, the CONTRACTOR shall furnish a Public Construction Bond in an amount equal to 100% of the Contract Price.

1. In lieu of the Public Construction Bond, the CONTRACTOR may furnish an alternative form of security in the form of cash, money order, certified check, cashier's check, irrevocable letter of credit or a security as listed in Part II of F.S. Chapter 625. Any such alternative form of security shall be for the same purpose, and be for the same amount and subject to the same conditions as those applicable to the bond otherwise required. The determination of the value of an alternative form of security shall be made by the OWNER.
2. Such Bond shall continue in effect for one (1) year after acceptance of the Work by the OWNER.
3. The OWNER shall record the Public Construction Bond with the Public Record Section of the Indian River County Courthouse located at 2000 16th Avenue, Vero Beach, Florida 32960.

### **SC-5.03 Certificates of Insurance**

SC-5.03 *Delete the second sentence of paragraph GC-5.03 in its entirety.*

### **SC-5.04 CONTRACTOR's Liability Insurance**

SC-5.04 *Add the following new paragraphs immediately after paragraph GC-5.04.B:*

- C. The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
  1. Worker's Compensation: To meet statutory limits in compliance with the Worker's Compensation Law of Florida. This policy must include Employer Liability with a limit \$100,000 for each accident, \$500,000 disease (policy limit) and \$100,000 disease (each employee). Such policy shall include a waiver of subrogation as against OWNER and ENGINEER on account of injury sustained by an employee(s) of the CONTRACTOR.
  2. Commercial General Liability: Coverage shall provide minimum limits of liability of \$1,000,000 per occurrence Combined Single Limit for Bodily Injury and Property Damage. This shall include coverage for:
    - a. Premises/Operations
    - b. Products/Completed Operations
    - c. Contractual Liability
    - d. Independent Contractors
    - e. Explosion
    - f. Collapse
    - g. Underground.



3. Business Auto Liability: Coverage shall provide minimum limits of liability of \$1,000,000 per occurrence Combined Single Limit for Bodily Injury and Property Damage. This shall include coverage for:
    - a. Owned Autos, and other vehicles
    - b. Hired Autos, and other vehicles
    - c. Non-Owned Autos, and other vehicles.
  4. Special Requirements:
    - a. Ten (10) days prior to the commencement of any work under this Contract, certificates of insurance and endorsement forms in the exact wording and format as presented in these Contract Documents will be provided to the OWNER's Risk Manager for review and approval.
    - b. "Indian River County Florida" will be named as "Additional Insured" on both the General Liability and Auto Liability.
    - c. The OWNER will be given thirty (30) days notice prior to cancellation or modification of any stipulated insurance. Such notification will be in writing by registered mail, return receipt requested and addressed to the OWNER's Risk Manager.
    - d. An appropriate "Indemnification" clause shall be made a provision of the Contract (see paragraph 6.20 of the General Conditions).
    - e. It is the responsibility of the CONTRACTOR to insure that all subcontractors comply with all insurance requirements.
    - f. It should be remembered that these are minimum requirements, which are subject to modification in response to high hazard operation.
    - g. Insured must be authorized to do business and have an agent for service of process in Florida and have Best's Rating of A-VII or better.
    - h. All insurance requirements shall be at the Contractor's sole cost and expense, including any deductible or self-insured retention, without contribution from Indian River County or its insurance carriers.
- D. Additional Insureds:
1. In addition to "Indian River County, Florida," the following individuals or entities shall be listed as "additional insureds" on the CONTRACTOR's liability insurance policies:
    - a. N/A
- E. Contractor shall be responsible for any deductible or self-insured retention.

#### **SC-5.05 OWNER's Liability Insurance**

SC-5.05 *Delete paragraph GC-5.05.A in its entirety.*

#### **SC-5.06 Property Insurance**

SC-5.06 *Delete paragraphs GC-5.06.A, B, and C in their entirety and insert the following paragraphs in their place:*

- A. CONTRACTOR shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. This insurance shall:
  1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents and other consultants

and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "All Risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER; and
5. allow for partial utilization of the Work by OWNER;
6. include testing and startup; and
7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. CONTRACTOR shall be responsible for any deductible or self-insured retention.

C. The policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with this paragraph SC-5.06 shall comply with the requirements of paragraph 5.06.C of the General Conditions.

SC-5.06.E *Delete paragraph GC-5.06.E in its entirety and insert the following in its place:*

E. Additional Insureds:

1. The following individuals or entities shall be listed as "additional insureds" on the CONTRACTOR's property insurance policies:
  - a. N/A

#### **SC-5.07 Waiver of Rights**

SC-5.07 *Delete GC-5.07 (paragraphs A, B, and C) in its entirety.*

#### **SC-5.08 Receipt and Application of Insurance Proceeds**

SC-5.08 *Delete GC-5.08 (paragraphs A and B) in its entirety.*

#### **SC-5.09 Acceptance of Bonds and Insurance; Option to Replace**

SC-5.09 *Delete GC-5.09 (paragraph A) in its entirety.*

**SC-6.02 Labor; Working Hours**

SC-6.02.B. *Add the following paragraphs immediately after paragraph GC-6.02.B:*

1. Regular working hours are defined as Monday through Friday, excluding Indian River County Holidays, from 7 a.m. to 5 p.m.
2. Indian River County Holidays are: New Year's Day, Martin Luther King, Jr. Day, Good Friday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving, Christmas Eve and Christmas Day. Working on these days will not be permitted without prior written permission and approval from the Construction Coordination Manager.
3. The CONTRACTOR shall receive no additional compensation for overtime work, i.e., work in excess of eight hours in any one calendar day or 40 hours in any one calendar week, even though such overtime work may be required under emergency conditions and may be ordered by the ENGINEER in writing.
4. All costs of inspection and testing performed during overtime work by the CONTRACTOR, which is allowed solely for the convenience of the CONTRACTOR, shall be borne by the CONTRACTOR, and a credit given to the OWNER to deduct the costs of all such inspection and testing from any payments otherwise due the CONTRACTOR.
5. All costs of OWNER's employees and costs of ENGINEER's Consultant resulting from overtime work by the CONTRACTOR, which is allowed solely for the convenience of the CONTRACTOR, shall be borne by the CONTRACTOR, and a credit given to OWNER to deduct all such costs from any payments otherwise due the CONTRACTOR.
6. No work shall commence before 7 a.m. or continue after 5 p.m. except in case of emergency upon specific permission of the ENGINEER.

**SC-6.06 Concerning Subcontractors, Suppliers, and Others**

SC-6.06.C. *Add the following sentence at the end of paragraph GC-6.06.C:*

OWNER or ENGINEER may furnish to any such Subcontractor, Supplier, or other individual or entity, to the extent practicable, information about amounts paid to CONTRACTOR on account of Work performed for CONTRACTOR by a particular Subcontractor, Supplier, or other individual or entity.

**SC-6.08 Permits**

SC-6.08 *Add the following paragraphs immediately after paragraph GC-6.08.A:*

1. The OWNER has obtained the following permits (copies of these permits are contained in Appendix A):  
N/A
2. The CONTRACTOR shall obtain and pay for all other required permits and licenses. The CONTRACTOR shall provide copies of the permits to the OWNER and ENGINEER and shall comply with all conditions contained in the permits at no extra cost to the OWNER.
3. The CONTRACTOR shall be familiar with all permit requirements during construction and shall be responsible for complying with these requirements. The cost of this effort shall be included in the pay item in which the work is most closely associated with.

**SC-9.05 Authorized Variations in Work**

SC-9.05.A. *Delete the second sentence in paragraph GC-9.05.A in its entirety.*

**SC-11.01 Cost of the Work**

SC-11.01.A.1. *Delete paragraph GC-11.01.A.1 in its entirety, and insert the following sentences in its place:*

1. CONTRACTOR will receive payment for actual costs of direct labor and burden (see SC-2.06.B) for the additional or unforeseen work. Labor includes foremen actually engaged in the work; and will not include project supervisory personnel nor necessary on-site clerical staff, except when the additional or unforeseen work is a controlling work item and the performance of such controlling work item actually extends completion of the project due to no fault of the Contractor. Compensation for project supervisory personnel, but in no case higher than a Project Manager's position, shall only be for the pro-rata time such supervisory personnel spent on the contract. In no case shall an officer or director of the Company, nor those persons who own more than 1% of the Company, be considered as project supervisory personnel, direct labor or foremen hereunder. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.

**SC-13.03 Test and Inspections**

SC-13.03.B. *Delete paragraph GC-13.03.B in its entirety, and insert the following sentences in its place:*

- B. OWNER shall employ and pay for the services of an independent testing laboratory to perform all initial inspections, tests, or approvals required by the Contract Documents except those inspections, tests, or approvals listed immediately below. Subsequent inspections, tests, or approvals required after initial failing inspections, tests, or approvals shall be paid for by the CONTRACTOR by back charge to subsequent applications for payment. The CONTRACTOR shall arrange, obtain, and pay for the following inspections, tests, or approvals:
1. inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D below;
  2. costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.B;
  3. tests otherwise specifically provided in the Contract Documents.

**SC-13.05 OWNER May Stop the Work**

SC-13.05.A. *Delete paragraph GC-13.05.A in its entirety and insert the following paragraph in its place:*

- A. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to comply with permit requirements, or fails to comply with the technical specifications, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

**SC-13.07 Correction Period**

SC-13.07 A. *Delete the first sentence of paragraph GC-13.07.A in its entirety and insert the following sentence in its place*

- A. If within one year after the date of Final Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for CONTRACTOR's use by OWNER or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

SC-13.07 B. *Delete paragraph GC-13.07.B in its entirety and insert the following sentence in its place*

- B. In special circumstances where a particular item of equipment is placed in continuous service before Final Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

**SC-14.02 Progress Payments**

SC-14.02.B.5. *Delete paragraph GC-14.02.B.5.d in its entirety and insert the following paragraph in its place:*

- d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A; or

SC-14.02.B.5. *Add the following sentences at the end of paragraph GC-14.02.B.5:*

- e. OWNER has been required to pay ENGINEER additional compensation because of CONTRACTOR delays or rejection of defective Work; or
- f. OWNER has been required to pay an independent testing laboratory for subsequent inspections, tests, or approvals taken after initial failing inspections, tests, or approvals.

SC-14.02.C.1. *Delete paragraph GC-14.02.C.1 in its entirety and insert the following paragraph in its place:*

- C. Payment Becomes Due
1. Payment shall be made by OWNER to CONTRACTOR according to the Local Government Prompt Payment Act. F.S. 218.70 et. seq.

**SC-14.04 Substantial Completion**

SC-14.04A. *After the third sentence in paragraph GC-14.04A of the General Conditions, delete the remainder of paragraph 14.04A in its entirety and replace with the following:*

“If Engineer considers the Work substantially complete, Engineer will prepare and deliver to Owner a tentative certificate of Substantial Completion that shall fix the date of Substantial Completion. In accordance with the provisions of Florida Statutes section 208.735(7)(a)(2005), upon receipt of the tentative certificate of Substantial Completion from Engineer, the Owner, the Engineer, and the Contractor shall conduct a walk-through inspection of the Project to document a list of any items required to render the Work on the Project complete, satisfactory, and acceptable under this Agreement (herein the “Statutory List”). The Statutory List shall be reduced to writing and circulated among the Owner, the Engineer, and the Contractor by the Owner or the Engineer within 30 calendar days after substantial completion. The Owner and Contractor acknowledge and agree that: 1) the failure to include any corrective work, or pending items that are not yet completed, on the Statutory List does not alter the responsibility of the Contractor to complete all of the Work under this Agreement; 2) upon completion of all items on the Statutory List, the Contractor may submit a pay request for all remaining retainage except as otherwise set forth in this Agreement; and 3) any and all items that require correction under this Agreement and that are identified after the preparation of the Statutory List remain the obligation of the Contractor to complete to the Owner’s satisfaction under this Agreement. After receipt of the Statutory List by the Contractor, the Contractor acknowledges and agrees that it will diligently proceed to complete all items on the Statutory List and schedule a final walk-through in anticipation of final completion on the Project.”

SC-14.04B *Add the following new paragraph immediately after paragraph GC 14.04B:*

C. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees

#### **SC-14.07 Final Payment**

SC-14.07.C.1. *Delete paragraph GC-14.07.C.1 in its entirety and insert the following paragraph in its place:*

C. Payment Becomes Due

1. Payment shall be made by OWNER to CONTRACTOR according to the “Local Government Prompt Payment Act” , Florida Statutes section 218.70, et. seq.

#### **SC-15.01 OWNER May Suspend Work**

SC-15.01.A *Delete the last sentence in paragraph GC-15.01.A and insert the following in its place:*  
 CONTRACTOR shall be allowed an extension of the Contract Times, directly attributable to any such suspension if CONTRACTOR makes a Claim for an extension as provided in paragraph 10.05. CONTRACTOR shall not be allowed an adjustment of the Contract Price and CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such Work suspension.

#### **SC-15.02 OWNER May Terminate For Cause**

SC-15.02.A.5 and SC-15.02.A.6 *Add the following new paragraphs immediately after paragraph GC-15.02.A.4:*

5. CONTRACTOR's violation of Section 02225 – "Erosion Control and Treatment of Dewatering Water From the Construction Site."
6. CONTRACTOR's failure to make payment to Subcontractors or Suppliers for materials or labor in accordance with the respective agreements between the CONTRACTOR and the Subcontractors or Suppliers.
7. CONTRACTOR certifies that it and its related entities as defined by Florida law are not on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725 of the Florida Statutes, and are not engaged in a boycott of Israel. In addition, if this agreement is for goods or services of one million dollars or more, CONTRACTOR certifies that it and its related entities as defined above by Florida law are not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to Section 215.473 of the Florida Statutes and are not engaged in business operations in Cuba or Syria.

OWNER may terminate this Contract if CONTRACTOR is found to have submitted a false certification as provided under section 287.135(5), Florida Statutes, been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or been engaged in business operations in Cuba or Syria, as defined by section 287.135, Florida Statutes.

OWNER may terminate this Contract if CONTRACTOR, including all wholly owned subsidiaries, majority-owned subsidiaries, and parent companies, that exist for the purpose of making profit, is found to have been placed on the Scrutinized Companies that Boycott Israel List or is engaged in a boycott of Israel as set forth in section 215.4725, Florida Statutes.

#### **SC-15.04 CONTRACTOR May Stop Work or Terminate**

SC-15.04 *Delete the following text from the first sentence of paragraph GC-15.04.A:*

~~or OWNER fails for 30 days to pay CONTRACTOR any sum finally determined to be due,~~

SC-15.04 *Delete the following text from the second sentence of paragraph GC-15.04.A:*

~~or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due,~~

#### **SC-16 Dispute Resolution**

##### **SC-16.02 Mediation**

SC-16 *Add the following new paragraph immediately after paragraph GC-16.01.*

##### SC-16.02 Mediation

- A. OWNER and CONTRACTOR agree that they shall submit any and all unsettled Claims or counterclaims, disputes, or other matters in question between them arising out of or relating to the Contract Documents or the breach thereof, to mediation by a certified mediator of the 19<sup>th</sup> Judicial Circuit in Indian River County unless delay in initiating mediation would irrevocably prejudice one of the parties. The mediator of any dispute

submitted to mediation under this agreement shall not serve as arbitrator of such dispute unless otherwise agreed.

## **SC-17 Miscellaneous**

### **SC-17.06 Liens**

*Add the following new paragraphs immediately after paragraph GC17.05:*

#### SC-17.06 Liens

- A. This project is a "Public Works" under Chapter 255, Florida Statutes. No merchant's liens may be filed against the OWNER. Any claimant may apply to the OWNER for a copy of this Contract. The claimant shall have a right of action against the CONTRACTOR for the amount due him. Such action shall not involve the OWNER in any expense. Claims against the CONTRACTOR are subject to timely prior notice to the CONTRACTOR as specified in Florida Statutes Section 255.05. The CONTRACTOR shall insert the following paragraph in all subcontracts hereunder:

"Notice: Claims for labor, materials and supplies are not assessable against Indian River County and are subject to proper prior notice to (CONTRACTOR'S Name) and to (CONTRACTOR Surety Company Name), pursuant to Chapter 255 of the Florida Statutes. This paragraph shall be inserted in every sub-subcontract hereunder." The payment due under the Contract shall be paid by the OWNER to the CONTRACTOR only after the CONTRACTOR has furnished the OWNER with an affidavit stating that all persons, firms or corporations who are defined in Section 713.01, Florida Statutes, who have furnished labor or materials, employed directly or indirectly in the Work, have been paid in full. The OWNER may rely on said affidavit at face value. The CONTRACTOR does hereby release, remiss and quit-claim any and all rights he may enjoy perfecting any lien or any other type of statutory common law or equitable lien against the job.

++END OF SUPPLEMENTARY CONDITIONS++



**Appendix A**

**Indian River County Building Division Permit Fee Schedule**

EFFECTIVE 10/11/21

| # | Permit Type  | Application Fee | Permit Fee  | Comments  |  |
|---|--|-----------------|---|---|--|
| 1 | <p><b>New Buildings,<br/>Alterations, Mobile<br/>and Modular Homes</b></p> | <p>\$200.00</p> | <p>0.4334% of ICC Building Valuation over<br/>\$46,146.75</p> | <p>Base permit fee includes subcontractor work (electrical, plumbing, mechanical, insulation, alarm, and irrigation) if subcontractor work is shown on the permit documents, if the value of the subcontractor work is included as part of the aggregate construction value and if subcontractor affidavits are submitted with the application. Commercial Site work and all Accessory Structures are excluded.</p> |  |
| 2 | <p><b>Additions, Alterations,<br/>Misc. Commercial</b></p>                 |                 |   |   |  |
|   |  |                 |   |   |  |

| Residential / Commercial Trade Permits |  |            |   | EFFECTIVE 10/11/21  |  |
|--|--|------------|---|---|--|
| #                                      | Permit Fee                                       | Comments   |   |   |  |
| 3                                      | Aboveground Swimming Pool                        | \$75.00    | Additional permit fee of 0.4334% of contract / work order valuation over \$17,305; permit fee due at time of application. Fee Includes one inspection. Trade permits requiring plan review subject to a \$55 plan review fee. |   |  |
| 4                                      | Burglar Alarm                                    | \$75.00    |   |   |  |
| 5                                      | Electric   | \$75.00    |   |   |  |
| 6                                      | Electrical                                       | \$75.00    |   |   |  |
| 7                                      | Electrical Service Change                        | \$75.00    |   |   |  |
| 8                                      | Electrical Temporary Pole                        | \$75.00    |   |   |  |
| 9                                      | Fence  | \$75.00    |   |   |  |
| 10                                     | Fuel Gas   | \$75.00    |   |   |  |
| 11                                     | In-fill Screening                                | \$75.00    |   |   |  |
| 12                                     | Insulation                                       | \$75.00    |   |   |  |
| 13                                     | Irrigation System                                | \$75.00    |   |   |  |
| 14                                     | Mechanical                                       | \$75.00    |   |   |  |
| 15                                     | Plumbing   | \$75.00    |   |   |  |
| 16                                     | Pool Barrier (excluding screened enclosure)      | \$75.00    |   |   |  |
| 17                                     | Pre-fabricated detached accessory structure      | \$75.00    |   |   |  |
| 18                                     | Residential Paving (Driveway, Patio Slab)        | \$75.00    |   |   |  |
| 19                                     | Solar water or PV                                | \$75.00    |   |   |  |
|  |  |            |   |   |  |
| Residential Specialty Permits          |  |            |   |   |  |
| #                                      | Permit Type                                      | Permit Fee | Comments  |   |  |
| 20                                     | Door / Window - Replacement / Hurricane Shutters | \$75.00    | Fee includes up to 4 components or openings   | Additional permit fee of 0.4334% of contract / work order valuation over \$17,305; permit fee due at time of application. Fee Includes one inspection. Trade permits requiring plan review subject to a \$55 plan review fee. |  |
| 21                                     | Door / Window - Replacement / Hurricane Shutters | \$200.00   | Greater than 4 components or openings   | Additional permit fee of 0.4334% of contract / work order valuation over \$46,146.75; permit fee due at time of application.  |  |
| 22                                     | Garage door replacement - (1Door)                | \$75.00    | \$25 for each additional door in the same building / unit   | Additional permit fee of 0.4334% of contract / work order valuation over \$17,305; permit fee due at time of application. Fee Includes one inspection. Trade permits requiring plan review subject to a \$55 plan review fee. |  |

| <b>Level-1 Specialty Permits</b>                            |  |                                    |  |   |   |
|---|--|------------------------------------|--|---|---|
| #   | Permit Type  | Permit Application Fee             | Comments   |   |   |
| 23  | Aluminum Structures                                    | \$200.00                           | Additional permit fee of 0.4334% of contract / work order valuation over \$46,146.75; permit fee due at time of application. |   |   |
| 24  | Sign   | \$200.00                           |  |   |   |
| 25  | Demolition   | \$200.00                           |  |   |   |
| 26  | Deck, Dock or Seawall                                  | \$200.00                           |  |   |   |
| 27  | Door or window replacement- Commercial                 | \$200.00                           |  |   |   |
| 28  | Garage doors replacement – Commercial                  | \$200.00                           |  |   |   |
| 29  | House Moving   | \$200.00                           |  |   | Separate Alteration permit required for foundation and improvements at relocation site. |
| 30  | Hurricane Shutters - Commercial                        | \$200.00                           |  |   |   |
| 31  | Site-Built Accessory Structure                         | \$200.00                           |  |   |   |
| 32  | Commercial Paving                                      | \$200.00                           |  |   |   |
| <b>Level-2 Residential and Commercial Specialty Permits</b> |  |                                    |  |   |   |
| #   | Permit Type  | Application Fee                    | Permit Fee   | Comments  |   |
| 33  | Miscellaneous Permits:<br>e.g: Fixed Station Generator |                                    | \$225.00   | Additional permit fee of 0.4334% of contract / work order valuation over \$51,916; permit fee due at time of application.   |   |
| 34  | Re-roofing   |                                    | \$225.00   |   |   |
| 35  | Residential Pool                                       |                                    | \$225.00   |   |   |
| 36  | Commercial Pool  | \$200.00                           | \$250.00   | Additional permit fee of 0.4334% of contract / work order valuation over \$57,685; permit fee due at time of application.   |   |
| <b>INSPECTION RELATED FEES</b>                              |  |                                    |  |   |   |
|   |  | FEE                                |  |   |   |
| 37  | Re-inspection fee                                      | \$45.00                            |  | [1] failure to comply with code/plan requirements. [2] unproductive inspector trip (unable to access the work or not ready for inspection). [3] Advisory Inspection requested by contractor or owner. |   |
| 38  | After-Hour Inspections                                 | \$50 / hour. Minimum 4-hour charge |  | Must be arranged 2 days in advance.   |   |
|   |  |                                    |  |   |   |
|   |  |                                    |  |   |   |

|                                    | <b>Plan Review</b>   | <b>FEE</b>  |  | <b>Comments</b>  |                    |
|------------------------------------|--|---|--|--|--------------------|
| 39                                 | 1st and 2nd Application / Plan Rejection / Modification        | \$100 each  |  | When content fails to meet sufficiency Requirement Check List (per state statute). | EFFECTIVE 10/11/24 |
| 40                                 | 3rd and subsequent Application / Plan Rejection / Modification | Four (4) times the original plan review fee (1/3 permit fee)  |  | When content fails to meet sufficiency Requirement Check List (per state statute). |                    |
| 41                                 | Revision - small format  | \$50.00   |  | one 8.5 x 11 sheet   |                    |
| 42                                 | Revision - large format  | \$100.00  |  | plan sheets - large format - or more than one 8.5x11                               |                    |
| 43                                 | Pre-Application Design Review                                  | \$100.00  |  |  |                    |
| <b>Contractor Licensing</b>        |  |   |  |  |                    |
|                                    |  | <b>FEE</b>  |  |  |                    |
| 44                                 | Competency Card Application Fee                                | \$50.00   |  |  |                    |
| 45                                 | Competency Card Renewal Fee                                    | \$50.00   |  |  |                    |
| <b>Administrative Service Fees</b> |  |   |  |  |                    |
|                                    |  | <b>FEE</b>  |  | <b>Comments</b>  |                    |
| 46                                 | Microfilm / Microfiche Document Requests Document Research     | See Archive Request form  |  |  |                    |
| 47                                 | Digital Document requests                                      | See Archive Request form  |  |  |                    |
| 48                                 | Paper documents from database or copier                        | 0.25* / 0.50** per page fee   |  | 8.5x11*, 8.5x14*, 11x17**  |                    |
| 49                                 | Change of contractor   | \$50.00   |  |  |                    |
| 50                                 | Change of sub-contractor                                       | \$20.00   |  |  |                    |
| <b>GENERAL INFORMATION</b>         |  |   |  |  |                    |
|                                    | <b>Valuation methodology</b>                                   | Valuation is based on the greater of contract value or latest ICC valuation table or as otherwise acceptable to the Building Official for specialty work not addressed by the ICC valuation table. The job valuation must include labor, overhead and profit. Valuation of total improvement (excluding land) shall be used.  |  |  |                    |
|                                    | <b>Penalties (statutory).</b>                                  | Any person who commences any work requiring a permit before obtaining the permit shall be subject to a penalty of one hundred percent (100%) (Double) of the standard permit fee. The payment of such penalty shall not relieve any person(s) from complying with the requirement of the Building Code, the IRC Code of Ordinances, any applicable laws, or this resolution |  |  |                    |
|                                    | <b>Multiple Buildings</b>                                      | Multiple Buildings on one property: Work in common areas of buildings is individually permitted per building not per property.  |  |  |                    |
|                                    | <b>Refunds</b>   | Permit and Permit Application fees are non-refundable.  |  |  |                    |
|                                    | <b>Private Provider Fee Reductions</b>                         | A fee reduction for Private Provider related permits will be calculated as follows: 10% reduction in fees if a "Private Provider" is utilized for Permit Plan Review, and 25% reduction in fees if a "Private Provider" is utilized for Permit related Inspections.   |  |  |                    |
|                                    | <b>Credit Card Service Fee</b>                                 | Credit card payments are subject to a 2.5% per transaction fee with a \$2 minimum   |  |  |                    |

**PROJECT MANUAL  
FOR**



**IRC-1829 Indian River County  
Central Regional WWTF  
Roof Replacement**

**June 17, 2022**

**REI PROJECT NUMBER  
019TPA-018**



**FLORIDA ENGINEERS LICENSE #26860**

**SECTION 00 01 07**

**SEALS PAGE**

**PROFESSIONAL ENGINEER**



**END OF SECTION 00 01 07**

**SECTION 00 01 10**

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**CONTRACT DRAWINGS**

**END OF SECTION 00 01 10**

**SECTION 00 01 15**

**LIST OF DRAWINGS**

**PART 1 GENERAL**

The following drawings and details are included as part of the Contract Documents:

| <b>Drawing</b> | <b>Description</b> | <b>Date</b> |
|----------------|--------------------|-------------|
| R1             | Roof Plan          | 06-17-2022  |
| R2             | Building Code      | 06-17-2022  |
| D1             | Roof Details       | 06-17-2022  |
| D2             | Roof Details       | 06-17-2022  |

**END OF SECTION 00 01 15**



**SECTION 00 60 00**

**PROJECT FORMS**

**PART 1 GENERAL**

**1.01 GENERAL**

A. The following documents are included in the Project Manual:

1. Roof Manufacturer's Acknowledgement - Section 00 62 33
2. Contractors Five-Year Warranty - Section 00 65 36
3. Asbestos Free Warranty - Section 00 65 37

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION 00 60 00**

**SECTION 00 62 33**

**ROOF MANUFACTURER'S ACKNOWLEDGMENT**

Owner: Indian River County

Project Name: IRC-1829 Indian River County Central Regional WWTF Roof Replacement

Project Address: 3550 49<sup>th</sup> Street, Vero Beach, Florida, 32967

Roofing Contractor: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

This is to advise the Owner that having thoroughly reviewed the Specifications and Drawings contained within the Project Manual dated **June 17, 2022** for the above-titled project, we acknowledge that the roof system(s) and flashing system(s) specified are suitable for use on this project. Having reviewed the project requirements in detail, the Manufacturer will provide a written response to the Engineer seven days prior to the bid date, if conflicts between the Manufacturer's requirements occur with the above listed documents.

1. The manufacturer certifies that the installer is approved, authorized, or licensed by manufacturer to install specified roof system and is eligible to receive the specified manufacturer's warranty.
2. The manufacturer will comply with the specified requirements for on-site technical support.

\_\_\_\_\_ is hereby designated as our Liaison on this project.  
(Print or type name of Liaison)

\_\_\_\_\_  
Telephone

\_\_\_\_\_  
Facsimile

\_\_\_\_\_  
Roof Manufacturer's Company Name

\_\_\_\_\_  
Roof Manufacturer Representative's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Roof Manufacturer Representative's Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Roof Manufacturer's Address

\_\_\_\_\_  
Telephone

\_\_\_\_\_  
Facsimile

**END OF SECTION 00 62 33**

**SECTION 00 65 36**

**CONTRACTOR'S FIVE-YEAR WARRANTY**

Know all men by these presents, that we, (Contractor) \_\_\_\_\_, having installed roofing system, flashings and sheet metal on the IRC-1829 Indian River County Central Regional WWTF Roof Replacement Project under contract between Indian River County (Owner) and Contractor, warrant to the Owner with respect to said work that for a period of five (5) years from date of final completion, the work shall be absolutely watertight and free from any and all leaks, provided however the following are excluded from this Warranty:

- a. Defects or failures resulting from abuse by the Owner.
- b. Defect in design involving failure of (1) structural frame, (2) load bearing walls, and (3) foundations.
- c. Damages caused by fire, tornado, hail, hurricane, acts of God, wars, vandalism, riots or civil commotion.

We, Contractor, agree that should any leaks occur in the work we will perform emergency repairs within 24 hours' notice and perform permanent repairs within a reasonable time in a manner to restore the work to a watertight condition by methods compatible to the system and acceptable under industry standards and general practice, all at no expense to the Owner.

We, Contractor, further agree that for a period of five (5) years from date of final completion referred to above, we will make repairs at no expense to the Owner to any defects which may develop in the work including but not limited to blisters, wrinkles, fish-mouths, ridges, splits and loose flashing in a manner compatible to the system and acceptable under industry standards and general practice as established by the Engineer.

Contractor shall attend two post construction field inspections: the first no earlier than twenty -three (23) months and no later than twenty-four (24) months after the date of final Completion and the second no earlier than fifty-nine (59) months and no later than sixty (60) months after the date of Final Completion. Contractor shall complete any corrective action requested by Owner, Engineer, or Manufacturer at no additional cost to the Owner.

