

# PROJECT MANUAL

FOR

## Dustin Sekula Memorial Library Roof Renovations

FOR THE

# CITY OF EDINBURG



2019

Page Intentionally Blank

City of Edinburg  
415 W. University Drive  
Edinburg, Texas 78539  
(956) 388-8211

Document 00001

TITLE SHEET  
PROJECT MANUAL  
FOR  
CITY OF EDINBURG  
DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL  
REPAIRS & ROOF REPLACEMENT

FOR

EDINBURG, TEXAS

**CITY ENGINEER**

\_\_\_\_\_  
Date

\_\_\_\_\_  
  
END OF DOCUMENT

Page Intentionally Blank





Document 00003

**TABLE OF CONTENTS**

<u>Document</u>	<u>Title</u>	<u>No. of Pages</u>
<b>INTRODUCTORY INFORMATION</b>		
00001	Title Sheet.....	2
00003	Table of Contents .....	4
00004	List of Drawings.....	2
00010	Request For Proposals .....	2
00020	Notice to Bidders .....	4
00100	Instruction to Bidders .....	8
<b>BIDDING REQUIREMENTS</b>		
<b>BID FORMS</b>		
00300	Intent to Respond .....	2
00310	Form of Proposal.....	4
<b>SUPPLEMENTS TO BID FORMS</b>		
00405	Schedule of Unit Price Work.....	2
00411	Bid Bond .....	2
00420	Statement of Bidders Qualifications .....	4
00423	Certificate of Bidder's Experience & Qualifications .....	2
00425	Equipment & Material Suppliers List .....	4
00429	Non-Bribery Model Form .....	2
<b>POST-BID PROCEDURES</b>		
00450	Post Bid Procedures .....	2
00460	Noncollusion Affidavit.....	2
<b>CONTRACT FORMS</b>		
AIA A101	Agreement .....	8
00510	Notice of Award .....	2
00550	Notice to Proceed.....	2
00610	Performance Bond .....	2
00620	Payment Bond .....	2
00625	Affidavit of Insurance .....	2
00630	Forms of Business .....	2
00631	Resolution of Corporation .....	2
00632	Contractor's Resolution on Authorized Representative .....	2
00635	Contractor's Act of Assurance .....	2
00640	Certification Regarding Department Suspension and Other Responsibility Matters.....	2
<b>CONDITIONS OF THE CONTRACT</b>		
<b>SUPPLEMENTARY CONDITIONS</b>		
00830	Warranty .....	4
<b>ADDENDA</b>		
00900	Addenda (For filing) .....	4
00910	Modifications.....	2

(For filing) Documents listed "for filing" are to be provided by the Bidder and are not included in this Project Manual unless indicated for example only. The Document numbers and titles hold places for actual documents to be submitted by the Contractor during the bid, post-bid, or construction phase of the Project.

\*1 For newspaper publication; not included as part of Project Manual.

**END OF DOCUMENT**

Page Intentionally Blank

Document 00004

**LIST OF DRAWINGS**

The list of Drawings is provided on the Sheet Index page for Dustin Sekula Memorial Library.

T1	TITLE SHEET
A1.1	DEFICIENCIES (REFERENCE)
A1.2	LEAK MAP (REFERENCE)
A1.3	FLOOR PLAN
A1.4	ROOF PLAN
A1.5	MECHANICAL PLAN
A2.1	RCP - L01
A2.2	RCP - L02
A3.1	ELEVATIONS
D0	DETAILS
D1	GENERAL DETAILS
D2	CURB DETAILS
D3	DETAILS
D4	DETAILS
D5	WALL SECTION
D6	WALL DETAILS
D7	LADDER DETAILS
S0	STRUCTURAL NOTES
S1.0	GENERAL NOTES & KEY WORK PLAN
S2.0	HIGH WALL REINFORCEMENT PLAN
S3.1	SECTIONS A-A & B-B
S3.2	SECTION C-C
S3.3	STRUCTURAL DETAILS

**END OF DOCUMENT**

Page Intentionally Blank



## REQUEST FOR PROPOSALS

The City of Edinburg is soliciting sealed Request for Proposals; hereinafter referred to as RFB, to be received by the City Secretary's Office located at 415 W. University Drive, Edinburg, Texas 78539. City of Edinburg normal business days are Monday through Friday between the hours of 8:00 a.m. to 5:00 p.m. and shall be closed on recognized holidays. A **pre-bid conference** will be conducted by the Architect on (July 23, 2019 from 11:00 am to 12:00 noon CST). The pre-bid conference shall be conducted at the City of Edinburg Engineering Conference Room: located at 415 W. University Drive Edinburg, Texas 78539. Attendance by prospective Bidders is recommended for all general contractors submitting Proposals. Sub-contractors, suppliers, and equipment suppliers may attend.

RFP'S will be received until 3:00 p.m. Central Time, on August 05, 2019, shortly thereafter all submitted RFP'S will be gathered and taken to the Edinburg City Hall Community Room, 1st Floor, to be publicly opened and read aloud. Any RFP received after the closing time will not be accepted and will be returned to the submitter unopened. It is the responsibility of the submitter to see that any RFP submitted shall have sufficient time to be received by the City Secretary's Office prior to the RFP opening date and time. The receiving time in the City Secretary's Office will be the governing time for acceptability of the RFP's. RFP's will not be accepted by telephone or facsimile machine. All RFP'S must bear original signatures and figures. The RFP shall be for:

### RFP # 2019-23

#### Dustin Sekula Memorial Library Structural Repairs & Roof Replacement

**Bidders receiving a "NOTICE TO BIDDERS" and/or "REQUEST FOR PROPOSALS" notice in the mail or reading same in the newspaper are advised that the bidding documents may be obtained from the City of Edinburg web page address: [www.cityofedinburg.com](http://www.cityofedinburg.com), or may obtain copies by contacting the office of: LORENA FUENTES, PURCHASING AGENT, LOCATED AT 415 W. UNIVERSITY DRIVE, EDINBURG, TEXAS 78539 by calling (956) 388-1895 or by emailing your request to the following address: [lfuentes@cityofedinburg.com](mailto:lfuentes@cityofedinburg.com). General and/or Prime Contractors submitting Proposals and/or proposals to the City of Edinburg shall be non-refundable.**

Plans, proposal forms, specifications, and contract documents may be purchased from the Engineering Department, Engineer of Record or are available for printing at:

[http://cityofedinburg.com/departments/finance/open\\_bid\\_notices.php](http://cityofedinburg.com/departments/finance/open_bid_notices.php).

Copies of the plans and specifications may be examined without charge at the following location:

**City of Edinburg  
Engineering Department – 2nd Floor  
415 W. University Drive  
Edinburg, Texas 78539**

Hand Delivered RFP'S:

415 W. University Drive  
C/o City Secretary Department (1<sup>st</sup> Floor)

If using Land Courier (i.e. FedEx, UPS):

City of Edinburg  
C/o City Secretary  
415 W. University Drive  
Edinburg, Texas 78539

If Mailing Proposals:

City of Edinburg  
C/o City Secretary  
P.O. Box 1079  
Edinburg, Texas 78540-1079

The City of Edinburg reserves the right to refuse and reject any or all RFP's and to waive any or all formalities or technicalities and to accept the RFP deemed most advantageous to the City, and hold the RFP's for a period of 90 days without taking action.

RFP's must be submitted in an envelope sealed with tape and prominently marked on the lower left hand corner of the envelope with corresponding RFP number and title.

Please read your requirements thoroughly and be sure that the RFP offered complies with all requirements/specifications noted. Any variation from the solicitation requirements/specifications must be clearly indicated by letter, on a point by point basis, attached to and made a part of your RFP. If no exceptions are noted, and you are the successful respondent, it will be required that the service(s) be provided as specified.

**PURPOSE**

(1) The purpose of these solicitation documents is to provide a proposal for roof replacement and miscellaneous building renovations (exterior and interior) at:

**Dustin Sekula Memorial Library Renovations**

**INTENT**

(2) The services to be provided under this RFP shall be in accordance with and shall meet all specifications and/or requirements as shown in this solicitation for RFP. There is no intention to disqualify any respondent who can meet the requirements.

**SUBMITTAL OF RFP**

(3) RFPs shall be submitted in sealed envelopes as referenced on the attached solicitation. Three (3) complete sets of the response, one (1) original marked "**ORIGINAL**," and three (3) copies marked "**COPY**". RFPs submitted by facsimile (fax) or electronically shall **NOT** be accepted. Submittal of an RFP in response to this solicitation constitutes an offer by the respondent. Once submitted, RFP's become the property of the City of Edinburg and as such the City reserves the right to use any ideas contained in any RFP regardless of whether that respondent/firm is selected. Submission of a RFP in response to this solicitation, by any respondent, shall indicate that the respondent(s) has/have accepted the conditions contained in the RFP, unless clearly and specifically noted in the RFP submitted and confirmed in the contract between the City and the successful respondent otherwise. RFPs which do not comply with these requirements may be rejected at the option of the City. RFPs must be filed with the City of Edinburg before the deadline day and hour. No late RFPs will be accepted. They will be returned to respondent unopened (if properly identified). Failure to meet RFP requirements may be grounds for disqualification.

Hand Delivered RFP'S:

415 W. University Drive  
c/o City Secretary Department (1<sup>st</sup> Floor)

If using Land Courier (i.e. FedEx, UPS):

City of Edinburg  
c/o City Secretary  
415 W. University Drive  
Edinburg, Texas 78541

If Mailing RFP's:

City of Edinburg  
c/o City Secretary  
P.O. Box 1079  
Edinburg, Texas 78540-1079

**RFP DOCUMENTS:** Prime (Roofing) Bidders may obtain Bid Documents from the city of Edinburg Purchasing Website: [Designated website for city of Edinburg]

No partial sets of Bid Documents will be issued, and the Owner will have no responsibility for errors or misinterpretations resulting from the use of incomplete sets of documents. Bidder is responsible for obtaining any issued Addenda posted to the City of Edinburg's Purchasing Website up to the bid due date.

**TIME ALLOWED FOR ACTION TAKEN**

(4) The City of Edinburg may hold RFP/s 90 days after deadline without taking action. Respondents are required to hold their RFP/s firm for same period of time.

**RIGHT TO REJECT/AWARD**

(5) The City of Edinburg reserves the right to reject any or all RFPs, to waive any or all formalities or technicalities, and to make such awards of contract as may be deemed to be the best and most advantageous to the City of Edinburg.

**ASSIGNMENT**

(6) Respondents are advised that the City of Edinburg shall not allow the successful respondent to sell, assign, transfer, or convey any part of any contract resulting from this RFP in whole or in part, to a third party without the written approval of the City of Edinburg.

**AWARD**

(7) Respondents are advised that the City of Edinburg is soliciting RFPs and award shall be made to the respondent that in the opinion of the City of Edinburg is the best qualified.

**NUMBER OF CONTRACTS**

(8) THE CITY reserves the right to award one or no contract in response to this RFP.

**STATUTORY REQUIREMENTS**

(9) It shall be the responsibility of the successful respondent to comply with all applicable State & Federal laws, Executive Orders and Municipal Ordinances, and the Rules and Regulations of all authorities having jurisdiction over the work to be performed hereunder and such shall apply to the contract throughout, and that they will be deemed to be included in the contract as though written out in full in the contract documents.



**ALTERATIONS/AMENDMENTS TO RFP**

(10) RFP **CANNOT** be altered or amended after opening time. Alterations made before opening time must be initiated by respondent guaranteeing authenticity. No RFP may be withdrawn after opening time without acceptable reason in writing and only after approval by the City of Edinburg.

**NO RESPONSE TO RFP**

(11) If unable to submit a RFP, respondent should return inquiry giving reasons.

**LIST OF EXCEPTIONS**

(12) The respondent shall attach to his/her RFP a list of any exceptions to the specifications/requirements.

**PAYMENT**

(13) The City of Edinburg will execute payment by mail in accordance with the State of Texas Pay Law after SERVICES have been completed, introduced to the City, and found to meet City of Edinburg specifications/requirements. No other method of payment will be considered.

**SYNONYM**

(14) Where in this solicitation package SERVICES is used, its meaning shall refer to the request for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT as specified.

**RESPONDENT'S EMPLOYEES**

(15) Neither the Respondent nor his/her employees engaged in fulfilling the terms and conditions of this Service Contract shall be considered employees of the City. The method and manner of performance of such undertakings shall be under the exclusive control of the vendor on contract. The City shall have the right of inspection of said undertakings at any time.

**INDEMNIFICATION CLAUSE**

(16) The Respondent agrees to indemnify and save harmless the City, from all suits and actions of every nature and description brought against them or any of them, for or on account of the use of patented appliances, products or processes, and he shall pay all royalties and charges which are legal and equitable. Evidence of such payment or satisfaction shall be submitted upon request of the Purchasing Agent, as a necessary requirement in connection with the final estimate for payment in which such patented appliance, products or processes are used

**INTERPRETATIONS**

(17) Any questions concerning the project and/or specifications/requirements with regards to this solicitation for statement(s) of qualifications shall be directed to the designated individuals as outlined in the RFP. Such interpretations, which may affect the eventual outcome of this request for statements of qualifications, shall be furnished in writing to all prospective Respondents via Addendum. No interpretation shall be considered binding unless provided in writing by the City of Edinburg in accordance with paragraph entitled "Addenda and Modifications".

**VERBAL THREATS AND OFFICIAL CONTACT**

(18) Any threats made to any employee of the City, be it verbal or written, to discontinue the providing of item/material/services for whatever reason and/or reasons shall be considered a breach of contract and the City will immediately sever the contract with the Respondent/Consultant

on contract.

Respondents shall not offer gratuities, favors or any monetary value to any official or employee of the City for purpose of influencing the selection. Any attempt by any Respondent to influence the selection process by any means, other than disclosure of qualifications and credentials through the proper channels, shall be grounds from exclusion from the selection process. Once the project is advertised, there shall be no contact with any city official or employee unless using the formal process through the Purchasing Department. Failure to comply will result in the firm being disqualified from the process.

Questions and answers that change or substantially clarify the Request for Proposals will be affirmed in writing and copies will be provided to all firms on record responding to RFP. Any inquiries to this RFP must be submitted to the Architect: Amtech Solutions, Inc. c/o Pesla Garcia, Office Administrator, at (956) 686-3095 or at the following e-mail address: peslagarcia@amtechsls.com no later than **July 23rd, 2019 by 5:00 pm**.

#### **CONFIDENTIAL INFORMATION**

(19) Any information deemed to be confidential by the respondent should be clearly noted on the pages where confidential information is contained; however, the City cannot guarantee that it will not be compelled to disclose all or part of any public record under Texas Public Information Act, since information deemed to be confidential by the respondent may not be considered confidential under Texas Law, or pursuant to a Court order.

#### **PAST PERFORMANCE**

(20) Respondent's past performance shall be taken into consideration in the evaluation of RFP submittal.

#### **JURISDICTION**

(21) Contract(s) executed as part of this solicitation shall be subject to and governed under the laws of the State of Texas. Any and all obligations and payments are due and performable and payable in Hidalgo County, Texas.

#### **RIGHT TO AUDIT**

(22) The City of Edinburg reserves the right to audit the vendor's books and records relating to the performance of this contract. The City of Edinburg, at its own expense, shall have the right at all reasonable times during normal business hours and upon at least twenty-four (24) hours' advance notice, to audit, to examine, and to make copies of or extracts from the books of account and records maintained by the vendor(s) with respect to the Supply/Service and/or Purchase Contract. If such audit shall disclose overpayment by City to vendor, written notice of such overpayment shall be provided to the vendor and the amount of overpayment shall be promptly reimbursed by vendor to the City. In the event any such overpayment is not paid within ten (10) business days after receipt of such notice, the unpaid amount of such overpayment shall bear interest at the rate of one percent (1%) per month from the date of such notice until paid.

#### **VENUE**

(23) The parties agree that venue for purposes of any and all lawsuits, cause of action, and/or any other dispute(s) shall be in Hidalgo County, Texas.

**IF YOU HAVE ANY QUESTIONS ABOUT COMPLIANCE, PLEASE CONSULT YOUR OWN LEGAL COUNSEL. COMPLIANCE IS THE INDIVIDUAL RESPONSIBILITY OF EACH PERSON OR AGENT OF A PERSON WHO IS SUBJECT TO THE FILING REQUIREMENT. AN OFFENSE UNDER CHAPTER 176 IS A CLASS “C” MISDEMEANOR.**

**CONFLICT OF INTEREST**

(24) CHAPTER 176 OF THE TEXAS LOCAL GOVERNMENT CODE

Effective January 1, 2006, Chapter 176 of the Texas Local Government Code requires that any vendor or person considering doing business with a local government entity disclose in the Questionnaire Form CIQ, the vendor or person’s affiliation or business relationship that might cause a conflict of interest with a local government entity. By law, this questionnaire must be filed with the records administrator of the City of Edinburg not later than the 7<sup>th</sup> business day after the date the person becomes aware of facts that require the statement be filed. See Section 176.006, Local Government Code. A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor. For more information or to obtain Questionnaire CIQ go to the Texas Ethics Commission web page at [www.ethics.state.tx.us/forms/CIQ.pdf](http://www.ethics.state.tx.us/forms/CIQ.pdf).

**CERTIFICATE OF INTERESTED PARTIES (Form 1295)**

(25) In 2015, the Texas Legislature adopted [House Bill 1295](#), which added section 2252.908 of the Government Code. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The law applies only to a contract of a governmental entity or state agency that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016. For more information go to the Texas Ethics Commission web page at [www.ethics.state.tx.us/forms/CIQ.pdf](http://www.ethics.state.tx.us/forms/CIQ.pdf).