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

|  |                 |
|--|-----------------|
| _____ State  |                 |
| _____ County   |                 |
| I, _____, a Notary Public for _____ County, _____ State, do hereby certify that _____ personally appeared before me this day and acknowledged the due execution of the foregoing instrument. |                 |
| Witness my hand and official seal, this _____ day of _____, 20_____.   |                 |
| _____<br>Notary Public   | (OFFICIAL SEAL) |
| My commission expires _____, 20_____.  |                 |

**END OF SECTION 00 65 36**

**SECTION 00 65 37**

**ASBESTOS FREE WARRANTY**

Owner: Indian River County

Project Name: IRC-1829 Indian River County Central Regional WWTF Roof Replacement

Project Address: 3550 49<sup>th</sup> Street, Vero Beach, Florida, 32967

Project Manual Date: June 17, 2022

Date of Substantial Completion: \_\_\_\_\_

Know all men by these present that we, \_\_\_\_\_  
(Contractor, Subcontractor, Material Supplier or Equipment Manufacturer)

having furnished labor, materials, equipment and/or supplies; removed existing roof system; installed new roof system and/or miscellaneous roof system components; from, to and/or on the above referenced Project under contract between the Owner and Contractor, warrant to Owner with respect to said work that no materials containing asbestos fibers were incorporated into the work, and that, to our knowledge and belief, no materials containing asbestos remain in or are covered by the work.

Exceptions: \_\_\_\_\_  
If there are no exceptions, state "No Exceptions" here.

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

Title: \_\_\_\_\_

|  |                 |
|--|-----------------|
| _____ State<br>_____ County  |                 |
| I, _____, a Notary Public for _____ County,<br>_____ State, do hereby certify that _____ personally appeared before me<br>this day and acknowledged the due execution of the foregoing instrument. |                 |
| Witness my hand and official seal, this _____ day of _____, 20_____.   |                 |
| _____<br>Notary Public   | (OFFICIAL SEAL) |
| My commission expires _____, 20____.   |                 |

**END OF SECTION 00 65 37**

## SECTION 01 11 00

### SUMMARY OF WORK

#### PART 1 GENERAL

##### 1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Name: IRC-1829 Indian River County Central Regional WWTF Roof Replacement
- B. Project Address: 3550 49<sup>th</sup> Street, Vero Beach, Florida, 32967
- C. Owner: Indian River County
- D. Engineer: The Contract Documents, dated June 17, 2022, were prepared by REI Engineers, Inc.
- E. This work includes the provision of all labor, material, equipment, supervision and administration to integrate the work outlined in this project manual into the total building system such that no leakage into the system occurs. In general, the scope of work in the **Base Bid** will include:
  - 1. **Roof Sections A1 & A2:** (Approximately 3,836 square feet): Remove and dispose of the existing roof system including flashings and sheet metal down to the existing structural deck; resecure the existing edge nailers to remain in place; adhere tapered polyisocyanurate insulation system, provide adhered gypsum coverboard, fully adhere thermoplastic single ply membrane along with flashings and accessories and provide sheet metal flashings and trim to provide a complete, watertight, 20-year warrantable roof assembly.
  - 2. **Roof Sections B1, B2, B3 & B4:** (Approximately 6,927 square feet): Remove and dispose of the existing roof system including abandoned fans, flashings and sheet metal down to the existing structural deck; resecure the existing edge nailers to remain in place; provide new sheet metal curb caps at abandoned locations; Provide new roof access ladder and hand railing modifications; adhere polyisocyanurate insulation system, provide adhered gypsum coverboard, fully adhere thermoplastic single ply membrane along with flashings and accessories and provide sheet metal flashings and trim to provide a complete, watertight, 20-year warrantable roof assembly.
  - 3. **Roof Section C1:** (Approximately 1,626 square feet): Remove and dispose of the existing roof system including hand rails, flashings and sheet metal down to the existing structural framing; Replace all existing plywood deck substrate under unit price/allowance work; Replace the existing edge nailers to remain in place; mechanically attach tapered polyisocyanurate insulation system, provide gypsum coverboard, induction weld thermoplastic single ply membrane, install flashings and accessories and provide sheet metal flashings and trim to provide a complete, watertight, 20-year warrantable roof assembly.
  - 4. **Roof Section C2:** (Approximately 809 square feet): Remove and dispose of all existing shingles and underlayment down to the structural framing. Remove and dispose of all sheet metal flashings and trim. Replace all existing plywood deck substrate under unit price/allowance work. Provide self-adhered underlayment, shingles, sheet metal flashings and trim.
- F. Asbestos Containing Roofing Materials (ACRM):

1. It is the intention of these specifications that no asbestos bearing materials be incorporated into the work. In the event the contractor should determine unanticipated asbestos bearing materials to be present in the existing building components, Contractor is to stop all work in the affected area, notify the Engineer and Owner, and provide temporary protection as required. Costs incurred, if any, due to the presence of hidden and/or unanticipated asbestos bearing materials will be authorized by Change Order to this contract.
- G. The contractor is responsible for all electrical, plumbing, mechanical, and other related trade work necessary to facilitate project operations. Contractor is responsible for re-locating any and all conduit, HVAC equipment, curbs, and/or plumbing necessary to comply with the requirements of these documents. All work shall conform to the requirements of the current Building Code approved in the State of the project location.
- H. General requirements and specific recommendations of the material manufacturers are included as part of these specifications. The manufacturers' specifications are the minimum standards required for the completed systems. Specific items listed herein may improve the standards required by the manufacturers and will take precedence where their compliance will not affect the manufacturers' guarantee or warranty provisions.

## **1.02 CONTRACT**

- A. Project will be constructed under a single prime general construction contract.

## **1.03 SITE INVESTIGATION**

- A. The Contractor acknowledges that he has satisfied himself as to the nature and location of the Work, the general and local conditions, particularly those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, ground water table or similar physical conditions at the site, the conformation and condition of the ground, the character, quality and quantity of surface and subsurface materials to be encountered, the character of equipment and facilities needed prior to and during the prosecution of the Work and all other matters which can in any way affect the Work or the cost thereof under this Contract. Any failure by the Contractor to acquaint himself with all the available information concerning these conditions will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the Work. Field measurements shall be taken at the site by the Contractor to verify all data and conditions affected by the Work.

## **1.04 SPECIFICATION FORMATS AND CONVENTIONS**

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 49-division format and CSI/CSC's "MasterFormat" numbering system.
  1. Section Identification: The Specifications use section numbers and titles to cross-reference Contract Documents. Sections in the Project Manual are in numeric sequence.; however, the sequence is incomplete. Consult the Table of Contents at the beginning of the Project Manual.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  1. Abbreviated Language: Language used in the Specifications and other Contract

Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.

2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION 01 11 00**

## SECTION 01 14 00

### WORK RESTRICTIONS

#### GENERAL

##### 1.01 SECTION INCLUDES

- A. Administrative and procedural requirements for work sequence, work restrictions, occupancy requirements and use of premises.

##### 1.02 WORK SEQUENCE

- A. The Work shall be conducted in the following sequences unless construction phases are otherwise specified.
  - 1. Construct Work in phases to accommodate the Owner's use; if applicable, of the premises during the construction period; coordinate the construction schedule and operations with the Owner and Engineer.
  - 2. Construct the Work in phases to provide for public convenience. Do not close off public use of facility until completion of one phase of construction will provide alternative usage.
  - 3. Construction shall be scheduled in such a manner that once work has commenced on one facility, the Contractor's work force shall remain at that facility continuously each work day through final completion at that facility.

##### 1.03 OCCUPANCY REQUIREMENTS

- A. Owner Occupancy
  - 1. Owner will occupy the premises during the entire period of construction to conduct normal operations. Cooperate with Owner in all construction operations to minimize conflict, and to facilitate Owner usage.
  - 2. Contractor shall at all times conduct his operations as to ensure the least inconvenience and the greatest amount of safety and security for the Owner, his staff, and the general public.
  - 3. Control noise from operations so that building occupants are not affected.
  - 4. Control odors from air intakes so that building occupants are not affected.

##### 1.04 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of site beyond areas in which the Work is indicated.
  - 1. Limits: Confine constructions operations to areas of work being renovated as approved by Engineer and Owner.
  - 2. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
  - 3. Move any stored materials and equipment that interfere with operations of the Owner.



B. Use of Existing Building

1. Maintain existing building in a weathertight condition throughout construction period.
2. Take every precaution against injuries to persons or damage to property.
3. Protect building, its contents, and its occupants during construction period.
4. The Contractor shall not overload or permit any part of the structure to be loaded with such weights as will endanger its safety or to cause excessive deflection. Materials placed on the roof prior to installation shall be equally distributed over the roof area.
5. Protect any existing surface improvements, such as pavements, curbs, sidewalks, lawn and landscaped areas, utilities, etc.
6. Repair to the Owner and Engineer's satisfaction, or to restore to a condition equal to that existing at the time of award of Contract, or to make restitution acceptable to the Owner, any and all damages to the building, its contents, or surface improvements resulting from, or attributable to, the work operation.

C. Transportation Facilities

1. Truck and equipment access:
  - a. Avoid traffic conflict with vehicles of the Owner's employees and customers, and avoid over-loading of street and driveways elsewhere on the Owner's property, limit the access of trucks and equipment to the designated areas.
  - b. Provide adequate protection for curbs and sidewalks over which trucks and equipment pass to reach the job site.
2. Contractor's vehicles:
  - a. Require contractor's vehicles, vehicles belonging to employees of the contractor, and all other vehicles entering the Owner's property in performance of the work the contract, to use only the designated access route.
  - b. Do not permit such vehicles to park on any street or other area of the Owner's property except in the designated area.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION 01 14 00**

**SECTION 01 21 00**

**ALLOWANCES**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Administrative and procedural requirements governing allowances.

**1.2 RELATED SECTIONS**

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

**1.3 CONTINGENCY ALLOWANCE**

- A. A \$10,000 contingency allowance shall be included in the base bid.
- B. Any unused portion remaining at the completion of the contract shall be credited back to the Owner as a credit.
- C. The Owner reserves the right to modify the contingency allowance prior to award of Contract.

**1.4 QUANTITY ALLOWANCES**

- A. Quantity allowance for the items indicated below shall be included in the base bid. The unit price submitted on the Bid Form shall be used to compute the quantity allowances. The quantities indicated are estimated quantities only for the purpose of comparing bids. The Contractor will be compensated at the unit price bid for the exact quantity of work performed under each unit price item. Deductive amounts of unit price work included in the Contract Sum will be calculated at 100% of the quoted add unit price.
  - 1. Replace 2,500 sq. ft. of Deteriorated Plywood Deck
  - 2. Replace 300 bd. ft. of Deteriorated Wood Blocking

**END OF SECTION 01 21 00**

## SECTION 01 22 00

### UNIT PRICES

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Administrative and procedural requirements for unit prices.

##### 1.2 RELATED SECTIONS

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

- 1. Rough Carpentry Section 06 10 00
- 2. Preparation for Reroofing Section 07 01 50
- 3. Roof Insulation Section 07 22 16

##### 1.3 DEFINITION

- A. Unit price is an amount proposed by Bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

##### 1.4 UNIT PRICE MEASUREMENT

- A. Prior to performing any work under a unit price as specified herein, the Contractor shall notify the Engineer to allow for measurement of the actual quantities of work. Any work performed under these items without prior approval and measurement shall be at the Contractor's expense.
- B. The Contractor shall maintain a daily log including visual documentation (i.e. digital photographs) showing dates, location and exact quantities of unit price work.
- C. Owner and Engineer reserve the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent party.

##### 1.5 UNIT PRICE PAYMENT

- A. Unit prices shall include all costs associated with performing the unit price work including but not limited to labor, material, equipment, insurance, applicable taxes, overhead and profit, etc.

##### 1.6 UNIT PRICE PERFORMANCE

- A. Unit price work shall be installed in accordance with the applicable specification section(s) and Contract Drawings for the project.

#### PART 2 PRODUCTS (NOT USED)

#### PART 3 EXECUTION

##### 3.1 SCHEDULE OF UNIT PRICES

- A. Unit prices for the items indicated below shall be provided on the Bid Form.

1. UP-1: Replace Deteriorated Plywood Deck.
  - a. Unit of Measurement: Square Foot (SF)
2. UP-2: Replace Deteriorated Wood Blocking.
  - a. Unit of Measurement: Board Foot (BF)

**END OF SECTION 01 22 00**

## SECTION 01 31 00

### PROJECT MANAGEMENT AND COORDINATION

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General project coordination procedures.
2. Coordination.
3. Administrative and supervisory personnel.
4. Project meetings.
5. Weekly Reports

##### 1.02 COORDINATION

A. Coordinate construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. The Contractor shall coordinate its operations with those included in different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Progress Reporting: The scheduling and sequence of all operations shall be carefully coordinated with the Owner and Engineer.

C. If necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Pre-Construction conference.
7. Pre-installation conferences.
8. Project closeout activities.

**1.03 PROJECT MEETINGS**

A. Substantial Completion Inspection Meeting

1. Scheduled by Owner and Engineer upon written notification of substantial completion of work from the Contractor.
2. Attendance: Owner, Engineer, Contractor, material manufacturer.
3. Minimum Agenda: Walkover inspection; verification of substantial completion; identification of punch list items; identification of problems, which may impede issuance of warranties.
4. Refer to Section 01 77 00 for other requirements.

B. Final Inspection Meeting

1. Scheduled by Owner and Engineer upon written notification of final completion of work from the Contractor.
2. Attendance: Owner, Engineer, Contractor.
3. Minimum Agenda: Verification of final completion including the completion of the punch list items.
4. Refer to Section 01 77 00 for other requirements.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION 01 31 00**

## **SECTION 01 33 00**

### **SUBMITTAL PROCEDURES**

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.

##### **1.02 SUBMITTAL PROCEDURE**

- A. General: The Contractor is responsible for providing the submittals to the Owner. Each submittal must be accepted in writing prior to commencement of work.
- B. Submission Requirements: Submit all required submittals electronically in pdf format to the Owner for review. The submittals will then be returned electronically to the Contractor with comments. Final submittals will require written responses to all Construction Document submittal comments.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as specified below. Time for review shall commence on Owner's receipt of submittal.
  - 1. Initial Review: Allow 7 work days for initial review of submittals.
  - 2. Allow 7 work days for processing each resubmittal.
  - 3. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- D. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals and provide letter describing in detail any proposed changes, substitutions, or deviations from the project or manufacturer's specifications. A written explanation of why substitutions should be considered is required and shall be included under the appropriate tab.
- E. Transmittal and Identification: Package submittals appropriately and include a title page and/or pdf bookmark for each numbered schedule of submittal item identified below. Owner will discard submittals received from sources other than Contractor. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
- F. Use for Construction: Use only final submittals with mark indicating action taken by Owner in connection with construction.

#### **PART 2 PRODUCTS**

##### **2.01 SUBMITTALS**

- A. General: Prepare and submit Submittals required herein and by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
  2. Mark each copy of each submittal to show which products and options are applicable.
  3. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Manufacturer's catalog cuts.
    - e. Printed performance curves.
    - f. Operational range diagrams.
    - g. Compliance with recognized trade association standards.
    - h. Compliance with recognized testing agency standards.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Include the following information, as applicable:
    - a. Dimensions.
    - b. Identification of products.
    - c. Fabrication and installation drawings.
    - d. Roughing-in and setting diagrams.
    - e. Shopwork manufacturing instructions.
    - f. Templates and patterns.
    - g. Schedules.
    - h. Notation of coordination requirements.
    - i. Notation of dimensions established by field measurement.
  2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
- D. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
- E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
- F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.
- G. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.
- H. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- I. Product Test Reports: Prepare written reports indicating current product produced by



manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

- J. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- K. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.

### **PART 3 EXECUTION**

#### **3.01 CONTRACTOR'S REVIEW**

- A. Review each submittal, check for compliance with the Contract Documents and note corrections and field dimensions prior to submitting to Engineer/Owner.

#### **3.02 ENGINEER'S ACTION**

- A. Submittals: Engineer/Owner will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal item with an action stamp and will mark stamp appropriately to indicate action taken.
- B. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

**END OF SECTION 01 33 00**

## SECTION 01 40 00

### QUALITY REQUIREMENTS

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.

##### **1.02 DEFINITIONS**

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction comply with requirements. Services do not include contract enforcement activities performed by Engineer.
- C. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

##### **1.03 DELEGATED DESIGN**

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Engineer/Owner.

##### **1.04 SUBMITTALS**

- A. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

##### **1.05 QUALITY ASSURANCE**

- A. It is the intent under this contract that workmanship shall be of the best quality consistent with the materials and construction methods specified. The presence or absence of the Owner's or Engineer's representative shall in no way relieve the Contractor of his responsibility to furnish materials and construction in full compliance with the drawings and specifications. The Owner and Engineer shall have the authority to judge the quality and require replacement of unacceptable work or personnel at any time.
- B. All contractors shall cooperate in the execution of their work and shall plan their work in such manners as to avoid conflicting schedules or delay of work. If any part of a Contractor's work depends upon the work of another Contractor, defects, which may affect that

work, shall be reported to the Engineer/Owner in order that prompt inspection may be made and defects corrected. Commencement of work by a Contractor where such condition exists will constitute acceptance of the other Contractor's work as being satisfactory in all respects to receive the work commenced, except defects, which may later develop. Work of all trades under this contract shall be closely coordinated in such a manner as to obtain the best possible workmanship for the entire project. All components of the work shall be installed in accordance with the best practices of the particular trade. The General Contractor is responsible to advise the Owner sufficiently in advance of operations to allow for assignment of personnel.

- C. Materials or methods described by words which, when applied, have a well known technical or trade meaning will be held to refer to such recognized standard. Standard specifications or manufacturer's literature, when referenced, shall be of the latest revision or printing unless otherwise stated, and are intended to establish the minimum requirements acceptable.
- D. All materials shall be new, all materials and workmanship shall be in every respect in accordance with the best modern practice.
- E. When special makes or grades of material which are normally packaged by the supplier or manufacturer are specified or accepted, such materials shall be delivered to the site in original packages or containers with seals unbroken and labels intact and shall not be opened until inspected and approved by the Engineer/Owner.
- F. The Contractor's Foreman or Superintendent to maintain one complete set of the contract documents and approved submittals on the job site.
- G. Contractor shall be responsible to correct deficiencies identified by Engineer/Owner and non-conforming work within 24 hours of receipt of notification, either verbally or written, and submit a plan of action for addressing the deficiencies and non-conforming work. Further tear-off or commencement of other work shall not occur until all deficiencies and non-conforming work are properly addressed.
- H. At any time during the construction and completion of work covered by these Specifications, if the conduct of any workman of the various crafts be determined unsuitable or a nuisance to the Owner or Engineer, or if the workman be considered incompetent or detrimental to the work, the Contractor shall order such party removed immediately from the grounds with the person not returning at any time during the course of work on the project.
- I. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
- J. Testing Agency Qualifications: An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.
- K. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- L. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of

manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

## **1.06 QUALITY CONTROL**

- A. The authorized representatives and agents of Owner shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records.
- B. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
  - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspecting they are engaged to perform.
  - 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- C. Contractor's Responsibilities:
  - 1. Repair and protection of work and materials are Contractor's responsibility.
  - 2. Should any work or materials not conform with requirements of the Specifications or become damaged during the progress of the work, such work or materials shall be removed and replaced, together with any work disarranged by such alterations, at any time before completion and acceptance of the project. All such work shall be done at the expense of the Contractor.
  - 3. Contractor will coordinate documents with manufacturer and perform such testing, reporting, and communication incidental to provisions of the warranty procedures.
- D. Manufacturer's Field Services: During construction and until substantial completion, manufacturer's representative shall perform quality assurance site visits every ten working days to ensure materials are being properly installed and as required to obtain the specified warranty.
  - 1. The first site visit shall be performed within the first three (3) days of operations.
  - 2. Coordinate all site visits with Engineer. Submit reports of findings within one week of inspection. Payment applications will be rejected until applicable reports are received.
  - 3. Inspections to be performed by an employee of the selected manufacturer that is assigned full time to their technical services department. Sales personnel will not be acceptable for this function and may result in rejection of the work installed that does not fulfill this requirement.
  - 4. Manufacturer's final inspections shall be performed only with REI personnel in attendance. A minimum of seven days' written notice is required. Any manufacturer's final inspection conducted without REI personnel in attendance will be repeated at no additional cost to the Owner.
  - 5. Any violation of this requirement will result in the removal of that manufacturer for a period of not less than one year from the Engineer's accepted materials list.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.

- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections.
  3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  4. Facilities for storage and field-curing of test samples.
  5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  6. Security and protection for samples and for testing and inspecting equipment at Project site.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION**

**3.01 REPAIR AND PROTECTION**

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Comply with the Contract Document requirements for Section 01 73 29-Cutting and Patching.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

**END OF SECTION 01 40 00**

## SECTION 01 42 00

### REFERENCES

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Requirements relating to Referenced Standards.

##### **1.02 DEFINITIONS**

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Engineer's action on Contractor's submittals, applications, and requests, "approved" is limited to Engineer's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Engineer. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Installer": Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
  - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.
- J. "Experienced": When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- K. "Project Site": Space available for performing construction activities. The extent of Pro-

ject site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

**1.03 INDUSTRY STANDARDS**

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Engineer for a decision before proceeding.
  - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Engineer for a decision before proceeding.
- D. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

|         |  |
|---------|--|
|         | Accessibility Guidelines for Buildings and Facilities<br>Available from Access Board<br><a href="http://www.access-board.gov">www.access-board.gov</a>   |
| CFR     | Code of Federal Regulations<br>Available from Government Printing Office<br><a href="http://www.access.gpo.gov/nara/cfr">www.access.gpo.gov/nara/cfr</a> |
| FED-STD | Federal Standard (See FS)  |
| FS      | Federal Specification<br>Available from National Institute of Building Sciences<br><a href="http://www.nibs.org">www.nibs.org</a>                        |

**1.04 ABBREVIATIONS AND ACRONYMS**

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

|    |  |
|----|--|
| AA | Aluminum Association, Inc. (The)<br><a href="http://www.aluminum.org">www.aluminum.org</a> |
|----|--|

|                       |  |
|-----------------------|--|
| ACI                   | American Concrete Institute/ACI International<br><a href="http://www.aci-int.org">www.aci-int.org</a>                                |
| ACPA                  | American Concrete Pipe Association<br><a href="http://www.concrete-pipe.org">www.concrete-pipe.org</a>                               |
| AGC                   | Associated General Contractors of America (The)<br><a href="http://www.agc.org">www.agc.org</a>                                      |
| AHA                   | American Hardboard Association<br><a href="http://www.ahardbd.org">www.ahardbd.org</a>   |
| AI                    | Asphalt Institute<br><a href="http://www.asphaltinstitute.org">www.asphaltinstitute.org</a>  |
| AIE                   | American Institute of Engineers<br><a href="http://www.aieonline.org">www.aieonline.org</a>  |
| AISC                  | American Institute of Steel Construction<br><a href="http://www.aisc.org">www.aisc.org</a>   |
| AISI                  | American Iron and Steel Institute<br><a href="http://www.steel.org">www.steel.org</a>  |
| AITC                  | American Institute of Timber Construction<br><a href="http://www.aitc-glulam.org">www.aitc-glulam.org</a>                            |
| ALCA                  | Associated Landscape Contractors of America<br><a href="http://www.alca.org">www.alca.org</a>  |
| ALSC                  | American Lumber Standard Committee<br><a href="http://www.alsc.org">www.alsc.org</a>   |
| ANLA                  | American Nursery & Landscape Association<br><a href="http://www.anla.org">www.anla.org</a>   |
| ANSI                  | American National Standards Institute<br><a href="http://www.ansi.org">www.ansi.org</a>  |
| APA                   | APA - The Engineered Wood Association<br><a href="http://www.apawood.org">www.apawood.org</a>  |
| APA                   | Architectural Precast Association<br><a href="http://www.archprecast.org">www.archprecast.org</a>                                    |
| ASCE                  | American Society of Civil Engineers<br><a href="http://www.asce.org">www.asce.org</a>  |
| ASHRAE                | American Society of Heating, Refrigerating and<br>Air-Conditioning Engineers<br><a href="http://www.ashrae.org">www.ashrae.org</a>   |
| ASME                  | ASME International (The American Society of<br>Mechanical Engineers International)<br><a href="http://www.asme.org">www.asme.org</a> |
| ASTM<br>International | ASTM International<br><a href="http://www.astm.org">www.astm.org</a>   |
| AWI                   | Architectural Woodwork Institute<br><a href="http://www.awinet.org">www.awinet.org</a>   |
| AWPA                  | American Wood-Preservers' Association<br><a href="http://www.awpa.com">www.awpa.com</a>  |
| AWS                   | American Welding Society<br><a href="http://www.aws.org">www.aws.org</a>   |
| BHMA                  | Builders Hardware Manufacturers Association<br><a href="http://www.buildershardware.com">www.buildershardware.com</a>                |
| BIA                   | Brick Industry Association (The)<br><a href="http://www.bia.org">www.bia.org</a>   |
| CCFSS                 | Center for Cold-Formed Steel Structures<br><a href="http://www.umn.edu/~ccfss">www.umn.edu/~ccfss</a>                                |



|          |   |
|----------|---|
| CDA      | Copper Development Association Inc.<br><a href="http://www.copper.org">www.copper.org</a>   |
| CIMA     | Cellulose Insulation Manufacturers Association<br><a href="http://www.cellulose.org">www.cellulose.org</a>  |
| CISCA    | Ceilings & Interior Systems Construction Association<br><a href="http://www.cisca.org">www.cisca.org</a>  |
| CISPI    | Cast Iron Soil Pipe Institute<br><a href="http://www.cispi.org">www.cispi.org</a>   |
| CLFMI    | Chain Link Fence Manufacturers Institute<br><a href="http://www.chainlinkinfo.org">www.chainlinkinfo.org</a>  |
| CPA      | Composite Panel Association<br>(Formerly: National Particleboard Association)<br><a href="http://www.pbmdf.com">www.pbmdf.com</a>                                     |
| CPPA     | Corrugated Polyethylene Pipe Association<br><a href="http://www.cppa-info.org">www.cppa-info.org</a>  |
| CRSI     | Concrete Reinforcing Steel Institute<br><a href="http://www.crsi.org">www.crsi.org</a>  |
| CSI      | Construction Specifications Institute (The)<br><a href="http://www.csinet.org">www.csinet.org</a>   |
| DHI      | Door and Hardware Institute<br><a href="http://www.dhi.org">www.dhi.org</a>   |
| EIMA     | EIFS Industry Members Association<br><a href="http://www.eifsfacts.com">www.eifsfacts.com</a>   |
| EJMA     | Expansion Joint Manufacturers Association, Inc.<br><a href="http://www.ejma.org">www.ejma.org</a>   |
| FMG (FM) | FM Global (Formerly: FM - Factory Mutual System)<br><a href="http://www.fmglobal.com">www.fmglobal.com</a>  |
| GA       | Gypsum Association<br><a href="http://www.gypsum.org">www.gypsum.org</a>  |
| GANA     | Glass Association of North America<br>(Formerly: FGMA - Flat Glass Marketing Association)<br><a href="http://www.glasswebsite.com/gana">www.glasswebsite.com/gana</a> |
| HPVA     | Hardwood Plywood & Veneer Association<br><a href="http://www.hpva.org">www.hpva.org</a>   |
| IGCC     | Insulating Glass Certification Council<br><a href="http://www.igcc.org">www.igcc.org</a>  |
| IRC      | Indian River County   |
| LGSI     | Light Gage Structural Institute<br><a href="http://www.loseke.com">www.loseke.com</a>   |
| MBMA     | Metal Building Manufacturers Association<br><a href="http://www.mbma.com">www.mbma.com</a>  |
| MCA      | Metal Construction Association<br><a href="http://www.metalconstruction.org">www.metalconstruction.org</a>  |
| MFMA     | Metal Framing Manufacturers Association   |
| MIA      | Marble Institute of America<br><a href="http://www.marble-institute.com">www.marble-institute.com</a>   |
| NAAMM    | National Association of Architectural Metal Manufacturers<br><a href="http://www.naamm.org">www.naamm.org</a>   |
| NAIMA    | North American Insulation Manufacturers Association (The)<br><a href="http://www.naima.org">www.naima.org</a>   |
| NCMA     | National Concrete Masonry Association<br><a href="http://www.ncma.org">www.ncma.org</a>   |

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| NCPI  | National Clay Pipe Institute<br><a href="http://www.ncpi.org">www.ncpi.org</a>  |
| NECA  | National Electrical Contractors Association<br><a href="http://www.necanet.org">www.necanet.org</a>                           |
| NEMA  | National Electrical Manufacturers Association<br><a href="http://www.nema.org">www.nema.org</a>                               |
| NETA  | InterNational Electrical Testing Association<br><a href="http://www.netaworld.org">www.netaworld.org</a>                      |
| NFPA  | National Fire Protection Association<br><a href="http://www.nfpa.org">www.nfpa.org</a>  |
| NFRC  | National Fenestration Rating Council<br><a href="http://www.nfrc.org">www.nfrc.org</a>  |
| NGA   | National Glass Association<br><a href="http://www.glass.org">www.glass.org</a>  |
| NHLA  | National Hardwood Lumber Association<br><a href="http://www.natlh hardwood.org">www.natlh hardwood.org</a>                    |
| NLGA  | National Lumber Grades Authority<br><a href="http://www.nlga.org">www.nlga.org</a>  |
| NPA   | National Particleboard Association<br>(See CPA)   |
| NRCA  | National Roofing Contractors Association<br><a href="http://www.nrca.net">www.nrca.net</a>                                    |
| NRMCA | National Ready Mixed Concrete Association<br><a href="http://www.nrmca.org">www.nrmca.org</a>                                 |
| NSA   | National Stone Association<br><a href="http://www.aggregates.org">www.aggregates.org</a>                                      |
| NTMA  | National Terrazzo and Mosaic Association, Inc.<br><a href="http://www.ntma.com">www.ntma.com</a>                              |
| NWWDA | National Wood Window and Door Association<br>(See WDMA)   |
| PCI   | Precast/Prestressed Concrete Institute<br><a href="http://www.pci.org">www.pci.org</a>  |
| PDCA  | Painting and Decorating Contractors of America<br><a href="http://www.pdca.com">www.pdca.com</a>                              |
| PDI   | Plumbing & Drainage Institute<br><a href="http://www.pdionline.org">www.pdionline.org</a>                                     |
| RCSC  | Research Council on Structural Connections<br><a href="http://www.boltcouncil.org">www.boltcouncil.org</a>                    |
| RMA   | Rubber Manufacturers Association<br><a href="http://www.rma.org">www.rma.org</a>  |
| SDI   | Steel Deck Institute<br><a href="http://www.sdi.org">www.sdi.org</a>  |
| SDI   | Steel Door Institute<br><a href="http://www.steeldoor.org">www.steeldoor.org</a>  |
| SGCC  | Safety Glazing Certification Council<br><a href="http://www.sgcc.org">www.sgcc.org</a>  |
| SIGMA | Sealed Insulating Glass Manufacturers Association<br><a href="http://www.sigmaonline.org/sigma">www.sigmaonline.org/sigma</a> |
| SJI   | Steel Joist Institute<br><a href="http://www.steeljoist.org">www.steeljoist.org</a>   |

|        |  |
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| SMACNA | Sheet Metal and Air Conditioning Contractors' National Association<br>www.smacna.org   |
| SPFA   | Spray Polyurethane Foam Alliance<br>(Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division)<br>www.sprayfoam.org |
| SPI    | The Society of the Plastics Industry<br>www.plasticsindustry.org   |
| SPIB   | Southern Pine Inspection Bureau (The)<br>www.spib.org  |
| SPRI   | SPRI (Single Ply Roofing Institute)<br>www.spri.org  |
| SSINA  | Specialty Steel Industry of North America<br>www.ssina.com   |
| SSMA   | Steel Stud Manufacturers Association<br>(Formerly: ML/SFA - Metal Lath/Steel Framing Association)<br>www.ssma.com  |
| SSPC   | SSPC: The Society for Protective Coatings<br>www.sspc.org  |
| SWI    | Steel Window Institute<br>www.steelwindows.com   |
| TCA    | Tile Council of America, Inc.<br>www.tileusa.com   |
| TPI    | Truss Plate Institute  |
| UL     | Underwriters Laboratories Inc.<br>www.ul.com   |
| WDMA   | Window & Door Manufacturers Association<br>(Formerly: NWWDA - National Wood Window and Door Association)<br>www.wdma.com                                     |
| WMMPA  | Wood Moulding & Millwork Producers Association<br>www.wmmpa.com  |
| WWPA   | Western Wood Products Association<br>www.wwpa.org  |

- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

|       |   |
|-------|---|
| BOCA  | BOCA International, Inc.<br>www.bocai.org   |
| IAPMO | International Association of Plumbing and Mechanical Officials (The)<br>www.iapmo.org                       |
| ICBO  | International Conference of Building Officials<br>www.icbo.org  |
| ICC   | International Code Council<br>(Formerly: CABO - Council of American Building Officials)<br>www.intlcode.org |
| SBCCI | Southern Building Code Congress International, Inc.   |

- C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

|      |   |
|------|---|
| CPSC | Consumer Product Safety Commission<br>www.cpsc.gov          |
| EPA  | Environmental Protection Agency<br>www.epa.gov              |
| OSHA | Occupational Safety & Health Administration<br>www.osha.gov |

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION 01 42 00**

## SECTION 01 50 00

### TEMPORARY FACILITIES AND CONTROLS

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.

#### **PART 2 PRODUCTS**

##### **2.01 MATERIALS**

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Engineer/Owner. Provide materials suitable for use intended.
- B. Portable Chain-Link Fencing: Minimum 2-inch 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide non-permanent bases for support.
- C. Tarpaulins: Fire-resistive labeled with flame-spread rating of 15 or less.
- D. Water: Potable.
- E. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- F. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.
  - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure and the requirements of the local Governing agency.
- G. Lamps and Light Fixtures: Provide GFCI protected general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- H. Scaffolds: Scaffolds should be built in their entirety and not left unfinished or in an unsafe condition. All scaffolds must be tagged to indicate the latest inspection. Scaffolds should be tied into the structure as close to a 3:1 ratio as possible and repeated tie-ins shall follow OSHA guidelines. All scaffolds shall have safe access with stairs being the first choice over a ladder. Scaffolds should include netting on upper levels if there is any possibility for materials to fall over the toe boards, per OSHA guidelines.

#### **PART 3 EXECUTION**

##### **3.01 TEMPORARY UTILITIES**

- A. Water Service: Water for construction purposes will be available from the Owner at no charge. Contractor shall operate exterior hose bids only with properly fitted handles which shall be removed at the end of each work day. Any damage to hose bids or hose bib stems shall be repaired by Contractor. Hose bibs shall not be operated with pliers.
- B. Electric Distribution: Provide receptacle outlets adequate for connection of power tools and equipment.
  - 1. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.

### **3.02 CONSTRUCTION FACILITIES**

- A. Temporary construction facilities shall include the following:
  - 1. Field Office (if appropriate): prefabricated, mobile units or job-built construction with lockable entrances and serviceable finishes including lights and utilities.
  - 2. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities. Facilities will be located at sites approved by Owner.
    - a. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
    - b. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy.
    - c. Drinking-Water Facilities: Provide bottled-water, drinking-water units.
  - 3. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations at a location approved by the Owner. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. Comply with Division 1 Section "Execution Requirements" for progress cleaning requirements. Use of Owner's waste disposal facilities is not acceptable.
    - a. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material to be deposited.

### **3.03 VEHICULAR ACCESS AND PARKING**

- A. Parking for Contractor vehicles may be available only in the approved Set-up and Staging area. No other vehicle parking on site will be allowed.

### **3.04 TEMPORARY BARRIERS AND ENCLOSURES**

- A. Contractor shall provide temporary barriers and enclosures for protection from exposure, foul weather, construction operations and other activities. Contractor is responsible for protecting buildings and grounds from damages during construction.
- B. Contractor shall provide environmental protection by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- C. Contractor shall provide storm water controls sufficient to prevent flooding from heavy rain.

- D. Contractor shall provide 6' chain link fencing with lockable gates and mesh to completely enclose the materials storage and staging area.

**3.05 TEMPORARY CONTROLS**

- A. Contractor shall provide security controls to protect work and materials at the project site.

**3.06 PROJECT SIGNS**

- A. Contractor shall provide temporary signs to provide information to building occupants directing them away from construction operations.

**END OF SECTION 01 50 00**

## SECTION 01 73 29

### CUTTING AND PATCHING

#### **PART 1 GENERAL**

##### **1.1 SECTION INCLUDES**

- A. This Section includes procedural requirements for cutting and patching.

##### **1.2 RELATED SECTIONS**

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

##### **1.3 DEFINITIONS**

- A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

##### **1.4 QUALITY ASSURANCE**

- A. Engineer's Approval: Obtain approval of cutting and patching before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.
- B. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio. Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations sealed by a licensed Engineer in the state of the project showing integration of reinforcement with original structure.
- C. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that result in increased maintenance or decreased operational life or safety.
- D. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity that results in reducing their capacity to perform as intended, or that result in increased maintenance or decreased operational life or safety.
- E. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Engineer's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- F. Cutting and Patching Conference: If extensive cutting and patching is required, before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

##### **1.5 WARRANTY**

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or



damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

## **PART 2 PRODUCTS**

### **2.1 MATERIALS**

- A. General: Comply with requirements specified in other Sections of these Specifications.
- B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

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

### **3.2 PREPARATION**

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to minimize interruption of services to occupied areas.

### **3.3 PERFORMANCE**

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - 1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily

- cover openings when not in use.
  - 2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Concrete or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
- 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
  - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
  - 3. Floors and Walls: Where walls or partitions that are removed extend from one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
  - 4. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition.
  - 5. Ceilings: Patch, repair, or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty and similar materials.

**END OF SECTION 01 73 29**

## SECTION 01 74 00

### CLEANING AND WASTE MANAGEMENT

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. The Owner has established that this Project shall include proactive measures for waste management participation by all parties to the contract.
  - 1. The purpose of this program is to ensure that during the course of the Project all diligent means are employed to pursue practical and economically feasible waste management and recycling options.
  - 2. Waste disposal to landfills shall be minimized.

##### **1.02 DEFINITIONS**

- A. Waste: Any material that has reached the end of its intended use. Waste includes salvageable, returnable, recyclable and reusable material.
- B. Construction waste: Solid wastes including, but not limited to, building materials, packaging materials, debris and trash resulting from construction operations.
- C. Salvage: To remove a waste material from the Project site to another site for resale or reuse by others.
- D. Hazardous waste: Any material or byproduct of construction that is regulated by the Environmental Protection Agency and that may not be disposed in any landfill or other waste end-source without adherence to applicable laws.
- E. Trash: Any product or material unable to be returned, reused, recycled or salvaged.
- F. Landfill: Any public or private business involved in the practice of trash disposal.
- G. Waste Management Plan: A Project-related plan for the collection, transportation, and disposal of the waste generated at the construction site.

#### **PART 2 PRODUCTS**

##### **2.01 MATERIALS**

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

#### **PART 3 EXECUTION**

##### **3.01 PROGRESS CLEANING**

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials in a legal manner.
  - 1. Comply with requirements in NFPA 241 for removal of combustible waste

- materials and debris.
2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
  3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
  2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Final Acceptance.
- G. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
1. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.
- H. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Final Acceptance.
- J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- K. Limiting Exposures: Supervise construction operations to assure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

### **3.02 FINAL CLEANING**

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Final Acceptance.
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - d. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - e. Remove debris and surface dust from roofs and walls.
    - f. Clean transparent materials and glass in windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
    - g. Remove labels that are not permanent.
    - h. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
    - i. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess foreign substances.
    - j. Replace parts subject to unusual operating conditions.
    - k. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

**END OF SECTION 01 74 00**

**SECTION 01 77 00**

**CLOSEOUT PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Warranties.

**1.02 WARRANTIES**

A. Asphalt Shingle Roofing System warranty as outlined in Section 07 31 13.

B. Metal Soffit Panel System finish warranty as outlined in Section 07 42 13.

C. Thermoplastic Single Ply Roofing System warranty as outlined in Section 07 54 00.

D. Pre-finished Sheet Metal finish warranty as outlined in Section 07 62 00.

E. Contractor's five (5) year warranty on their company letterhead using sample contained in the Project Manual.

1. Contractor will be required to attend two post construction field inspections: the first no earlier than twenty-three (23) months and no later than twenty-four (24) months after the date of Final Completion and the second no earlier than fifty-nine (59) months and no later than sixty (60) months. Contractor shall complete any corrective action requested by Owner, Engineer, or Manufacturer at no additional cost to the Owner.

F. Contractor's Asbestos-Free Warranty on their company letterhead using sample contained in the Project Manual.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION 01 77 00**

**SECTION 06 10 00**

**ROUGH CARPENTRY**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Rough Carpentry work required to facilitate installation of new roof assembly including:
1. Provide pressure treated wood blocking and plywood sheathing.
  2. Re-securement of existing rough carpentry to remain in place.
  3. Removal and replacement of damaged, rotted or deteriorated rough carpentry with pressure treated rough carpentry to match existing.
  4. Removal and replacement of damaged, rotted or deteriorated wood joist members with untreated wood members to match existing.
  5. Removal and replacement of damaged, rotted or deteriorated plywood deck with untreated plywood deck to match existing.
  6. Re-securement of existing plywood deck.

**1.2 RELATED SECTIONS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Specification Sections, apply to this Section, including but not limited to:
- |                                     |                  |
|-------------------------------------|------------------|
| 1. Preparation for Reroofing        | Section 07 01 50 |
| 2. Roof Insulation                  | Section 07 22 16 |
| 3. Metal Roof Panels                | Section 07 41 13 |
| 4. Metal Soffit Panels              | Section 07 42 13 |
| 5. Thermoplastic Single Ply Roofing | Section 07 54 00 |
| 6. Sheet Metal Flashing and Trim    | Section 07 62 00 |

**1.3 REFERENCES**

- A. Refer to the following references, current edition for specification compliance:
1. 2017 Florida Building Code
  2. American Society for Testing and Materials (ASTM)
  3. American Wood-Protection Association (AWPA)
    - a. AWPA E12 - Standard Method of Determining the Corrosion of Metal in Contact with Wood.
    - b. AWPA M4 - Standard for the Care of Preservative Treated Wood Products.
    - c. AWPA P5 - Standard for Waterborne Preservatives.
    - d. AWPA P23 - Standard for Chromated Copper Arsenate Type C (CCA-C).
    - e. AWPA P25 - Standard for Inorganic Boron (SBX).
    - f. AWPA P26 - Standard for Alkaline Copper Quat Type A (ACQ-A).
    - g. AWPA P27 - Standard for Alkaline Copper Quat Type B (ACQ-B).
    - h. AWPA P28 - Standard for Alkaline Copper Quat Type C (ACQ-C).
    - i. AWPA P29 - Standard for Alkaline Copper Quat Type D (ACQ-D).
    - j. AWPA P47 - Standard for DCOI/Imidacloprid/Stabilizer, Waterborne (EL2).
    - k. AWPA P48 - Standard for Copper Azole Type C (CA-C).
    - l. AWPA T1 - Use Category System: Processing and Treatment Standard.
    - m. AWPA U1 - Use Category System: User Specification for Treated Wood.
  4. American Plywood Association (APA)

5. American National Standard
  - a. ANSI/SPRI ES-1 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems
6. Underwriters Laboratories, Inc. (UL)
7. FM Global/Factory Mutual Research (FM)

#### **1.4 DEFINITIONS**

- A. Rough Carpentry includes carpentry work not specified as part of other Sections and generally not exposed.
- B. KDAT: Kiln Dried After Treatment.

#### **1.5 SUBMITTALS**

- A. Refer to Section 01 33 00-Submittal Procedures.
- B. Manufacturer's Product Data Sheets for all materials specified certifying material complies with all specified requirements.

#### **1.6 QUALITY ASSURANCE**

- A. Contractor shall inspect wood to be installed for damage, warping, splits, and moisture content as defined by the applicable wood products industry standards. Materials that do not comply shall be rejected.
- B. Rough carpentry installation shall present a smooth, consistent substrate for roof system and flashing installation.
- C. Qualifications of workers: Provide sufficient, competent and skilled carpenters in accordance with accepted practices and supervisors who shall be present at all times during execution of this portion of the work, and who shall be thoroughly familiar with type of construction involved in this section and related work and techniques specified.
- D. Moisture Content:
  1. Treated wood products shall be KDAT.
  2. Treated lumber used in the roofing assembly shall not be stored or installed in a manner exposing it to rain.
  3. Moisture content of treated lumber shall be 19 percent or less before being covered/enclosed into roofing assembly.
  4. Contractor shall be responsible for ensuring lumber is delivered, stored and installed at 19% or less moisture content.
  5. Plywood shall be 18% or less before being covered/enclosed into roofing assembly.
- E. Each piece of treated lumber and plywood shall bear the stamp of the AWPA Quality Mark, indicating compliance with the requirements of the AWPA Quality Control Program.
- F. Lumber Standards: Comply with PS 20 and applicable rules of respective grading and inspecting agencies for species and products indicated.
- G. Plywood Product Standards: Comply with PS 1 (ANSI A 199.1) or, for products not manufactured under PS 1 provisions, with applicable APA Performance Standard for type of panel indicated.



- H. Installation of all required new rough carpentry for roofing and flashing terminations to ensure plumb, uniform and level metal flashings.
- I. Rough carpentry installation shall ensure roof membrane flashing transitions are smooth for complete roof drainage and appearance.
- J. Installation of all fasteners and associated materials to secure rough carpentry as detailed and specified.

## **1.7 DELIVERY, STORAGE, AND HANDLING**

- A. Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Store a minimum of four inches above ground on framework or blocking. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks. Cover with protective waterproof covering providing for adequate air circulation and ventilation
- B. Exposure to precipitation during shipping, storage or installation shall be avoided. If material does become wet, it shall be replaced or permitted to dry prior to covering or enclosure by other roofing, sheet metal or other construction materials (except for protection during construction).
- C. Immediately upon delivery to job site, place materials in area protected from weather.
- D. Do not store seasoned materials in wet or damp portions of building.
- E. Protect sheet materials from corners breaking and damaging surfaces, while unloading.

## **PART 2 PRODUCTS**

### **2.1 MATERIALS**

- A. Lumber: Shall Be No. 2 or better spruce or southern yellow pine. Shall be sound, thoroughly seasoned, dressed to nominal finish dimension, and free of warpage, cupping, and bowing. Dimensions shall be determined by job conditions or as indicated in detail drawings.
- B. Plywood Sheathing: Shall be structural 1 rated. Plywood shall be stamped APA RATED SHEATHING grade-C or better and shall be manufactured with exterior glue (exposure 1). Plywood shall have a minimum thickness of 3/4 inch or as required to match existing.
- C. Preservative Treatment:
  - 1. Treatment: ACQ as manufactured for Viance in accordance with AWWA U1 and P5, P26, P27, P28, P29 as appropriate. Use 0.15 lb/cu ft (2.4 kg/m<sup>3</sup>) of ACQ in accordance with AWWA U1: (UC3B) as appropriate.
  - 2. Treatment: Ecolife or EL2 as manufactured by Viance. Use 0.019 lb/cu ft (0.3 kg/m<sup>3</sup>) of Ecolife or EL2 (+ 0.2 lb/cu ft MCS) in accordance with AWWA U1 (UC3B) as appropriate.
  - 3. Engineers accepted equivalent.

### **2.2 FASTENERS**

- A. General:
  - 1. All fasteners shall be stainless steel or as approved by Engineer.
  - 2. Fasteners securing pressure treated lumber shall be manufactured for corrosion resistance and exposures associated with pressure treated wood applications.

3. Nails shall not be used at roof edges to fasten rough carpentry, lumber, plywood, etc. Screws, anchors, and/or machine bolts shall be used to secure rough carpentry at roof perimeter edges.
  4. Masonry screws, spikes, and drive-pins shall not be used to fasten edge/perimeter nailers to concrete decks. Minimum ½" diameter anchors or bolts shall be used to secure roof edge nailers to concrete substrates.
- B. Wood to steel deck and light gage steel framing (16-ga. or less):
1. Shall be #14-13 DP1, pancake or panhead, corrosion resistant, ASTM A153, FM Approved, self-drilling and self-tapping screw, length to provide minimum 3 pitches of thread through metal thicknesses. Acceptable manufacturers include:
    - a. ITW Buildex Teks
    - b. Concealor®
    - c. Blazer
    - d. SFS Intec
    - e. Engineers accepted equivalent.
- C. Wood to wood:
1. Screws: No. 10 or greater, stainless steel wood screws with flat head, or insulation screws. Length to embed into base substrate a minimum of 1-1/2".
  2. Nails: 8, 10 or 16 penny, stainless steel, ring shank nails. Length to embed into base substrate a minimum 1-1/2". Acceptable manufacturers include:
    - a. Maze Nails
    - b. Anchor Staple and Nail
    - c. Swan Secure Products
    - d. Manasquan Premium Fasteners
    - e. Engineers accepted equivalent.
- D. Wood to brick, concrete block, other masonry units, and solid concrete substrates:
1. Epoxy adhesive anchoring system: Minimum 1/2-inch diameter, corrosion resistant threaded rods supplied by the anchoring system manufacturer, length as required to provide minimum embedment as required by fastener manufacturer based upon substrate being secured. Screen for substrate provided by fastener manufacturer. Corrosion resistant nut and 1-1/2" diameter flat washer. Acceptable manufacturers include:
    - a. Hilti Hit Hy-10 Plus
    - b. Powers Fasteners, Inc. AC100 Anchoring System
    - c. ITW Ramset Epcon C6 Fast Curing Epoxy
    - d. Engineers accepted equivalent
- E. Wood to solid concrete substrates:
1. Masonry screws, 1/4 inch minimum diameter, Type 410 stainless steel with flat head. Length to provide minimum 1" embedment into substrate. Acceptable manufacturers include:
    - a. Tapcon by ITW Buildex,
    - b. KWIK-CON II by Hilti
    - c. Powers Fasteners Tapper +
    - d. Engineers accepted equivalent.
  2. Sleeve-Type, or Wedge-Type, Expansion Anchor: Minimum 1/2 inch diameter,

Type 304 or 316 Stainless Steel, Expansion Anchor Bolt Assembly of length as required to provided minimum embedment as required by fastener manufacturer based upon substrate being secured. Acceptable manufacturers include:

- a. Lok/Bolt, Power Bolt or Power-Stud by Powers Fasteners
- b. Redi-Bolt, Dynabolt or Trubolt by Red Head Anchoring Systems
- c. Kwik Bolt by Hilti
- d. Engineers accepted equivalent.

F. Wood to structural steel (greater than 12-GA.):

1. #12-24 DP5 (for steel thickness up to 1/2") or DP4 (for steel thickness from 1/8" to 3/8"), flat or hex head, corrosion resistant, self-drilling/self-tapping fastener of length to provide minimum 3 pitches of thread through metal thicknesses. Acceptable manufacturers include:

- a. ITW Buildex Teks
- b. SFS Intec
- c. Blazer
- d. Engineers accepted equivalent

G. Wood to Grouted Cavity:

1. Grout: High strength, non-metallic, non-shrink grout for precision grouting and general construction Conform to ASTM C476 and ASTM C 1107. Acceptable manufacturers include Commercial Grade Quikrete, Precision Grout, Kauffman SureGrout or Engineers accepted equivalent. Grout type proportioned by volume as follows:

- a. Portland cement or blended hydraulic cement: one part.
- b. Hydrated lime: 0 to 1/10 part.
- c. Fine aggregate: 2-1/4 to three times sum of volumes of cement and lime used.
- d. Coarse aggregate: one to two times sum of volumes of cement and lime used.
- e. Sum of volumes of fine and coarse aggregates: Do not exceed four times sum of volumes of cement and lime used.

2. Bolt: corrosion resistant threaded J bolt meeting ASTM A 307, Grade A with ASTM A 563 hex nuts and flat washers, diameter of 1/2".

H. Washers: Fasteners heads for screws, anchors and bolts terminating at the surface of nailers shall be provided with a minimum 5/8 inch diameter, stainless steel or similar corrosion resistance flat washer provided by fastener manufacturer, unless washer is provided from factory as part of the fastener assembly.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Contractor shall inspect substrates to receive rough carpentry, and ensure substrates are in satisfactory condition prior to installation of rough carpentry.
- B. Contractor shall inspect all new and existing rough carpentry including fasteners for material condition before proceeding with installation. Deteriorated, rotted, damaged, split, warped, twisted or wet materials shall be removed and replaced with specified materials. Refer to Section 01 22 00-Unit Prices.

- C. Contractor shall remove old cants, tapered edge strips, debris, old fasteners, etc. that interfere with the installation of new rough carpentry.
- D. Contractor shall notify Engineer in writing of unsatisfactory conditions.
- E. Commencement of work signifies Contractor's acceptance of substrates. Any defects in roofing work resulting from such accepted substrates shall be corrected at no additional expense to the Owner.

### **3.2 PREPARATION**

- A. Steel/Metal Substrates:
  - 1. Any pressure treated wood to contact steel or metal shall have the steel/metal coated with a heavy coating of asphalt primer.
- B. Roof Deck and Structure:
  - 1. Roof deck and structure shall be dried and broomed and/or vacuumed clean of debris and foreign matter prior to installation of the new rough carpentry.
  - 2. Contractor shall adjust substrates to receive rough carpentry to ensure completed rough carpentry installation is acceptable for roofing and sheet metal flashings.
  - 3. Steel decking shall be coated with a uniform, heavy application of asphalt primer, or separated by membrane or other acceptable means to prevent contact between steel and treated wood products.
  - 4. Treated lumber shall not make direct contact with light gage steel decking.
- C. Masonry Walls:
  - 1. Adhesive anchors:
    - a. Contractor shall follow adhesive anchor manufacturer's published instructions for preparation and installation.
    - b. Pre-drill hole or clean-out existing gap/hole for adhesive anchors.
    - c. Use compressed air to blow-out all dust and moisture. Dust and moisture will result in failure of anchors and shall be removed before installing adhesive anchors.

### **3.3 INSTALLATION**

- A. Remove existing damaged or deteriorated wood blocking, nailers, and curbs and replace with new material of same dimensions.
- B. Re-secure all existing wood nailers at roof edges that are to remain. Fastener type and spacing shall comply with this specification.
- C. Install new wood blocking, nailers, and curbs to achieve a minimum eight inch flashing height above the roof membrane. Wood nailers at perimeter roof edges and expansion joints shall be installed to match insulation height. Maintain constant nailer height at perimeter edges.
- D. Wood blocking and nailers shall be installed concurrently with roof system installation. Removal of insulation and/or folding back of roof membrane to install wood blocking and nailers at a later date is not acceptable.
- E. Set rough carpentry to required levels and lines, with members plumb, true to line, material cut to fit, and braced to hold work in proper position. Use a belt sander to remove any obtrusive surface irregularities. Drive nails and spikes home; and pull bolt nuts tight with

heads and washers in close contact with the wood.

- F. Fit rough carpentry to other construction; scribe and cope for accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar supports to allow attachment of other construction. All joints between wood shall be installed for a smooth transition.
- G. Attachment:
1. The Contractor shall consult the fastener manufacturer's published literature and follow the recommended requirements for pre-drilling, cleaning, placement and compatibility of substrates. Follow manufacturer's requirements for fasteners spacing, substrate preparation and substrate embedment where not specified.
  2. Securely attach rough carpentry work to substrate with fasteners. Anchor to resist a minimum force of 300 lbs/lineal foot in any direction.
  3. Rough carpentry attachment shall meet the requirements herein and that of the current FM Loss Prevention Data Sheet 1-49, Perimeter Flashing.
  4. Install bolts flush with the top surface of nailers where possible to avoid countersinking. Bolt bottom nailers then fasten upper nailers where possible. Countersink bolts, nuts and screws flush with wood surfaces only as detailed.
  5. Install fasteners without splitting wood. Pre-drill where necessary. Split or damaged wood shall be removed, or repaired and/or re-secured to provide acceptable conditions.
  6. For anchors, pre-drill concrete and masonry units to prevent damage or cracking of the masonry. Consult fastener manufacturer's published guides. Damaged masonry shall be repaired, and fasteners shall be removed and re-installed in an acceptable location.
  7. Fastener spacing: Fasteners shall be staggered 1/3 the board width and installed within 6" of each end.
    - a. Bolts, adhesive anchors, wedge and sleeve anchors, and machine bolts securing nailers shall be spaced 48 inches on center, staggered and an additional fastener within 6 inches of each end of nailer to prevent boards from twisting at board joints. Secure at 24" on center in corners (Zone 3) of the roof area.
    - b. Screws and 1/4 inch diameter anchors securing wood to concrete or masonry units shall be spaced 12 inches on center maximum, staggered, with fasteners installed at each end of nailer lengths to prevent wood from twisting at board joints.
    - c. Screws securing wood to wood shall be installed 12 inches apart, staggered, with two screws installed within 6 inches of each end of nailer lengths to prevent wood from twisting at board joints.
    - d. Self-drilling, and/or pre-drilled self-tapping screws securing wood to structural steel shall be spaced 12 inches apart, staggered, with one screw within 6 inches of each end of nailer lengths to prevent wood from twisting at board joints.
    - e. Nails securing wood to wood shall be spaced 12 inches apart, staggered, with two nails installed within 6 inches of each end of nailer lengths to prevent wood from twisting at board joints.
  8. Plywood Sheathing Securement: Secure at 12" on center staggered each direction.
  9. Plywood Deck Securement:
    - a. Screw or nail plywood at 4 inches on center along the edges of plywood and 6 inches on center along the intermediate roof framing.
- H. Select fasteners of size and length that will not be exposed from the building interior and/or from the ground, or remove protruding fasteners, paint or finish to eliminate exposure.

- I. Thickness of wood nailers shall be flush with adjacent insulation and other materials. Additional fasteners shall be installed to ensure nailers are flush.
- J. Unless otherwise detailed, plywood used as blocking or shim shall be installed below dimensional lumber such that the fastener head terminates at the dimensional lumber surface.
- K. Wood nailers at roof perimeters, expansion joints, roof area dividers, etc. shall not be less than 3 feet long.
- L. When multiple nailers are installed stacked two high or more, offset nailers no less than 12" such that joints at nailer end do not line-up vertically.
- M. Each end of nailers shall be fastened with additional fasteners to ensure a smooth transition at butted joints, and to prevent warping and/or twisting.
- N. Shims:
  - 1. The Contractor shall add plywood and lumber shims as required for the specified height and thickness.
  - 2. Shims shall make full contact with stacked rough carpentry. Partial shim contact, and small shim pieces spaced apart are not acceptable.
  - 3. Plywood used as blocking or shim shall be installed below dimensional lumber such that the fastener head terminates at the dimensional lumber surface.
- O. Curbs:
  - 1. Adjust wood curbs to support rooftop piping, ducts, equipment, etc.
  - 2. Raise equipment to provide required flashing height for roofing.

**3.4 CLEANING**

- A. The Contractor shall ensure the site and building are cleaned to meet pre-construction conditions, as accepted by the Owner.
- B. The site and building shall be free of saw dust from pressure treated lumber, fasteners and other debris.
- C. Damages to the building, grounds, equipment and site shall be repaired or replaced by the Contractor to meet pre-construction conditions, as accepted by the Owner.

**END OF SECTION 06 10 00**

**SECTION 07 01 50**

**PREPARATION FOR REROOFING**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Preparatory work to be completed prior to roof installation including but not limited to:
  - 1. Removal of existing roof assemblies down to the structural deck.
  - 2. Removal of existing roof assemblies down to the structural framing. Roof sections "C1" and "C2" only.
  - 3. Repairs to structural deck.
  - 4. Fastener withdrawal tests on roof section "C1".
  - 5. Soil pipe extensions.
  - 6. Raising of mechanical units/HVAC units to meet the required minimum flashing height.
  - 7. Installation and/or modification of through wall/edge primary/overflow scuppers.
  - 8. Under Roof Deck Survey

**1.2 RELATED SECTIONS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Specification Sections, apply to this Section, including but not limited to:
  - 1. Rough Carpentry Section 06 10 00
  - 2. Roof Insulation Section 07 22 16
  - 3. Thermoplastic Single Ply Roofing Section 07 54 00

**1.3 DEFINITIONS**

- A. Removal: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain property of the Owner.
- B. Existing to remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Engineer, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.
- C. Material ownership: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site.

**1.4 EXISTING ROOF ASSEMBLIES\***

- A. Roof Section A1
  - 1. Coal tar pitch built-up roof
  - 2. Wood fiber board
  - 3. Tapered polyisocyanurate insulation
  - 4. Structural concrete deck
- B. Roof Section A2
  - 1. Coal tar pitch built-up roof
  - 2. Wood fiber board
  - 3. Structural concrete deck

- C. Roof Sections B1, B2, B3 & B4
  - 1. Thermoplastic single-ply membrane
  - 2. Polyisocyanurate insulation
  - 3. Sloped structural concrete deck
  
- D. Roof Section C1
  - 1. Modified bitumen granule surfaced membrane cap sheet
  - 2. Modified bitumen base sheet
  - 3. 5/8" Plywood deck
  - 4. 2"x4" Wood joists spaced 24" on center
  
- E. Roof Section C2
  - 1. Asphalt shingles
  - 2. Felt underlayment
  - 3. 5/8" Plywood deck
  - 4. 2"x4" Wood framing spaced 24" on center

\*Roof system composition is based on random sampling. Contractor is responsible for verification of roof system composition.