**CONFIDENTIALITY OF INFORMATION AND SECURITY**

(26) Should the successful respondent become the holder of and have access to confidential information in the process of fulfilling its responsibilities in connection with an awarded contract the successful respondent agrees that it shall keep such information confidential and will comply fully with the laws and regulations of the State of Texas, ordinances and regulations of the City, and any applicable federal laws and regulations relating to confidentiality.

**TERMINATION OF CONTRACT**

(27) The City of Edinburg reserves the right to terminate the contract if, in the opinion of the City of Edinburg, the successful vendor’s performance is not acceptable, no funds are available, or if the City wishes, without cause, to discontinue this contract. Termination will be in written form allowing a 30-day notice.

**RESPONSE DEADLINE**

(28) Responses to the RFP must be addressed to City Secretary, City of Edinburg, 415 W. University Drive by **Monday, August 05, 2019 until 3:00 p.m.** for consideration. **An (1) original and three (3) copies** of complete sets of the response must be submitted no later than this date

and time in a **sealed envelope** indicating that its contents are in response to the RFP for the “DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT”. Respondents are advised that all confidential records must be submitted in a separate sealed envelope and marked accordingly.

Hand Delivered RFP's: 415 W. University Drive  
c/o City Secretary Department (1<sup>st</sup> Floor)

If using Land Courier (i.e.FedEx, UPS): City of Edinburg  
c/o City Secretary  
415 W. University Drive  
Edinburg, Texas 78541

If Mailing RFPs: City of Edinburg  
c/o City Secretary  
P.O. Box 1079  
Edinburg, Texas 78540-1079

#### **ADDENDA AND MODIFICATIONS**

(29) Any changes, additions, or clarifications to the RFP are made by amendments (addenda). Any respondent in doubt as to the true meaning of any part of the RFP or other documents may request an interpretation from the Purchasing Division. At the request of the respondent, or in the event the Purchasing Division deems the interpretation to be substantive, the interpretation will be made by written addendum. Said Addenda shall be mailed, e-mailed, hand delivered and/or faxed, to all prospective respondents. All Addenda issued in respect to this RFP shall be considered official changes to the original documents. Verbal statements in response to inquiries and/or requests for explanations shall not be authoritative or binding. It shall be the respondent's responsibility to ensure that they have received all Addenda in respect to this project. Furthermore, respondents are advised that they must recognize, comply with, and attach a signed copy of each Addendum which shall be made part of their RFP Submittal. Respondent(s) signature on Addenda shall be interpreted as the respondent's "recognition and compliance to" official changes as outlined by the City of Edinburg and as such are made part of the original solicitation documents. Failure of any respondent to receive any such addendum or interpretation shall not relieve such respondent from its terms and requirements. The City may issue a written addendum no later than five calendar days prior to the date Proposals must be received. Addendums are available online at [www.cityofedinburg.com](http://www.cityofedinburg.com).

#### **RFP PREPARATION COSTS**

(30) The City of Edinburg shall not be held liable for any costs incurred by any respondent for work performed in the preparation of and production of a RFP or for any work performed prior to execution of contract.

#### **EQUAL EMPLOYMENT OPPORTUNITY**

(31) Respondent agrees that they will not discriminate in hiring, promotion, treatment, or other terms and conditions of employment based on race, sex, national origin, age, disability, or in any way violate Title VII of 1964 Civil Rights Act and amendments, except as permitted by said laws.

### **AUTHORIZATION TO BIND RESPONDENT TO RFP**

(32) RFPs MUST give full firm name and address of respondent, and be manually signed. Failure to do so will disqualify your RFP. Person signing bid must show title or AUTHORITY TO BIND HIS/HER FIRM IN A CONTRACT. Firm name and authorized signature must appear on each page that calls for this information. The legal status of the Respondent whether corporation, partnership, or individual, shall also be stated in the RFP. A corporation shall execute the RFP by its duly authorized officers in accordance with its corporate by-laws and shall also list the state in which it is incorporated. A partnership Respondent shall give full names and addresses of all partners. All partners shall execute the RFP. Partnership and Individual Respondent shall state in the proposal the names and addresses of all persons with a vested interest therein. The place of residence of each Respondent, or the office address in the case of a firm or company, with county and state and telephone number, shall be given after the signature.

### **BRAND OR MANUFACTURER REFERENCE**

(33) Unless otherwise specified, any catalog or manufacturer's reference or brand name used in describing an item is merely descriptive, and not restrictive, and is used only to indicate type and style of product desired. Proposals on alternate brands will be considered if they meet specification requirements. If a bidder quotes on equipment other than the one(s) specified in the bid, sufficient specifications and descriptive (pictured literature) data must accompany same to permit thorough evaluation. In the absence of these qualifications, he/she will be expected to furnish the product called for.

### **COOPERATIVE PRICING**

(34) Bidders are advised that in addition to responding to our "local" solicitation for Proposal/Proposals with Dealer pricing, vendors/contractors are encouraged to provide pricing on the below referenced items/products/services based on BuyBoard, TX-MAS, H-GAC and/or any other State of Texas recognized and approved cooperative which has complied with the bidding requirements for the State of Texas. If bidding other than or in addition to "dealer" pricing, kindly duplicate the bid forms for each bid being provided from a cooperative contract. Any and all applicable fees must be included. All cooperative pricing must be submitted on or before bid opening date and hour.

### **HB 89**

(35) The 85th Texas Legislature approved new legislation, effective Sept. 1, 2017, which amends Texas Local Government Code Section 1. Subtitle F, Title 10, Government Code by adding Chapter 2270 which states that a governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it:

- 1) does not boycott Israel; and
- 2) will not boycott Israel during the term of the contract

**Confidential Information Respondents are advised that all confidential records must be submitted in a separate sealed envelope and marked accordingly.**

## **SECTION I SCOPE OF THE PROPOSAL**

### **INTRODUCTION**

The purpose of the RFP is to solicit and obtain from interested parties (also referred to herein as “Vendor” or “Vendors”) the best possible proposal for the Dustin Sekula Memorial Library Structural Repairs & Roof Replacement. The City of Edinburg intends to select the most competitive proposal that meets the City’s requirements and specifications listed within the proposal and then enter into negotiations with the Vendor/s for purposes of reaching a satisfactory agreement for the City for the Dustin Sekula Memorial Library Structural Repairs & Roof Replacement.

### **BACKGROUND**

The City of Edinburg Dustin Sekula Memorial Library Structural Repairs & Roof Replacement project will replace the existing roof and reinforce the roof and exterior wall structure and address the related exterior and interior cosmetic issues.

### **SCOPE OF WORK**

The project consists of repairs and additions of damaged or improperly built areas of the roof deck and structure, replacement of metal panel roof system with single play roof system with new insulation, replace mechanical curbs and reinforce attachments, addition of exterior wall reinforcement, addition of exterior wall pilasters to conceal structural reinforcement, exterior and interior wall repair and associated stucco and painting, and minor interior cosmetic repairs related to roof leaks.

### **ADDITIONAL INFORMATION**

The City of Edinburg is requesting that RFP’s (Request for Proposal) be routed to: The CITY Secretary, at 415 West University, Edinburg, Texas 78541.

### **NON-COLLUSION**

Submitters, by submitting a signed submission, certify that the accompanying submission is not the result of, or affected by, any unlawful act of collusion with any other person or company engaged in the same line of business or commerce, or any other fraudulent act punishable under Texas or United States law.

### **NON-DISCRIMINATION**

Submitters, during the performance of this contract, will not discriminate against any employee or applicant for employment because of race, religion, sex, national origin or disability except where religion, sex, national origin or disability is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor.

### **PROCESSING TIME FOR PAYMENT**

Submitters are advised that a minimum of thirty (30) days is required to process invoices for payment.

### **ELECTRONIC SUBMISSION OF PROPOSALS**

The City of Edinburg's City Secretary Department will not accept telegraphic or electronically transmitted submissions.

**PROOF OF FINANCIAL AND BUSINESS CAPABILITY**

Submitters must, upon request, furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these requirements. The CITY will make the final determination as to the submitter's ability.

**SUBMITTER DEFAULT**

The City of Edinburg reserves the right, in case of submitter default, to procure the articles or services from other sources and hold the defaulting submitter responsible for any excess costs occasioned thereby.

**RESTRICTIVE OR AMBIGUOUS REQUIREMENTS**

It is the responsibility of the submitter to review the Request for Proposals (RFP) packet and to notify the City Engineering Department if the requirements are formulated in a manner that would unnecessarily restrict competition. Any such protest or question regarding the requirements or bidding procedures must be received in the City Secretary Department not less than seventy-two hours prior to the time set for the opening. These criteria also apply to requirements that are ambiguous.

**RFP DELIVERY**

The City of Edinburg requires submitters, when hand-delivering proposals by **3:00 pm on August 05, 2019** to have a City Secretary Department representative time/date stamp and initial the envelope.

**SIGNING OF PROPOSALS**

In order to be considered, all submittals **must** be signed.

**WAIVING OF INFORMALITIES**

THE CITY reserves the right to waive minor informalities or technicalities when it is in the best interest of THE CITY.

**SUBCONTRACTING**

The successful submitter may not subcontract the award without the written consent of the City.

**BIDDER RESPONSIBILITY**

It is the responsibility of each vendor before submitting a proposal:

- To examine thoroughly the contract documents and other related data identified in the proposal documents.
- To visit the site to become familiar with and satisfy vendor as to the general, local, and site conditions that may affect cost, progress, performance, etc.

- To consider federal, state, and local laws and regulations that may affect costs, progress, performance or furnishing of the work.
- To study and carefully correlate vendor's knowledge and observations with the contract documents and such other related data.
- To promptly notify THE CITY Purchasing of all conflicts, errors, ambiguities, or discrepancies which vendor has discovered in or between the contract documents and such other related documents.

#### **TERMINATION**

THE CITY has the authority and express right to terminate any Agreement awarded under this RFP or any Work Order resulting from the Agreement at any time for any reason, including but not limited to, instances where THE CITY finds that the Contractor's work is negligent, not satisfactory, or not in accordance with the Agreement requirements.



## **SECTION II RFP REQUIREMENTS**

### **PURPOSE**

The intent of this Request for Proposal and resulting contract is to obtain proposals to DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT.

### **REQUEST FOR PROPOSALS**

The required contents and limitations for the preparation of the RFP are described in this section. Failure to provide the requested information or adhere to any of The CITY limitations will result in disqualification of the submitted RFP. A total of **one (1) original and four (4) copies** of the RFP shall be submitted to the address on the cover letter. Letter of Intent from Surety Company to provide Payment and Performance Bonds shall also be required from the proposer as part of RFP.

### **SUBMITTAL**

For proper comparison and evaluation, THE CITY requests that proposals address, at a minimum, the following format.

- 1) **Cover Letter** - A brief introductory letter of representation.
- 2) **Executive Summary** - A brief summary highlighting the most important points of the proposal. If used, the Summary should not exceed five pages.
- 3) **Degree of Compliance** - A statement that all products and services quoted in proposal is in full accord with the specifications or a brief listing of all those specification sections to which the Proposer takes exception. All explanations, exceptions, comments, etc., pertaining to the specific sections of the specifications shall be listed and numbered in order of the respective article of the specification.

### **CONTENTS**

The required contents for the RFP are presented below in the order they should be incorporated into the submitted document.

- 1) **UNDERSTANDING OF THE PROJECT:** This section should demonstrate the submitter's understanding of the project's needs, the work required, and any local issues or concerns. This description should be concise, candid, and limited to 2 pages in length.
- 2) **FIRM QUALIFICATIONS, PERSONNEL AND STAFFING (00420 Statement of Bidder's Qualifications):** The CITY is seeking a contract with a competent firm(s); with a minimum of 5 years' experience of installation of the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT.
  - a) **Qualifications:**
    - i) List Firm's qualifications and ability to perform the service requirements.

- ii) List qualifications of key personnel to be assigned to this project, including but not limited to education, training, registrations, certifications and licenses.

**b) Experience:**

- i) Number of years of experience as a General Contractor.
- ii) Relevant experience with projects of similar size and scope performed over the past five (5) years. For each project listed, date services provided and name, titles, and telephone numbers of each client or client's representative.
- iii) Specific experience with public entity clients, especially large municipalities. If company submitting proposal for new construction has provided services to the CITY in the past, identify the name of the project and the department for which services were provided.
- iv) If company submitting proposal for this project is submitting as a team or joint venture, provide the same information for each member of the team or joint venture.
- v) Provide the following information for key personnel to be assigned to this project:
  - (1) Total years' experience.
  - (2) Primary work assignment for the projects outlined in this RFP.
  - (3) Relevant experience with projects of similar size and scope.

**c) Previous Project Performance:**

- i) Provide evidence of satisfactory performance on past projects
- ii) List past assignments over the past five (5) years
- iii) Provide copies of outstanding service letters, letters of commendation, service awards, etc.
- iv) Provide five recent references who may be contacted to verify performance of similar services. For each reference, provide a current phone number and e-mail address. References may not be present or former CITY employees.

**d) Quality of Service:**

- i) Company submitting proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT – Availability: Identify any concurrent or near future commitment that would impede the firm's ability to perform this contract.
- ii) Describe company submitting proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT policies, procedures and plans to ensure quality services (continuing education, on-going training, internal quality practices, etc.)

- iii) If company submitting proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT has ever had a contract terminated or has been dismissed due to alleged unsatisfactory performance, state when, where and why the contract was terminated and/or Security Consultant dismissed, the client's name, and the contact person's phone number.
- 3) **Proposal Pricing/Delivery** - Pricing shall be inclusive for all items requested in this proposal. Brief notes referencing specific line items may be included, if necessary, for explanation. Proposal shall state all labor, materials and equipment necessary to complete the project as stated in the SCOPE OF WORK (Page 2).
- 4) **Contractor Background Information** - This section should include a description of the Proposer experience with other services similar to the one described herein. This information should include scope of several similar jobs including magnitude and cost, customer contacts and other information that THE CITY can use as a basis for performance evaluation. This section should also include information on your organization and staff assigned to the project.
- 5) **References** - Proposer shall submit with this proposal a list of at least three (3) references where like services or similar projects have been performed by their firm. Include name of firm, address, telephone number and name of representative.
- 6) **Schedule** – Proposer shall submit the amount of working days that will take company to complete project.

## **SECTION III SELECTION AND SCHEDULES**

### **SELECTION PROCEDURES**

The RFP shall be submitted according to the schedule below.

### **PROPOSAL RANKING**

A selection committee will evaluate and rank the written RFPs on a per project basis. After the RFPs have been ranked, the committee will make a recommendation to the CITY Council.

### **RFP SUBMITTED TO**

**An original and three (3) copies** of RFPs should be submitted to:

**City of Edinburg  
c/o City Secretary  
415 West University  
P.O. Box 1079  
Edinburg, Texas 78541**

RFPs must be submitted by **no later than** 3:00 p.m. on Monday August 05, 2019.

## **SECTION IV FIRM and RFP EVALUATION**

### **RFP – EVALUATION**

The evaluation system consists of a 100 Point system. The RFP will be ranked after evaluation. All RFP's submitted will be ranked and evaluated based on specified RFP criteria. The submittal evaluation will be based on the following criteria.

- **40 Points: Proposer's itemized and total proposed price**
  - Total estimated cost for base bid submitted\*

\*Alternates might be included based on what is most advantageous to City.
- **40 Points: Proposer's qualifications/experience and performance/references**
  - Demonstrated prior experience for similar projects (20 points)
  - Number of years in business (5 points)
  - Litigation History/Lawsuit History (5 points)
  - References (10 points)
- **10 Points: The Proposer's Team and Subcontractors.**
  - Resumes for Key Individuals (5 points)
    - Project Superintendent
    - Project Manager
  - List of Subcontractors (5 points)
- **10 Points: Schedule.**
  - Lowest total days (10 points)
  - Within 30 days of lowest (8 points)
  - Within 60 days of lowest (6 points)
  - More than 60 days from lowest (5 points)

### **Proposed Price (40 points):**

The price will be evaluated and scored based on the main proposal cost. The City reserves the right to include any and all alternate price proposals in the price evaluation process. The established budget will determine which, if any, alternates will be recommended and accepted as part of the overall price ranking evaluation. After the highest ranked firm is selected, negotiations on price and changes on the scope of work may occur with the firm that provides the best value to the City.

Points will be awarded based upon the total number of offers submitted. The lowest offeror will receive the maximum number of points and the highest offeror will receive the minimum number of points. A point spread system will be established once all the offers are tabulated. The closer the prices of the offers, the larger the point spread will be.

## SAMPLE: Utilizing the 80% Spread Formula

Contractor	Price	Points
Offeror No. 01	\$1,000,000.00	40.0
Offeror No. 02	\$1,050,000.00	37.33
Offeror No. 03	\$1,100,000.00	34.67
Offeror No. 04	\$1,150,000.00	32.0

70% spread:  $40 \times 70\% = 28.0$  points    Results: 12 points spread  
75% spread:  $40 \times 75\% = 30.0$  points    Results: 10 points spread  
80% spread:  $40 \times 80\% = 32.0$  points    Results: 8 points spread  
85% spread:  $40 \times 85\% = 34.0$  points    Results: 6 points spread  
90% spread:  $40 \times 90\% = 36.0$  points    Results: 4 points spread  
95% spread:  $40 \times 95\% = 38.0$  points    Results: 2 points spread

If the committee decided to utilize the 90% spread formula, Offeror No. 04 is only 4 points away from Offeror No. 1. The committee may feel that a 4 point difference is too close, and is unfair to the lowest price offeror. A 70% spread, or 12 point difference, may be too far spread out and may be considered unfair to the highest price offer. Especially since the prices are not too far apart on a \$1 Million project. The point spread could be very different on a \$300,000.00 project budget versus a \$30 million project budget.