## **1.5 SUBMITTALS**

- A. Refer to Section 01 33 00-Submittal Procedures.
- B. Manufacturer's Product Data Sheets for all materials specified certifying material complies with all specified requirements.
- C. Latest edition of the Manufacturer's current material specifications and installation instructions.

## **1.6 QUALITY ASSURANCE**

- A. Qualifications: Previous experience removing existing roof systems.
- B. Requirements: Contractor to comply with governing EPA regulations and hauling/disposal regulations of authorities having jurisdiction.

## **1.7 SCHEDULING**

- A. Conduct demolition so that Owner's operations will not be disrupted. Provide 72 hours notification to Owner of activities that will affect Owner's operations.

## **1.8 WARRANTIES**

- A. Any damage to existing items under warranty shall be repaired/replaced with materials acceptable to the Warrantor.

## **PART 2 PRODUCTS**

### **2.1 MATERIALS**

- A. Wood Deck
  - 1. Refer to Specification Section 06 10 00.



- B. Galvanized Steel Plates for Concrete Deck Openings of size to extend a minimum of 6" beyond opening on each side of thickness as indicated in Contract Drawings.
  - 1. Deck opening up to 8" in any one direction: 18 gauge
  - 2. Deck opening from 8" to 13" in any one direction: 16 gauge
  - 3. Deck opening from 13" to 24" in any one direction: 1/8" thick
  - 4. Deck opening greater than 24" in any one direction: Steel deck or plate as determined by Engineer
- C. Soil Pipe Extensions (No-Hub):
  - 1. Provide no-hub coupling with coupling conforming to CISPI 310 and ASTM C 1277. Gasket to be made from elastomeric compound meeting ASTM C 564. 5/16" hex-head screw band assembly. Inside diameter to match outside diameter of soil pipe being raised.
  - 2. Solid-wall white PVC pipe of diameter to match existing and length as necessary to provide minimum 8" and maximum 12" flashing height.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Survey existing conditions to determine extent of demolition.
- B. Record the conditions of items to be removed/reinstalled and items to be removed/salvaged.
- C. Contractor shall not remove any element that may result in structural deficiency or collapse of any part of the structure or adjacent structures during demolition.
- D. Contractor to inspect substrate for soundness and notify Engineer in writing of any deficiencies. Commencement of work signifies Contractor's acceptance of site conditions.

### **3.2 PREPARATION**

- A. Do not begin demolition until utilities have been disconnected/sealed and have been verified as such in writing.
- B. Do not close off or obstruct streets, walks or other adjacent occupied facilities without permission from Owner and authorities having jurisdiction.
- C. Provide safe conditions for pedestrians. Erect temporary protection such as walkways, fences, railings and canopies as required by OSHA and other governing authorities.
- D. Provide protection for adjacent building, appurtenances and landscaping to remain. Erect temporary fencing around trees to remain.
- E. Provide temporary weather protection as required to prevent water leakage and damaged to exterior or interior of adjacent structures.

### **3.3 UTILITIES/SERVICES**

- A. Maintain existing utilities that are to remain in service and protect them against damage during selective site demolition unless authorized in writing by the Owner and authorities having jurisdiction.
  - 1. Locate all conduits and equipment attached to the underside of the decking prior to reroofing. Insulation fastener locations are not to disturb existing conduits or

- interior components/equipment.
- 2. If utilities serving occupied portions of the site must be shut down, temporary services shall be provided.
- 3. Provide 72 hours' notice to Owner if shut down is required.
- 4. Where services are to be removed, relocated or abandoned, provide necessary bypass connections to remaining occupied buildings and areas.

### **3.4 POLLUTION CONTROLS**

- A. Use water, mist, temporary enclosures and other suitable methods to limit the spread of dust and dirt. Comply with local EPA regulations.
  - 1. Do not use water where damage may occur or where hazardous conditions would be created such as ice or flooding.

### **3.5 UNDER ROOF DECK SURVEY**

- A. Prior to any work being performed, a survey of the under-deck components shall be completed.
- B. Contractor shall locate and mark any conduit, utilities, etc. that will interfere with the replacement roof system.
- C. Contractor shall determine the presence of spray applied fireproofing on the underside of the roof deck and utilize caution during roof operations. If fireproofing is present, Contractor shall monitor the building interior during roof operations and notify the Owner/Engineer immediately if fireproofing is observed to be displaced.

### **3.6 REMOVALS**

- A. Demolish and remove existing construction only to the extent required by new construction.
- B. Remove all existing roofing, roof insulation, membrane and sheet metal and discard.
- C. Remove or correct any obstruction which might interfere with the proper application of new materials.
- D. Lift or remove all existing equipment so that existing flashings can be totally removed, and new flashings installed.
- E. Lift existing sheet metal flashings to remain to remove all existing materials. After installation of new materials, neatly bend flashing back into place.
- F. Remove debris from existing materials to provide clean, dry substrate.
- G. Demolish asphalt, concrete and masonry in small sections. Cut concrete and masonry at juncture with construction to remain using powered masonry saw, core drill or hand tools. Do not use powered impact tools.
- H. Remove and transport debris in a manner that will prevent damage/spills to adjacent buildings and areas.
- I. Dispose of demolished items and materials on a daily basis. On-site storage of removed items is not permitted.
- J. Transport demolished materials off-site and dispose of materials in a legal manner.
- K. Perform progress inspections to detect hazards resulting from demolition activities.

### **3.7 FLASHING HEIGHTS**

- A. Permanently raise roof top equipment as required to achieve 8" minimum flashing height.
- B. Provide additional wood blocking to top of parapet walls and expansion joints to achieve minimum 8" flashing height.
- C. Extend all existing sanitary vents to height required by the applicable Plumbing Code, but no less than 8 inches and no more than 12 inches above the finished roof system.
  - 1. Preparation
    - a. For soil pipes that do not provide minimum 8" flashing height, cut existing pipe so that no-hub coupling can be located within roof insulation system.
  - 2. Installation
    - a. Provide no-hub coupling installed and torqued in accordance with manufacturer's installation instructions.
    - b. Provide PVC pipe extension to provide a minimum 8" and maximum 12"

### **3.8 STEEL PLATE INSTALLATION**

- A. Mechanically attach deck repair plates to concrete deck with approved fasteners 6" on center or a minimum of 2 fasteners per side.

### **3.9 COUNTERFLASHING PREPARATION**

- A. Counterflashing to Remain: Neatly bend existing counterflashing up at walls as required to completely remove existing base flashings and to install new base flashings. After installation of new base flashings, neatly bend counterflashing back in place using sufficient care to prevent deformation to the finished counterflashing.

### **3.10 SCUPPER INSTALLATION/MODIFICATION**

- A. Locate bottom of overflow scupper 2 inches above surface of the roof system adjacent to the nearest roof drain (excluding sump).
- B. Remove existing masonry and store for reuse if in good condition. Reinstall masonry units to extent possible. Provide new concrete masonry units to match existing.
- C. Extend opening through entire thickness of parapet. Take precautions to avoid damaging adjacent wall surfaces.
- D. Provide finished openings as indicated.
- E. Install veneer materials of same type, size and finish to match existing. Set units in full beds of mortar to match adjacent joints in thickness. Tool joints to match.
- F. Repair exterior finish to match adjacent surfaces.

### **3.11 FASTENER WITHDRAWAL TESTS**

- A. Conduct fastener pull tests in accordance with ANSI/SPRI FX-1-2001 requirements. Perform a minimum of 5 pull tests per individual roof area. Provide a report along with a roof plan showing test locations and corresponding withdrawal value of each pull test. Testing to be performed either by manufacturer of fasteners tested or by roof manufacturer.

**3.12****CLEANING**

- A. Inspect the site daily and clean up debris and hazards at the end of each day. Adjacent roads, drives and walkways shall remain in operation and free from construction materials debris.
- B. Clean adjacent structures of dust dirt and debris. Return adjacent areas to original conditions to the satisfaction of the Owner.

**END OF SECTION 07 01 50**

**SECTION 07 22 16**

**ROOF INSULATION**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Roof Section A1:
  - 1. Provide base layer insulation adhered in foam adhesive. Refer to performance requirements for minimum R-value.
  - 2. Provide tapered insulation system adhered in foam adhesive
  - 3. Provide gypsum overlayment cover board adhered in foam adhesive
- B. Roof Section A2:
  - 1. Provide tapered insulation system adhered in foam adhesive
  - 2. Provide gypsum overlayment cover board adhered in foam adhesive
- C. Roof Sections B1, B2, B3 & B4:
  - 1. Provide base layer insulation adhered in foam adhesive. Refer to performance requirements for minimum R-value.
  - 2. Provide gypsum overlayment cover board adhered in foam adhesive
- D. Roof Section C1:
  - 1. Provide tapered insulation system mechanically attached or adhered in foam adhesive
  - 2. Provide gypsum overlayment cover board mechanically attached or adhered in foam adhesive

**1.2 RELATED SECTIONS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Specification Sections, apply to this Section, including but not limited to:
  - 1. Rough Carpentry Section 06 10 00
  - 2. Preparation for Reroofing Section 07 01 50
  - 3. Thermoplastic Single Ply Roofing Section 07 54 00
  - 4. Storm Drainage Section 22 14 00

**1.3 REFERENCES**

- A. Refer to the following references for specification compliance:
  - 1. Florida Building Code
  - 2. National Roofing Contractors Association – NRCA
  - 3. FM Global
  - 4. Underwriters Laboratories, Inc. – UL
  - 5. ASHRAE Standard 90.1

**1.4 PERFORMANCE REQUIREMENTS**

- A. R Value – Roof Sections A1 and B2
  - 1. The minimum continuous “R-value” for the above deck insulation system shall be

R-25 and in accordance with the current Energy Conservation Code and ASHRAE 90.1.

2. R value to be based on Long-Term Thermal Resistance (LTTR) for polyisocyanurate insulation and manufacturer's published data for all other insulation components, as tested in accordance with ASTM C177, C236, C518 or C976.

- B. Wind Design: Install insulation system to meet the required wind uplift pressures as specified on REI Wind Load Drawing "R2".

## **1.5 SUBMITTALS**

- A. Refer to Section 01 33 00-Submittal Procedures.
- B. Manufacturer's Product Data Sheets for all materials specified certifying material complies with all specified requirements.
- C. Latest edition of the Manufacturer's current material specifications and installation instructions.
- D. Tapered insulation plan from material supplier with minimum R-value for each roof area.

## **1.6 QUALITY ASSURANCE**

- A. Insulation to be installed in accordance with their respective manufacturer's requirements.
- B. Insulation(s) not bearing UL label at point of delivery shall be rejected.
- C. Insulation damaged or wetted before, during, or after installation shall be removed from the job site no later than the next working day from the day such damage or moisture contamination is noted.

## **1.7 DELIVERY, STORAGE, AND HANDLING**

- A. Delivery: Material shall be delivered in the manufacturer's original sealed and labeled shrouds and in quantities to allow continuity application.
- B. Storage: Materials shall be stored out of direct exposure to the elements on pallets or dunnage at least 4 inches above ground level at site location acceptable to Owner.
  1. Utilize tarps that will completely cover materials to prevent moisture contamination. Remove or slit factory shrouds and/or visqueen; do not use these materials as tarps.
  2. Install vapor retarders under material storage areas located on the ground.
  3. Remove damaged or deteriorated materials from the job site.
- C. Handling: Material shall be handled in such a manner to preclude damage and contamination with moisture or foreign matter.

## **1.8 PROJECT CONDITIONS**

- A. Insulation shall not be applied during precipitation. Contractor assumes all responsibility for starting installation in the event there is a probability of precipitation occurring during application.
- B. Contractor will take necessary action to restrict dust, asphalt, and debris from entering the structure.

- C. No more roofing will be removed than can be replaced with insulation, membrane and base flashings in the same day to create a watertight installation.

## **PART 2 PRODUCTS**

### **2.1 MATERIALS**

A. Insulation Boards:

1. Roof Insulation – Roof Sections A1 and B2:  
Shall be rigid polyisocyanurate roof insulation board with factory applied coated polymer bonded glass fiber mat facers on the top and bottom. Boards to comply with ASTM C1289 Type II, Class 2, Grade 2 and meet the following requirements:
  - a. Curing time shall be 24 hours minimum, plus an additional 24 hours minimum per inch thickness, at a minimum of 60 degrees F before shipment from the manufacturer.
  - b. Dimensional stability shall be 2 percent maximum linear change when conditioned at 158 degrees F and 97 percent relative humidity for seven days.
  - c. Maximum permissible insulation board size for foam adhesive is 4' x 4'. Field cutting of larger boards is not acceptable.
  - d. Thickness shall be two layers of 2" insulation for a combined thickness of 4".
  
2. Roof Insulation – Roof Sections A2, B1, B3 and B4:  
Shall be rigid polyisocyanurate roof insulation board with factory applied coated polymer bonded glass fiber mat facers on the top and bottom. Boards to comply with ASTM C1289 Type II, Class 2, Grade 2 and meet the following requirements:
  - a. Curing time shall be 24 hours minimum, plus an additional 24 hours minimum per inch thickness, at a minimum of 60 degrees F before shipment from the manufacturer.
  - b. Dimensional stability shall be 2 percent maximum linear change when conditioned at 158 degrees F and 97 percent relative humidity for seven days.
  - c. Maximum permissible insulation board size for foam adhesive is 4' x 4'. Field cutting of larger boards is not acceptable.
  - d. Minimum thickness shall be 1/2".
  
3. Tapered Insulation System – Roof Sections A1, A2, C1  
Shall be rigid polyisocyanurate roof insulation board with factory applied coated polymer bonded glass fiber mat facers on the top and bottom. Boards to comply with ASTM C1289 Type II, Class 2, Grade 2 and meet the following requirements:
  - a. Curing time shall be 24 hours minimum, plus an additional 24 hours minimum per inch thickness, at a minimum of 60 degrees F before shipment from the manufacturer.
  - b. Dimensional stability shall be 2 percent maximum linear change when conditioned at 158 degrees F and 97 percent relative humidity for seven days.
  - c. Board size shall be 4 foot by 4 foot.
  - d. Slope shall be 1/4" per foot and minimum thickness shall be 1/2"
  - e. Fill Insulation: Shall be rigid polyisocyanurate meeting the above requirements with board size of 4 foot by 4 foot and thickness of 2".
  - f. Crickets and Saddles: Shall be rigid polyisocyanurate meeting the above requirements with a board size of 4 foot by 4 foot and 1/2" per foot slope.
  
4. Gypsum Overlayment: Shall be nonstructural, glass mat faced gypsum panel with

500 psi moisture resistant treated core, non-asphaltic primer surfacing, and tested in accordance with ASTM E 84 and ASTM E 136. Board Size shall be 4' by 8' and minimum thickness shall be 1/2-inch.

**B. Insulation Accessories**

1. Tapered Edge Strip: Shall be a closed-cell polyisocyanurate foam core integrally bonded to non-asphaltic, fiber-reinforced organic felt or inorganic coated-glass facers. Fabricated with "zero edge" to provide transitions as required by field conditions:
  - a. Shall be installed at edges to make transitions as detailed in Contract Drawings.
  - b. Use 2" by 24" tapered edge strips to form crickets in front of curbs wider than 12" and to provide slope transition at the outside of drainage sumps.
  - c. Use 1.5" x 12".

**C. Insulation Attachment Materials:**

1. Wood Deck Mechanical Fasteners and Stress Plates: Shall be corrosion resistant 3" galvalume stress plate and corrosion resistant screw type fasteners for use with steel decks; approved by the insulation manufacturer for the insulation type, thickness and board size specified; fastener length as required by the fastener manufacturer for the insulation thickness specified, and to penetrate the deck a minimum of 1 inch.
2. Foam Adhesive: Shall be a one or two part, VOC compliant, moisture-cured polyurethane foamable adhesive designed as roof insulation adhesive and approved by insulation manufacturer.

**PART 3 EXECUTION**

**3.1 EXAMINATION**

- A. Contractor to inspect substrate for soundness and notify Engineer in writing of any deficiencies.
- B. Commencement of work signifies Contractor's acceptance of substrate. Any defects in roofing work resulting from such accepted substrates shall be corrected to Owner's satisfaction at no additional expense.

**3.2 PREPARATION**

- A. General
  1. Roof deck to be dry and broomed clean of debris and foreign matter prior to installation of insulation system.

**3.3 APPLICATION**

- A. General
  1. Application shall be in accordance with the insulation/membrane manufacturer's instructions and these specifications.
  2. All insulation to be in full sheets, carefully fitted and pushed against adjoining sheets to form tight joints. Gaps exceeding 1/4 inch will not be accepted.
  3. Insulation and overlayment boards that must be cut to fit shall be saw cut or knife-cut in a straight line, not broken. Chalk lines shall be used to cut insulation. Uneven or broken edges are not acceptable.



4. Remove insulation dust and debris that develops during insulation cutting operations.
5. Joints between successive and adjacent layers of insulation to be offset a minimum of six (6") inches.
6. Stagger joints of gypsum overlayment one (1') foot (vertically and laterally) to ensure that joints do not coincide with joints from the previous or adjacent layer.
7. Crickets, saddles and tapered edge strips shall be installed before the overlayment insulation.
8. Adhere cant strips and tapered edge strips at transitions, terminations and/or penetrations as detailed or required in ribbons of foam adhesive or a full mopping of hot asphalt to ensure smooth transitions are provided for the roof membrane and flashings.
9. Provide necessary modifications to insulation system or nailers at roof edges as required to ensure a flush and smooth transition is provided for the roof membrane and flashing.
10. Field modifications of insulation, tapered insulation, tapered edge strips and cants shall be made by the Contractor where required to accommodate roof and flashing conditions, prevent water dams and ponding water. Ponding water at scuppers and cricket valleys shall not be accepted.
11. Provide necessary modifications to prevent standing water which is defined as 1/4" of water in a 4-square foot or larger area 24 hours or more after precipitation.

B. Tapered Insulation

1. Install tapered insulation system to provide positive slope for complete roof drainage.
2. Crickets shall be sized as shown in the Contract Drawings. Modifications shall be provided to ensure positive slope and prevent standing water along the cricket valley.
  - a. Minimum length to width ratio shall be 2:1. Fabricate partial crickets with dimensions which would result in a minimum length to width ratio of 2:1 if they were extended to full size.
  - b. Unless otherwise noted, fabricate all crickets from tapered stock as required to provide the specified minimum slope. For example, when roof slope is indicated as 1/4" per foot minimum, fabricate crickets with slope of 1/2" per foot minimum.
  - c. Construct crickets on up slope side of all curbs to ensure positive drainage.
  - d. Install tapered edge strips at cricket edges to provide a smooth transition between the cricket and insulation system below.
3. Insulation boards may require mechanical fasteners and stress plates at slope transition of crickets to minimize bridging.

C. Roof Drainage:

1. Drainage sumps shall be installed as detailed.
2. The Contractor shall be responsible for carefully laying out the tapered insulation, sumps, drain bowls and scuppers to ensure the finished roof provides complete drainage with no standing water.
3. Contractor shall fabricate miter-cut sumps at scuppers to provide smooth transitions between the insulation system and the drains/scuppers.
4. Sumps shall ensure complete roof drainage and prevent water dams.
5. Contractor shall adjust insulation, drains and scuppers to ensure complete roof drainage and satisfactory substrates for membrane and flashings.
6. Drain sump components shall be fastened to the deck using specified insulation fasteners or adhesives.
7. Circular sumps and sumps that do not provide smooth transition or that create standing water at the drains shall be rejected and shall require removal and

replacement.

D. Insulation Mechanical Attachment

1. Fastener quantity and spacing shall be as indicated in the Contract Drawings.
2. Fasteners shall be installed using manufacturer's recommended equipment and in accordance with the manufacturer's requirements.
3. Fasteners and stress plates shall be set secure and tight against the insulation surface and shall not be over-driven.
4. Fasteners shall engage the top flange of steel decks only.

E. Foam Adhesive Application

1. Adhesive beads shall be positioned and spaced at a minimum as indicated in the Contract Drawings. Comply with the requirements of the membrane manufacturer's tested assembly for adhesive spacing and positioning.
2. Adhesive beads shall be sized in accordance with the adhesive manufacturer's guidelines.
3. Insulation boards shall be placed onto the beads and immediately "walked" and/or "weighted" into place. Insulation boards must be placed into the adhesive in strict accordance with the adhesive manufacturer's guidelines.
4. Ensure full adhesion of all layers of insulation and take whatever steps necessary to achieve full adhesion, including but not limited to temporary ballasting of insulation until adhesive sets.

**END OF SECTION 07 22 16**

## SECTION 07 31 13

### ASPHALT SHINGLE ROOFING

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Installation of a new Underwriters Laboratory 790 Class A, shingle type roof system including flashing and all accessories.

##### **1.02 REFERENCES**

- A. Refer to the following references for specification compliance:
  - 1. Florida Building Code
  - 2. National Roofing Contractors Association - NRCA
  - 3. Asphalt Roofing Manufacturers Association - ARMA
  - 4. Factory Mutual Research - FM
  - 5. Underwriters Laboratories, Inc. - UL

##### **1.03 SUBMITTALS**

- A. Refer to Section 01 33 00-Submittals.
- B. Selection Samples: Complete set of color cards representing manufacturer's full range of available colors and patterns.
- C. Submit manufacturer's installation instructions, showing required preparation and installation procedures.
- D. Manufacturer's Product Data Sheets for all materials specified certifying material complies with all specified requirements.

##### **1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the roofing system products specified in this section, with minimum 25 years' experience.
- B. Installer Qualifications: Certified or authorized by shingle manufacturer for steep slope installation, certified to install enhanced warranty projects.
- C. System application to be in accordance with the current Asphalt Roofing Manufacturer's Association's Residential Asphalt Roofing Manual (ARMA) and the proceeding requirements and details.

##### **1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING**

- A. Store products in manufacturer's unopened labeled packaging until ready for installation.
- B. Store products in a covered, ventilated area, at temperature not more than 110 degrees F (43 degrees C); do not store near steam pipes, radiators, etc., or in sunlight.
- C. Store bundles on flat surface to maximum height recommended by manufacturer. Weight equalization boards must be used if pallets are to be double stacked.
- D. All rolls must be stored on end.

- E. Bundles should not be dropped on edge nor should attempt be made to separate shingles by “breaking” over ridge or other bundles.
- F. Handle shingles carefully in hot weather to avoid damaging shingle edges.

## **1.06 JOB CONDITIONS**

- A. Substrate: Proceed with shingle work only after substrate construction and penetrating work have been completed.
- B. Environmental Conditions
  - 1. Proceed with shingle work only when weather conditions are in compliance with manufacturer’s recommendations and when substrate is completely dry.
  - 2. Contractor shall take extra precautions in temperatures below 40 degrees F.
  - 3. Contractor shall protect the deck and building interior from the elements during the course of the work.

## **1.07 WARRANTY**

- A. Manufacturer’s Warranty: Manufacturer’s standard form in which manufacturer agrees to repair or replace asphalt shingles that fail in materials within specified warranty period. Material failures include manufacturing defects and failure of asphalt shingles to self-seal after a reasonable time.
  - 1. Material Warranty Period:
    - a. Twenty (20) years from date of Substantial Completion, non-prorated for the first ten (10) years.
  - 2. Wind-Speed Warranty: Asphalt shingles will resist blow-off or damage caused by wind speeds up to 120 mph.
  - 3. Algae-Discoloration Warranty Period: Asphalt shingles will not discolor.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

- A. Architectural Shingles
  - 1. Fiberglass mat, 235 lbs. per sq. (minimum), dimensional, mineral granule surfaced, self-sealing two-ply laminated, asphalt roofing shingle.
  - 2. Shingles to meet Underwriter’s Laboratory Class A requirements for wind resistance and external fire hazard.
  - 3. Shingles shall meet ASTM D 3018 Type 1 self-sealing and D 3462.
  - 4. Shingles shall be resistant to algae/fungus discoloration.
  - 5. Color to be selected by Owner.
- B. Hip Shingles: Mineral granule surfaced prefabricated, precut, individual units approved by asphalt shingle manufacturer.
- C. Self-Adhering Underlayment: 40-mil minimum thickness sheet; slip-resistant surfacing, polyethylene-film-reinforced top surface laminated to SBS-modified asphalt adhesive, with release paper backing; suitable for high temperature applications up to 250 degrees, approved by asphalt shingle manufacturer such as:
  - 1. Mid-States Asphalt Quik-Stick HT.

2. Grace Ice and Water Shield HT.
3. Carlisle WIP 300 HT.
4. Engineer's accepted equivalent

D. Miscellaneous

1. Underlayment Fasteners: Plastic capped nails, 1" in length with a 1" diameter head.
2. Starter Strips: As recommended and required by asphalt shingle manufacturer to meet specified warranty requirements.
3. Shingle Fasteners: Hot-dipped galvanized roofing nail of adequate length to penetrate the deck a minimum of 3/4 inch with 1-1/2" in min length, annular threaded 11 or 12 gauge with a 3/8" diameter head.
4. Hip Shingle Fasteners: Hot-dipped galvanized roofing nail of adequate length to penetrate the deck a minimum of 3/4 inch with 2-1/2" in min length, 11 or 12 gauge with a 3/8" diameter head.
5. Roof Cement: Asbestos free polymer modified trowel grade asphaltic cement meeting the requirements of ASTM D 4586 Type I or II.
6. Vent Pipe Flashings: Pre-fabricated, rigid section, high-density polypropylene or other UV-stabilized material.

## **PART 3 EXECUTION**

### **3.01 INSPECTION**

- A. Contractor shall verify that deck surfaces are dry, free of ridges, warps, or voids and that work penetrating the roof deck, or which may otherwise affect the roofing has been properly prepared.
- B. Notify Engineer in writing of unsatisfactory conditions. Do not proceed with shingle work until all unsatisfactory conditions have been corrected in a manner acceptable to the Engineer.

### **3.02 PREPARATION**

- A. General. All surfaces shall be swept or vacuumed prior to commencement of roofing.

### **3.03 APPLICATION**

- A. Self-Adhering Underlayment
  1. Install per Manufacturer's recommendations except as noted herein.
  2. End laps to be a minimum of 4", and side laps a minimum of 2".
  3. Completely cover deck surface with one ply of underlayment by laying underlayment parallel to eaves.
- B. Metal
  1. At eaves, drip edge is installed below the underlayment and ice dam protection membrane which assures that water drains completely off the roof.
  2. At rakes, drip edge is installed over the underlayment and ice dam protection membrane to prevent wind-blown rain from working its way onto the deck between the drip edge and underlayment.
  3. Install sheet metal flashing and trim in accordance with the detail drawings, manufacturer's requirements, and Section 07 62 00-Sheet Metal Flashing and Trim.

- C. Shingles
1. Install starter strips. Project first course of shingles 3/4" beyond face of drip edge.
  2. Place asphalt shingles in straight coursing pattern with manufacturer recommended exposure to produce a double thickness over entire roof area.
  3. Install per the six (6") inch method. Stair step with 6" offset and blend shingles from several bundles for color uniformity.
  4. **Hand nail shingles only** in place through double thickness area designated by fastener line and driven per manufacturer's recommendations with a minimum of six (6) nails per shingle.
- D. Hips.
1. Apply shingles up to a hip from both sides of roof before finishing intersection.
  2. To apply the capping, bend each shingle along centerline of longer dimension to extend an equal distance on each side of hip. In cold weather, warm the shingle until it is pliable before bending. Apply the shingles with a 5-inch exposure, beginning at the bottom of the hip or from end of ridge opposite the direction of prevailing winds. Secure each shingle side, 5-1/2 inches back from the exposed end and 1 inch up from the edge.
- E. Step flashing:
1. Provide dimensions indicated on the Contract Drawings.
  2. Turn underlayment system vertically up wall as indicated in the Contract Drawings.
  3. Install starter course butted tight against the vertical wall. Fasten per Manufacturer's instructions.
  4. Provide kick-out flashing with fully soldered seams over starter course and set in bed of roof cement. Secure with two nails approximately 1 inch from upslope edge of horizontal flange.
  5. Provide first course of step flashing directly over kick-out flashing. Secure with two nails approximately 1 inch from upslope edge of horizontal flange. Dab roof cement at each fastener.
  6. Install shingle course over step flashing, butt shingle that intersects the wall firmly against step flashing and secure in place. Do not provide shingle fastener through step flashing.
  7. Seal edge of shingle over step flashing with quarter sized dab of roof cement.
- F. Daily Tie-ins: Contractor to take adequate provisions on tie-ins between new roofing and existing. Contractor is responsible for all interior damages associated with his operations.

### 3.04 PROTECTION

- A. Lay out progression of work to minimize working on or above completed roofing.
- B. Minimize traffic over finished roof surface.

**END OF SECTION 07 31 13**

## SECTION 07 42 13

### METAL SOFFIT PANELS

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Provide prefinished, prefabricated nonstructural aluminum vented soffit panel providing cladding protection of a weather barrier substrate where indicated.

##### 1.2 RELATED SECTIONS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Specification Sections, apply to this Section, including but not limited to:
  - 1. Rough Carpentry Section 06 10 00
  - 2. Sheet Metal Flashing and Trim Section 07 62 00

##### 1.3 REFERENCES

- A. ASTM International
  - 1. B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
  - 2. D523 - Standard Test Method for Specular Gloss.
  - 3. D659 - Standard Guide for Testing Industrial Water-Reducible Coatings.
  - 4. D822 - Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.
  - 5. D2244 - Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.
- B. American Architectural Manufacturer's Association (AAMA) 605.2 - Voluntary Specification for High Performance Organic Coatings.
- C. National Roofing Contractors Association (NRCA) - Roofing Manual.
- D. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - Architectural Sheet Metal Manual.
- E. Underwriters Laboratories (UL) - Building Materials Directory.

##### 1.4 PERFORMANCE REQUIREMENTS

- A. Design Requirements:
  - 1. Provide factory preformed soffit panel system that has been pretested and certified by the manufacturer to comply with specified requirements under installed conditions.
  - 2. Provide one-piece, single length soffit panels.
  - 3. Provide continuous interlocking seams with open hem male legs that inherently increases load span capability, stiffness, and flexural stress handling.

- B. Wind Design: Install roofing system to meet or exceed the requirements of the current adopted version of ASCE-7, and shall be an approved assembly tested to the wind pressures listed below:
  - 1. Positive Zone: Pressure 54.4psf.
  - 2. Negative Zone: Pressure -68.5 psf.
- C. Attachment of Panels shall be as determined in accordance with ASTM E 1592 along with holding strength of fasteners to existing structure in accordance with submitted test data, provided by fastener manufacturer, based on length of embedment and properties of materials.