After the percentage spread is agreed upon, in this case the 80% formula, the lowest offeror gets the maximum 40 points and the highest offeror gets 32 points. Everyone else in the middle will get their points scored proportionately (extrapolated). This is the scoring system which will be utilized by the ranking committee on the price category for all construction projects. The point system will vary from project to project depending on the project budget ranges, on the number of offers submitted, and on the price spread differences between all offerors.

### **RESPONDENT – EVALUATION**

The evaluation system consists of a 100-point system. The firms will be ranked after evaluation. Categories under the 100-point system include response to RFP. RFP submittal evaluation will be based on the following criteria.

### **STAFFING OF PROJECT TEAM**

The firms should provide information on their proposed professional team members, i.e., applicable certifications/registrations and other pertinent information that demonstrates their qualifications to perform the contract. The professional team members shall have experience in performing similar contracts for counties, cities, irrigation districts, TX DOT or other clients as stated in the Request for Proposals (RFP). Similar experience gained through other clients should be substantiated by reference. A list and scope of the various projects for comparative purposes shall be included in an appendix.

### **EXPERIENCE OF PROJECT TEAM/ABILITY TO COMMIT RESOURCES**

The provider shall designate experienced staff to completely and efficiently perform the work. Also, in this section, outline the firm's contingency plans for servicing the project in the event that one or more key personnel are not available for any reason during the period of performance.

### **METHODOLOGY**

The RFP should provide a description of the firm's approach to the methodology and management to the scope of services for the project.

### **UNDERSTANDING OF PROJECT/SIMILAR PROJECTS**

The proposal shall include the following:

1. Address appropriate Federal/State/Local regulations and policies
2. Identify information to be gathered or obtained

The respondents should provide as much background information as to its experience in providing similar services to State, CITY, County or any other governmental agencies. Reference information should be as current as possible, especially contact persons and telephone numbers.

### **FAMILIARITY WITH APPLICABLE RULES AND REGULATIONS**

The RFP should indicate, through past experience of the proposed Team, that they possess sufficient knowledge of governmental regulations, appropriate codes, guidelines, professional standards and policies (as required).

**SECTION V**  
**AWARD OF CONTRACT, RESERVATION OF RIGHTS**

**Number of Contracts**

The CITY reserves the right to award one or no contract(s) in response to this RFP.

**Advantageous Contract**

The Contract/s, if awarded, will be awarded to the vendor/s submitting proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT whose Submittal(s) is/are deemed most advantageous to the CITY and, as determined by the selection committee, upon approval of the CITY Council.

**Final Selection and City Council Approval**

The CITY may accept any Submittal in whole or in part. If subsequent negotiations are conducted, they shall not constitute a rejection or alternate RFP on the part of THE CITY. However, final selection of a company submitting proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT is subject to City Council approval.

**Remedy of Technical Errors**

The CITY reserves the right to accept one or more submittals or reject any or all submittals received in response to this RFP, and to waive informalities and irregularities in the submittals received. The CITY also reserves the right to terminate this RFP, and reissue a subsequent solicitation, and/or remedy technical errors in the RFP process.

**Preparation Costs**

This RFP does not commit the CITY to enter into a Contract, award any services related to this RFP, nor does it obligate the CITY to pay any costs incurred in preparation or submission of a submittal or in anticipation of a contract.

**Insurance and Indemnity**

If selected, vendor/s submitting proposal for DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT will be required to comply with the Insurance and Indemnity Requirements established herein.

**Independent Contractor**

The company/s submitting proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT agrees and understands that, if selected, it and all persons designated by it to provide services in connection with a contract, is (are) and shall be deemed to be (an) independent contractor(s), responsible for its (their) respective acts or omissions, and that THE CITY shall in no way be responsible for company submitting proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT STRUCTURAL REPAIRS & ROOF REPLACEMENT actions, and that none of the parties hereto will have authority to bind the other or to hold out to third parties.

**Purchase Orders, As Needed**

Execution of a contract does not obligate the CITY to engage any delivery orders, Purchase Orders, or other commitments for services. Service delivery shall be at the CITY's discretion, as



needed, and will be communicated to the company submitting proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT through individual Purchase Orders.

## **ATTACHMENT I Insurance Requirements**

The Respondent awarded the contract shall furnish proof of insurance, which will also include any subcontractor that is subcontracted by the bidder in at least the following limits, to be in place prior to providing any services under this Contract and to continue in effect at all times during the term of this Contract:

- 1 Professional liability insurance policy with limits of at least One Million Dollars (\$1,000,000) per occurrence, or limited to claims made, include at least a five (5) year extended reporting period.
  
- 1 Automobile liability insurance policy with limits of at least Three Hundred Thousand Dollars (\$300,000) per person and \$500,000 per occurrence consistent with potential exposure to The CITY under the Texas Tort Claims Act. Coverage should include injury to or death of persons and property damage claims (with limits up to \$500,000) arising out of the services provided to The CITY hereunder.
  
- 1 Uninsured/Underinsured motorist coverage in an amount equal to the bodily injury limits set forth immediately above;
  
- 1 A Five Hundred Thousand Dollar (\$500,000) Comprehensive General Liability insurance policy providing additional coverage to all underlying liabilities of The CITY consistent with potential exposure of The CITY under the Texas Tort Claims Act;
  
- 1 Workers' compensation insurance in amounts established by Texas law, unless the Bidder is specifically exempted from the Texas Workers' Compensation Act, Texas Labor Code Chapter 401, et. Seq.

Certificates of insurance naming The CITY as an additional insured shall be submitted to The CITY for approval prior to any services being performed by Contractor. Each policy of insurance required hereunder shall extend for a period equivalent to, or longer than the term of the Contract, and any insurer hereunder shall be required to give at least thirty (30) days written notice to The CITY prior to the cancellation of any such coverage on the termination date, or otherwise. This Contract shall be automatically suspended upon the cancellation, or other termination, of any required policy of insurance hereunder, and such suspension shall continue until evidence that adequate replacement coverage is provided to The CITY. If replacement coverage is not provided within thirty (30) days following suspension of the Contract, the Contract shall automatically terminate.

**ATTACHMENT II  
Insurance Requirement Acknowledgement**

I, \_\_\_\_\_, authorized representative for  
\_\_\_\_\_,

Company/Vendor

Hereby acknowledge the receipt of The CITY's required insurance limits. Said requirements:

- Will be acquired within 10 working days after notification from the Engineering Department of proposal awarded by The CITY of Edinburg; (\*An insurance certificate for the required insurance limits shall be provided to the City Engineer in order to qualify for award of bid and to execute a contract between the Company and The CITY.)
- Will acquire additional amount needed to meet The CITY's requirements within 10 working days after notification from the Engineering Department of bid awarded by The CITY of Edinburg; currently carry the following:

Professional Liability (Errors & Omissions):

\$ \_\_\_\_\_

Automobile Liability: \$ \_\_\_\_\_ General Liability:  
\$ \_\_\_\_\_

(\* An insurance certificate for the required insurance limits shall be provided to the City Engineer in order to qualify for award of bid and to execute a contract between the Company and The CITY.) **OR**

- Have already been met (see attached copy of insurance certificate).

\_\_\_\_\_  
Authorized Representative

\_\_\_\_\_  
Date

**Notice to Bidder:** Failure to provide Certificates of Insurance to the City Engineer will cause the bid award to be rescinded and then awarded to next lowest bidder. Certificates of Insurance will be monitored/verified on a **quarterly basis** to ensure that coverage policy is in place. It is the Company's obligation to maintain the appropriate insurance coverage throughout the term of the contract.

---

THIS FORM MUST ACCOMPANY BID PACKET

**ATTACHMENT III**

**Project Requirements  
Acknowledgement**

This is to certify that I, \_\_\_\_\_, possess all of the  
**APPLICABLE:**

1. Licenses:

\_\_\_\_\_

2. Bonds:

\_\_\_\_\_

3. Certificates:

\_\_\_\_\_

4. Permits:

\_\_\_\_\_

5. Other:

\_\_\_\_\_

necessary to carry out the required project. Furthermore, I am providing copies of the required documentation, so that if my company is awarded the bid, I may be eligible to enter a contract with the CITY and proceed to complete the project in a timely manner.

**\* Any license, bonds, certificates, permits, etc. which are required must be presented as part of the bid packet in order to expedite the bid evaluation process. Failure to provide said documentation will result in the disqualification of your bid.**

\_\_\_\_\_

Authorized Signature

Date

\_\_\_\_\_

Company

\_\_\_\_\_

Address

\_\_\_\_\_

City, State, Zip

**ATTACHMENT IV**

**LITIGATION DISCLOSURE FORM**

**Failure to fully and truthfully disclose the information required by this Litigation Disclosure form may result in the disqualification of your submittal from consideration or termination of the contract, once awarded.**

1. Have you or any member of your Firm or Team to be assigned to this engagement ever been indicted or convicted of a felony or misdemeanor greater than a Class C in the last five (5) years?

**Circle One**                      YES                      NO

2. Have you or any member of your Firm or Team to be assigned to this engagement ever been terminated (for cause or otherwise) from any work being performed for the CITY or any other Federal, State or Local Government, or Private Entity?

**Circle One**                      YES                      NO

3. Have you or any member of your Firm or Team to be assigned to this engagement ever been involved in any claim or litigation with the CITY or any other Federal, State or Local Government, or Private Entity during the last ten (10) years?

**Circle One**                      YES                      NO

**If you have answered “Yes” to any of the above questions, please indicate the name(s) of the person(s), the nature, and the status and/or outcome of the information, indictment, conviction, termination, claim or litigation, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your submittal.**

**ATTACHMENT V**

**VENDOR/S PROVIDING PROPOSAL FOR DUSTIN SEKULA MEMORIAL  
LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT  
QUALIFICATIONS  
GENERAL QUESTIONNAIRE**

1 Name/Name of Agency/Company: \_\_\_\_\_

(Full, correct legal name)

2 Address: \_\_\_\_\_

3. Telephone/Fax: \_\_\_\_\_

4. Does your Company anticipate any mergers, transfer of organization ownership, management reorganization, or departure of key personnel within the next twelve (12) months that may affect the organization's ability to carry out its submittal?

Yes\_\_\_\_ No\_\_\_\_

5. Is your Company authorized and/or licensed to do business in Texas?

Yes\_\_\_\_ No\_\_\_\_

6. Where is the Company's corporate headquarters located? \_\_\_\_\_

7. a. Does the Company have an office located in Edinburg, Texas?

Yes\_\_\_\_ No\_\_\_\_

b. If the answer to the previous question is "yes", how long has the Company conducted business from its Edinburg office?

\_\_\_\_\_ (years)      \_\_\_\_\_ (months)

c. State the number of full-time employees at the Edinburg office. \_\_\_\_\_

8. a. If the Company does not have an Edinburg office, does the Company have an office located in Hidalgo County, Texas?

Yes \_\_\_\_ No \_\_\_\_

b. If the answer to the previous question is yes, how long has the Company conducted business from its Hidalgo County office?

\_\_\_\_ (years)      \_\_\_\_ (months)

c. State the number of full-time employees at the Hidalgo County office. \_\_\_\_  
\_\_\_\_

9. Has the Company or any of its principals been debarred or suspended from contracting with any public entity? Yes \_\_\_\_ No \_\_\_\_

If yes, identify the public entity and the name and current phone number of a representative of the public entity familiar with the debarment or suspension, and state the reason for or circumstances surrounding the debarment or suspension, including but not limited to the period of time for such debarment or suspension. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. Indicate person whom The CITY may contact concerning your submittal or setting dates for meetings.

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

11. Surety Information

Have you or the Company ever had a bond or surety instrument "called," canceled, or forfeited?

Yes ( ) No ( ).

If yes, state the name of the bonding company, date, amount of bond and reason for such bond being "called," or its cancellation or forfeiture. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. Bankruptcy Information

Have you or the Company ever been declared bankrupt or filed for protection from creditors under state or federal proceedings? Yes ( ) No ( )



If yes, state the date, court, jurisdiction, cause number, amount of liabilities and amount of assets. \_\_\_\_\_

\_\_\_\_\_

13. Provide any other names under which your business has operated within the last 10 years.

\_\_\_\_\_

\_\_\_\_\_

**ATTACHMENT VI**  
**HOUSE BILL 89 VERIFICATION**

I, \_\_\_\_\_, the undersigned representative  
of

\_\_\_\_\_, (Company or Business name)  
(hereafter referred to as company) **being an adult over the age of eighteen (18) years of age, verify that the company named-above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:**

- 1. Does not boycott Israel currently; and**
- 2. Will not boycott Israel during the term of the contract.**
- 3) Is not currently listed on the State of Texas Comptroller’s Companies that Boycott Israel List located at <https://comptroller.texas.gov/purchasing/publications/divestment.php>**

*Pursuant to Section 2270.001, Texas Government Code:*

- 1. “Boycott Israel” means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and*
  - 2. “Company” means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.*
- 

\_\_\_\_\_  
**SIGNATURE OF COMPANY REPRESENTATIVE:**

\_\_\_\_\_  
**TYPE/PRINT NAME AND TITLE:**

\_\_\_\_\_  
**DATE:**

\_\_\_\_\_

## ATTACHMENT VII

### SUBMITTAL CHECKLIST

**This checklist is to help the company submitting proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT ensure that all required documents have been included in its submittal.**

Document and Location in Submittal	Check or Initial to Indicate Document is Attached to Submittal
Tab A – Interest Statement	
Tab B – Company submitting proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT Qualification General Questionnaire (Attachment VI in RFP)	
Tab C – *Project Requirements Acknowledgement (Attachment V in RFP)	
Tab D – Litigation Disclosure (Attachment IV in RFP)	
Tab E – Proof of Insurability (Letter from Insurance Provider and copy of current Insurance Certificate)	
Tab F – *Insurance Requirement Acknowledgement (Attachment II in RFP)	
Tab G – Letter of Intent from Surety Company to provide Payment and Performance Bonds. (Section II in RFP Requirements)	
Tab H – Submittal Checklist (Attachment VI in RFP)	
Tab I - *House Bill 89 Verification (Attachment VI)	
Tab J- *Formal Proposal for the DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT	
1 Original* and 2 Copies of Submittal	

**\*Documents marked with an asterisk on this checklist require a signature. Be sure they are signed prior to submittal.**

Page Intentionally Blank

**NOTICE TO BIDDERS**

**Owner:** City of Edinburg  
415 W. University Drive  
Edinburg, Texas 78539  
Phone: (956) 388-8211  
Fax: (956) 383-7111

**Architect:** Amtech Solutions, Inc.  
1600 Jackson Rd. #3  
Pharr TX 78539  
(956) 686-3095

**1.00 INVITATION**

- A. Bidders are invited to submit an offer for performance of a Contract to the City of Edinburg located at the above address, for the following construction Project:  
Project: Dustin Sekula Memorial Library Structural Repairs & Roof Replacement  
Located: 1906 S. Closner Blvd., Edinburg Texas 78539
- B. Work of the Project consists of The project consists of repairs and additions of damaged or improperly built areas of the roof deck and structure, replacement of metal panel roof system with single play roof system with new insulation, replace mechanical curbs and reinforce attachments, addition of exterior wall reinforcement, addition of exterior wall pilasters to conceal structural reinforcement, exterior and interior wall repair and associated stucco and painting, and minor interior cosmetic repairs related to roof leaks.
- C. The Contract Documents are identified as listed in the Project Manual, issued by the City of Edinburg/Amtech Solutions, Inc.
- D. The bidder shall bear all costs associated with the preparation and submission of its bid, and the Owner will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- E. When requested, the successful Bidder shall present satisfactory evidence that Bidder has regularly engaged in furnishing products and performing construction work as proposed, and has the capital, labor, equipment, and material to execute the Work required by Contract Documents.

**2.00 BID SUBMISSION**

- A. Bids signed by an officer of the company and dated will be received at the City Secretary's Office, at 415 W. University Drive, Edinburg, TX 78539 until (3:00 PM) local time, on (August 05, 2019).
- B. Bids submitted after the above time will be returned to the Bidder unopened.
- C. Bids shall be submitted in United States Currency and the English language on the Bid Forms and Supplements to Bid Forms provided with this Project Manual.
- D. Oral, telephonic, facsimile, or telegraphic bids are invalid and will not receive consideration.
- E. Bids will be opened and publicly read in the City of Edinburg City Hall Community Room at 415 W. University Drive, Edinburg, TX 78539 on the same date bids are received.

- F. Bids will be irrevocable for 90 **days** from the bid date. Bidder may withdraw after 90 days without penalty if no mutual agreement can be reached.

### 3.00 MODIFICATION OR WITHDRAWAL

- A. Bids submitted early may be modified or withdrawn by notice to the City of Edinburg at the place and prior to the time designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder and shall be so worded as not to reveal the amount of the original Bid.
- B. Oral, telephonic, facsimile, or telegraphic modification of Bids will not receive consideration.
- C. Withdrawn Bids may be resubmitted up to the time designated for receipt of Bids.

### 4.00 CONTRACT TIME

- A. The Work shall be performed within the date established in the Notice to Proceed.
- B. Contractor shall pay liquidated damages in the amounts stated in Document 00500 - Agreement for failure to complete the Work within the Contract Time.
- C. The work is to be performed only during weekdays 8:00 AM to 5:00 PM (Monday to Friday). City recognized holidays are recommended to be avoided. Work performed during weekends (Saturday-Sunday) and holidays will incur a Contractor payment of **\$50** per hour to Owner for onsite inspection.

### 5.00 SECURITY DEPOSIT REQUIREMENTS

- A. Bids shall be accompanied by a security deposit as stated in Document 00100 - Instructions to Bidders.