## **1.5 SUBMITTALS**

- A. Refer to Section 01 33 00-Submittal Procedures.
- B. Manufacturer's Product Data Sheets for all materials specified certifying material complies with all specified requirements.
- C. Latest edition of the Manufacturer's current material specifications and installation instructions.
- D. Shop drawings showing all details, trim pieces, transitions and closures necessary to install soffit panels.

## **1.6 QUALITY ASSURANCE**

- A. Manufacturer Qualifications:
  - 1. Manufacturer shall have a minimum of 10 years' experience supplying metal siding to the region where the work is to be done.
- B. Installer Qualifications:
  - 1. Acceptable to, licensed or certified by manufacturer.
  - 2. Not less than 3 years' experience with systems.
- C. Regulatory Requirements:
  - 1. Comply with local Building Code requirements if more restrictive than those specified.

## **1.7 DELIVERY, STORAGE, AND HANDLING**

- A. Protect against damage and discoloration.
- B. Handle panels with non-marring slings.
- C. Do not bend panels.
- D. Store panels above ground, with one end elevated for drainage.
- E. Protect panels against standing water and condensation between adjacent surfaces.
- F. If panels become wet, immediately separate sheets, wipe dry with clean cloth, and allow to air dry.
- G. Remove any strippable film coating prior to installation and do not allow it to remain on



the panels in extreme cold, heat or in direct sunlight.

- H. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

## **1.8 WARRANTY**

- A. Finish Warranty: Provide manufacturer's written panel finish warranty against deterioration of factory applied finishes.
  - 1. Warranty Period: Minimum period of thirty (30) years from date of Substantial Completion.
  - 2. Prorated Conditions: None.
  - 3. Limitations of liability: Not less than value of material and labor to replace.
  - 4. Include weather tight performance of curbs, equipment supports, pipe portals and provided as part of this work.
  - 5. The Manufacturer's warranty shall not include "hold harmless" clause, nor limit liability of Contractor.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Acceptable Manufacturers:
  - 1. Construction Metal Products (CMP)
  - 2. DMI
  - 3. Englert
  - 4. Fabral
  - 5. Firestone Building Products
  - 6. IMETCO
  - 7. MBCI
  - 8. McElroy
  - 9. Merchant & Evans
  - 10. Metal Roofing Systems
  - 11. Metal Sales
  - 12. Morin
  - 13. Peterson (Pac-Clad)
  - 14. Ultra Seam

### **2.2 PRODUCTS**

- A. Soffit Panel
  - 1. Base Metal: 0.032" Aluminum.
  - 2. Face: Panels shall be manufactured with two radii stiffening ribs.
  - 3. Panel size: 12 inches in width.
  - 4. Seam size: Nominal 1-inch-deep interlocking seams with a structurally qualifying open hem on the male leg.
  - 5. Fabricate with vented slots.

### **2.3 RELATED MATERIALS**

- A. Fasteners
  - 1. Flush Seam Panel Stainless Steel Screws:
    - a. For metal: Manufacturer's standard #10-16 x 1" long self-drilling, self-

- tapping pancake head Phillips drive screws.
    - b. For untreated plywood: Manufacturer's standard #10-12 x 1" long A-point fastener, pancake head Phillips drive screws.
  - 2. Blind Rivets: Solid-threaded, sealed stem type with EPDM washer under head.
    - a. Exposed rivets shall match color finish of panel.
- B. Accessories:
  - 1. Provide manufacturer's standard accessories and other items essential to completeness of roof installation including anchor clips, trim, ridge and hip caps, closures, flashing, and fascia.
  - 2. Form flashings, closure, and trim from same gauge and finish as nearby fascia sheet metal.
- C. Sealant: Refer to Section 07 62 00-Sheet Metal Flashing and Trim.

## **2.4 FABRICATION**

- A. All panels to be correctively leveled and handled to minimize stress and waviness of sheet.
- B. Form and fabricate sheets, seams, strips, clips, edge treatments with no oil canning or panel distortion.
  - 1. Fabricate panels in full lengths with no end laps.
  - 2. Fabricate exposed items of prefinished sheet metal, color to match panels.
  - 3. Hem exposed edges on underside 1/2-inch miter and seam corners.
  - 4. Provide for thermal expansion and contraction of the Work.
- C. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.
- D. Unless otherwise shown on drawings or specified herein, panels shall be full length. Fabricate flashings and accessories in longest practical lengths.
- E. Soffit panels shall be factory formed. Field formed panels are not acceptable.

## **2.5 FINISH**

- A. Exterior Finish:
  - 1. Full 70 percent Kynar 500/Hylar 5000 for a total 1.0 mil dry film thickness with a specular gloss of 10-15 percent when tested in accordance with ASTM D523 at 60 degrees.
- B. Interior Finish:
  - 1. Primer Coat Material: Corrosion-resistant primer; primer coat dry film thickness: 0.15 mils; finish coat material: polyester paint, finish coat dry film thickness: 0.35 mils.
  - 2. Total Interior Dry Film Thickness: 0.50 mils.
  - 3. Color: Off-White.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Substrate:
  - 1. Examine substrate to ensure that is properly secured and prepared to receive metal soffit panels.
  - 2. Ensure substrate is installed flat, free from objectionable warp, wave, and buckle.

### **3.2 INSTALLATION**

- A. Metal Soffit Panels:
  - 1. Follow panel manufacturer's directions.
  - 2. Lap panels away from prevailing wind direction.
  - 3. Do not stretch or compress panel side-laps.
  - 4. Secure panels without warp or deflection.
  - 5. Clean and dry surfaces prior to applying sealant.
  - 6. Exposed fasteners are not allowed, except to fasten flashings, at fixed points, or as indicated on Drawings.
  - 7. Field apply sealant to penetrations, transitions, and other locations necessary to prevent water infiltration.
- B. Cutting and Fitting:
  - 1. Neat, square and true. Torch cutting, electric saws and grinders with abrasive wheels are prohibited where cut is exposed to final view.
  - 2. Openings 6 inches and larger in any direction: Shop fabricate and reinforce to maintain original load capacity.
  - 3. Where necessary to saw-cut panels, debur cut edges.
- C. Dissimilar Metals:
  - 1. Where sheet metal is in contact with dissimilar metals, execute juncture to facilitate drainage and minimize possibility of galvanic action.
  - 2. At point of contact with dissimilar metal, coat metal with protective paint or tape which can be placed between metals.

### **3.3 PROTECTION**

- A. Protect work as required to ensure metal soffit panel system will be without damage at time of final completion.

**END OF SECTION 07 42 13**

**SECTION 07 54 00**

**THERMOPLASTIC SINGLE-PLY ROOFING**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Roof Sections A1, A2, B1, B2, B3 and B4: Provide fully adhered, thermoplastic membrane and flashings to provide a permanently watertight system.
- B. Roof Section C1: Provide mechanically attached, thermoplastic membrane and flashings to provide a permanently watertight system.

**1.2 RELATED SECTIONS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Specification Sections, apply to this Section, including but not limited to:
  - 1. Rough Carpentry Section 06 10 00
  - 2. Roof Insulation Section 07 22 16
  - 3. Sheet Metal Flashing and Trim Section 07 62 00
  - 4. Roof Accessories Section 07 72 00
  - 5. Storm Drainage Section 22 14 00

**1.3 REFERENCES**

- A. Refer to the following references, current edition for specification compliance:
  - 1. Florida Building Code
  - 2. ASTM International
  - 3. National Roofing Contractors Association (NRCA)
  - 4. Underwriters Laboratory (UL)
  - 5. FM Global
  - 6. Single Ply Roofing Institute

**1.4 PERFORMANCE REQUIREMENTS**

- A. Install roofing system to meet UL 790 Class A Fire Rating.
- B. Wind Design: Install roofing system to meet or exceed the requirements of the current adopted version of ASCE-7, and shall be an approved assembly tested to the wind uplift pressures listed on REI Wind uplift drawing.

**1.5 SUBMITTALS**

- A. Refer to Section 01 33 00-Submittal Procedures.
- B. Latest edition of the Manufacturer's current material specifications and installation instructions.
- C. Manufacturer's Product Data Sheets for all materials specified certifying material complies with all specified requirements.
- D. Submit documentation of approved, tested roof system to meet the specified requirements for the following:
  - 1. Wind uplift pressures

2. UL Fire Resistance Rating

E. Detail Drawings:

1. Submit manufacturer approved drawings and details for conditions not depicted in Contract Drawings including but not limited to inside corners, outside corners, lap seams, etc.

## **1.6 QUALITY ASSURANCE**

A. Manufacturer Requirements:

1. Manufacturer must have written contractor/installer approval program.
2. Products manufactured by other manufacturers and private labeled are not acceptable.
3. See materials section for general product description and specified requirements.

B. Contractor Requirements:

1. This roofing system shall be applied only by a Contractor authorized by the membrane manufacturer prior to bid.
2. Application of the roofing system shall be accomplished by a primary roofing contractor, his roofing foreman, and sufficient applicator technicians who all have been trained and approved by the manufacturer of the single ply roofing system. Contractor to submit evidence of qualification from the manufacturer.

C. Upon completion of the installation an inspection shall be made by a representative of the membrane manufacturer to review the installed roof system and list all deficiencies.

D. There shall be no deviation made from the Contract Documents or the approved shop drawings without prior written approval by the Engineer.

E. All work shall be completed by personnel trained and authorized by the membrane manufacturer.

F. Contractor to provide manufacturer written verification indicating all seams have been probed and are watertight.

## **1.7 DELIVERY, STORAGE AND HANDLING**

A. All products delivered to the job site shall be in the original unopened containers or wrappings bearing all seals and approvals.

B. Handle all materials to prevent damage. Place all materials on pallets and fully protect from moisture.

C. Membrane rolls shall be stored lying down on pallets and fully protected from the weather with clean canvas tarpaulins. Unvented polyethylene tarpaulins are not accepted due to the accumulation of moisture beneath the tarpaulin in certain weather conditions that may affect the ease of membrane weldability.

D. All adhesives shall be stored at temperatures approved for the product.

E. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.

F. All materials which are determined to be damaged by the Engineer or membrane

manufacturer are to be removed from the job site and replaced at no cost to the Owner.

## 1.8

### PROJECT CONDITIONS

- A. Roofing shall not be applied during precipitation. Contractor assumes all responsibility for starting installation in the event there is a probability of precipitation occurring during application.
- B. Only as much of the new roofing as can be made weathertight each day, including all flashing and detail work, shall be installed. All seams shall be cleaned, and heat welded before leaving the job site that day.
- C. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building and its contents shall be protected against all risks.
- D. All surfaces to receive new insulation, membrane or flashings shall be dry. Should surface moisture occur, the Applicator shall provide the necessary equipment to dry the surface prior to application.
- E. All new and temporary construction, including equipment and accessories, shall be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage.
- F. Uninterrupted waterstops shall be installed at the end of each day's work and shall be completely removed before proceeding with the next day's work. Waterstops shall not emit dangerous or unsafe fumes and shall not remain in contact with the finished roof as the installation progresses. Contaminated membrane shall be replaced at no cost to the Owner.
- G. Arrange work sequence to avoid use of newly constructed roofing as a walking surface or for equipment movement and storage. Where such access is absolutely required, the Applicator shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas. A protection layer of plywood over insulation board shall be provided for all new and existing roof areas that receive rooftop traffic during construction.
- H. Prior to and during application, all dirt, debris and dust shall be removed from surfaces, either by vacuuming, sweeping, blowing with compressed air and/or similar methods.
- I. Contaminants, such as grease, fats, oils, and solvents, shall not be allowed to come into contact with the roofing membrane. All rooftop contamination that is anticipated or that is occurring shall be reported to the Engineer and membrane manufacturer to determine the corrective steps to be taken.
- J. If any unusual or concealed condition is discovered, the contractor shall stop work, notify Owner of such condition immediately, and in writing within 24 hours.
- K. The roofing membrane shall not be installed under the following conditions without consulting the membrane manufacturer's technical department for precautionary steps:
  - 1. The roof assembly permits interior air to pressurize the membrane underside.
  - 2. Any exterior wall has 10% or more of the surface area comprised of opening doors or windows.
  - 3. The wall/deck intersection permits air entry into the wall flashing area.
- L. Precautions shall be taken when using membrane adhesives at or near rooftop vents or air intakes. Adhesive odors could enter the building. Coordinate the operation of vents and

air intakes in such a manner as to avoid the intake of adhesive odor while ventilating the building. Keep lids on unused cans at all times.

## **1.9 WARRANTIES**

- A. **Manufacturer's Guarantee:** Manufacturer's standard form, non-pro-rated, without monetary limitation or deductibles, in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks or breaches in the primary roof membrane causing moisture to enter the substrate below (even if visible leaks are not observed inside the facility). Warranty to remain in effect for wind speeds up to 72 mph. Warranties requiring the Owner's signature will not be acceptable.
1. Warranty to include but not be limited to membrane, insulation, adhesives, fasteners, sealants, flashings, polymer clad sheet metal, etc.
  2. Warranty Period: Twenty years from date of Substantial Completion.
  3. Manufacturer's Representative shall attend two post construction field inspections: the first no earlier than twenty -three (23) months and no later than twenty-four (24) months after the date of Substantial Completion and the second no earlier than fifty-nine (59) months and no later than sixty (60) months. Submit a written report within seven (7) days of the site visits to the Engineer listing observations, conditions and any recommended repairs or remedial action.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURER**

- A. Membrane materials shall be manufactured by the following:

1. Sika Sarnafil
2. FiberTite

### **2.2 MEMBRANE MATERIALS**

- A. Fully Adhered Membrane and Components:

1. Membrane (non fleeceback)
  - a. Sika Sarnafil 60 mil G410
  - b. FiberTite 45 mil SM
2. Membrane Adhesive: Shall be membrane manufacturer's solvent based adhesive. Water based adhesive shall not be utilized in temperatures below 40 degrees F.
  - a. Solvent Based
    - i. Sika Sarnafil Sarnacol 2170
    - ii. FTR 190e (non fleeceback)

- B. Mechanically Attached Membrane and Components:

1. Membrane
  - a. Sika Sarnafil, 60 mil, S327
  - b. FiberTite 45 mil SM
2. Coverstrip: Shall be 8" wide pre-cut polyester reinforced flashing strip.
3. Membrane Fasteners and Plates/Attachment Bar: Shall be approved and provided

by membrane manufacturer for the deck type and membrane configuration.

- a. Fastener shall be phillips head, carbon steel fastener with corrosion resistant coating designed for use with specified plate meeting the following minimum requirements:
  - i. Shank diameter: .21"
  - ii. Thread diameter: .26"
  - iii. Head diameter: .435"
  - iv. Thread density: 13 turns per inch.

## **2.3 RELATED MATERIALS**

- A. Flashing/Stripping Membrane: Shall be a non fleeeback, thermoplastic membrane reinforced with fiberglass. Utilize asphalt resistant flashing membrane where in contact with residual asphaltic materials or as required by the manufacturer.
  1. Sika Sarnafil 60 mil G410
  2. FiberTite 60 mil SM
- B. Asphalt Resistant Flashing/Asphalt Resistant Stripping Membrane: Shall be a 60-mil minimum thickness non fleeeback, asphalt resistant, thermoplastic membrane reinforced with fiberglass or polyester.
- C. Flashing Adhesive: Shall be membrane manufacturer's solvent-based adhesive.
  1. Sika Sarnafil Sarnacol 2170
  2. FiberTite FTR 190e
- D. Fluid Applied Flashing: Shall be roof system manufacturer's approved, reinforced, PMMA liquid applied flashing:
  1. Sika Sarnafil Liquid Flashing
  2. FiberTite – Soprema Alsan RS
- E. T-joint Patch: Shall be membrane manufacturer's circular patch welded over T-joints formed by overlapping thick membranes.
- F. Corner Flashing: Shall be membrane manufacturer's pre-formed inside and outside flashing corners that are heat-welded to membrane or polymer clad metal base flashings.
- G. Pipe Flashing: Shall be membrane manufacturer's pre-formed pipe boot flashing that is heat-welded to membrane and secured with a stainless-steel draw band and sealant.
- H. Termination Bar: Shall be manufacturer's 1/8" by 1" mill finish extruded aluminum bar with pre-punched slotted holes.
- I. Counterflashing Bar: Shall be a prefabricated extruded aluminum metal counterflashing and termination bar. 0.10"-0.12" thick bar with 2-1/4" profile, pre-drilled holes 8" on center and sealant kick out at top edge.
- J. Sealant: Shall be manufacturer's multi-purpose sealant.
- K. Fasteners:
  1. Flashing Membrane Termination Screws: #12 corrosion resistant hex or pan head screws with length to penetrate substrate a minimum of 1-1/2".
  2. Concrete and Masonry Flashing Membrane Termination Anchors:



- a. 1/4" diameter metal-based expansion anchor with stainless steel pin of length to penetrate substrate a minimum of 1-1/2".
  - b. Masonry screws approved by membrane manufacturer, 1/4-inch minimum diameter, corrosion resistant, with Phillips flat head. Length to provide minimum 1-1/2" embedment into substrate.
- L. Primary Membrane Cleaner: Shall be a high-quality solvent cleaner provided by membrane manufacturer and approved by engineer for use as a general membrane cleaner.
  - M. Pre-weld Cleaner: Shall be a high-quality solvent based seam cleaner with moderate evaporation rate provided by membrane manufacturer.
  - N. Walkway Pad: Shall be walkway pad by manufacturer of membrane.
  - O. Prefabricated Expansion Joint: Shall be manufacturer's approved pre-fabricated expansion joint made with polyester reinforced membrane, neoprene foam and galvanized metal.
  - P. Polymer Clad Metal: Refer to Section 07 62 00-Sheet Metal Flashing and Trim

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that the substrate is dry, clean, smooth, and free of loose material, oil, grease, or other foreign matter. Sharp ridges and other projections and accumulations of bitumen shall be removed to ensure a smooth surface before roofing.
- B. Any deteriorated substrate shall be repaired.
- C. Beginning installation means acceptance of prepared substrate.

### **3.2 PREPARATION**

- A. Asphalt roofing substrates shall be removed, covered, or flashed using compatible, approved materials. PVC shall not come in contact with substrates containing asphalt materials.
- B. Provide necessary protection from adhesive vapors to prevent interaction with foamed plastic insulation.

### **3.3 MEMBRANE INSTALLATION (ADHERED)**

- A. The surface of the insulation or substrate shall be inspected prior to installation of the roof membrane. The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination. Broken, delaminated, wet or damaged insulation boards shall be removed and replaced.
- B. Over the properly installed and prepared substrate, membrane adhesive shall be-spread in accordance with the manufacturer's instructions and application rates utilizing equipment as required by the manufacturer.
  - 1. Do not allow adhesive to skin-over or surface-dry prior to installation of roof membrane.
  - 2. Water based membrane adhesive shall not be used if temperatures below 40° F (5° C) are expected during application or subsequent drying time.
  - 3. Adhesive application rates shall comply with the manufacturer's published requirements.

4. The Applicator shall count the amount of pails of adhesive used per area per day to verify conformance to the specified adhesive rate.
  5. No adhesive shall be applied in seam areas. All membrane shall be applied in the same manner.
  6. Notched squeegees shall be replaced each day or as notches are reduced below  $\frac{1}{4}$ ".
- C. The roof membrane shall be unrolled into the adhesive. Adjacent rolls overlap previous rolls by 3 inches (75 mm). This process is repeated throughout the roof area. Immediately after placement of membrane, each roll shall be pressed firmly into place with the manufacturer's recommended roller by frequent rolling in two directions.

### **3.4 MEMBRANE INSTALLATION (SCREWS AND PLATES)**

#### **A. General**

1. Membrane is to be attached with membrane fasteners and plates according to membrane manufacturer's requirements.
2. Membrane overlaps shall be shingled with the flow of water.
3. Full-width rolls of membrane shall be fastened perpendicular to the direction of the wood planks.
4. Tack welding of membrane rolls for purposes of temporary restraint during installation is not permitted.

#### **B. Perimeter and Corner Areas**

1. Over the properly installed and prepared substrate surface, half-width rolls (60" width) are to be installed either parallel or perpendicular to the entire perimeter edge. Membrane fasteners and plates are installed along the edge of the membrane on the fastening line six (6") inches on center. Plate is held back 1-inch from the outer edge of the membrane. The adjacent half-roll is positioned to overlap the fastened edge of the first half-roll by 5-1/2-inches in accordance with the overlap lines marked on the sheet's edge. The 5-1/2-inch overlap will allow the top membrane to extend 2-1/2-inches past the membrane fastener and plate for heat-welding. Fasteners shall clamp the membrane tightly to the substrate. In corner areas where perimeter half-rolls intersect, add rows spaced 54-1/2" on center of membrane fasteners and plates over the top of the half-rolls and weld a coverstrip above them for watertightness.
2. Refer to the Contract Drawings for perimeter and corner layout.
3. Hot-air weld overlaps according to membrane manufacturer's requirements. Seam test cuts shall be taken at least 3 times per day.

#### **C. Field Area**

1. Over the properly installed and prepared substrate surface, full-width rolls (120") are to be installed perpendicular to the steel deck flutes. Membrane fasteners and plates are installed along the edge of the membrane on the fastening line six (6") inches on center. Plates are held-back 1-inch from the outer edge of the membrane. The adjacent full-roll is positioned to overlap the fastened edge of the first full-roll by 5-1/2-inches in accordance with the overlap lines marked on the sheet's edge. The 5-1/2-inch overlap will allow the top membrane to extend 2-1/2-inches past the membrane fastener and plate for heat-welding. Fasteners shall clamp the membrane tightly to the substrate.
2. Hot-air weld overlaps according to membrane manufacturer's recommendations. Seam test cuts shall be taken at least 3 times per day.

### **3.5 MEMBRANE TERMINATION**

- A. Terminate membrane at all walls as shown in the contract drawings.

1. Roof Deck: Membrane shall be mechanically terminated using approved fasteners and plates six (6) inches on center.
  2. Wood Wall Substrate: Membrane shall be turned up wall one inch and mechanically terminated using approved screws eight (8) inches on center with a termination bar.
  3. Concrete/Masonry Wall Substrate: Membrane shall be turned up wall one inch and mechanically terminated using approved anchors eight (8) inches on center with a termination bar.
- B. Terminate membrane at all penetrations as shown in the contract drawings.
1. Membrane shall be fastened six inches on center or a minimum of four (4) fasteners per penetration into the structural deck using fasteners and plates as approved by the membrane manufacturer for the deck substrate.
- C. Membrane shall extend over roof edge a minimum of 2" below the perimeter wood blocking.

### 3.6 FLASHING INSTALLATION

- A. General
1. All flashings shall be installed concurrently with the roof membrane as the job progresses.
  2. No temporary flashings shall be allowed without the prior written approval of the Engineer and Manufacturer. Approval shall only be for specific locations on specific dates. 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. Seams shall not be "taped" as temporary measure but shall be fully completed before the end of each day.
  4. Flashing shall be adhered to compatible, dry, smooth, and solvent-resistant surfaces.
  5. Where substrates are incompatible with adhesives and PVC materials, the Contractor shall remove the incompatible materials and replace it with a compatible substrate or install compatible PVC flashing materials.
  6. Use caution to ensure adhesive fumes are not drawn into the building.
- B. Adhesive for Flashing Membrane
1. Over the properly installed and prepared flashing substrate, flashing adhesive shall be applied according to instructions found on the Product Data Sheet. The membrane adhesive shall be applied in smooth, even coats with no gaps, globs or similar inconsistencies.
  2. Only an area which can be completely covered in the same day's operations shall be flashed. The bonded sheet shall be pressed firmly in place with a hand roller.
  3. No adhesive shall be applied in seam areas that are to be welded.
- C. All flashings shall mechanically terminated a minimum of 8 inches above the finished roofing surface using approved fasteners and counterflashing bar unless otherwise indicated in the Contract Drawings. Flashing heights less than 8" shall be accepted in writing by the Manufacturer's Technical Department.
- D. All flashing membranes shall be consistently adhered to substrates. All interior and exterior corners and miters shall be cut and hot-air welded into place. No bitumen shall be in contact with the (roof) membrane.
- E. All flashings shall be hot-air welded at their joints and at their connections with the (roof) membrane.

- F. All flashings that exceed 30 inches (0.75 m) in height shall receive additional securement. Consult Manufacturer's Technical Department for securement methods.
- G. Corners shall be flashed using the membrane manufacturer's pre-formed corners.
- H. Polymer Clad sheet metal incorporated into the roofing system shall be sealed off with a heat welded stripping ply. The stripping ply shall extend four inches beyond sheet metal onto roof membrane and fit closely to edge of sheet metal.
- I. Retrofit Roof Drain
  - 1. Mechanically attach membrane 6" on center into structural deck around drain sump. Fully adhere flashing membrane and hot-air weld to membrane a minimum of 2 inches.
  - 2. Flashing membrane shall be set in a full bed of sealant under the clamping ring.
  - 3. Install retrofit roof drain according to manufacturer's installation instructions and provide stripping membrane hot-air welded to flange of retrofit roof drain extending onto flashing membrane.
  - 4. Refer to Section 22 14 00.
- J. Soil Pipe/Pipe Penetration:
  - 1. Provide field wrapped pipe penetration flashing or manufacturer's pre-fabricated pipe boot as shown in detail drawing.
  - 2. Apply aluminum tape to penetration if asphalt contamination is present.
  - 3. Horizontal flashing membrane shall be hot-air welded a minimum of four inches onto the membrane.
  - 4. Vertical flashing membrane shall be fully adhered to pipe penetration and extend a minimum of 1.5" horizontal at the base of penetration. Hot-air weld vertical flashing membrane to horizontal flashing membrane.
  - 5. Install stainless steel draw band and sealant or hot-air weld flashing cap to terminate top edge of pipe flashing.

### **3.7 HOT-AIR WELDING OF SEAM OVERLAPS**

- A. General
  - 1. All seams shall be hot-air welded. Seam overlaps should be 3 inches (75 mm) wide when automatic machine-welding and 4 inches (100 mm) wide when hand-welding, except for certain details.
  - 2. Welding equipment shall be provided by or approved by the membrane manufacturer. All mechanics intending to use the equipment shall have successfully completed a training course provided by a membrane manufacturer's technical representative prior to welding.
  - 3. All membrane to be welded shall be clean and dry.
- B. Hand-Welding
  - 1. Hand-welded seams shall be completed in two stages. Hot-air welding equipment shall be allowed to warm up for at least one minute prior to welding.
  - 2. The back edge of the seam shall be welded with a narrow but continuous weld to prevent loss of hot air during the final welding.
  - 3. The nozzle shall be inserted into the seam at a 45 degree angle to the edge of the membrane. Once the proper welding temperature has been reached and the membrane begins to "flow," the hand roller is positioned perpendicular to the nozzle and pressed lightly. For straight seams, the 1½ inch (40 mm) wide nozzle is recommended for use. For corners and compound connections, the ¾ inch (20 mm) wide nozzle shall be used.

- C. Machine Welding
  - 1. Machine welded seams are achieved by the use of automatic welding equipment. When using this equipment, instructions from the manufacturer shall be followed and local codes for electric supply, grounding and over current protection observed. Dedicated circuit house power or a dedicated portable generator is recommended. No other equipment shall be operated off the generator.
  - 2. Metal tracks may be used over the deck membrane and under the machine welder to minimize or eliminate wrinkles.
- D. Quality Control of Welded Seams
  - 1. The Applicator shall check all welded seams for continuity using a rounded screwdriver. Visible evidence that welding is proceeding correctly is smoke during the welding operation, shiny membrane surfaces, and an uninterrupted flow of dark grey material from the underside of the top membrane. On-site evaluation of welded seams shall be made daily by the Applicator to locations as directed by the Engineer or membrane manufacturer's representative. One inch (25 mm) wide cross-section samples of welded seams shall be taken at least three times a day. Correct welds display failure from shearing of the membrane prior to separation of the weld. Each test cut shall be patched by the Applicator at no extra cost to the Owner.

### **3.8 WALKWAY PAD INSTALLATION**

- A. Roofing membrane to receive walkway pad shall be clean and dry.
- B. Place chalk lines on sheet to indicate location of Walkway.
- C. Apply a continuous coat of membrane adhesive to the sheet and the back of walkway pad in accordance with membrane manufacturer's technical requirements and press walkway pad into place with a water-filled, foam-covered lawn roller.
- D. Clean the membrane in areas to be welded. Hot-air weld the entire perimeter of the walkway to the roofing membrane.
- E. Check all welds with a rounded screwdriver. Re-weld any inconsistencies.
- F. Important: Check all existing membrane seams that are to be covered by walkway with rounded screwdriver and re-weld any inconsistencies before walkway installation.
- G. Provide walk pads where indicated in Contract Drawings and at the following locations:
  - 1. Around roof hatches.
  - 2. At base and top of fixed wall access ladders.
  - 3. Around HVAC units.
  - 4. At door access to roof areas.

### **3.9 TEMPORARY CUT-OFF**

- A. All flashings shall be installed concurrently, with the membrane in order to maintain a watertight condition as the work progresses.
- B. When a break in the day's work occurs in the central area of the project install a temporary watertight seal. An 8" strip of flashing membrane shall be welded 4" to the new field membrane. The remaining 4" of flashing membrane shall be sealed to the deck and/or the substrate so that water will not be allowed to travel under the new or existing membrane. The edge of the membrane shall be sealed in a continuous heavy application of pourable

sealer of 6 inch width. When work resumes, the contaminated membrane shall be removed and disposed of. None of these materials shall be reused in the new work.

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

**3.10 CLEANING**

- A. The Contractor shall ensure trash and debris is removed from the roof daily.
- B. Metal scraps, nails, screws and other sharp damaging debris shall be kept off of the roof membrane surface during construction.
- C. The Contractor shall clean off/remove excess adhesive, sealant, stains and residue on the membrane and flashing surfaces.
- D. The Contractor shall remove temporary coverings and masking protection from adjacent work areas upon completion.

**3.11 PROTECTION**

- A. The Contractor shall be responsible for protecting the roof from construction related damages during the Work.
- B. The Contractor shall repair or remove and replace damaged membrane, flashings and other membrane components. Repairs shall be approved by the Engineer and be in accordance with the membrane manufacturers repair instruction to comply with the specified warranty.

**END OF SECTION 07 54 00**

## SECTION 07 62 00

### SHEET METAL FLASHING AND TRIM

#### **PART 1 GENERAL**

##### **1.1 SECTION INCLUDES**

- A. Fabrication and installation of new sheet metal flashings and trim to provide a permanently watertight condition.

##### **1.2 RELATED SECTIONS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Specification Sections, apply to this Section, including but not limited to:
  - 1. Rough Carpentry Section 06 10 00
  - 2. Metal Soffit Panels Section 07 42 13
  - 3. Thermoplastic Single Ply Roofing Section 07 54 00

##### **1.3 REFERENCES**

- A. Refer to the following references for specification compliance:
  - 1. 2017 Florida Building Code
  - 2. ASTM International
  - 3. National Roofing Contractors Association (NRCA)
  - 4. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
    - a. Architectural Sheet Metal Manual, Seventh Edition – January 2012
  - 5. ANSI/SPRI ES-1

##### **1.4 SUBMITTALS**

- A. Refer to Section 01 33 00-Submittal Procedures.
- B. Manufacturer's Product Data Sheets for all materials specified certifying material complies with all specified requirements.
- C. Pre-finished sheet metal and sealant color chart.
- D. Shop Drawings for any transitions and/or terminations not depicted in Contract Drawings.

##### **1.5 MOCK-UPS**

- A. Provide mock-ups of the following sheet metal components prior to fabrication of the components:
  - 1. Coping: Provide minimum 10' length of coping mock-up including any applicable fascia covers. Mock-up shall include at least one seam of the configuration specified.
  - 2. Gutter: Provide mock-up of gutter, gutter bracket and gutter hanger. Mock-up shall include one lap in gutter section.
  - 3. Metal Edge and Fascia Cover: Provide minimum 10' length of gravel stop/metal edge and fascia cover. Include at least one lap of each component.
  - 4. Expansion Joint: Provide minimum 10' length of expansion joint cover and cleat mock-up. Mock-up shall include at least one seam of the configuration specified.

**1.6 QUALITY ASSURANCE**

- A. Installation shall comply with the Contract Drawings. References to figures are from SMACNA Architectural Sheet Metal Manual, Seventh Edition – January 2012.
- B. Ensure work is free of leaks in all weather conditions.
- C. Fabricate metal edge (where no gutter is present) and coping in accordance with ANSI/SPRI ES-1 requirements.
- D. Workmanship shall be first-class in every respect. The sheet metal work shall be assembled and secured in accordance with these specifications, the manufacturer's requirements and referenced standards.

**1.7 DELIVERY, STORAGE AND HANDLING**

- A. Delivery: Deliver materials in the manufacturer's original sealed and labeled containers and in quantities required to allow continuity of application.
- B. Storage: Store materials within areas designated or approved by the Owner. Ensure materials remain dry, covered and not in contact with the ground.
- C. Handling: Handle material in such manner as to preclude damage and contamination with moisture or foreign matter.

**1.8 PROJECT CONDITIONS**

- A. Environmental: Protect building and its components from the elements at all times during the project.
- B. Coordination and Scheduling: Coordinate all phases of work to allow continuity of work without delays.

**1.9 WARRANTY**

- A. Contractor to provide the pre-finished sheet metal manufacturer's thirty (30) year finish warranty from the date of substantial completion.
- B. Provide certification of air-dried kynar paint or powder coating for specified materials.

**PART 2 PRODUCTS**

**2.1 ALUMINUM**

**2.2 PRE-FINISHED ALUMINUM**

- A. ASTM B209 Aluminum Alloy Sheet and Plate, alloy and temper 3003-H14, primed and finished on one side with Kynar/Hylar based fluoropolymer coating of 1.0 mil total dry film thickness, and on the reverse side, with a wash coat of 0.3 to 0.4 mil dry film thickness. A strippable plastic film should protect the finish during fabrication and installation. Manufacturer's standard color to be selected by Owner.
  - 1. 050 inch (50-mil)
    - a. Continuous Cleat (Expansion Joint)
    - b. Continuous Cleat (Coping)
  - 2. 040 inch (40-mil)



- a. Slip Flashing
- b. Receiver Flashing
- c. Counterflashing
- d. Expansion Joint Cover
- e. Coping
- f. Fascia Cover
- g. Metal Edge
- h. Collector Head
- i. Scupper Face Plate

### **2.3 POLYMER CLAD METAL (PVC)**

- A. Polymer Clad Metal – Heat-weldable, 24 gauge, AISI G90 galvanized steel sheet with a 20-mil unsupported thermoplastic membrane coating to match the flashing membrane composition laminated on one side. Polymer-Clad metal shall be manufactured by, and included in the warranty of, the single-ply membrane Manufacturer. Color shall be selected by Owner.
  1. Flange/Sleeve
  2. Metal Edge
  3. Scupper Liner

### **2.4 FASTENERS**

- A. Roofing Nails: 11- or 12-gauge stainless steel ring shank roofing nails with diamond point, minimum 3/8" diameter head and length as required to penetrate substrate a minimum of 1-1/4".
- B. Screws:
  1. Sheet metal to wood attachment (exposed): #12 stainless steel, 5/16 HWH with length to penetrate substrate a minimum of 1-1/2". Provide with bonded EPDM washer or washer specified below.
  2. Sheet metal to wood attachment (concealed): #10 stainless-steel, low-profile pancake head with length to penetrate substrate a minimum of 1-1/2".
  3. Sheet metal to light gauge steel attachment: #14-13 DP1 stainless-steel low-profile pancake head of length as required for three threads to penetrate metal substrate or min. 1" penetration though wood substrates.
- C. Concrete and Masonry Anchors: 1/4" diameter metal-based expansion anchor with stainless steel pin of length to penetrate substrate a minimum of 1-1/2".
- D. Washers: Shall be stainless steel with neoprene gasket backing. Shall be 9/16" diameter for use with #12 screws and 5/8" diameter for use with 1/4" diameter concrete and masonry anchors.
- E. Rivets: #44 stainless steel rivets with stainless steel mandrel. Length of rivet to properly fasten particular sheet metal components. Rivets shall be factory painted to match adjacent sheet metal.

### **2.5 RELATED MATERIALS**

- A. PVC Flashing: 20 mil corrosion resistant, waterproof PVC flashing.
- B. Polyurethane Sealant: One-component elastomeric gun grade polyurethane sealant conforming to ASTM C 920, Type S, Grade NS, Class 25, and use NT, M, A, G, or O as required by substrate conditions. Color to match adjacent materials.

- C. Sealant Tape: Minimum ½” wide non-skinning butyl sealant tape.
- D. Butyl Sealant: Shall be gun grade, non-skinning, non-hardening, flexible blend of butyl rubber and polyisobutylene sealant.
- E. Aluminum Tape: Pressure-sensitive, 2” wide aluminum tape used as a separation layer between small areas of asphalt contamination and the membrane and as bond breaker under the metal edge cover plates.
- F. Backer Rod: Closed-cell polyethylene or polyurethane rods sized approximately 25% larger than joint opening.

**PART 3 EXECUTION**

**3.1 EXAMINATION**

- A. Coordinate with other work for correct sequencing of items which make up the entire system.
- B. Ensure substrates are installed, secured and modified to accommodate sheet metal flashings.
- C. Deficiencies associated with the sheet metal substrates shall be reported to Engineer before beginning sheet metal work. All such deficiencies shall be corrected before installing sheet metal flashings.

**3.2 INSTALLATION**

- A. General:
  - 1. All joints to be locked and sealed or soldered.
  - 2. Provide for thermal movement (expansion and contraction) of all exposed sheet metal.
  - 3. Where dissimilar metals contact, galvanic action shall be prevented by means of heavy coat of asphalt paint.
  - 4. All metal flanges shall be installed on top of membrane and adhered as indicated in detail drawings. Metal flanges connected to the roof shall be installed per membrane manufacturer’s specifications and the requirements herein.
  - 5. Various sheet metal sections shall be uniform with corners, joints and angles mitered, sealed and secured.
  - 6. Exposed edges shall be returned (hemmed); both for strength and appearance, and sheet metal shall be fitted closely and neatly.
  - 7. Provide cleats or stiffeners and other reinforcements to make all sections rigid and substantial.
  - 8. Sheet metal shall be fabricated, supported, cleated, fastened and joined to prevent warping, “oil canning”, and buckling.
  - 9. All sheet metal details shall provide for redundancy including but not limited to sheet metal underlayment and/or sealants. This secondary protection shall be installed, sealed and lapped to ensure a redundant layer of protection will shed moisture infiltration in the sheet metal fails.
- B. Fasteners: Shall be size and type required.
  - 1. All fasteners to be rust resistant and compatible with materials to be joined.
  - 2. All exposed fasteners shall be stainless steel screws with washers fastened through 5/16” predrilled oversized holes.
  - 3. All exposed fasteners into concrete or masonry shall be metal based expansion anchor with stainless steel pin with washers fastened through 11/32” predrilled

oversized holes.

4. All exposed fasteners shall have factory painted heads to match the sheet metal color.
5. Exposed horizontal surface fasteners are not acceptable.

C. Slip Flashing for Curbs

1. Fabricate slip flashing at curbs as shown in detail drawings in 10' lengths.
2. Slip flashing shall extend a minimum of 2 inches below base flashing termination and shall fit tightly against curb.
3. Secure slip flashing 12" on center of a minimum of two fasteners per side of the curb.
4. Notch and lap ends of adjoining sections not less than 4"; apply sealant tape between sections.
5. Lap miters at corners a minimum of 1 inch and apply sealant between laps. Rivet at 2" on center.

D. Equipment Support

1. Wrap top of equipment support with sheet metal underlayment to extend two inches below base flashing termination.
2. Fabricate equipment support cap at curbs as shown in detail drawings in one continuous piece of sheet metal and secure at eighteen inches on center.

E. Reglet Mounted Two-Piece Receiver and Counterflashing

1. Fabricate receiver and counterflashing as shown in detail drawings in 10' lengths.
2. Install receiver flashing into saw-cut reglet and secure with soft metal wedges at 18" on center set deep into joint or surface mount at 12" on center.
3. Install sealant properly tooled to ensure adhesion and slope to shed water in saw-cut reglet. Sealant shall completely cover soft metal wedges.
4. Install counterflashing as indicated in detail drawings and secure to receiver flashing 12 inches on center. Stagger receiver anchors/wedges with counterflashing fasteners.
5. Counterflashing shall extend a minimum of 1.5 inches below base flashing termination.
6. Notch and lap ends of adjoining sheet metal sections not less than 4"; apply sealant tape between sections.
7. Lap miters at corners a minimum of 1 inch and apply sealant between laps. Rivet at 2" on center.

F. Surface Mounted Two-Piece Receiver and Counterflashing

1. Fabricate receiver and counterflashing as shown in detail drawings in 10' lengths.
2. Install receiver flashing surface mounted at 12" on center.
3. Install sealant in kick-out and manually tool concave to ensure proper adhesion and slope to shed water as indicated in detail drawings.
4. Install counterflashing as indicated in detail drawings and secure to receiver flashing 12 inches on center. Stagger receiver anchors with counter flashing fasteners.
5. Counterflashing shall extend a minimum of 1.5 inches below base flashing termination.
6. Notch and lap ends of adjoining sheet metal sections not less than 4"; apply sealant between sections.
7. Lap miters at corners a minimum of 1 inch and apply sealant between laps. Rivet at 2" on center.

G. Fascia Cover

1. Provide fascia cover secured to wood blocking 12" on center where indicated in detail drawings.
2. Notch and lap ends of adjoining fascia cover sheet metal sections not less than 4"; apply sealant tape or two beads of butyl sealant between sections.

H. Parapet Wall

1. Fabricate coping in 10' lengths. Width of coping shall be fabricated to be a maximum of 1/2" wider than the width of the wall; Contractor is responsible to field verify parapet wall width prior to sheet metal fabrication. Refer to SMACNA Architectural Sheet Metal Manual Figure 3-4A.
2. Install tapered edge strip mechanically attached or set in foam adhesive to top of wood blocking.
3. Install flashing membrane up and over parapet extending a minimum of 1" below wood blocking.
4. Install continuous cleat fastened to substrate 6" on center in vertical leg. Locate fasteners no greater than 2" from the bottom hem.
5. Lock outside face of coping onto continuous cleat and secure inside face as follows:
  - a. For coping widths up to and including 12 inches, secure with screws through waterproof washers and oversized holes at 18 inches on center.
  - b. For coping widths greater than 12 inches, secure inside face with continuous cleats. Secure cleat through vertical face of cleat to blocking with fasteners at 6 inches on center. Locate fasteners no greater than 2 inches from the bottom hem.
6. Provide drive seam at adjoining coping sections. Turn cover ends back a minimum of 1" onto itself. Allow 1/4" space between coping sections for expansion and contraction and install sealant. Refer to SMACNA Architectural Sheet Metal Manual Figure 3-2, type 4.
7. Provide one piece coping section at four way and tee intersections.
8. Turn coping ends up a minimum of 2" at elevation walls and cover termination with surface mounted counterflashing.

I. Through-Wall Primary/Overflow Scupper

1. Fabricate thru-wall scupper flange, liner, and faceplate as shown in detail drawings. Scuppers dimensions shall be as indicated in the Contract Drawings.
2. Hot-air weld stripping membrane at seams of the flange and liner.
3. Install flashing membrane through scupper opening prior to installing new scupper to seal wall cavity.
4. Provide flange which extends a minimum of 4" on top and sides of scupper and extends a minimum of 4" out onto the horizontal membrane. Mechanically fasten the horizontal flange into structural deck 8" on center or a minimum of two fasteners per scupper with approved fasteners.
5. Strip-in flange as specified in Contract Drawings.
6. Provide faceplate which extends 1.5" around the entire scupper and secure to wall substrate with four fasteners. Set faceplate in a bead of sealant.
7. Scupper Liner shall extend 1" beyond the exterior wall face and lock onto faceplate.

J. Metal Edge (Thermoplastic)

1. Fabricate metal edge as shown in detail drawings in 10' lengths. Refer to SMACNA Architectural Sheet Metal Manual Figure 2-1 except for continuous cleat dimensions which shall be as shown in Contract Drawings.
  - a. Fabricate without vertical gravel stop at drainage edges and 3/4 inch vertical gravel stop at non-drainage edges.

2. Terminate membrane at roof edge and hot-air weld flashing membrane strip to extend down the outside vertical face over the wall.
3. Provide sealant tape at base of flashing membrane on outside of wall to prevent moisture infiltration.
4. Install a continuous cleat over fascia cover as indicated in detail drawings fastened to substrate 6" on center. Locate fasteners no greater than 2" from the bottom hem.
5. Lock metal edge onto continuous cleat and secure flange of metal edge to wood blocking 3" on center staggered and not within 1/2" from inside edge and 3/4" from outside edge.
6. Strip flange of metal edge with hot-air welded stripping membrane as specified in the Contract Drawings.
7. Hand tong all of metal edge onto continuous cleat.
8. Metal Edge Joints:
  - a. Leave a 1/4" opening between metal edge sections. Install two roofing nails in the end of the flange, and one roofing nail in the end of the vertical face of each metal edge section.
  - b. Center aluminum tape over entire joint opening (flange and face).
  - c. Hot-air weld 4" wide strip of stripping membrane over entire joint.
  - d. Strip in flange of metal edge as described above.
  - e. Center 6" wide cover plate over joint locking onto notched drip edges of metal edge sections. Refer to SMACNA Architectural Sheet Metal Manual Figure 2-5A, and Figure 2-5, Detail 1.
  - f. Strip flange of cover plate with hot-air welded flashing membrane. Flashing membrane shall extend 2" beyond the cover plate flange on 3 interior sides.

K. Base Flashing Closure

1. Install new closures where base flashings abruptly end.
2. Completely solder or seal all joints to be watertight.
3. Install closures over membrane and under finish ply of base flashing.
4. Extend closures up under counterflashings or copings.
5. Install closures to completely seal ends of base flashings, membrane and cants as well as end joints of edge metal.

L. Polymer Clad Base Flashing

1. Fabricate as shown in detail drawings in 10' lengths.
2. Leave a 1/4" opening between sheet metal sections.
3. Center aluminum tape over entire joint opening.
4. Hot-air weld 4" wide strip of stripping membrane over entire joint.
5. Strip flange of base flashing as indicated in the Contract Drawings.

**3.3 CLEANING AND PROTECTION**

- A. All sheet metal work shall be thoroughly cleaned of all asphalt, flux, scrapes and dust.
- B. Scratches through the metal finish shall be replaced to the Owner's satisfaction.

**END OF SECTION 07 62 00**

## SECTION 07 72 00

### ROOF ACCESSORIES

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Provide roof accessory assemblies as indicated and required by the Contract Drawings:
  - 1. Provide pipe supports for all rooftop conduit, gas lines, electrical lines, condensation lines, etc.
  - 2. Provide PVC pipe to route condensation from HVAC p-traps to nearest drainage point.
  - 3. Provide fixed interior access ladder with landing platform located under roof section "B1". Ladder is to be anchored to the concrete ground floor and anchored to the second-floor landing with no intermediary supports. Contractor to provide hand railing modifications at ladder installation location.
  - 4. Replace roof hatch.

##### 1.2 RELATED SECTIONS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Specification Sections, apply to this Section, including but not limited to:
  - 1. Thermoplastic Single Ply Roofing Section 07 54 00
  - 2. Sheet Metal Flashing and Trim Section 07 62 00

##### 1.3 SUBMITTALS

- A. Refer to Section 01 33 00-Submittal Procedures.
- B. Manufacturer's Product Data Sheets for all materials specified certifying material complies with all specified requirements.
- C. Latest edition of the Manufacturer's current material specifications and installation instructions.
- D. Shop Drawings of fixed interior ladder.

##### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Packing and Shipping: Deliver materials to site in Manufacturer's original unopened packaging with labels intact.
- B. Storage: Adequately protect against damage while stored at the site.
- C. Handling: Comply with Manufacturer's instructions.

##### 1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify all dimensions required.

##### 1.6 WARRANTIES

- A. All roof accessories provided through roof system manufacturer shall be included in the specified roof system manufacturer's warranty.

## **PART 2 PRODUCTS**

### **2.1 MATERIALS**

- A. Pipe Support: Smooth EPDM rubber pipe support sized to fit the diameter of the pipe being supported and height adjustable. Acceptable products include:
  - 1. Olympic Olyflow PipeGuard
  - 2. Erico Caddy Pyramid EZ Series
  - 3. Portable Pipe Hangers
  - 4. Miro Industries
  
- B. Access Ladder
  - 1. Fixed Steel Ladder: Fixed ladder of appropriate length with walk-thru handrails, welded one-piece construction, gray powder coat finish such as:
    - a. Cotterman Model FW
  
  - 2. Fixed Steel Ladder Anchors: Minimum 1/2-inch diameter, corrosion resistant threaded rods supplied by the anchoring system manufacturer. Screen for hollow masonry provided by fastener manufacturer. Corrosion resistant nut and 1-1/2" diameter flat washer. Acceptable manufacturers include:
    - a. Powers Fasteners, Inc. Chem-Fast Anchoring System
    - b. Powers Fasteners, Inc. AC100 Anchoring System
    - c. ITW Ramset Epcon System
  
- C. Roof Hatch: Aluminum, 11 gage (1.6mm) cover & curb, 18 gage (0.60mm) cover liner. 1-inch (25mm) thick rigid insulation in curb and cover 12-inch (300mm) high curb. Provide heavy duty padlock hasp. Provide vandal resistant features as available. Match existing dimensions.
  - 1. Bilco Type S

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verification of Conditions: Examine subsurfaces to receive Work and report detrimental conditions in writing to Architect. Commencement of Work will be construed as acceptance of subsurfaces.
  
- B. Coordination: Coordinate with other Work which affects, connects with, or will be concealed by this Work

### **3.2 INSTALLATION**

- A. Pipe Supports
  - 1. Provide pipe supports at all rooftop gas, electrical conduit and condensation lines with a 5' maximum spacing.
  - 2. Provide new PVC condensation lines with integral P-trap on HVAC units.
  - 3. Route condensation lines to nearest drainage point (i.e. roof drain, gutter, or scupper).
  
- B. Ladder:

1. Drill 5/8" diameter hole a minimum of 2-1/2" into masonry wall using the appropriate drill bit.
2. Use brush and/or compressed air to remove all dust and debris from hole.
3. Insert HIT-S Screen tube into hole and fill to front edge of screen with HY 20 adhesive (minimum 1 pump for S12 screen tube).
4. Insert HIT-A Rod into adhesive-filled screen, twisting slightly. Fastener may be adjusted during specified gel time. Do not disturb fastener between specified gel and cure time.
5. Install fixed steel ladder and secure to HIT-A Rods with washers and nuts. Do not exceed maximum torque on anchors.

C. Roof Hatch

1. Install roof hatches at locations indicated, fastening securely to deck through curb flange per the manufacturer's specifications.

**3.3**

**CLEANING**

- A. During the course of the Work and on completion, remove and dispose of excess materials, equipment and debris away from premises.

**END OF SECTION 07 72 00**



## SECTION 22 14 00

### STORM DRAINAGE

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Water test of roof drains.
- B. Provide retrofit roof drains approved by roof system manufacturer.

##### 1.2 RELATED SECTIONS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications sections, apply to this section, including but not limited to:
  - 1. Thermoplastic Single Ply Roofing Section 07 54 00
  - 2. Sheet Metal Flashing and Trim Section 07 62 00

##### 1.3 REFERENCES

- A. Refer to the following references for specification compliance:
  - 1. Florida Building Code
  - 2. Cast Iron Soil Pipe Institute - CISPI
    - a. CISPI 301 Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.
    - b. CISPI 310 Specification for Coupling for use in connection with Hubless Cast Iron Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Application.
    - c. CISPI Pipe and Fittings Handbook
  - 3. ASTM International
    - a. ASTM A 74 Specification for Cast Iron Soil Pipe and Fittings Hub and Spigot.
    - b. ASTM A 888 Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Application.
    - c. ASTM C 564 Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
    - d. ASTM C 1277 Specification for Shielded Couplings joining hubless cast iron soil pipe and fittings.
    - e. ASTM D 2665 Specification for PVC Plastic Drain, Waste and Vent Pipe and Fittings.
    - f. ASTM D 2564 Solvent Cements for PVC Pipe and Fittings.
  - 4. American Society of Mechanical Engineers – ASME
    - a. ASME A112.21.2 Roof Drains
  - 5. International Association Plumbing & Mechanical Officials – IAPMO

##### 1.4 SUBMITTALS

- A. Refer to Section 01 33 00-Submittal Procedures.

- B. Manufacturer's Product Data Sheets for all materials specified certifying material complies with all specified requirements.
- C. Shop Drawings: Include plans, elevations, sections and details.

## **1.5 QUALITY ASSURANCE**

- A. Contractor shall ensure plumbing systems and components are installed by licensed, qualified personnel.
- B. Contractor shall ensure roof drains, couplings, piping, supports, fixtures, pipe hangers, fasteners, fittings, etc. are installed in compliance with the referenced plumbing code, and shall be installed in accordance with the component manufacturer's published guidelines and instructions, and referenced standards.
- C. Contractor shall be responsible for field testing of completed storm drain systems as required by the referenced plumbing code.

## **1.6 DELIVERY, STORAGE AND HANDLING**

- A. Delivery: Materials shall be delivered in the manufacturer's original sealed and labeled packaging.
- B. Storage: Materials shall be stored as directed by Owner and Engineer, to prevent damage. Storage shall not encumber Owner's operations.
- C. Handling: Materials shall be handled in such a manner as to prevent damage and contamination.

## **1.7 PROJECT CONDITIONS**

- A. Environmental Requirements:
  - 1. Roof drains and associated plumbing shall be installed during periods of no precipitation to prevent water from entering the building.
  - 2. The Contractor shall be responsible for all necessary precautions to prevent damage to the building and contents during roof drain and associated plumbing installations.
  - 3. Comply with applicable rules and regulations of Authorities Having Jurisdiction pertaining to storm sewage systems.
- B. Protection:
  - 1. Contractor shall ensure roof drainage systems remain in service, and shall be restored fully operational before leaving the site.
  - 2. Contractor shall protect building interior and exterior surfaces during construction.

## **PART 2 PRODUCTS**

### **2.1 MATERIALS**

- A. High Flow Retrofit Roof Drain (PVC): Shall be prefabricated aluminum drain insert composed of 11 gauge spun aluminum drain body, PVC coated 17.5" diameter flange, cast aluminum clamping ring, cast aluminum strainer, built-in vortex breaker providing more consistent flow, watertight U-Flow seal and stem length and diameter as required by field conditions. Drain shall be approved by roof system manufacturer. Contractor shall field verify drain diameter and required stem length prior to ordering drains.

## **PART 3 EXECUTION**

### **3.1 INSPECTION**

- A. A pre-job conference including the Engineer, Contractor, and the Owner's representative shall be conducted prior to the installation of roof drains and associated piping and plumbing fixtures.
- B. Contractor shall verify that conditions are acceptable to begin the installation.
- C. Contractor shall be responsible for daily inspection of the plumbing installation to ensure conditions remain satisfactory.

### **3.2 PREPARATION**

- A. The Contractor shall inspect all existing building components and conditions before proceeding with plumbing installation.
- B. Where decking is to be cut for new drains, the building interior shall be inspected for utilities, structural members and occupancy conditions to ensure conditions are satisfactory to proceed.
- C. Where decking is cut to install new roof drains, minimum 2" x 2" x 1/8" steel angle shall be installed on existing framing for additional deck support.
- D. Where new piping is to be installed, the Contractor shall inspect the piping route and hanger attachment points to ensure conditions are satisfactory to install piping and all associated plumbing fixtures for the completed drainage system.
- E. Route piping to maintain working spaces around electrical equipment by NEC.
- F. Piping and fixtures shall not be routed to interfere with the service of in-place equipment and systems.
- G. Do not close off or obstruct streets, walks or other adjacent occupied facilities without permission from Owner, Engineer, and Authorities Having Jurisdiction.

### **3.3 EXISTING ROOF DRAINS AND LEADERS**

- A. Prior to commencement of any work on the project the Contractor shall inspect each existing roof drain for damage and water flow.
  - 1. Each drain shall be cleaned of accumulated debris and loose gravel. Drain bowl and drain outlet shall be cleaned of bitumen build-up to bare metal by hand scraping.
  - 2. A power vacuum shall be provided by the Contractor and utilized to vacuum debris, loose gravel, and bitumen scraping. Vacuum hose shall be of sufficient length to reach the first elbow in the drain line in order to vacuum the line.
  - 3. After cleaning bitumen from the drain bowl, Contractor shall inspect the bowl carefully for cracks, and the drain pipe connection for possible deterioration.
  - 4. Each drain shall be water tested for proper flow utilizing a minimum 3/4-inch hose. Water shall flow into the line under maximum pressure available for a period of not less than 15 minutes.
  - 5. Inspection and testing operation shall precede any roofing tear-off. If deficiencies or damages are observed, Contractor shall record the deficiency on a Roof Plan and forward to the Engineer. The Engineer will notify the Owner's Maintenance Department accordingly. Contractor shall allow 48 hours after notification for any corrective work by the Owner.

6. If no deficiencies or damages are reported to the Owner prior to commencement of work, Contractor shall assume full responsibility for the condition and operation of the drains.
  7. Contractor shall install temporary drain plugs while performing any work at or near the roof drains. Drain plugs shall be removed at the end of each work day.
- B. Contractor shall be responsible for installing drain plugs during roofing activities to prevent foreign materials from entering drainage system. Drain plugs shall be removed at the end of each work day to maintain drains in fully operational condition.
  - C. Clamping rings and bolts at roof drains shall be fully reinstalled at the end of each working day.
  - D. Drain piping clogged by construction debris shall be repaired by the Contractor at no cost to the Owner.