### 6.00 EXAMINATION

- A. Bid Documents are on display on the City of Edinburg website, may be examined at the location below or purchased from the Engineer of Record:

**City of Edinburg  
Engineering Department – 2<sup>nd</sup> Floor  
415 W. University Drive  
Edinburg, Texas 78539**

### 7.00 AVAILABILITY

- A. Bid Documents may be purchased from the Engineering Department, Engineer of Record or are available for printing at [http://cityofedinburg.com/departments/finance/open\\_bid\\_notices.php](http://cityofedinburg.com/departments/finance/open_bid_notices.php).
- B. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.
- C. Bid Documents may be purchased by bidders upon receipt of a cashier's check, certified check, money order, company check, or personal check in the amount established by the City of Edinburg or Engineer of Record. The cost includes the Project Manual w/ Specifications and one full sized set of Drawings. They can also be downloaded at no cost, as specified on 7(A).
- D. **The cost for the bid documents will not be refunded.**
- E. Bid Documents are made available only for the purpose of obtaining offers for this Project. Purchase of Bid Documents does not grant a license for other purposes.

- E. On receipt of Bid Documents, verify that documents are legible and complete. Compare contents of Project Manual with Table of Contents; see that all drawings listed in the List of Drawings are included. Notify City of Edinburg should the documents be incomplete as issued.

#### 8.00 QUESTIONS AND INTERPRETATIONS

- A. Bidder is required to study Bid Documents, the site, and conditions affecting the Work, and submit written questions on interpretation of those documents and conditions, or other factors affecting the Work, to the City of Edinburg.
- B. Written questions may be submitted by facsimile or email, addressed to the Engineer. **No questions will be accepted after 5:00 PM, five days before the bid due date.** All facsimile communications shall be confirmed by mailing the original correspondence to the City of Edinburg Purchasing Department, if applicable.
- C. Immediately notify the Engineer upon finding discrepancies or omissions in the Bid Documents.

#### 9.00 ACCEPTANCE/REJECTION OF BIDS

- A. The Owner reserves the right to reject or accept any bids as stated in Document 00100 - Instructions to Bidders.

#### 10.00 PRE-BID CONFERENCE

- A. One (1) pre-bid conference will be conducted by the Owner on July 23, 2019 at 11:00AM. The pre-bid conference shall be conducted at the City of Edinburg Engineering Conference Room: located at 415 W. University Drive Edinburg, Texas 78539.
- B. **Attendance by prospective Bidders is highly recommended.** Sub-contractors, suppliers, and equipment suppliers may attend.
- C. Recognizing that free and open communication will benefit all participants, the Owner does not intend to limit or curtail the exchange of information between the Engineer and the prospective Bidders. However, the pre-bid conference is conducted primarily for the benefit of prospective Bidders. As such, a specific procedure will be followed during the conference:
  - a. All attendees will sign-in, indicating their role with the project: contractor, supplier, manufacturer, etc.
  - b. Seating priority will be given to Prospective Bidders. Sub-contractors, suppliers, and manufacturer's representatives shall remain behind the contractor area.
  - c. The Owner will make introductions of his staff and consultants.
  - d. The Owner and consultants will give a brief description of the project.
  - e. Only Contracting firms (Prospective Bidders) are permitted to ask questions. Sub-contractors suppliers, and manufacturer's shall deliver their questions to the Contractor they are working with for presentation.
  - f. Questions and answers will be recorded and developed into Meeting Minutes. Meeting Minutes will be distributed to meeting attendees. The Owner reserves the right to use electronic recording, or some other method to record the meeting.

- D. The meeting will be conducted in English. Translators will not be provided.
- E. If necessary, written clarifications or instructions will be issued in the form of an Addendum. Refer to Section 00100 – Instructions to Bidders for specific information concerning Addendums.

**END OF DOCUMENT**

Page Intentionally Blank



**INSTRUCTIONS TO BIDDERS****1.00 SUMMARY****1.01 DOCUMENT INCLUDES**

- A. Bid Documents and Contract Documents.
- B. Site Assessment.
- C. Subcontractors/Suppliers/Others.
- D. Bid Submission.
- E. Bid Enclosure Requirements.
- F. Offer, Acceptance, Rejection.

**1.02 RELATED DOCUMENTS**

- A. Document 00020 - Notice to Bidders: Date, time and place for receipt of bids; Contract Time.
- B. Document 00310 - Form of Proposal.
- C. Document 00405 - Schedule of Unit Price Work.
- D. Document 00450 - Post Bid Procedures.
- E. Document 00500 - Agreement.
- F. Document 00700 - General Conditions.
- G. Document 00800 - Supplementary Conditions.

**2.00 BID DOCUMENTS AND CONTRACT DOCUMENTS****2.01 DEFINITIONS**

- A. Definitions set forth in Document 00700 – General Conditions and in other Contract Documents, are applicable to the Bid Documents.
- B. Addenda: Written or graphic instruments issued prior to the opening of Bids, which clarify, modify, correct, or change the Bid Documents.
- C. Alternate Bid: The total amount bid for additions to the Work, as described in the Bid Documents. Each Alternate Bid shall include the cost of effects on adjacent or related components, and the Contractor's overhead and profit.
- D. Bid Documents: The Project Manual and Drawings, including Addenda, plus Notice to Bidders, Instructions to Bidders, and Supplements to Bid Forms identified in Document 00310 - Form of Proposal.
- E. Bidder: A person or entity who submits a Bid.
- F. Low Bidder: The apparent successful Bidder who qualifies as a responsible Bidder and who submits the Bid with the lowest Total Bid Price.

- G. Bid, Offer, Bidding: The act of submitting a complete and properly signed offer in accordance with these Instructions to Bidders. The Bid will be in the English language.
- H. Total Bid Price: The monetary amount for performing the Work as identified by the Bidder in Document 00310 - Form of Proposal, which amount includes Cash Allowances and Alternate Bids, if any. Bid Price(s) will be in United States.
- I. Security Deposit: A certified check, cashiers check or bid bond in at least the sum of 5 percent of the Total Bid Price which includes Cash Allowances and Alternate Bids, if any.

## **2.02 QUESTIONS, INTERPRETATIONS**

- A. Bidder shall: 1) carefully study the Bid Documents and compare them with each other, 2) examine the site, conditions thereon, and local conditions, and 3) report at once to the Engineer any errors, inconsistencies or ambiguities discovered.
- B. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- C. Direct questions to Engineer.
- D. Verbal discussions and answers are not binding. Requests from Bidders for clarifications and interpretations of content of documents must be in writing (mail or facsimile transmission only), and must be received not less than 5 business days before the date set for receipt of Bids.
- E. The reply will be by Addendum.

## **2.03 ADDENDA**

- A. Addenda issued to Bidding Requirements are applicable only during the bidding period. Addenda to the Post-Bid Procedures are applicable only through the issuance of the Notice to Proceed. Any Addenda issued to Contract Forms, Conditions of the Contract, Specifications or Drawings become a part of the Contract Documents. Include resultant costs in the Total Bid Price.
- B. Addenda will be issued by the Engineer to Bidders of record by email. Addenda will also be posted on the City website.
- C. Each Bidder shall ascertain, prior to submitting a Bid that the Bidder has received all Addenda issued. The Bidder shall acknowledge their receipt in the place indicated in Document 00310 - Form of Proposal.

## **2.04 SUBSTITUTIONS OF MATERIALS/EQUIPMENT**

- A. No substitutions will be considered on this Project during the bidding period.
- B. Voluntary substitutions by the Bidder will not be considered.

## **3.00 SITE ASSESSMENT**

- A. Bidders shall examine the Project site before submitting a Bid, become familiar with local conditions under which the Work will be performed, conduct appropriate explorations, and correlate personal observations with requirements of the Bid Documents. Work will be performed in public right-of-way and City property. The site may be examined at any time during daylight hours.

- B. Bidder shall make site investigations to the extent Bidder deems necessary to ascertain the extent of subsurface conditions and variations thereof.
- C. Failure to perform such investigations during the bid period shall not relieve Bidder from responsibility for investigations, interpretations and proper use of available information in preparation of Bidder's proposal.
- D. Publications by the United States Department of Agriculture, Soil Conservation Service and others may be helpful to the bidder in his subsurface site investigation.
- E. Geotechnical investigation reports for the proposed project site may also be helpful to the bidder in his subsurface site investigation.

#### **4.00 SUBCONTRACTORS/SUPPLIERS/OTHERS**

- A. The Owner reserves the right to reject a proposed Subcontractor or Supplier for reasonable cause.

#### **5.00 BID SUBMISSION**

##### **5.01 SUBMISSION PROCEDURES**

- A. Bidders shall be solely responsible for the delivery of their Bids in the manner and time prescribed in Document 00020 - Notice to Bidders.
- B. Submit **one copy of the original executed offer** on the bid forms provided, properly signed, with required Security Deposit, and other Supplements to Bid Forms, in a sealed, opaque envelope. On the outside of the envelope, clearly indicate that it is a sealed bid and include the Bidder's name, Project name and Owner name. Bids submitted by mail shall be enclosed in a separate envelope addressed for mailing, and identifying the enclosure as a bid. In addition, **four copies must also be submitted.**
- C. Fill in all blanks in the Bid forms. Acknowledge receipt of Addenda. Bid all Alternate Bids required by Bid Documents.
- D. A summary of submitted Bids will be made available to Bidders following the Bid opening.
- E. All costs and expenses incurred by the Bidder that are associated with preparation of the Bid shall be paid by and be the sole responsibility of the Bidder.

##### **5.02 BID INELIGIBILITY**

- A. Failure to provide required Security Deposit in the proper amount will be cause to declare the Bid invalid.
- B. Improperly completed information may be cause for declaring the Bid invalid.
- C. Bids that are unsigned, improperly signed, illegible, obscure, altered, or which contain qualifications or irregularities of any kind, may be declared invalid. Document 00310 - Form of Proposal, Supplements to the Bid Forms identified in the Form of Proposal, or enclosures which are improperly prepared, may be declared invalid.

#### **6.00 BID ENCLOSURE REQUIREMENTS**

##### **6.01 SUPPLEMENTS TO BID FORMS**

- A. Bid submittals shall include any other documents specified in Document 00310 - Form of Proposal.

#### **6.02 SECURITY DEPOSIT**

- A. Bids shall be accompanied by a Security Deposit.
- B. The Security Deposit of the Bidders will be retained until after the Contract is executed.
- C. After execution of the Contract, Security Deposits will be returned to the Bidders.
- D. If no Contract is awarded, all Security Deposits will be returned to the respective Bidders.

#### **6.03 CERTIFIED CHECK/CASHIER'S CHECK**

- A. Make certified check or cashier's check (security checks) payable to the Owner.
- B. The security checks are submitted on the condition that if the Bidder is named apparent Low Bidder and then fails either to timely execute the Agreement or to timely provide any required bonds, or to do both, then in that event the Owner will cash the security check.
- C. The Owner will retain an amount equal to the difference between the Bid of the Bidder providing the security check and the Bid of the Bidder who is finally awarded the Contract and who executes the Agreement and provides the required bonds.
- D. Any balance remaining will be reimbursed by the Owner to the Bidder who provided the security check.

#### **6.04 BID BOND**

- A. The bid bond must be a valid and enforceable bond, executed by a corporate Surety authorized by the Texas State Board of Insurance to conduct insurance business in the State of Texas and shall comply with other requirements set out by law or included in the Bid Documents.
- B. Endorse the bid bond in the name of the Owner as obligee, signed by the Contractor as principal and executed, signed and sealed by the Surety.
- C. The bid bond must be conditioned such that if the Bidder is named apparent Low Bidder and then fails either to execute the Agreement timely or to provide any required bonds timely, or to do both, then in that event the Surety will be obligated to pay to the Owner an amount equal to the difference between the Bid of the Bidder on whom the bond was written and the Bid of the Bidder who is finally awarded the Contract and who executes the Agreement and provides the required bonds, up to the penal sum of the Bond.
- D. In addition, the Owner expressly reserves the right to reject any Bid if the Bid Bond (or Bid Bond rider) conditions the Bid in a way inconsistent with the Bid Documents. Examples include but are not limited to:
  - 1. a condition prohibiting the Owner from making a Claim against the Performance Bond Surety that would be allowable under the Contract and Performance Bond form published in the Bid Documents;
  - 2. a condition that provides that the Performance Bond Surety cannot be held liable for completing the Contract in case of default; or
  - 3. a condition limiting the Performance Bond Surety's liability for damages inconsistent with the Contract and Performance Bond form published in the Bid Documents.

- E. On all contracts that will equal to or exceed \$100,000, the performance bond and the payment bond must be provided by a surety that has a rating of "A" from AM BEST, MOODY'S or STANDARD & POORS.

In the event that the total bid amount is \$50,000 or less, the successful contractor has the option to enter into a single payment contract with the City of Edinburg in lieu of a Performance Bond, provided that no money shall be paid to the contractor until completion of the work by the contractor and accepted of same by the City of Edinburg. In the event that the total bid amount is \$25,000 or less, the successful contractor has the option to enter into a single payment contract with the City of Edinburg in lieu of a Payment and Performance Bond.

#### **6.05 BID FORM SIGNATURE**

- A. Document 00310 - Form of Proposal shall be signed by the Bidder as follows:
1. Sole Proprietorship: Full name, address, and signature of sole proprietor, signed in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature.
  2. Partnership: Name and address of the firm, signature of each partner in the presence of a witness who will also sign. The full name and address of each partner shall be given.
  3. Corporation: Signature of duly authorized officer.
  4. Joint Venture: Each party of the joint venture shall execute Document 00310 - Form of Proposal under their respective seals in a manner appropriate to such party as described above, similar to the requirements of a Partnership.

#### **7.00 DETERMINING LOWEST RESPONSIVE, RESPONSIBLE BIDDER**

##### **7.01 BIDDERS QUALIFICATIONS**

- A. Bids must contain evidence of Bidder's qualifications to do business in the state of Texas. To demonstrate that the Bidder is responsible and able to perform the Work, funding policies dictate each Bidder must submit, as a part of the Bidding Documents, all of the items listed below:

00310 Form of Proposal  
00405 Schedule of Unit Price Work  
00411 Bid Bond  
00420 Statement of Bidder's Qualifications  
00423 Certification of Bidder's Qualifications  
00425 Equipment & Material Suppliers List  
00460 Non-Collusion Affidavit  
00429 Non-Bribery Model Form

- B. Only the above data/information provided with the Bidding Documents may be used for evaluation and developing the Recommendation to Award by the Engineer. Bidders will not be allowed to substitute any "Key Personnel" other than alternates presented in the bid or examples of previous projects submitted in the bid package. Minor clarifications of submitted

materials will be permitted after bid opening. Such request for clarifications will only be initiated by the Engineer in writing and only written responses will be accepted.

- C. In determining the lowest responsible, responsive Bidder, in addition to price, the following elements will be considered:
1. The quality, availability, and adaptability of the supplies, materials, equipment, or contractual services, to the particular use required;
  2. The ability, capacity and skill of the bidder to perform the contract or to provide the service required;
  3. Whether the bidder can perform the contract and provide the service promptly, or within the time required, without delay or interference;
  4. The character, responsibility, integrity, reputation, and experience of the bidder;
  5. The quality of performance of previous services, or contracts;
  6. The previous and existing compliance by the bidder with laws relating to the contract or service;
  7. Any previous or existing noncompliance by the bidder with specifications, or requirements relating to time of submission of specified data such as samples, models, drawings, certificates, or other information;
  8. The sufficiency of the financial resources and ability of the bidder to perform the contract or to provide the service; and
  9. The ability of the bidder to provide competent personnel for the job, as demonstrated by the submitted listing of the names and the skills of experienced personnel, including potential alternates, whom the bidder currently employs and who will be available for performing this work;
  10. The experience of the bidder in performing work similar in type, size and complexity to this project, as demonstrated by a listing of projects, with verifiable references (names, addresses, phone numbers, etc.), successfully completed.
  11. Bidder shall provide with the Bid an experience statement with pertinent information regarding similar projects and other evidence of qualifications for each such Subcontractor, Supplier, person, or organization.

**7.02 BIDDER MUST MEET THE FOLLOWING MINIMUM CRITERIA:**

- (A) The Bidder must demonstrate \*\*Successful Completion during the last five (5) years of at least one project comparable in nature and scope to this project. The comparable scope shall be at least 1/4 the size of the proposed project.
- (B) At least two \*Key Personnel, and their potential alternate, employed by the Bidder must have a minimum of five (5) years experience in similar construction projects.
- (C) The Bidder must have an employee, to be dedicated to this project, who is experienced in scheduling, with demonstrated ability in employing scheduling techniques similar to those to be used for this project.
- (D) Bidder may, at its discretion, include resumes of alternates for Key Personnel, and if in the

process of bid evaluation, the Owner rejects any Key Personnel, the Owner will consider the alternates.

\* **KEY PERSONNEL:** Individuals who will be directly assigned to this project. Resumes of Key Personnel must be submitted with the Bid (include in Document 00420) and accepted by the Owner in order for Bidder to receive the Award. At the minimum, the resumes for the following personnel that are to be assigned to this Project are to be submitted.

- (a) Owner or Principals of the Bidder
- (b) The Project Manager
- (c) The Project Superintendent
- (d) The Project Scheduler
- (e) Minimum of two Foremen

\*\***SUCCESSFUL COMPLETION:** Defined as completion of a project on time, no more than thirty (30) days later than the original contract time, and within budget, within 5% of the original contract price. If there is any project submitted by the Bidder as qualifying, but which does not meet these requirements, in order to be fully responsible, the Bidder is required to submit detailed information on that project demonstrating what caused the increases to cost or time. The name and telephone numbers of the Design Engineer and the Client are to be provided for evaluation as to whether the project may be considered "successful". For any project where liquidated damages were assessed, the Bidder will not be considered to have been on time.

#### **7.03 BIDDERS ARE REQUIRED TO SUBMIT WITH THEIR BID:**

00310 Form of Proposal

00405 Schedule of Unit Price Work

00411 Bid Bond

00420 Statement of Bidder's Qualifications

00423 Certification of Bidder's Qualifications

00425 Equipment & Material Suppliers List

00429 Non-Bribery Model Form

00460 Non-Collusion Affidavit

- (A) Failure to submit these items with the bid will result in a finding that the bid is non-responsive and the bid will be disqualified.

#### **7.04 The Owner will evaluate and compare only the bids determined to be responsive in accordance with the following:**

- (a) Is the bid complete (all Bidding Documents submitted);
- (b) Have documents been properly signed;
- (c) Are the required bid securities part of the bid package; and
- (d) Are there any computational errors present?

#### **7.05 The Owner reserves the right to accept or reject any variation, deviation, or alternative offer which is not submitted in accordance with the bidding documents. Variations, deviations, alternative offers, and other factors that are in excess of the requirements of the bidding**

**documents or which otherwise result in unsolicited benefits for the Owner, shall not be taken into account in bid evaluation.**

**7.06 In evaluating the bids, the Owner will determine for each bid, the evaluated bid price by adjusting the bid price as follows:**

- A. Making any correction for errors;
- B. Excluding provisional sums and the provision, if any, for contingencies in the price schedules;
- C. Taking an appropriate adjustment for any other quantifiable acceptable non-material variations, deviations or alternative offers; and
- D. Making appropriate adjustments to reflect additional factors in the manner and to the extent indicated in the Bidding Documents.

**7.07 The Owner will award the contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated bid price provided that such bidder has been determined to be qualified to perform the contract satisfactorily in accordance with the provisions of the Bidding Documents.**

**8.00 OFFER ACCEPTANCE, REJECTION**

**8.01 ACCEPTANCE**

- A. The Owner will give notice of intent to award the Contract to the Low Bidder. Acceptance by the Owner is conditioned upon Bidder's submission of information for establishing satisfactory qualifications, if required; and execution of submittals required in Document 00450 - Post-Bid Procedures.
- B. The Bid shall remain open to acceptance and shall be irrevocable for the Period for Bid Acceptance stated in Document 00020 – Notice to Bidders.
- C. Additional time taken by Contractor to fulfill requirements for submittals, including review and re-submittal, shall be added to the acceptance period.

**8.02 REJECTION**

- A. The Owner reserves the right to reject any and all Bids or to accept any Bid deemed advantageous to it.

**8.03 BID TABULATION**

- A. The Engineer will tabulate, record, and evaluate the Bids of all responsible Bidders after the Bid opening.
- B. In tabulating Bids, the amount written for a unit price governs over the total amount calculated. Therefore, the Engineer may correct any mathematical errors in the extension of the total amount based on the unit price given by a Bidder and adjust their Total Bid Price.

**9.00 APPROVAL BY THE FUNDING AGENCIES**

- A. All addenda, contracts, work directives, change orders, time extensions, and other matters specified in the Contract Documents are not valid until approved in accordance with the City of Edinburg's Purchasing Policies and Procedures Manual.

**END OF DOCUMENT**



Document 00300

**CONTRACTOR NOTICE OF INTENT TO RESPOND**

Firms interested in submitting a bid on the project as outlined in the specifications, should indicate their intention by signing, dating and returning the form to the address below five (5) days prior to bid due date, so that they may receive any addendums to the specifications should the need arise.

**Owner:** City of Edinburg  
Attn: Finance Department  
415 W. University Drive  
Edinburg, Texas 78539

**Architect:** Amtech Solutions, Inc.  
Attn: Christopher Garza  
1600 N. Jackson Road #03  
Pharr TX, 78577

Bidder: \_\_\_\_\_  
[Please print or type the full name of your proprietorship, partnership, corporation, or joint venture.\*)

Contact Name: \_\_\_\_\_  
[Please print or type name] [Title]

Address: \_\_\_\_\_  
[Mailing]  
\_\_\_\_\_  
[Street, if different]

Telephone: \_\_\_\_\_  
[Print or type telephone number]

Fax: \_\_\_\_\_  
[Print or type telephone number]

Email: \_\_\_\_\_  
[Print or type telephone number]

**END OF DOCUMENT**

Page Intentionally Blank

Document 00310

FORM OF PROPOSAL

To: CITY OF EDINBURG

Project No.: RFP #2019-23

Project: Dustin Sekula Memorial Library Structural Repairs & Roof Replacement

Bidder: [Print or type full name of proprietorship, partnership, corporation, or joint venture]

1.0 OFFER

Having examined the place of the Work and all matters referred to in the Bid Documents, and the Contract Documents prepared by or approved by the Engineer for the named Project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Total Bid Price of:

[Print or type in words, Bidder's Total of BASE BIDS in Architect's Specifications - Price] (Dollars)

(\$ [Print or type in figures, Bidder's Total of BASE BIDS in Architect's Specifications - Bid Price])

[Working Days]

Unit Price or Combination Stipulated Price and Unit Price Contract. If the Bid is for a Unit Price Contract or a combination of Stipulated Price and Unit Price Contract, the Total Bid Price, including Cash Allowances, if any, is tabulated in: Document 00405 - Schedule of Unit Price Work for a Project with no Alternate Bids, or Document 00407 - Schedule of Alternates for a Project with Alternate Bids.

Cash Allowances. All Cash Allowances, totaled in either Document 00405 - Schedule of Unit Price Work, as applicable, and described in the Bid Documents are included in the Total Bid Price.

Changes in Contract Price Due to Variations in Actual Quantities. For items quoted in Document 00405 - Schedule of Unit Price Work, the Total Bid Price is based in whole or in part on the Unit Price multiplied by the quantity for each of the items listed. The Contract Price is subject to change due to variation in the actual quantities of each item in the completed Work in accordance with the Contract Documents.

Alternate Bids. Alternate Bid work, as described in the Bid Documents, will be performed for an amount added or deducted to the Total Bid Price for each Alternate Bid that is accepted by the Owner. The Owner may accept or reject any or all Alternate Bids.

Security Deposit. Included herewith is a Security Deposit in the amount of 5 percent of the greatest amount of the Total Bid Price, or Total Alternate Bid Price(s).

Period for Bid Acceptance. This offer shall be open to acceptance and is irrevocable for 90 days from the Bid date. That period may be extended by mutual written agreement of the Owner and the Bidder. After 90 days, the Bidder may withdraw without penalty if no mutual agreement can be reached.

**2.0 CONTRACT TIME**

If this offer is accepted, Substantial Completion of the Work will be achieved within the time stated in Document 00020 - Notice to Bidders. The Date of Commencement will be established by the Notice to Proceed.

**3.0 ADDENDA**

The following Addenda have been received. The modifications to the Bid Documents noted therein have been considered and all costs relating thereto are included in the Bid Price:

- Addendum No. \_\_\_\_\_, dated \_\_\_\_\_
- Addendum No. \_\_\_\_\_, dated \_\_\_\_\_
- Addendum No. \_\_\_\_\_, dated \_\_\_\_\_
- Addendum No. \_\_\_\_\_, dated \_\_\_\_\_
- Addendum No. \_\_\_\_\_, dated \_\_\_\_\_
- Addendum No. \_\_\_\_\_, dated \_\_\_\_\_

**4.0 SUPPLEMENTS TO THIS BID:**

The following Supplements are attached as an integral part of this Bid:

- Document 00405 - Schedule of Unit Price Work, if applicable
- Document 00411 – Bid Bond (*Form supplied by Bidder*)
- Document 00420 – Statement of Bidder’s Qualifications
- Document 00423 – Certification to Bidder’s Experience & Qualifications
- Document 00425 – Equipment & Material Suppliers List
- Document 00 4100 Specifications; Proposal Form

**5.0 SIGNATURES:**

Bidder: \_\_\_\_\_  
[Please print or type the full name of your proprietorship, partnership, corporation, or joint venture.\*)

By: \_\_\_\_\_  
[Signature]\*\* [Date]

Name: \_\_\_\_\_  
[Please print or type name] [Title]

Address: \_\_\_\_\_  
[Mailing]

\_\_\_\_\_  
[Street, if different]

Telephone: \_\_\_\_\_  
[Print or type telephone number]

- \* *If the Bid is a joint venture, add additional Bid form signature sheets for each member of the joint venture.*
- \*\* *The undersigned, as bidder, certifies that the only person or parties interested in this proposal as principals are those named herein; that the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the Contract for the Project.*

*Note: This document constitutes a government record, as defined by § 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in § 37.10 of the Texas Penal Code.*

**END OF DOCUMENT**

Page Intentionally Blank

Document 00405

**SCHEDULE OF UNIT PRICE WORK**

This Document, constitutes a Supplement to Document 00310 - Form of Proposal.  
 When a Contract is awarded, this Document becomes a supplement to Document 00500 - Form of Agreement  
 Between Owner and Contractor.

Base Bid					
SPEC NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (in figures)	UNIT TOTAL (in figures)
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
PLEASE REFER TO ARCHITECT'S SPECIFICATIONS FOR UNIT PRICING					
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
<b>Total</b>					\$
<b>In case of DISCREPANCIES, Unit Price RULES OVER Unit Total and Total Amounts.</b>					

**TOTAL BID PRICE (Total Unit Prices)**

\$ \_\_\_\_\_

Notes:

(1) United States Dollars. In the event of a discrepancy, this column shall govern.

Project: \_\_\_\_\_

Project No. \_\_\_\_\_ Bidder's Signature: \_\_\_\_\_

Company: \_\_\_\_\_ Name: \_\_\_\_\_

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

**END OF DOCUMENT**



Document 00411

**BID BOND****PART 1 - GENERAL****1.01 SECTION INCLUDES**

This section describes the standardized bid bond form to be submitted with the bid on the project.

**1.02 REFERENCES – Not Used****1.03 DEFINITIONS – Section 0700****1.04 BID BOND FORMS**

Bidder is to inset an original bid bond or a copy of cashiers check provided for bid bond Purposes. Original check is to be submitted along with bid.

**PART 2 - PRODUCT – Not Used****PART 3 - EXECUTION**

STANDARIZED FORMS FOLLOW

**BID BOND (PENAL SUM FORM)**

00411-1 of 4

<p><b>Bidder</b></p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>):  <b>[Address of Bidder's principal place of business]</b></p>	<p><b>Surety</b></p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>):  <b>[Address of Surety's principal place of business]</b></p>
<p><b>Owner</b></p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>	<p><b>Bid</b></p> <p>Project (<i>name and location</i>): _____</p>  <p>Bid Due Date: <b>AUGUST 05 2019</b></p>
<p><b>Bond</b></p> <p>Penal Sum: _____</p> <p>Date of Bond: _____</p>	
<p>Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.</p>	
<p>Bidder</p> <p style="text-align: center;">_____ <i>(Full formal name of Bidder)</i></p>	<p>Surety</p> <p style="text-align: center;">_____ <i>(Full formal name of Surety) (corporate seal)</i></p>
<p>By: _____ <i>(Signature)</i></p>	<p>By: _____ <i>(Signature) (Attach Power of Attorney)</i></p>
<p>Name: _____ <i>(Printed or typed)</i></p>	<p>Name: _____ <i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p>Attest: _____ <i>(Signature)</i></p>	<p>Attest: _____ <i>(Signature)</i></p>
<p>Name: _____ <i>(Printed or typed)</i></p>	<p>Name: _____ <i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p><i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i></p>	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
  - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
  - 3.2. All Bids are rejected by Owner, or
  - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.

11. The term “Bid” as used herein includes a Bid, offer, or proposal as applicable.

**END OF SECTION**

**STATEMENT OF BIDDER'S QUALIFICATIONS**

**ARTICLE 1—GENERAL INFORMATION**

1.01 Provide contact information for the Business:

Legal Name of Business:			
Corporate Office			
Name:		Phone number:	
Title:		Email address:	
Business address of corporate office:			
Local Office			
Name:		Phone number:	
Title:		Email address:	
Business address of local office:			

1.02 Provide information on the Business's organizational structure:

Form of Business:	<input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation		
<input type="checkbox"/> Limited Liability Company <input type="checkbox"/> Joint Venture comprised of the following companies:			
	1.		
	2.		
	3.		
Provide a separate Qualification Statement for each Joint Venturer.			
Date Business was formed:		State in which Business was formed:	
Is this Business authorized to operate in the Project location?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Pending	

1.03 Identify all businesses that own Business in whole or in part (25% or greater), or that are wholly or partly (25% or greater) owned by Business:

Name of business:		Affiliation:	
-------------------	--	--------------	--

Address:			
Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	
Address:			

1.04 Provide information regarding the Business's officers, partners, and limits of authority.

Name:		Title:		
Authorized to sign contracts: <input type="checkbox"/> Yes <input type="checkbox"/> No		Limit of Authority:	\$	
Name:		Title:		
Authorized to sign contracts: <input type="checkbox"/> Yes <input type="checkbox"/> No		Limit of Authority:	\$	
Name:		Title:		
Authorized to sign contracts: <input type="checkbox"/> Yes <input type="checkbox"/> No		Limit of Authority:	\$	
Name:		Title:		

**ARTICLE 2—LICENSING**

2.01 Provide information regarding licensure for Business, if applicable:

Name of License:			
Licensing Agency:			
License No:		Expiration Date:	
Name of License:			
Licensing Agency:			
License No:		Expiration Date:	

**ARTICLE 3—DIVERSE BUSINESS CERTIFICATIONS**

3.01 Provide information regarding Business's Diverse Business Certification, if any. Provide evidence of current certification.

Certification	Certifying Agency	Certification Date
<input type="checkbox"/> Disadvantaged Business Enterprise		
<input type="checkbox"/> Minority Business Enterprise		
<input type="checkbox"/> Woman-Owned Business Enterprise		
<input type="checkbox"/> Small Business Enterprise		
<input type="checkbox"/> Disabled Business Enterprise		

<input type="checkbox"/> Veteran-Owned Business Enterprise		
<input type="checkbox"/> Service-Disabled Veteran-Owned Business		
<input type="checkbox"/> HUBZone Business (Historically Underutilized) Business		
<input type="checkbox"/> Other		
<input type="checkbox"/> None		

**ARTICLE 4—SAFETY**

4.01 Provide information regarding Business’s safety organization and safety performance.

Name of Business’s Safety Officer:			
Safety Certifications			
Certification Name	Issuing Agency	Expiration	

4.02 Provide Worker’s Compensation Insurance Experience Modification Rate (EMR), Total Recordable Frequency Rate (TRFR) for incidents, and Total Number of Recorded Manhours (MH) for the last 3 years and the EMR, TRFR, and MH history for the last 3 years of any proposed Subcontractor(s) that will provide Work valued at 10% or more of the Contract Price. Provide documentation of the EMR history for Business and Subcontractor(s).

Year									
Company	EMR	TRFR	MH	EMR	TRFR	MH	EMR	TRFR	MH

**ARTICLE 5—FINANCIAL**

5.01 Provide information regarding the Business’s financial stability. Provide the most recent audited financial statement, and if such audited financial statement is not current, also provide the most current financial statement.

Financial Institution:			
Business address:			
Date of Business’s most recent financial statement:		<input type="checkbox"/> Attached	
Date of Business’s most recent audited financial statement:		<input type="checkbox"/> Attached	
Financial indicators from the most recent financial statement			

Contractor's Current Ratio (Current Assets ÷ Current Liabilities)	
Contractor's Quick Ratio ((Cash and Cash Equivalents + Accounts Receivable + Short Term Investments) ÷ Current Liabilities)	

**ARTICLE 6—SURETY INFORMATION**

6.01 Provide information regarding the surety company that will issue required bonds on behalf of the Business, including but not limited to performance and payment bonds.

Surety Name:			
Surety is a corporation organized and existing under the laws of the state of:			
Is surety authorized to provide surety bonds in the Project location?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Is surety listed in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" published in Department Circular 570 (as amended) by the Bureau of the Fiscal Service, U.S. Department of the Treasury?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

**ARTICLE 7—INSURANCE**

7.01 Provide information regarding Business's insurance company(s), including but not limited to its Commercial General Liability carrier. Provide information for each provider.

Name of insurance provider, and type of policy (CLE, auto, etc.):			
Insurance Provider	Type of Policy (Coverage Provided)		
Are providers licensed or authorized to issue policies in the Project location?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Does provider have an A.M. Best Rating of A-VII or better?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Mailing Address (principal place of business):			
Physical Address			



(principal place of business):			
Phone (main):		Phone (claims):	

**ARTICLE 8—CONSTRUCTION EXPERIENCE**

8.01 Provide information that will identify the overall size and capacity of the Business.

Average number of current full-time employees:	
Estimate of revenue for the current year:	
Estimate of revenue for the previous year:	

8.02 Provide information regarding the Business's previous contracting experience.

Years of experience with projects like the proposed project:			
As a general contractor:		As a joint venturer:	
Has Business, or a predecessor in interest, or an affiliate identified in Paragraph 1.03:			
Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Been barred from contracting by any local, state, or federal agency within the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Been released from a bid in the past 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Defaulted on a project or failed to complete any contract awarded to it? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Refused to construct or refused to provide materials defined in the contract documents or in a change order? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Been a party to any currently pending litigation or arbitration? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Provide full details in a separate attachment if the response to any of these questions is Yes.			

- 8.03 List all projects currently under contract in Schedule A and provide indicated information.
- 8.04 List a minimum of three and a maximum of six projects completed in the last 5 years in Schedule B and provide indicated information to demonstrate the Business's experience with projects similar in type and cost of construction.
- 8.05 In Schedule C, provide information on key individuals whom Business intends to assign to the Project. Provide resumes for those individuals included in Schedule C. Key individuals include the Project Manager, Project Superintendent, Quality Manager, and Safety Manager. Resumes may be provided for Business's key leaders as well.