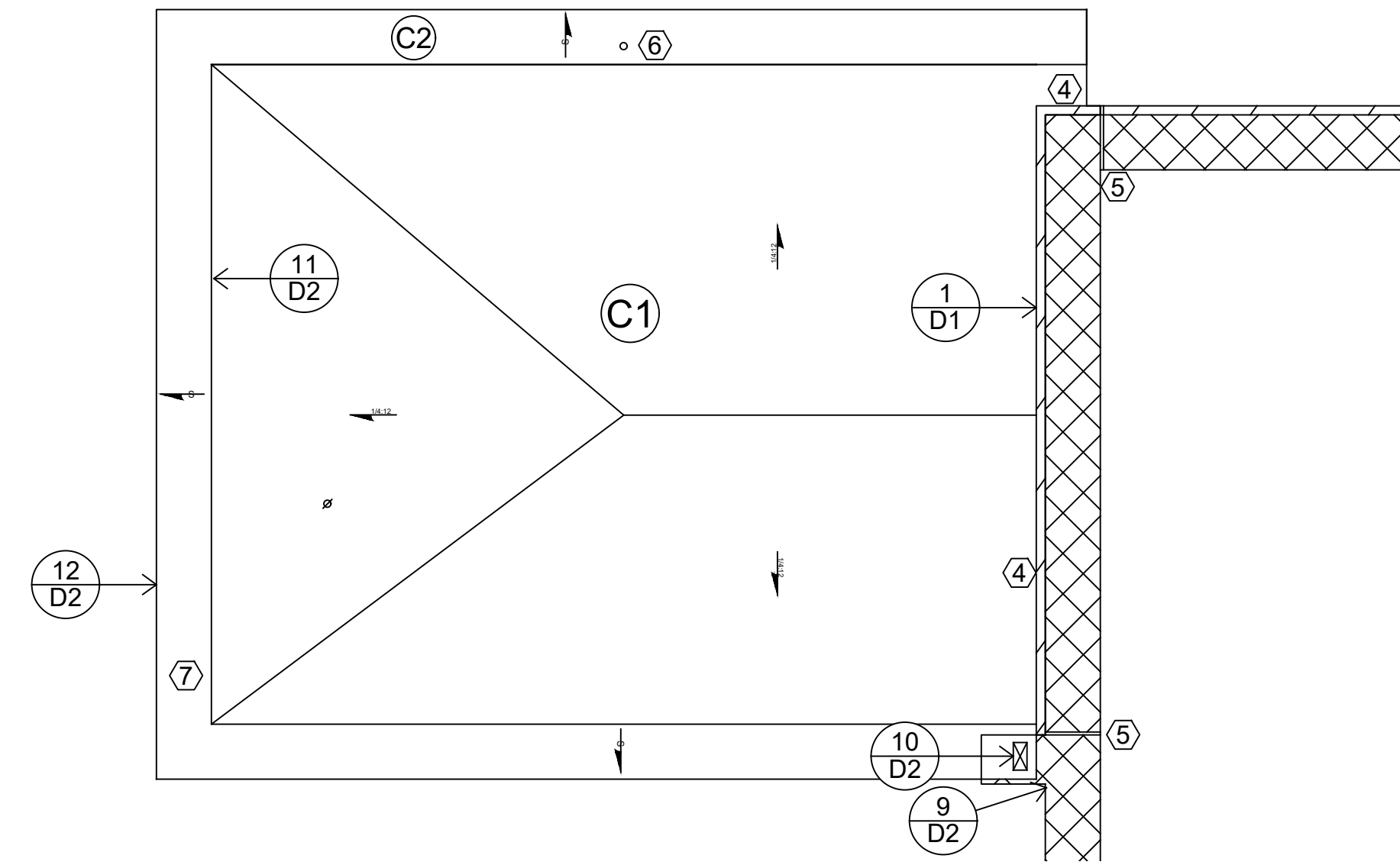
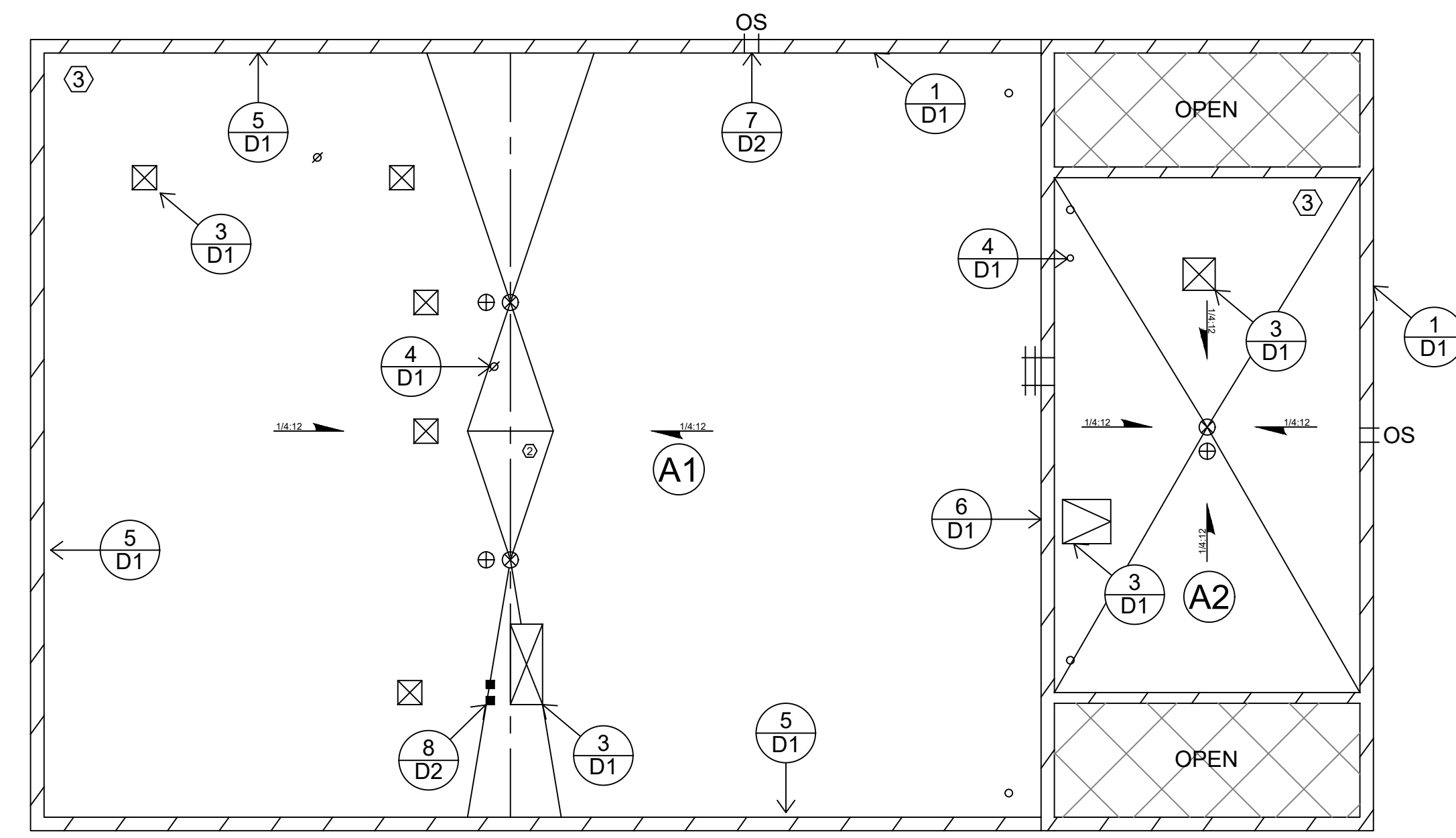
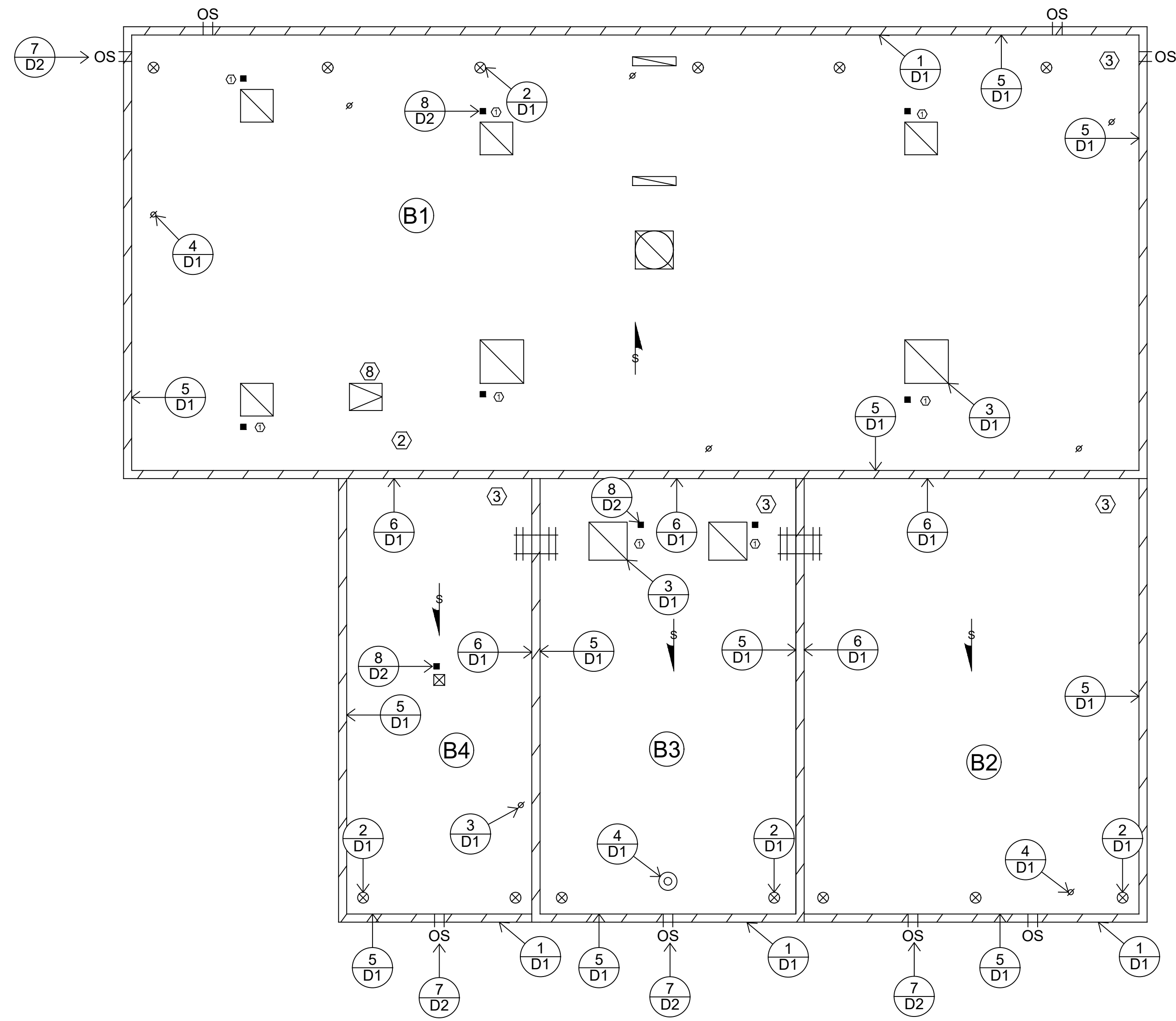
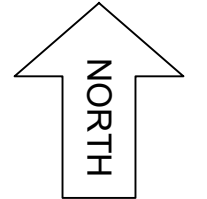
### **3.4 FIELD QUALITY CONTROL**

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred.
  1. Submit separate reports for each system inspection.
  2. Defects requiring correction include the following:
    - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
    - b. Deflection: Flexible piping with deflection that prevents passage of ball of cylinder of size not less than 92.5 percent of piping diameter.
    - c. Crushed, broken, cracked or otherwise damaged piping.
    - d. Infiltration: Water leakage into piping.
    - e. Exfiltration: Water leakage from or around piping on watertight joints.
  3. Replace defective piping using new materials and repeat inspections.
  4. Reinspect and repeat procedure until results are satisfactory.

### **3.5 CLEANING**

- A. Clean interior of piping of dirt and superfluous materials. Flush with potable water.

**END OF SECTION 22 14 00**



| KEY |                    |
|-----|--------------------|
|     | ROOF EDGE          |
|     | ROOF PARAPET       |
|     | OVERFLOW SCUPPER   |
|     | ROOF DRAIN         |
|     | OVERFLOW DRAIN     |
|     | SOIL STACK/PIPE    |
|     | CURB               |
|     | ABANDONED CURB     |
|     | STRUCTURAL SLOPE   |
|     | SECTOR DESIGNATION |
|     | DETAIL NUMBERS     |
|     | PITCH PAN          |
|     | ROOF LADDER        |
|     | VENT/HOT STACK     |
|     | ROOF HATCH         |
|     | DRAWING NOTE       |

\*CONTRACTOR TO VERIFY FOR BIDDING PURPOSES

| ROOF SECTOR  | SQUARE FOOTAGE* |
|--------------|-----------------|
| A1           | 3,089           |
| A2           | 747             |
| B1           | 3,901           |
| B2           | 1,284           |
| B3           | 1,019           |
| B4           | 723             |
| C1           | 1,626           |
| C2           | 809             |
| <b>TOTAL</b> | <b>13,198</b>   |

**NOTES:**

- ① REMOVE MECHANICAL FAN AND PROVIDE NEW SHEET METAL CURB CAP.
- ② PROVIDE NEW ROOF ACCESS LADDER AND CONNECT EXISTING HANDRAILS TO NEW LADDER PLATFORM.
- ③ REMOVE EXISTING LIGHTNING PROTECTION SYSTEM.
- ④ REMOVE EXISTING SAFETY RAILING AND CUT MOUNTS FLUSH WITH SUBSTRATE.
- ⑤ PROVIDE NEW SAFETY RAILS TO TERMINATE WALK PATH FROM OPEN ROOF AREA.
- ⑥ REMOVE ABANDONED PIPE PENETRATION.
- ⑦ REMOVE ABANDONED ANTENNA.
- ⑧ REPLACE ROOF HATCH.

REVISION # REVISION DATE

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SCALE:

AS NOTED

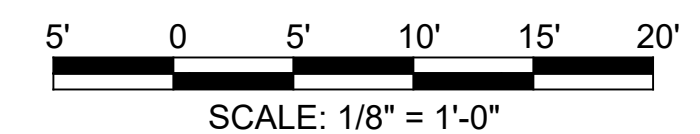
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SHEET DESCRIPTION:  
ROOF PLAN

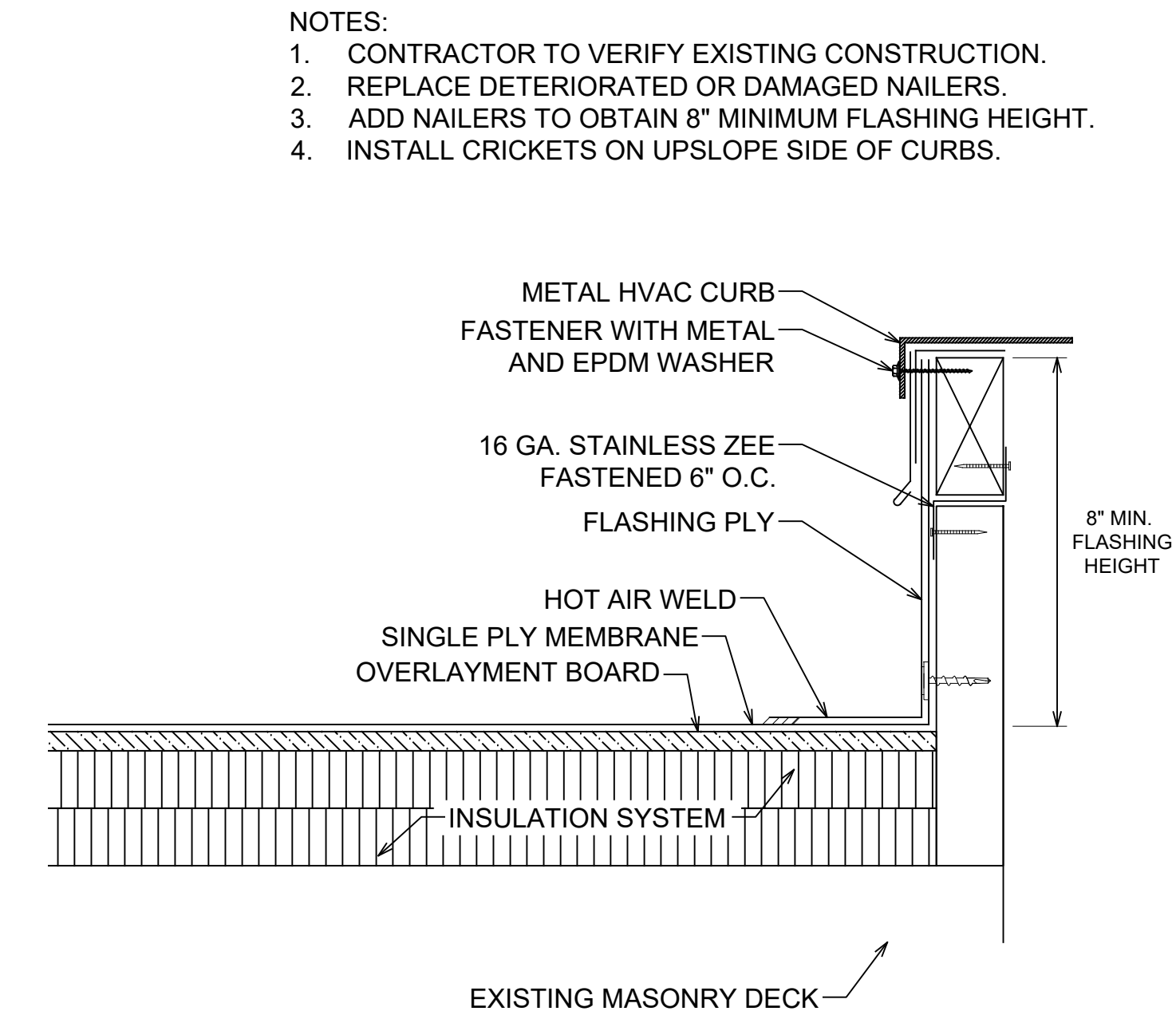
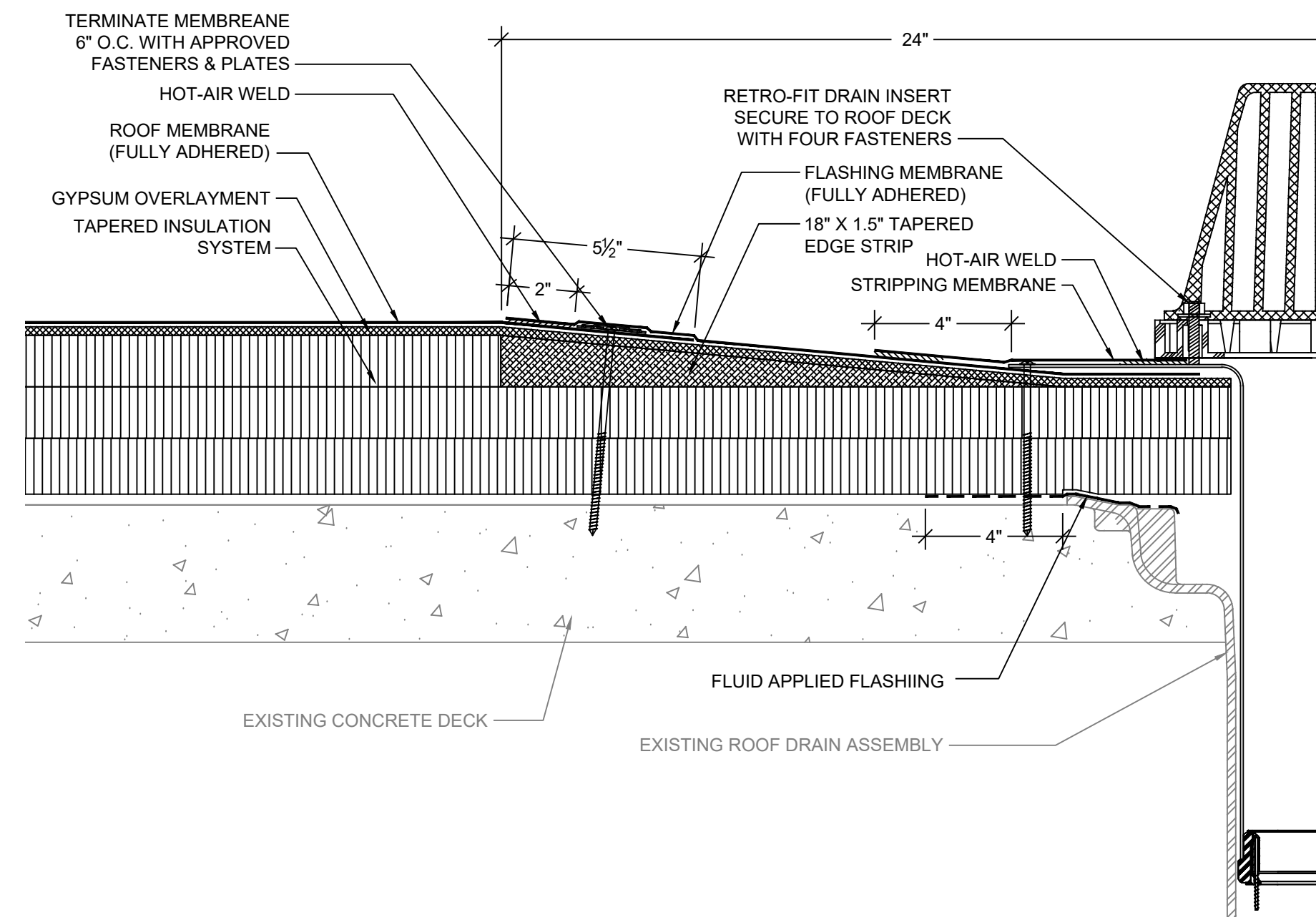
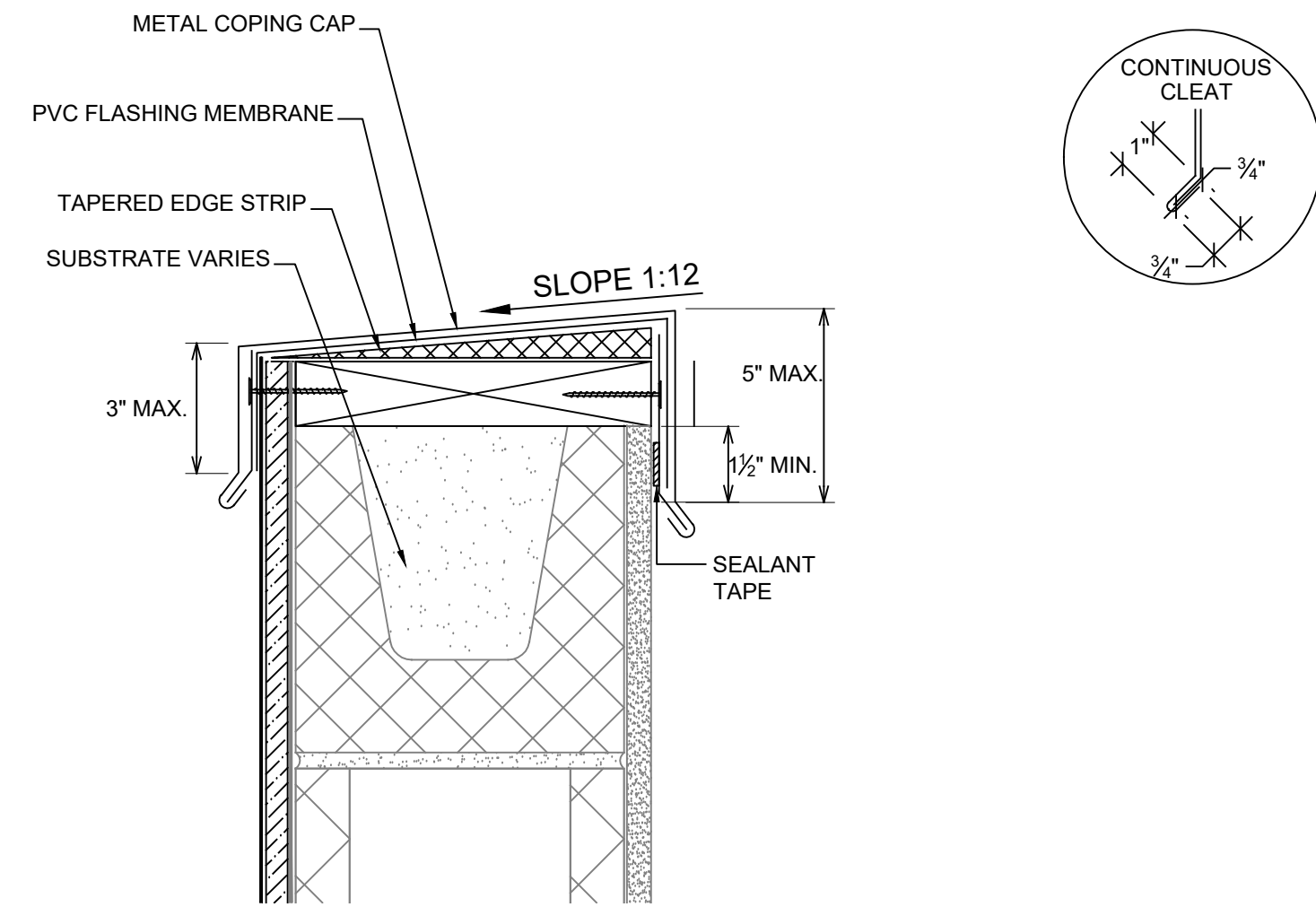
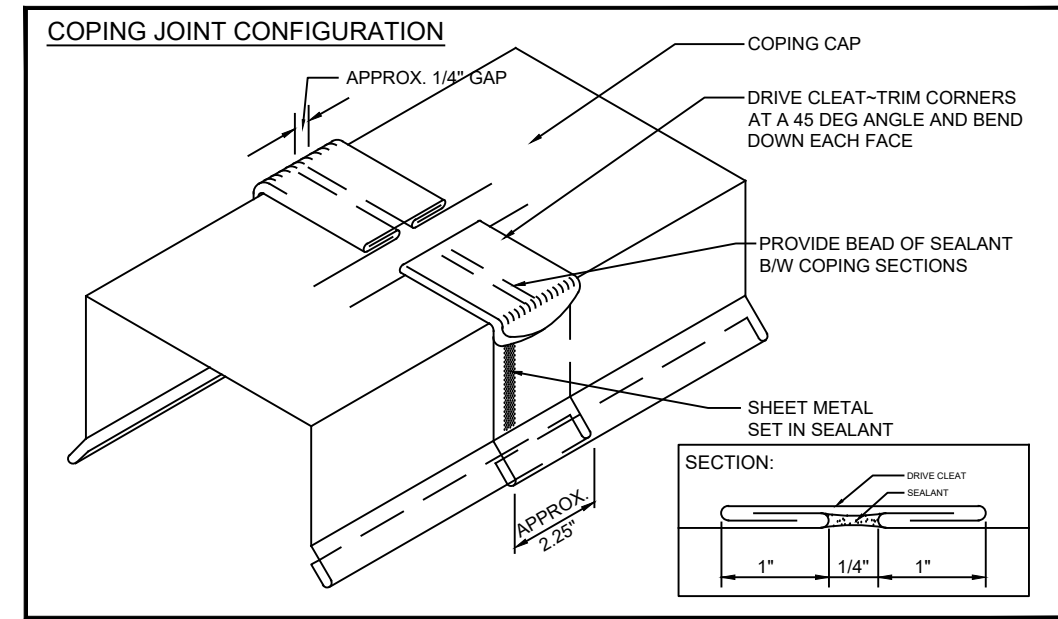
REI PROJECT NO:  
019TPA-018

SHEET:

**R1**







- NOTES:
1. CONTRACTOR TO VERIFY EXISTING CONSTRUCTION.
  2. REPLACE DETERIORATED OR DAMAGED NAILERS.
  3. ADD NAILERS TO OBTAIN 8" MINIMUM FLASHING HEIGHT.
  4. INSTALL CRICKETS ON UPSLOPE SIDE OF CURBS.

**1** PARAPET/COPING CAP

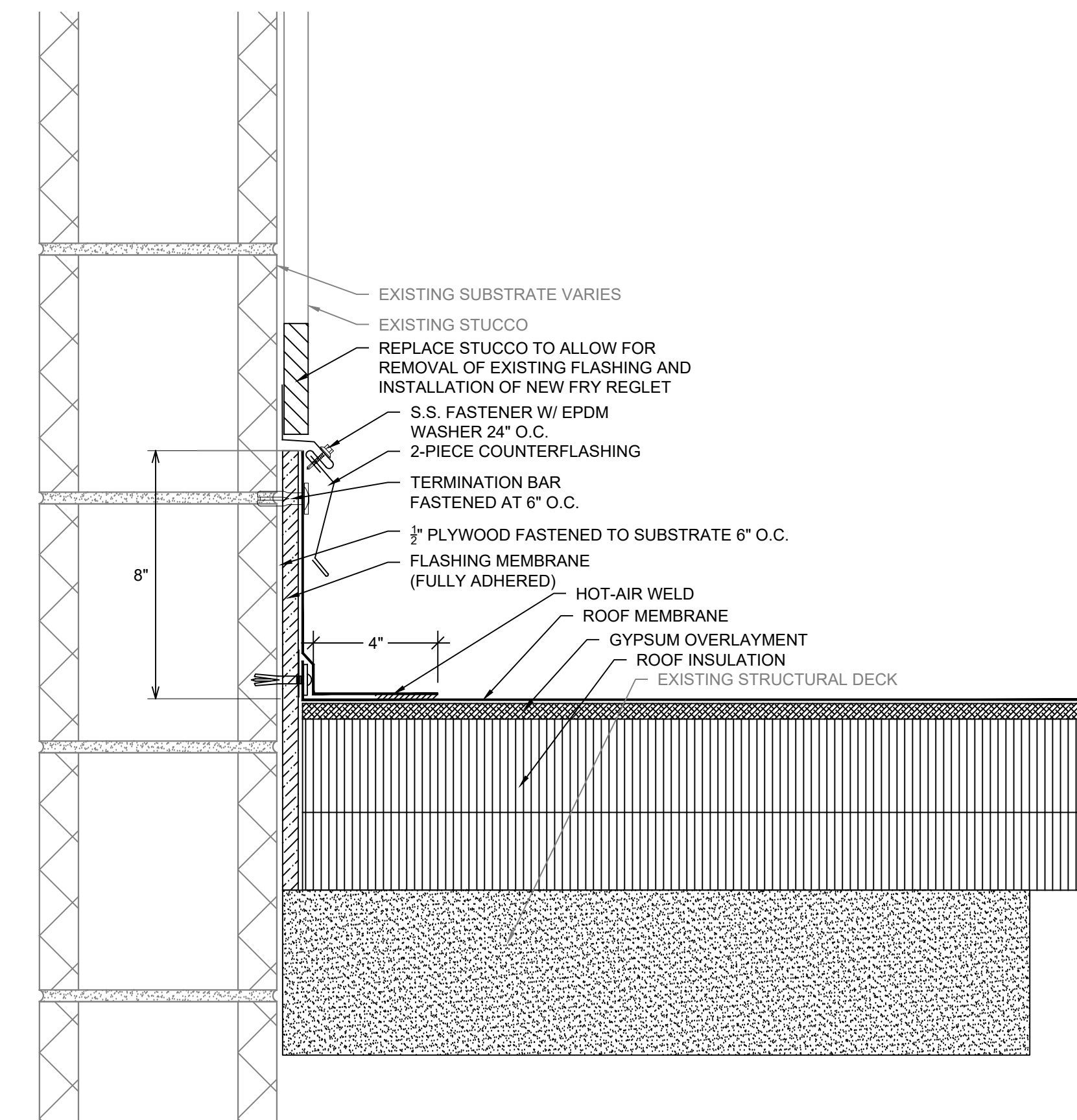
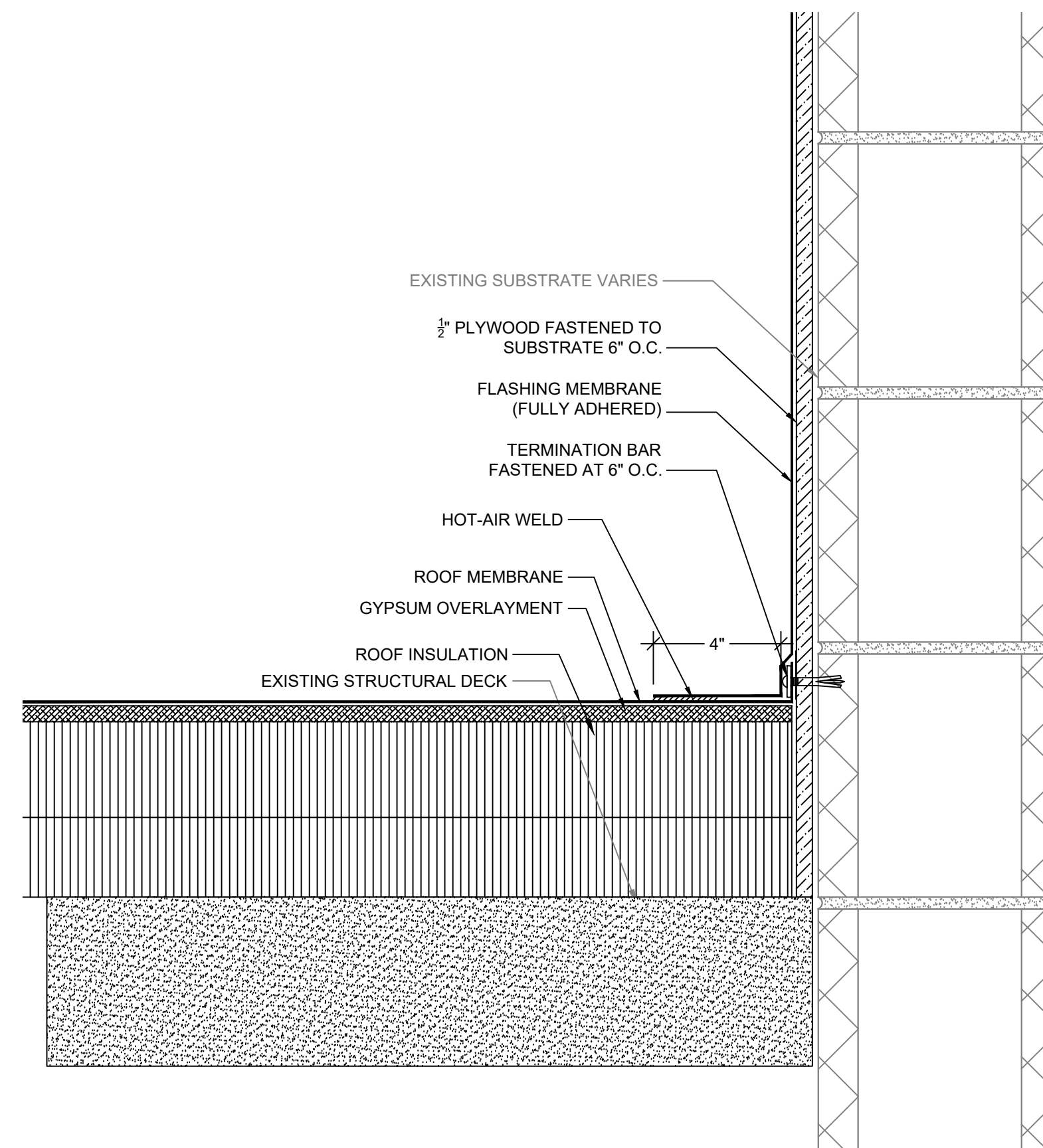
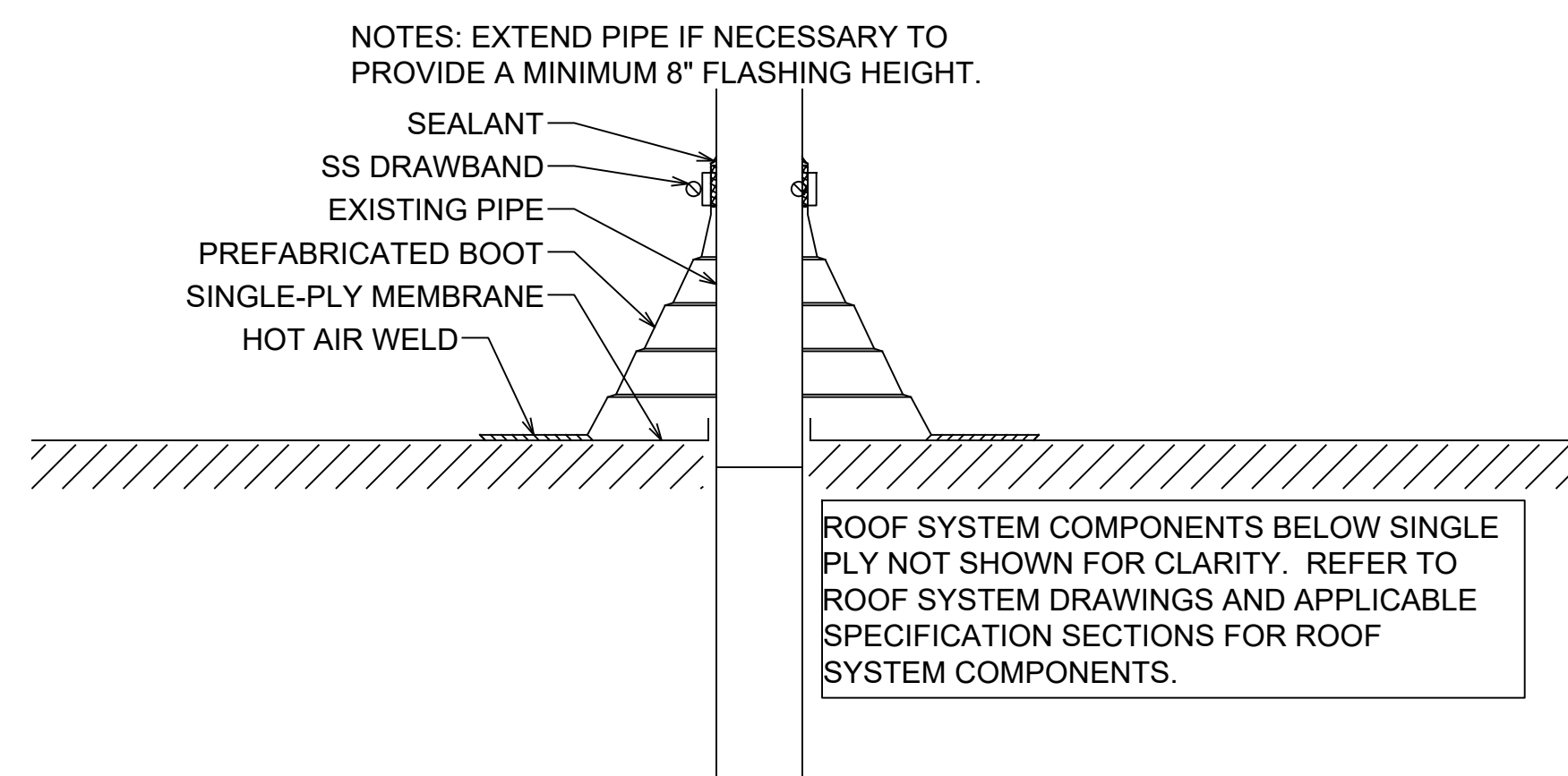
SCALE: NOT TO SCALE