**ARTICLE 9—REQUIRED ATTACHMENTS**

- 9.01 Provide the following information with the Statement of Qualifications:
  - A. If Business is a Joint Venture, separate Qualifications Statements for each Joint Venturer, as required in Paragraph 1.02.
  - B. Diverse Business Certifications if required by Paragraph 3.01.
  - C. Certification of Business's safety performance if required by Paragraph 4.02.
  - D. Financial statements as required by Paragraph 5.01.
  - E. Attachments providing additional information as required by Paragraph 8.02.
  - F. Schedule A (Current Projects) as required by Paragraph 8.03.
  - G. Schedule B (Previous Experience with Similar Projects) as required by Paragraph 8.04.
  - H. Schedule C (Key Individuals) and resumes for the key individuals listed, as required by Paragraph 8.05.
  - I. Additional items as pertinent.

This Statement of Qualifications is offered by:

Business: \_\_\_\_\_  
*(typed or printed name of organization)*

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

\_\_\_\_\_  
*(individual's signature)*

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

Title: \_\_\_\_\_  
*(typed or printed)*

Date: \_\_\_\_\_  
*(date signed)*

*(If Business is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest: \_\_\_\_\_  
*(individual's signature)*

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

Title: \_\_\_\_\_  
*(typed or printed)*

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

Designated Representative:

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

Title: \_\_\_\_\_  
*(typed or printed)*

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

Phone: \_\_\_\_\_

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

**Schedule A—Current Projects**

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

**Schedule B—Previous Experience with Similar Projects**

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					

Construction Manager					
----------------------	--	--	--	--	--

**Schedule B—Previous Experience with Similar Projects**

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

**Schedule C—Key Individuals**

<b>Project Manager</b>			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	
<b>Project Superintendent</b>			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	



<b>Safety Manager</b>			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	
<b>Quality Control Manager</b>			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

**END OF DOCUMENT**

DOCUMENT 00423

**CERTIFICATE OF BIDDER'S  
EXPERIENCE & QUALIFICATIONS**

The undersigned bidder certifies that he is, at the time of bidding, and shall be, throughout the period of the contract, licensed by the State of Texas to do the type of work required under terms of the contract documents. Bidder further certifies that he is skilled and regularly engaged in the general class and type of work called for in the contract documents.

The bidder represents that he is competent, knowledgeable and has special skills on the nature, extent and inherent conditions of the work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the particular facilities which may create, during the construction program, unusual or peculiar unsafe conditions hazardous to persons and property. Bidder expressly acknowledges that he is aware of such peculiar risks and that he has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the construction work with respect to such hazards.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Name of Bidder

\_\_\_\_\_  
Signature of Bidder

\_\_\_\_\_  
Title of Signatory

**END OF SECTION**

Page Intentionally Blank





**BIDDER**

Executed this: \_\_\_\_\_ Day of : \_\_\_\_\_ 20. \_\_\_\_\_

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

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

**NOTARY PUBLIC**

State of Texas

County of:

Subscribed and sworn to before me this: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

**END OF SECTION**

Page Intentionally Blank



DOCUMENT 00429

CITY OF EDINBURG NON-BRIBERY MODEL FORM

[ Bidder's letterhead ]

[ Date ]

[ Name and address ]

Dear [ Name of Owner ] :

The undersigned party certifies that [ Name of bidding company ] complies with the following criteria:

1. They have not engaged and will not engage in bribery of officials related to potential or active City of Edinburg projects.
2. Respondents shall not offer gratuities, favors or any monetary value to any official or employee of the City for purpose of influencing the selection. Any attempt by any Respondent to influence the selection process by any means, other than disclosure of qualifications and credentials through the proper channels, shall be grounds from exclusion from the selection process. Once the project is advertised, there shall be no contact with any city official or employee unless using the formal process through the Purchasing Department. Failure to comply will result in the firm being disqualified from the process.
3. They have corporate policies that clearly prohibit the use of any bribery in a corporate activity.
4. They have neither been convicted of (nor found by a civil judgment to have committed) bribery of domestic officials, fraud, embezzlement, theft, forgery, destruction of records, making false statements to government officials, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty, within five years of the date of this certification.

\_\_\_\_\_  
*Printed name*

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Position in bidding company*

*Date* \_\_\_\_\_

END OF SECTION

Page Intentionally Blank

Document 00450

**POST-BID PROCEDURES****1.0 DOCUMENT INCLUDES**

- A. Notice of Intent to Award.
- B. Agreement.
- C. Requirements of Bidder.
- D. Failure of Bidder to comply with requirements.
- E. Notice to Proceed.
- F. Pre-construction Conference.
- G. Starting the Project.

**2.0 NOTICE OF INTENT TO AWARD**

- A. Owner will provide written Notice of Intent to Award (the Contract) to the selected bid or proposal, stating that upon compliance with the conditions listed herein within 14 days after receipt of the notice, and on approval by Owner, Owner will execute and deliver the Agreement.

**3.0 FORM OF AGREEMENT**

- A. The Agreement shall be Document 00500 - Agreement between the Owner and Contractor, together with Supplements enumerated in and attached thereto.

**4.0 REQUIREMENTS OF BIDDER**

- A. Within 14 days of receipt of the Notice of Intent to Award, the selected bidder or proposal shall execute and deliver to the Engineer for the Owner's approval those documents indicated by an "X" below:

- Document 00500 - Agreement Between the Owner and Contractor
- Document 00610 - Performance Bond (100% of the Contract Amount)
- Document 00620 - Payment Bond (100% of the Contract Amount)
- Document 00625 - Affidavit of Insurance (*with Certificate of Insurance attached*)

**5.0 FAILURE OF BIDDER TO COMPLY WITH REQUIREMENTS**

- A. Should the Bidder on receipt of the Notice of Intent to Award fail to comply with requirements of this Document 00450 within the stated time, the Owner may declare the award in default and require forfeiture of the Security Deposit.
- B. After Owner's written notice of default to the Bidder or proposal, Owner may award the Contract to the responsible Bidder whose offer is the next advantageous bid or proposal, and the Security Deposit of the Bidder in default shall be forfeited to the Owner in accordance with the provisions of Document 00100 - Instructions to Bidders.

**6.0 NOTICE TO PROCEED**

- A. Upon Owner's execution of the Agreement and delivery to Contractor, the Engineer shall give the Contractor Notice to Proceed within 30 days after the Effective Date of the Agreement, which notice shall establish the Date of Commencement of the Work.

**7.0 PRE-CONSTRUCTION CONFERENCE**

- A. Not later than 10 days after the date of Notice to Proceed, but before Contractor starts work at the site, Owner will convene a Pre-construction Conference as specified in Section 01312 - Coordination and Meetings.

**8.0 STARTING THE PROJECT**

- A. Contractor shall start performance of the Work at the site on the Date of the Commencement of the Work, but no Work shall be done at the site prior to that date.
- B. As Contractor, verify that you and all Subcontractors pay the Prevailing Wage.

**END OF DOCUMENT**

## SECTION 00460

**NONCOLLUSION AFFIDAVIT****PART 1 - GENERAL****1.01 SECTION INCLUDES**

This section describes the standardized forms for use in Bidder and Contractor representations and certifications for the project.

**1.02 REFERENCES – Not Used****1.03 DEFINITIONS – Section 0700****1.04 REPRESENTATIONS AND CERTIFICATIONS**

A. Affidavit of Non-collusion

B. Historically Underutilized Business (HUB) Certification (Bidder to insert appropriate certification notice at the end of this Section).

**PART 2 - PRODUCT – Not Used****PART 3 - EXECUTION – Not Used**

STANDARIZED FORMS FOLLOW

NONCOLLUSION AFFIDAVIT OF PRIME BIDDER

STATE OF TEXAS  
COUNTY OF HIDALGO

\_\_\_\_\_, being first duly sworn, deposes and says that:  
(Name)

- (1) He is President of \_\_\_\_\_, the Bidder that has submitted the attached Bid;  
(Company)
- (2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
- (3) Such Bid is genuine and is not a collusive or sham Bid.
- (4) Neither said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed directly or indirectly with another Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix an overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the **CITY OF EDINBURG**, or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including affiant.

Sign \_\_\_\_\_

Title \_\_\_\_\_

Subscribed and sworn to me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

By:

Notary Public  
My commission expires

END OF SECTION



# AIA<sup>®</sup> Document A101<sup>™</sup> – 2017

## Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

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

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

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

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

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

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

The parties should complete A101<sup>™</sup>-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement.

AIA Document A201<sup>™</sup>-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Sample

The Owner and Contractor agree as follows.

Init.



## TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

## EXHIBIT A INSURANCE AND BONDS

### ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

### ARTICLE 2 THE WORK OF THIS CONTRACT

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

### ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

*(Check one of the following boxes.)*

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.
- Established as follows:  
*(Insert a date or a means to determine the date of commencement of the Work.)*

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

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

#### § 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

*(Check one of the following boxes and complete the necessary information.)*

- Not later than ( ) calendar days from the date of commencement of the Work.

By the following date:

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
-----------------	-----------------------------

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

#### ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be ( \$ ), subject to additions and deductions as provided in the Contract Documents.

#### § 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

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

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. (Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
------	-------	---------------------------

§ 4.3 Allowances, if any, included in the Contract Sum: (Identify each allowance.)

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

§ 4.4 Unit prices, if any:

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

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

§ 4.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

§ 4.6 Other:

(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

## ARTICLE 5 PAYMENTS

### § 5.1 Progress Payments

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

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

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

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

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

### § 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

*(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)*

**§ 5.1.7.1.1** The following items are not subject to retainage:  
*(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)*

**§ 5.1.7.2** Reduction or limitation of retainage, if any, shall be as follows:  
*(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)*

**§ 5.1.7.3** Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:  
*(Insert any other conditions for release of retainage upon Substantial Completion.)*

**§ 5.1.8** If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

**§ 5.1.9** Except with the Owner’s prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

**§ 5.2 Final Payment**

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

- .1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

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

**§ 5.3 Interest**

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

*(Insert rate of interest agreed upon, if any.)*

\_\_\_\_\_ % \_\_\_\_\_

**ARTICLE 6 DISPUTE RESOLUTION**

**§ 6.1 Initial Decision Maker**

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

*(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*

## § 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

*(Check the appropriate box.)*

- Arbitration pursuant to Section 15.4 of AIA Document A201–2017
- Litigation in a court of competent jurisdiction
- Other *(Specify)*

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

## ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner’s convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

*(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner’s convenience.)*

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

## ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner’s representative:

*(Name, address, email address, and other information)*

§ 8.3 The Contractor’s representative:

*(Name, address, email address, and other information)*

§ 8.4 Neither the Owner’s nor the Contractor’s representative shall be changed without ten days’ prior notice to the other party.

**§ 8.5 Insurance and Bonds**

**§ 8.5.1** The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

**§ 8.5.2** The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

**§ 8.6** Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

*(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)*

**§ 8.7** Other provisions:

**ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS**

**§ 9.1** This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction
- .4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:  
*(Insert the date of the E203-2013 incorporated into this Agreement.)*

.5 Drawings

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

.6 Specifications

Section	Title	Date	Pages
---------	-------	------	-------

.7 Addenda, if any:

Number	Date	Pages
--------	------	-------

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:

*(Check all boxes that apply and include appropriate information identifying the exhibit where required.)*

- AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:  
*(Insert the date of the E204-2017 incorporated into this Agreement.)*

The Sustainability Plan:

Title	Date	Pages
-------	------	-------

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
----------	-------	------	-------

.9 Other documents, if any, listed below:

*(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)*

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

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

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

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

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





# AIA Document A101™ – 2017 Exhibit A

## Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the \_\_\_\_\_ day of \_\_\_\_\_ in the year \_\_\_\_\_  
(In words, indicate day, month and year.)

for the following **PROJECT**:  
(Name and location or address)

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

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

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

This document is intended to be used in conjunction with AIA Document A201™–2017, General Conditions of the Contract for Construction. Article 11 of A201™–2017 contains additional insurance provisions.

### TABLE OF ARTICLES

- A.1 GENERAL
- A.2 OWNER’S INSURANCE
- A.3 CONTRACTOR’S INSURANCE AND BONDS
- A.4 SPECIAL TERMS AND CONDITIONS

#### ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201™–2017, General Conditions of the Contract for Construction.

#### ARTICLE A.2 OWNER’S INSURANCE

##### § A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor’s request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

##### § A.2.2 Liability Insurance

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

##### § A.2.3 Required Property Insurance

§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk “all-risks” completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner’s



property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

**§ A.2.3.1.1 Causes of Loss.** The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:

*(Indicate below the cause of loss and any applicable sub-limit.)*

Cause of Loss	Sub-Limit
---------------	-----------

**§ A.2.3.1.2 Specific Required Coverages.** The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect’s and Contractor’s services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:

*(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)*

Coverage	Sub-Limit
----------	-----------

**§ A.2.3.1.3** Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

**§ A.2.3.1.4 Deductibles and Self-Insured Retentions.** If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

**§ A.2.3.2 Occupancy or Use Prior to Substantial Completion.** The Owner’s occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

**§ A.2.3.3 Insurance for Existing Structures**

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, “all-risks” property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

**§ A.2.4 Optional Extended Property Insurance.**

The Owner shall purchase and maintain the insurance selected and described below.

*(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)*

- § A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.
- § A.2.4.2 Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.
- § A.2.4.3 Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.
- § A.2.4.4 Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.
- § A.2.4.5 Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.
- § A.2.4.6 Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.
- § A.2.4.7 Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

**§ A.2.5 Other Optional Insurance.**

The Owner shall purchase and maintain the insurance selected below.

*(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)*

- § A.2.5.1 Cyber Security Insurance** for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information.  
*(Indicate applicable limits of coverage or other conditions in the fill point below.)*

- § A.2.5.2 Other Insurance**  
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

## ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

### § A.3.1 General

**§ A.3.1.1 Certificates of Insurance.** The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

**§ A.3.1.2 Deductibles and Self-Insured Retentions.** The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

**§ A.3.1.3 Additional Insured Obligations.** To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

### § A.3.2 Contractor's Required Insurance Coverage

**§ A.3.2.1** The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

*(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)*

### § A.3.2.2 Commercial General Liability

**§ A.3.2.2.1** Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than \_\_\_\_\_ ( \$ ) each occurrence, \_\_\_\_\_ ( \$ ) general aggregate, and \_\_\_\_\_ ( \$ ) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to, or destruction of, tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

**§ A.3.2.2** The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the work involves such hazards.
- .11 Claims related to explosion, collapse, and underground hazards, where the Work involves such hazards.

**§ A.3.2.3** Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than \_\_\_\_\_ ( \$\_\_ ) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

**§ A.3.2.4** The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

**§ A.3.2.5** Workers' Compensation at statutory limits.

**§ A.3.2.6** Employers' Liability with policy limits not less than \_\_\_\_\_ ( \$\_\_ ) each accident, \_\_\_\_\_ ( \$\_\_ ) each employee, and \_\_\_\_\_ ( \$\_\_ ) policy limit.

**§ A.3.2.7** Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

**§ A.3.2.8** If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than \_\_\_\_\_ ( \$\_\_ ) per claim and \_\_\_\_\_ ( \$\_\_ ) in the aggregate.

**§ A.3.2.9** If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than \_\_\_\_\_ ( \$\_\_ ) per claim and \_\_\_\_\_ ( \$\_\_ ) in the aggregate.

**§ A.3.2.10** Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than \_\_\_\_\_ ( \$\_\_ ) per claim and \_\_\_\_\_ ( \$\_\_ ) in the aggregate.

**§ A.3.2.11** Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than \_\_\_\_\_ ( \$\_\_ ) per claim and \_\_\_\_\_ ( \$\_\_ ) in the aggregate.

**§ A.3.2.12** Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than \_\_\_\_\_ ( \$\_\_ ) per claim and \_\_\_\_\_ ( \$\_\_ ) in the aggregate.

**§ A.3.3 Contractor's Other Insurance Coverage**

**§ A.3.3.1** Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

*(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)*

**§ A.3.3.2** The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

*(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)*

- § A.3.3.2.1** Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below.