**2** DRAIN

SCALE: 3"=1'-0"

**3** CURB

SCALE: 3"=1'-0"



**4** PIPE PENTRATION/SOIL STACK

SCALE: 3"=1'-0"

**5** ROOF TO WALL FLASHING

SCALE: 3"=1'-0"

**6** ROOF TO WALL FLASHING WITH STUCCO REPLACEMENT

SCALE: 3"=1'-0"

**IRC-1829 INDIAN RIVER COUNTY CENTRAL REGIONAL WWTF**  
**ROOF REPLACEMENT**  
 3550 49th St  
 VERO BEACH, FL 32967  
 REI PROJECT# 19TPA-018

| REVISION # | REVISION DATE |
|------------|---------------|
| 1          |               |
| 2          |               |
| 3          |               |
| 4          |               |

SCALE: AS NOTED

DATE: 06-17-2022

DRAWING:

**D1**

ROOF DETAILS



10150 HIGHLAND MANOR DR  
SUITE 200  
TAMPA, FL 33610  
813.944.2137

ROOFING, WATERPROOFING  
AND BUILDING ENVELOPE  
ENGINEERS & CONSULTANTS  
CERTIFICATE NO. C-1520

IRC-1829 INDIAN RIVER COUNTY CENTRAL REGIONAL WWTF  
ROOF REPLACEMENT  
3550 49th St  
VERO BEACH, FL 32967  
REI PROJECT# 19TPA-018

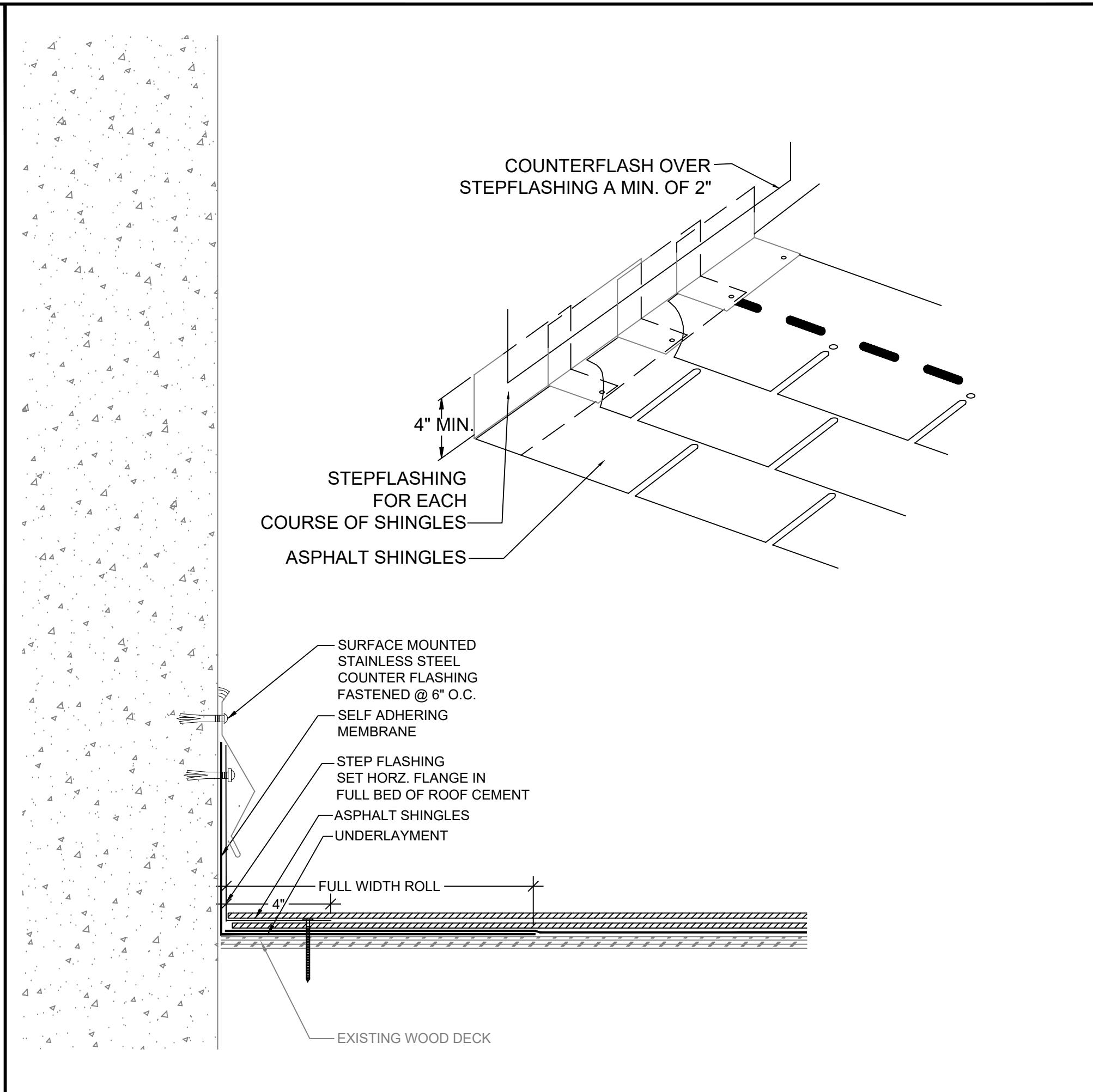
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DATE: 06-17-2022

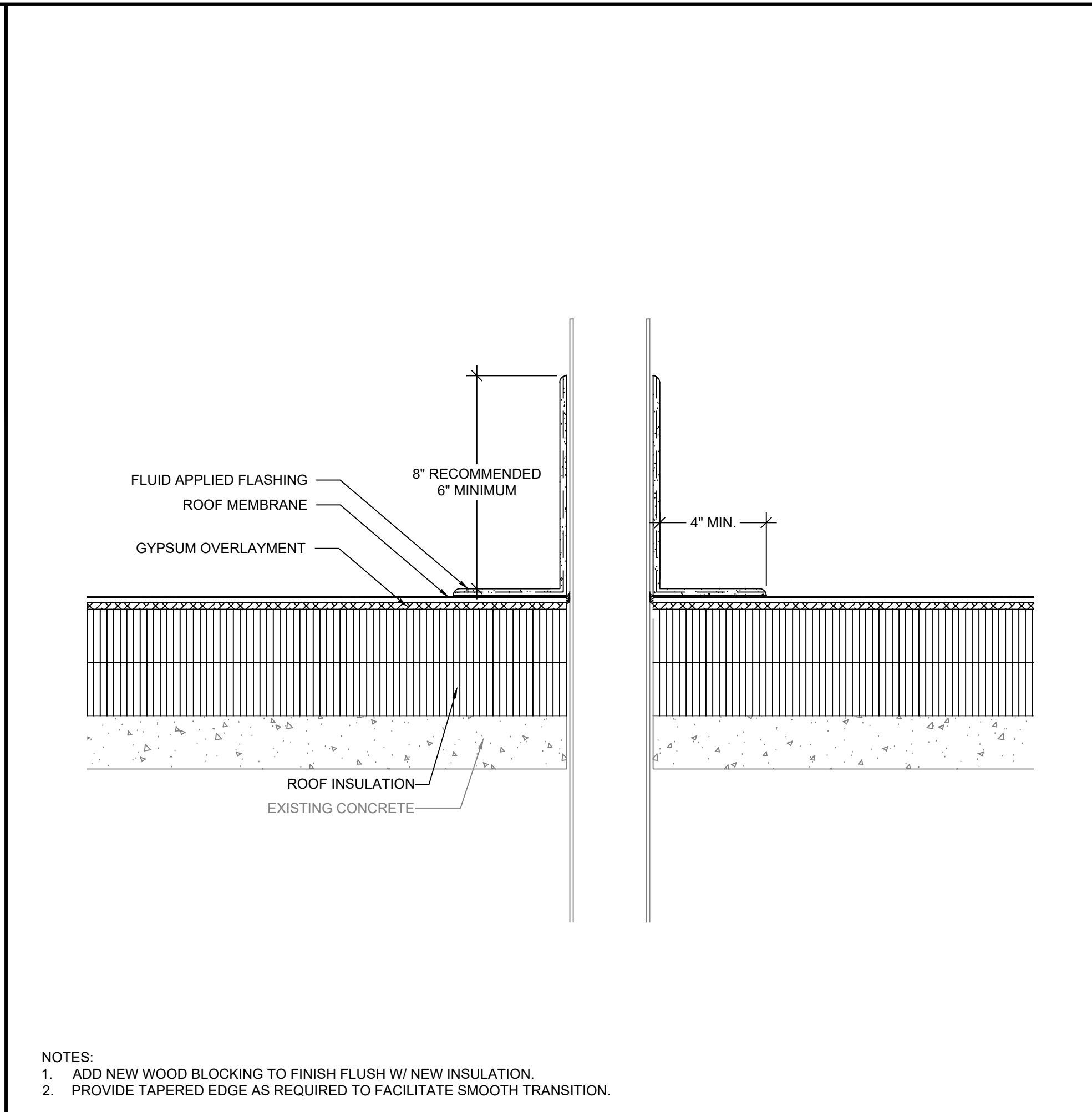
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D2

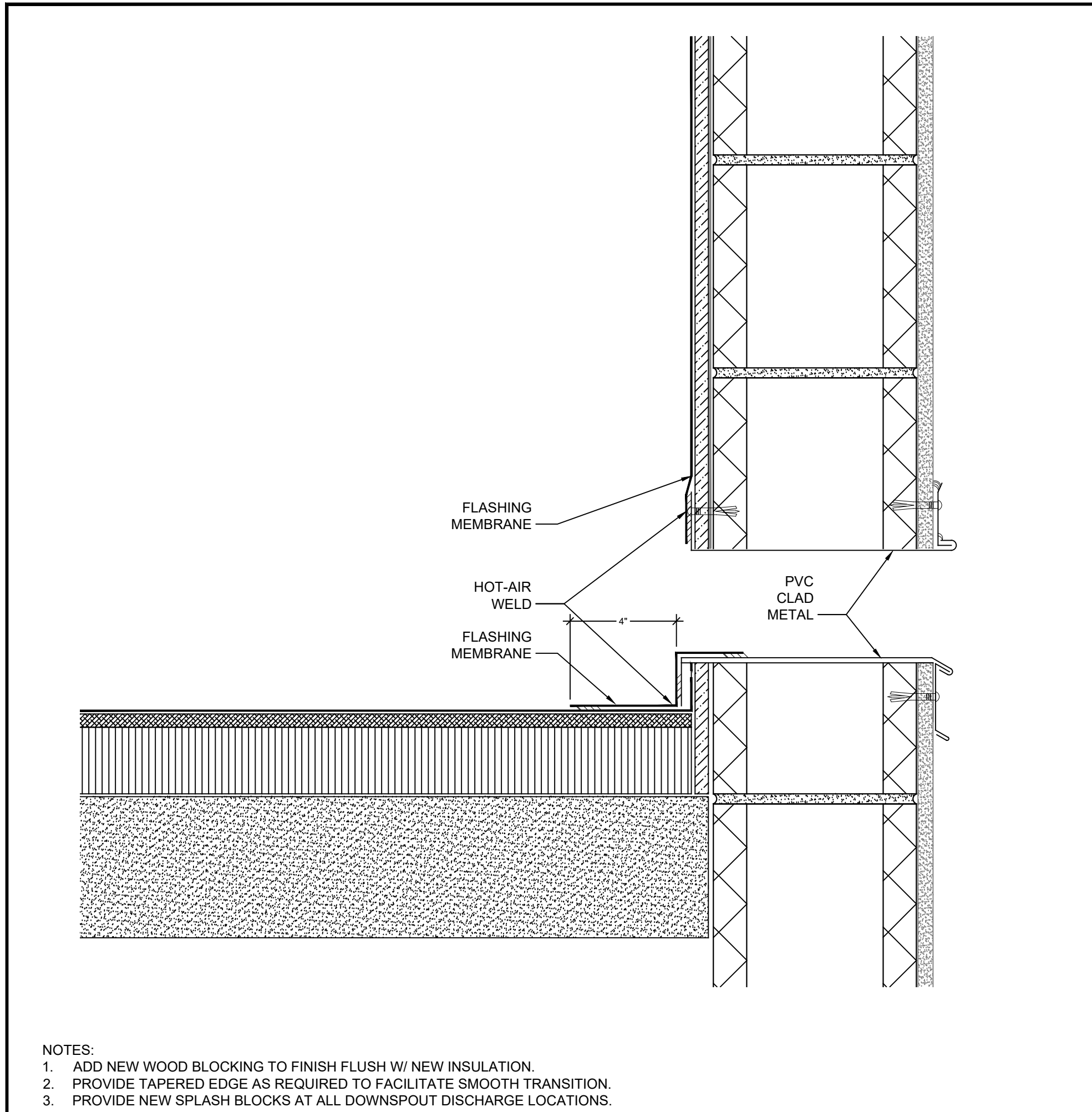
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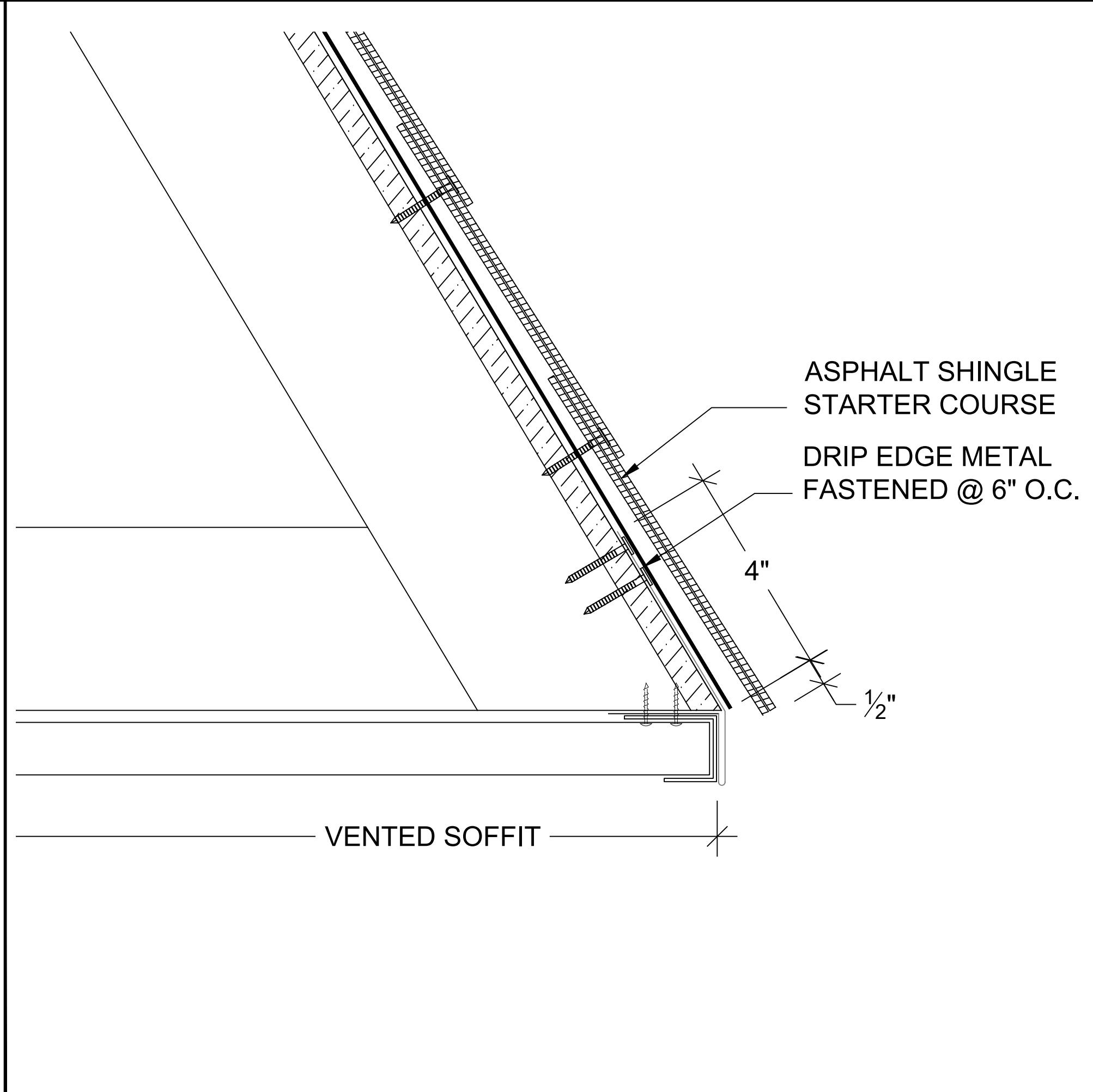
9 SURFACE MOUNT STEP FLASHING  
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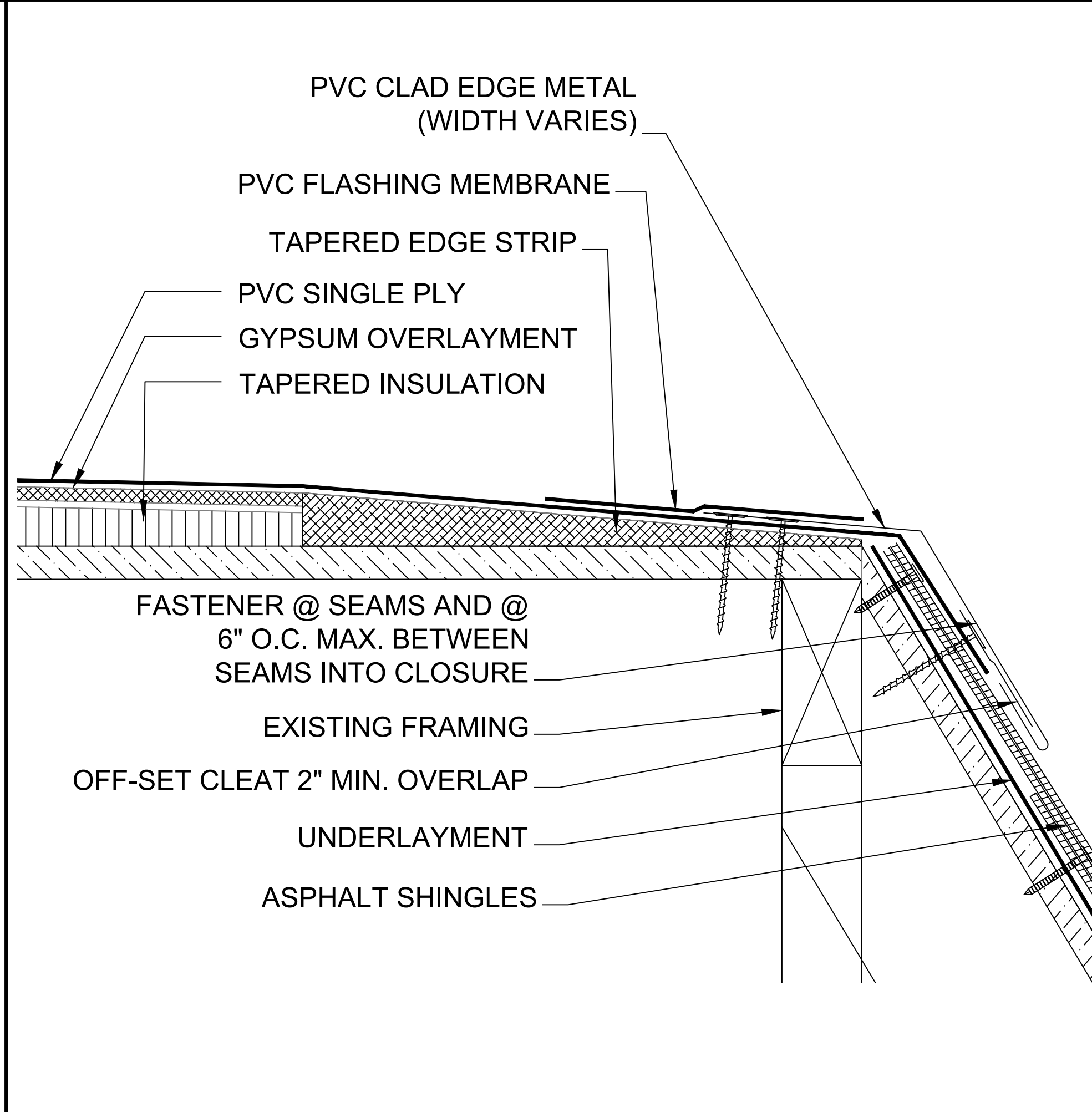
8 UNISTRUT PENETRATION  
SCALE: 3"=1'-0"



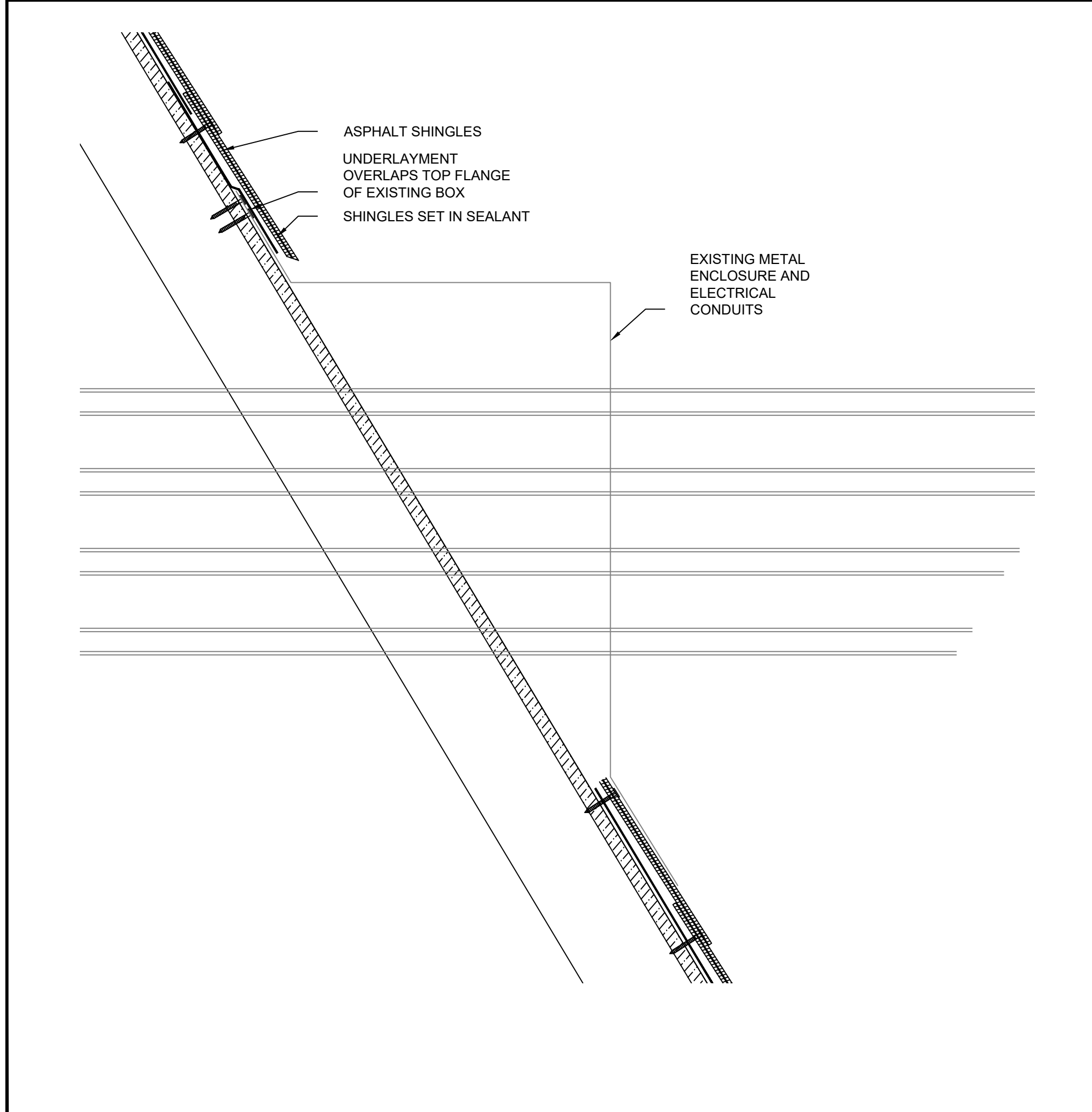
7 OVERFLOW SCUPPER  
SCALE: NOT TO SCALE



12 SHINGLE ROOF EAVE  
SCALE: 3"=1'-0"



11 SHINGLE ROOF TRANSITION TO PVC ROOF  
SCALE: 3"=1'-0"



10 MULTIPENETRATION FLASHING  
SCALE: 3"=1'-0"

NOTES:  
1. ADD NEW WOOD BLOCKING TO FINISH FLUSH W/ NEW INSULATION.  
2. PROVIDE TAPERED EDGE AS REQUIRED TO FACILITATE SMOOTH TRANSITION.  
3. PROVIDE NEW SPLASH BLOCKS AT ALL DOWNSPOUT DISCHARGE LOCATIONS.

NOTES:  
1. ADD NEW WOOD BLOCKING TO FINISH FLUSH W/ NEW INSULATION.  
2. PROVIDE TAPERED EDGE AS REQUIRED TO FACILITATE SMOOTH TRANSITION.