*(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)*

- § A.3.3.2.2 Railroad Protective Liability Insurance**, with policy limits of not less than \_\_\_\_\_ ( \$\_\_ ) per claim and \_\_\_\_\_ ( \$\_\_ ) in the aggregate, for Work within fifty (50) feet of railroad property.
- § A.3.3.2.3 Asbestos Abatement Liability Insurance**, with policy limits of not less than \_\_\_\_\_ ( \$\_\_ ) per claim and \_\_\_\_\_ ( \$\_\_ ) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.
- § A.3.3.2.4** Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.
- § A.3.3.2.5** Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.
- § A.3.3.2.6 Other Insurance**  
*(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)*

Coverage

Limits

**§ A.3.4 Performance Bond and Payment Bond**

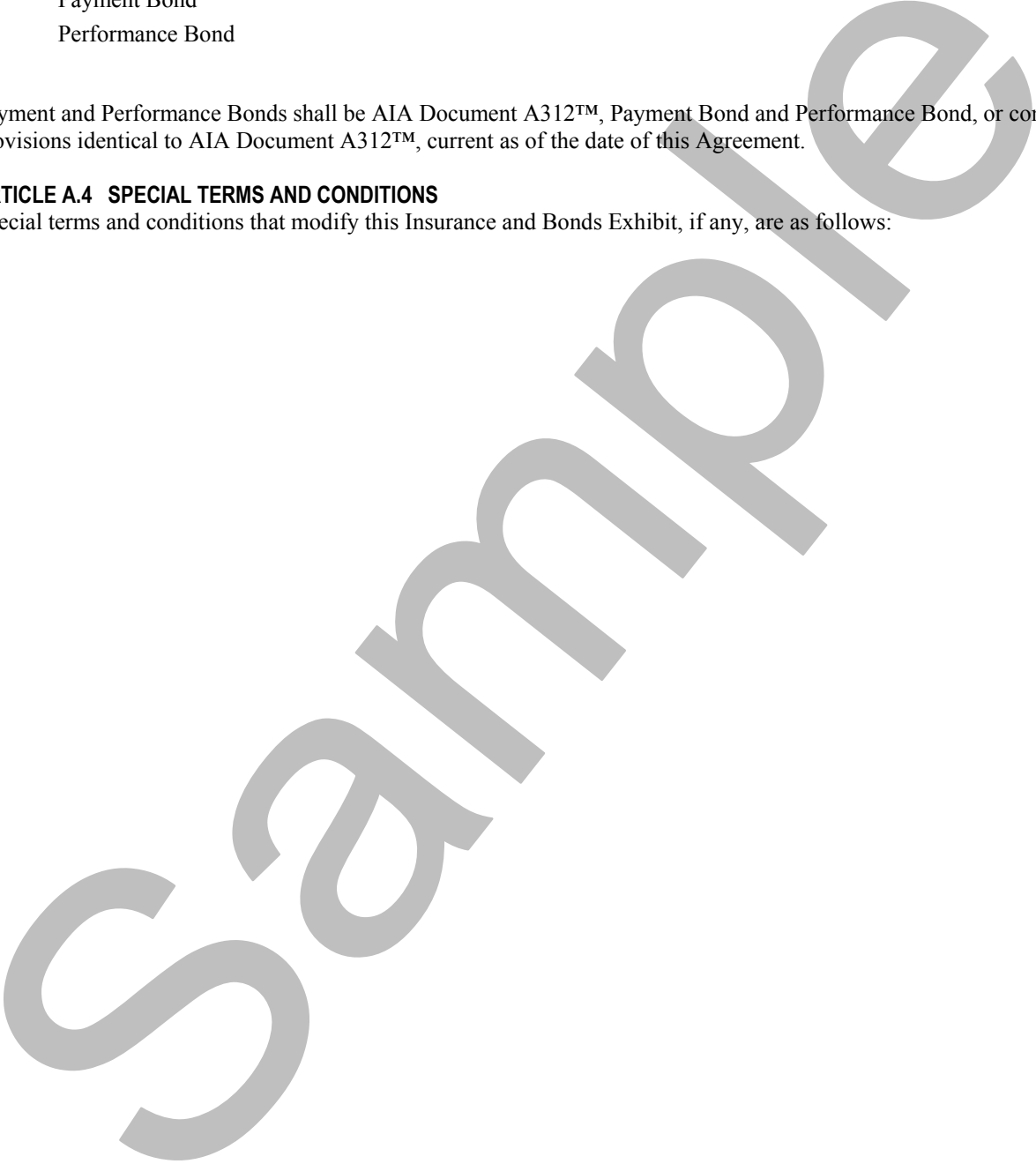
The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:  
*(Specify type and penal sum of bonds.)*

Type	Penal Sum (\$0.00)
Payment Bond	
Performance Bond	

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

**ARTICLE A.4 SPECIAL TERMS AND CONDITIONS**

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:







# AIA<sup>®</sup> Document A201<sup>™</sup> – 2017

## General Conditions of the Contract for Construction

for the following PROJECT:  
*(Name and location or address)*

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

THE ARCHITECT:  
*(Name, legal status and address)*

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

For guidance in modifying this document to include supplementary conditions, see AIA Document A503<sup>™</sup>, Guide for Supplementary Conditions.

### TABLE OF ARTICLES

- 1 GENERAL PROVISIONS
- 2 OWNER
- 3 CONTRACTOR
- 4 ARCHITECT
- 5 SUBCONTRACTORS
- 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
- 7 CHANGES IN THE WORK
- 8 TIME
- 9 PAYMENTS AND COMPLETION
- 10 PROTECTION OF PERSONS AND PROPERTY
- 11 INSURANCE AND BONDS
- 12 UNCOVERING AND CORRECTION OF WORK
- 13 MISCELLANEOUS PROVISIONS
- 14 TERMINATION OR SUSPENSION OF THE CONTRACT
- 15 CLAIMS AND DISPUTES

Init.

## INDEX

(Topics and numbers in bold are Section headings.)

### Acceptance of Nonconforming Work

9.6.6, 9.9.3, **12.3**

Acceptance of Work

9.6.6, 9.8.2, 9.9.3, 9.10.1, 9.10.3, 12.3

### Access to Work

**3.16**, 6.2.1, 12.1

Accident Prevention

10

Acts and Omissions

3.2, 3.3.2, 3.12.8, 3.18, 4.2.3, 8.3.1, 9.5.1, 10.2.5,  
10.2.8, 13.3.2, 14.1, 15.1.2, 15.2

Addenda

1.1.1

Additional Costs, Claims for

3.7.4, 3.7.5, 10.3.2, 15.1.5

### Additional Inspections and Testing

9.4.2, 9.8.3, 12.2.1, **13.4**

### Additional Time, Claims for

3.2.4, 3.7.4, 3.7.5, 3.10.2, 8.3.2, **15.1.6**

### Administration of the Contract

3.1.3, **4.2**, 9.4, 9.5

Advertisement or Invitation to Bid

1.1.1

Aesthetic Effect

4.2.13

### Allowances

**3.8**

### Applications for Payment

4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5.1, 9.5.4, 9.6.3, 9.7, 9.10

Approvals

2.1.1, 2.3.1, 2.5, 3.1.3, 3.10.2, 3.12.8, 3.12.9, 3.12.10.1,  
4.2.7, 9.3.2, 13.4.1

### Arbitration

8.3.1, 15.3.2, **15.4**

## ARCHITECT

**4**

Architect, Definition of

### 4.1.1

Architect, Extent of Authority

2.5, 3.12.7, 4.1.2, 4.2, 5.2, 6.3, 7.1.2, 7.3.4, 7.4, 9.2,  
9.3.1, 9.4, 9.5, 9.6.3, 9.8, 9.10.1, 9.10.3, 12.1, 12.2.1,  
13.4.1, 13.4.2, 14.2.2, 14.2.4, 15.1.4, 15.2.1

Architect, Limitations of Authority and Responsibility

2.1.1, 3.12.4, 3.12.8, 3.12.10, 4.1.2, 4.2.1, 4.2.2, 4.2.3,  
4.2.6, 4.2.7, 4.2.10, 4.2.12, 4.2.13, 5.2.1, 7.4, 9.4.2,  
9.5.4, 9.6.4, 15.1.4, 15.2

Architect's Additional Services and Expenses

2.5, 12.2.1, 13.4.2, 13.4.3, 14.2.4

Architect's Administration of the Contract

3.1.3, 3.7.4, 15.2, 9.4.1, 9.5

Architect's Approvals

2.5, 3.1.3, 3.5, 3.10.2, 4.2.7

Architect's Authority to Reject Work

3.5, 4.2.6, 12.1.2, 12.2.1

Architect's Copyright

1.1.7, 1.5

Architect's Decisions

3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 4.2.14, 6.3,  
7.3.4, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4.1, 9.5, 9.8.4, 9.9.1,  
13.4.2, 15.2

Architect's Inspections

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 13.4

Architect's Instructions

3.2.4, 3.3.1, 4.2.6, 4.2.7, 13.4.2

Architect's Interpretations

4.2.11, 4.2.12

Architect's Project Representative

4.2.10

Architect's Relationship with Contractor

1.1.2, 1.5, 2.3.3, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2,  
3.5, 3.7.4, 3.7.5, 3.9.2, 3.9.3, 3.10, 3.11, 3.12, 3.16,  
3.18, 4.1.2, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5,  
9.7, 9.8, 9.9, 10.2.6, 10.3, 11.3, 12, 13.3.2, 13.4, 15.2

Architect's Relationship with Subcontractors

1.1.2, 4.2.3, 4.2.4, 4.2.6, 9.6.3, 9.6.4, 11.3

Architect's Representations

9.4.2, 9.5.1, 9.10.1

Architect's Site Visits

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, 13.4

Asbestos

10.3.1

Attorneys' Fees

3.18.1, 9.6.8, 9.10.2, 10.3.3

Award of Separate Contracts

6.1.1, 6.1.2

### Award of Subcontracts and Other Contracts for Portions of the Work

**5.2**

### Basic Definitions

**1.1**

Bidding Requirements

1.1.1

Binding Dispute Resolution

8.3.1, 9.7, 11.5, 13.1, 15.1.2, 15.1.3, 15.2.1, 15.2.5,  
15.2.6.1, 15.3.1, 15.3.2, 15.3.3, 15.4.1

Bonds, Lien

7.3.4.4, 9.6.8, 9.10.2, 9.10.3

### Bonds, Performance, and Payment

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**, 11.1.3, **11.5**

### Building Information Models Use and Reliance

**1.8**

Building Permit

3.7.1

### Capitalization

**1.3**

Certificate of Substantial Completion

9.8.3, 9.8.4, 9.8.5

### Certificates for Payment

4.2.1, 4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7,  
9.10.1, 9.10.3, 14.1.1.3, 14.2.4, 15.1.4

Certificates of Inspection, Testing or Approval

13.4.4



Certificates of Insurance  
9.10.2  
**Change Orders**  
1.1.1, 3.4.2, 3.7.4, 3.8.2.3, 3.11, 3.12.8, 4.2.8, 5.2.3,  
7.1.2, 7.1.3, **7.2**, 7.3.2, 7.3.7, 7.3.9, 7.3.10, 8.3.1,  
9.3.1.1, 9.10.3, 10.3.2, 11.2, 11.5, 12.1.2  
**Change Orders**, Definition of  
**7.2.1**  
**CHANGES IN THE WORK**  
2.2.2, 3.11, 4.2.8, **7**, 7.2.1, 7.3.1, 7.4, 8.3.1, 9.3.1.1,  
11.5  
**Claims**, Definition of  
**15.1.1**  
Claims, Notice of  
1.6.2, 15.1.3  
**CLAIMS AND DISPUTES**  
3.2.4, 6.1.1, 6.3, 7.3.9, 9.3.3, 9.10.4, 10.3.3, **15**, 15.4  
Claims and Timely Assertion of Claims  
15.4.1  
**Claims for Additional Cost**  
3.2.4, 3.3.1, 3.7.4, 7.3.9, 9.5.2, 10.2.5, 10.3.2, **15.1.5**  
**Claims for Additional Time**  
3.2.4, 3.3.1, 3.7.4, 6.1.1, 8.3.2, 9.5.2, 10.3.2, **15.1.6**  
**Concealed or Unknown Conditions, Claims for**  
**3.7.4**  
Claims for Damages  
3.2.4, 3.18, 8.3.3, 9.5.1, 9.6.7, 10.2.5, 10.3.3, 11.3,  
11.3.2, 14.2.4, 15.1.7  
Claims Subject to Arbitration  
15.4.1  
**Cleaning Up**  
**3.15**, 6.3  
Commencement of the Work, Conditions Relating to  
2.2.1, 3.2.2, 3.4.1, 3.7.1, 3.10.1, 3.12.6, 5.2.1, 5.2.3,  
6.2.2, 8.1.2, 8.2.2, 8.3.1, 11.1, 11.2, **15.1.5**  
**Commencement of the Work**, Definition of  
**8.1.2**  
**Communications**  
3.9.1, **4.2.4**  
Completion, Conditions Relating to  
3.4.1, 3.11, 3.15, 4.2.2, 4.2.9, 8.2, 9.4.2, 9.8, 9.9.1,  
9.10, 12.2, 14.1.2, 15.1.2  
**COMPLETION, PAYMENTS AND**  
**9**  
Completion, Substantial  
3.10.1, 4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, 9.8, 9.9.1,  
9.10.3, 12.2, 15.1.2  
Compliance with Laws  
2.3.2, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 10.2.2, 13.1,  
13.3, 13.4.1, 13.4.2, 13.5, 14.1.1, 14.2.1.3, 15.2.8,  
15.4.2, 15.4.3  
Concealed or Unknown Conditions  
3.7.4, 4.2.8, 8.3.1, 10.3  
Conditions of the Contract  
1.1.1, 6.1.1, 6.1.4  
Consent, Written  
3.4.2, 3.14.2, 4.1.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3, 13.2,  
15.4.4.2

**Consolidation or Joinder**  
**15.4.4**  
**CONSTRUCTION BY OWNER OR BY**  
**SEPARATE CONTRACTORS**  
1.1.4, **6**  
**Construction Change Directive**, Definition of  
**7.3.1**  
**Construction Change Directives**  
1.1.1, 3.4.2, 3.11, 3.12.8, 4.2.8, 7.1.1, 7.1.2, 7.1.3, **7.3**,  
9.3.1.1  
Construction Schedules, Contractor's  
3.10, 3.11, 3.12.1, 3.12.2, 6.1.3, 15.1.6.2  
**Contingent Assignment of Subcontracts**  
**5.4**, 14.2.2.2  
**Continuing Contract Performance**  
**15.1.4**  
**Contract**, Definition of  
**1.1.2**  
**CONTRACT, TERMINATION OR SUSPENSION**  
**OF THE**  
5.4.1.1, 5.4.2, 11.5, **14**  
Contract Administration  
3.1.3, 4, 9.4, 9.5  
Contract Award and Execution, Conditions Relating to  
3.7.1, 3.10, 5.2, 6.1  
Contract Documents, Copies Furnished and Use of  
1.5.2, 2.3.6, 5.3  
**Contract Documents**, Definition of  
**1.1.1**  
**Contract Sum**  
2.2.2, 2.2.4, 3.7.4, 3.7.5, 3.8, 3.10.2, 5.2.3, 7.3, 7.4, **9.1**,  
9.2, 9.4.2, 9.5.1.4, 9.6.7, 9.7, 10.3.2, 11.5, 12.1.2, 12.3,  
14.2.4, 14.3.2, 15.1.4.2, **15.1.5**, **15.2.5**  
**Contract Sum**, Definition of  
**9.1**  
Contract Time  
1.1.4, 2.2.1, 2.2.2, 3.7.4, 3.7.5, 3.10.2, 5.2.3, 6.1.5,  
7.2.1.3, 7.3.1, 7.3.5, 7.3.6, 7, 7, 7.3.10, 7.4, 8.1.1, 8.2.1,  
8.2.3, 8.3.1, 9.5.1, 9.7, 10.3.2, 12.1.1, 12.1.2, 14.3.2,  
15.1.4.2, 15.1.6.1, 15.2.5  
**Contract Time**, Definition of  
8.1.1  
**CONTRACTOR**  
**3**  
Contractor, Definition of  
**3.1**, **6.1.2**  
**Contractor's Construction and Submittal Schedules**  
**3.10**, 3.12.1, 3.12.2, 4.2.3, 6.1.3, 15.1.6.2  
Contractor's Employees  
2.2.4, 3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2,  
10.3, 11.3, 14.1, 14.2.1.1  
**Contractor's Liability Insurance**  
**11.1**  
Contractor's Relationship with Separate Contractors  
and Owner's Forces  
3.12.5, 3.14.2, 4.2.4, 6, 11.3, 12.2.4

Contractor's Relationship with Subcontractors  
1.2.2, 2.2.4, 3.3.2, 3.18.1, 3.18.2, 4.2.4, 5, 9.6.2, 9.6.7, 9.10.2, 11.2, 11.3, 11.4

Contractor's Relationship with the Architect  
1.1.2, 1.5, 2.3.3, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2, 3.5.1, 3.7.4, 3.10, 3.11, 3.12, 3.16, 3.18, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5, 9.7, 9.8, 9.9, 10.2.6, 10.3, 11.3, 12, 13.4, 15.1.3, 15.2.1

Contractor's Representations  
3.2.1, 3.2.2, 3.5, 3.12.6, 6.2.2, 8.2.1, 9.3.3, 9.8.2

Contractor's Responsibility for Those Performing the Work  
3.3.2, 3.18, 5.3, 6.1.3, 6.2, 9.5.1, 10.2.8

Contractor's Review of Contract Documents  
3.2

Contractor's Right to Stop the Work  
2.2.2, 9.7

Contractor's Right to Terminate the Contract  
14.1

Contractor's Submittals  
3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 9.2, 9.3, 9.8.2, 9.8.3, 9.9.1, 9.10.2, 9.10.3

Contractor's Superintendent  
3.9, 10.2.6

Contractor's Supervision and Construction Procedures  
1.2.2, 3.3, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4, 7.1.3, 7.3.4, 7.3.6, 8.2, 10, 12, 14, 15.1.4

Coordination and Correlation  
1.2, 3.2.1, 3.3.1, 3.10, 3.12.6, 6.1.3, 6.2.1

Copies Furnished of Drawings and Specifications  
1.5, 2.3.6, 3.11

Copyrights  
1.5, **3.17**

Correction of Work  
2.5, 3.7.3, 9.4.2, 9.8.2, 9.8.3, 9.9.1, 12.1.2, **12.2**, 12.3, 15.1.3.1, 15.1.3.2, 15.2.1

**Correlation and Intent of the Contract Documents**  
**1.2**

**Cost**, Definition of  
**7.3.4**

Costs  
2.5, 3.2.4, 3.7.3, 3.8.2, 3.15.2, 5.4.2, 6.1.1, 6.2.3, 7.3.3.3, 7.3.4, 7.3.8, 7.3.9, 9.10.2, 10.3.2, 10.3.6, 11.2, 12.1.2, 12.2.1, 12.2.4, 13.4, 14

**Cutting and Patching**  
**3.14**, 6.2.5

Damage to Construction of Owner or Separate Contractors  
3.14.2, 6.2.4, 10.2.1.2, 10.2.5, 10.4, 12.2.4

Damage to the Work  
3.14.2, 9.9.1, 10.2.1.2, 10.2.5, 10.4, 12.2.4

Damages, Claims for  
3.2.4, 3.18, 6.1.1, 8.3.3, 9.5.1, 9.6.7, 10.3.3, 11.3.2, 11.3, 14.2.4, 15.1.7

Damages for Delay  
6.2.3, 8.3.3, 9.5.1.6, 9.7, 10.3.2, 14.3.2

**Date of Commencement of the Work**, Definition of  
**8.1.2**

**Date of Substantial Completion**, Definition of  
**8.1.3**

**Day**, Definition of  
**8.1.4**

Decisions of the Architect  
3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 6.3, 7.3.4, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4, 9.5.1, 9.8.4, 9.9.1, 13.4.2, 14.2.2, 14.2.4, 15.1, 15.2

**Decisions to Withhold Certification**  
9.4.1, **9.5**, 9.7, 14.1.1.3

Defective or Nonconforming Work, Acceptance, Rejection and Correction of  
2.5, 3.5, 4.2.6, 6.2.3, 9.5.1, 9.5.3, 9.6.6, 9.8.2, 9.9.3, 9.10.4, 12.2.1

Definitions  
1.1, 2.1.1, 3.1.1, 3.5, 3.12.1, 3.12.2, 3.12.3, 4.1.1, 5.1, 6.1.2, 7.2.1, 7.3.1, 8.1, 9.1, 9.8.1, 15.1.1

**Delays and Extensions of Time**  
**3.2**, **3.7.4**, 5.2.3, 7.2.1, 7.3.1, **7.4**, **8.3**, 9.5.1, **9.7**, 10.3.2, **10.4**, 14.3.2, **15.1.6**, 15.2.5

**Digital Data Use and Transmission**  
**1.7**

Disputes  
6.3, 7.3.9, 15.1, 15.2

**Documents and Samples at the Site**  
**3.11**

**Drawings**, Definition of  
**1.1.5**

Drawings and Specifications, Use and Ownership of  
3.11

Effective Date of Insurance  
8.2.2

**Emergencies**  
**10.4**, 14.1.1.2, **15.1.5**

Employees, Contractor's  
3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2, 10.3.3, 11.3, 14.1, 14.2.1.1

Equipment, Labor, or Materials  
1.1.3, 1.1.6, 3.4, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1, 4.2.6, 4.2.7, 5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1, 10.2.4, 14.2.1.1, 14.2.1.2

Execution and Progress of the Work  
1.1.3, 1.2.1, 1.2.2, 2.3.4, 2.3.6, 3.1, 3.3.1, 3.4.1, 3.7.1, 3.10.1, 3.12, 3.14, 4.2, 6.2.2, 7.1.3, 7.3.6, 8.2, 9.5.1, 9.9.1, 10.2, 10.3, 12.1, 12.2, 14.2, 14.3.1, 15.1.4

Extensions of Time  
3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3, 7.4, 9.5.1, 9.7, 10.3.2, 10.4, 14.3, 15.1.6, **15.2.5**

**Failure of Payment**  
9.5.1.3, **9.7**, 9.10.2, 13.5, 14.1.1.3, 14.2.1.2

Faulty Work  
(See Defective or Nonconforming Work)

**Final Completion and Final Payment**  
4.2.1, 4.2.9, 9.8.2, **9.10**, 12.3, 14.2.4, 14.4.3

Financial Arrangements, Owner's  
2.2.1, 13.2.2, 14.1.1.4

**GENERAL PROVISIONS**  
**1**

## **Governing Law**

### **13.1**

Guarantees (See Warranty)

## **Hazardous Materials and Substances**

### **10.2.4, 10.3**

Identification of Subcontractors and Suppliers

5.2.1

## **Indemnification**

3.17, **3.18**, 9.6.8, 9.10.2, 10.3.3, 11.3

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

2.1.2, **2.2**, 2.3, 3.2.2, 3.12.10.1, 6.1.3, 6.1.4, 6.2.5,

9.6.1, 9.9.2, 9.10.3, 10.3.3, 11.2, 13.4.1, 13.4.2,

14.1.1.4, 14.1.4, 15.1.4

## **Initial Decision**

### **15.2**

## **Initial Decision Maker, Definition of**

1.1.8

Initial Decision Maker, Decisions

14.2.4, 15.1.4.2, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5

Initial Decision Maker, Extent of Authority

14.2.4, 15.1.4.2, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5

## **Injury or Damage to Person or Property**

### **10.2.8, 10.4**

Inspections

3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 12.2.1, 13.4

Instructions to Bidders

1.1.1

Instructions to the Contractor

3.2.4, 3.3.1, 3.8.1, 5.2.1, 7, 8.2.2, 12, 13.4.2

## **Instruments of Service, Definition of**

### **1.1.7**

Insurance

6.1.1, 7.3.4, 8.2.2, 9.3.2, 9.8.4, 9.9.1, 9.10.2, 10.2.5, **11**

Insurance, Notice of Cancellation or Expiration

11.1.4, 11.2.3

## **Insurance, Contractor's Liability**

### **11.1**

Insurance, Effective Date of

8.2.2, 14.4.2

## **Insurance, Owner's Liability**

### **11.2**

## **Insurance, Property**

### **10.2.5, 11.2, 11.4, 11.5**

Insurance, Stored Materials

9.3.2

## **INSURANCE AND BONDS**

### **11**

Insurance Companies, Consent to Partial Occupancy

9.9.1

Insured loss, Adjustment and Settlement of

11.5

Intent of the Contract Documents

1.2.1, 4.2.7, 4.2.12, 4.2.13

## **Interest**

### **13.5**

## **Interpretation**

1.1.8, 1.2.3, **1.4**, 4.1.1, 5.1, 6.1.2, 15.1.1

Interpretations, Written

4.2.11, 4.2.12

Judgment on Final Award

15.4.2

## **Labor and Materials, Equipment**

1.1.3, 1.1.6, **3.4**, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1,

5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1,

10.2.4, 14.2.1.1, 14.2.1.2

Labor Disputes

8.3.1

Laws and Regulations

1.5, 2.3.2, 3.2.3, 3.2.4, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 9.9.1, 10.2.2, 13.1, 13.3.1, 13.4.2, 13.5, 14, 15.2.8, 15.4

Liens

2.1.2, 9.3.1, 9.3.3, 9.6.8, 9.10.2, 9.10.4, 15.2.8

Limitations, Statutes of

12.2.5, 15.1.2, 15.4.1.1

Limitations of Liability

3.2.2, 3.5, 3.12.10, 3.12.10.1, 3.17, 3.18.1, 4.2.6, 4.2.7,

6.2.2, 9.4.2, 9.6.4, 9.6.7, 9.6.8, 10.2.5, 10.3.3, 11.3,

12.2.5, 13.3.1

Limitations of Time

2.1.2, 2.2, 2.5, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2.7,

5.2, 5.3, 5.4.1, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3,

9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 12.2, 13.4, 14, 15,

15.1.2, 15.1.3, 15.1.5

## **Materials, Hazardous**

### **10.2.4, 10.3**

Materials, Labor, Equipment and

1.1.3, 1.1.6, 3.4.1, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1,

5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1.2,

10.2.4, 14.2.1.1, 14.2.1.2

Means, Methods, Techniques, Sequences and

Procedures of Construction

3.3.1, 3.12.10, 4.2.2, 4.2.7, 9.4.2

Mechanic's Lien

2.1.2, 9.3.1, 9.3.3, 9.6.8, 9.10.2, 9.10.4, 15.2.8

## **Mediation**

8.3.1, 15.1.3.2, 15.2.1, 15.2.5, 15.2.6, **15.3**, 15.4.1,

15.4.1.1

## **Minor Changes in the Work**

1.1.1, 3.4.2, 3.12.8, 4.2.8, 7.1, **7.4**

## **MISCELLANEOUS PROVISIONS**

### **13**

**Modifications**, Definition of

#### **1.1.1**

Modifications to the Contract

1.1.1, 1.1.2, 2.5, 3.11, 4.1.2, 4.2.1, 5.2.3, 7, 8.3.1, 9.7, 10.3.2

## **Mutual Responsibility**

### **6.2**

## **Nonconforming Work, Acceptance of**

9.6.6, 9.9.3, **12.3**

Nonconforming Work, Rejection and Correction of

2.4, 2.5, 3.5, 4.2.6, 6.2.4, 9.5.1, 9.8.2, 9.9.3, 9.10.4, 12.2

## Notice

1.6, 1.6.1, 1.6.2, 2.1.2, 2.2.2., 2.2.3, 2.2.4, 2.5, 3.2.4, 3.3.1, 3.7.4, 3.7.5, 3.9.2, 3.12.9, 3.12.10, 5.2.1, 7.4, 8.2.2, 9.6.8, 9.7, 9.10.1, 10.2.8, 10.3.2, 11.5, 12.2.2.1, 13.4.1, 13.4.2, 14.1, 14.2.2, 14.4.2, 15.1.3, 15.1.5, 15.1.6, 15.4.1

Notice of Cancellation or Expiration of Insurance  
11.1.4, 11.2.3

## Notice of Claims

1.6.2, 2.1.2, 3.7.4, 9.6.8, 10.2.8, **15.1.3**, 15.1.5, 15.1.6, 15.2.8, 15.3.2, 15.4.1

Notice of Testing and Inspections  
13.4.1, 13.4.2

Observations, Contractor's  
3.2, 3.7.4

Occupancy  
2.3.1, 9.6.6, 9.8

Orders, Written  
1.1.1, 2.4, 3.9.2, 7, 8.2.2, 11.5, 12.1, 12.2.2.1, 13.4.2, 14.3.1

## OWNER

### 2

**Owner**, Definition of

### 2.1.1

**Owner, Evidence of Financial Arrangements**

2.2, 13.2.2, 14.1.1.4

**Owner, Information and Services Required of the**  
2.1.2, **2.2**, 2.3, 3.2.2, 3.12.10, 6.1.3, 6.1.4, 6.2.5, 9.3.2, 9.6.1, 9.6.4, 9.9.2, 9.10.3, 10.3.3, 11.2, 13.4.1, 13.4.2, 14.1.1.4, 14.1.4, 15.1.4

Owner's Authority

1.5, 2.1.1, 2.3.32.4, 2.5, 3.4.2, 3.8.1, 3.12.10, 3.14.2, 4.1.2, 4.2.4, 4.2.9, 5.2.1, 5.2.4, 5.4.1, 6.1, 6.3, 7.2.1, 7.3.1, 8.2.2, 8.3.1, 9.3.2, 9.5.1, 9.6.4, 9.9.1, 9.10.2, 10.3.2, 11.4, 11.5, 12.2.2, 12.3, 13.2.2, 14.3, 14.4, 15.2.7

**Owner's Insurance**

### 11.2

Owner's Relationship with Subcontractors  
1.1.2, 5.2, 5.3, 5.4, 9.6.4, 9.10.2, 14.2.2

**Owner's Right to Carry Out the Work**  
2.5, 14.2.2

**Owner's Right to Clean Up**  
6.3

**Owner's Right to Perform Construction and to Award Separate Contracts**

### 6.1

**Owner's Right to Stop the Work**  
2.4

Owner's Right to Suspend the Work  
14.3

Owner's Right to Terminate the Contract  
14.2, 14.4

**Ownership and Use of Drawings, Specifications and Other Instruments of Service**

1.1.1, 1.1.6, 1.1.7, **1.5**, 2.3.6, 3.2.2, 3.11, 3.17, 4.2.12, 5.3

## Partial Occupancy or Use

9.6.6, **9.9**

**Patching, Cutting and**  
3.14, 6.2.5

Patents  
3.17

**Payment, Applications for**

4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5, 9.6.3, 9.7, 9.8.5, 9.10.1, 14.2.3, 14.2.4, 14.4.3

**Payment, Certificates for**

4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7, 9.10.1, 9.10.3, 14.1.1.3, 14.2.4

**Payment, Failure of**

9.5.1.3, **9.7**, 9.10.2, 13.5, 14.1.1.3, 14.2.1.2  
Payment, Final

4.2.1, 4.2.9, **9.10**, 12.3, 14.2.4, 14.4.3

**Payment Bond, Performance Bond and**

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**

**Payments, Progress**

9.3, **9.6**, 9.8.5, 9.10.3, 14.2.3, 15.1.4

**PAYMENTS AND COMPLETION**

### 9

Payments to Subcontractors

5.4.2, 9.5.1.3, 9.6.2, 9.6.3, 9.6.4, 9.6.7, 14.2.1.2

PCB

10.3.1

**Performance Bond and Payment Bond**

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**

**Permits, Fees, Notices and Compliance with Laws**

2.3.1, **3.7**, 3.13, 7.3.4.4, 10.2.2

**PERSONS AND PROPERTY, PROTECTION OF**  
**10**

Polychlorinated Biphenyl

10.3.1

**Product Data**, Definition of

**3.12.2**

**Product Data and Samples, Shop Drawings**

3.11, **3.12**, 4.2.7

**Progress and Completion**

4.2.2, **8.2**, 9.8, 9.9.1, 14.1.4, 15.1.4

**Progress Payments**

9.3, **9.6**, 9.8.5, 9.10.3, 14.2.3, 15.1.4

**Project**, Definition of

**1.1.4**

Project Representatives

4.2.10

**Property Insurance**

10.2.5, **11.2**

Proposal Requirements

1.1.1

**PROTECTION OF PERSONS AND PROPERTY**  
**10**

Regulations and Laws

1.5, 2.3.2, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 9.9.1, 10.2.2, 13.1, 13.3, 13.4.1, 13.4.2, 13.5, 14, 15.2.8, 15.4

Rejection of Work

4.2.6, 12.2.1

Releases and Waivers of Liens  
9.3.1, 9.10.2

Representations  
3.2.1, 3.5, 3.12.6, 8.2.1, 9.3.3, 9.4.2, 9.5.1, 9.10.1

Representatives  
2.1.1, 3.1.1, 3.9, 4.1.1, 4.2.10, 13.2.1

Responsibility for Those Performing the Work  
3.3.2, 3.18, 4.2.2, 4.2.3, 5.3, 6.1.3, 6.2, 6.3, 9.5.1, 10

Retainage  
9.3.1, 9.6.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3

**Review of Contract Documents and Field Conditions by Contractor**  
**3.2**, 3.12.7, 6.1.3

Review of Contractor's Submittals by Owner and Architect  
3.10.1, 3.10.2, 3.11, 3.12, 4.2, 5.2, 6.1.3, 9.2, 9.8.2

Review of Shop Drawings, Product Data and Samples by Contractor  
3.12

**Rights and Remedies**  
1.1.2, 2.4, 2.5, 3.5, 3.7.4, 3.15.2, 4.2.6, 5.3, 5.4, 6.1, 6.3, 7.3.1, 8.3, 9.5.1, 9.7, 10.2.5, 10.3, 12.2.1, 12.2.2, 12.2.4, **13.3**, 14, 15.4

**Royalties, Patents and Copyrights**  
**3.17**

Rules and Notices for Arbitration  
15.4.1

**Safety of Persons and Property**  
**10.2**, 10.4

**Safety Precautions and Programs**  
3.3.1, 4.2.2, 4.2.7, 5.3, **10.1**, 10.2, 10.4

**Samples**, Definition of  
**3.12.3**

**Samples, Shop Drawings, Product Data and**  
3.11, **3.12**, 4.2.7

**Samples at the Site, Documents and**  
**3.11**

**Schedule of Values**  
**9.2**, 9.3.1

Schedules, Construction  
3.10, 3.12.1, 3.12.2, 6.1.3, 15.1.6.2

Separate Contracts and Contractors  
1.1.4, 3.12.5, 3.14.2, 4.2.4, 4.2.7, 6, 8.3.1, 12.1.2

**Separate Contractors**, Definition of  
**6.1.1**

**Shop Drawings**, Definition of  
**3.12.1**

**Shop Drawings, Product Data and Samples**  
3.11, **3.12**, 4.2.7

**Site, Use of**  
**3.13**, 6.1.1, 6.2.1

Site Inspections  
3.2.2, 3.3.3, 3.7.1, 3.7.4, 4.2, 9.9.2, 9.4.2, 9.10.1, 13.4

Site Visits, Architect's  
3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, 13.4

Special Inspections and Testing  
4.2.6, 12.2.1, 13.4

**Specifications**, Definition of  
**1.1.6**

**Specifications**  
1.1.1, **1.1.6**, 1.2.2, 1.5, 3.12.10, 3.17, 4.2.14

Statute of Limitations  
15.1.2, 15.4.1.1

Stopping the Work  
2.2.2, 2.4, 9.7, 10.3, 14.1

Stored Materials  
6.2.1, 9.3.2, 10.2.1.2, 10.2.4

**Subcontractor**, Definition of  
**5.1.1**

**SUBCONTRACTORS**  
**5**

Subcontractors, Work by  
1.2.2, 3.3.2, 3.12.1, 3.18, 4.2.3, 5.2.3, 5.3, 5.4, 9.3.1.2, 9.6.7

**Subcontractual Relations**  
**5.3**, 5.4, 9.3.1.2, 9.6, 9.10, 10.2.1, 14.1, 14.2.1

Submittals  
3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 7.3.4, 9.2, 9.3, 9.8, 9.9.1, 9.10.2, 9.10.3

Submittal Schedule  
3.10.2, 3.12.5, 4.2.7

**Subrogation, Waivers of**  
6.1.1, **11.3**

**Substances, Hazardous**  
**10.3**

**Substantial Completion**  
4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, **9.8**, 9.9.1, 9.10.3, 12.2, 15.1.2

**Substantial Completion**, Definition of  
**9.8.1**

Substitution of Subcontractors  
5.2.3, 5.2.4

Substitution of Architect  
2.3.3

Substitutions of Materials  
3.4.2, 3.5, 7.3.8

**Sub-subcontractor**, Definition of  
**5.1.2**

Subsurface Conditions  
3.7.4

**Successors and Assigns**  
**13.2**

**Superintendent**  
**3.9**, 10.2.6

**Supervision and Construction Procedures**  
1.2.2, **3.3**, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4, 7.1.3, 7.3.4, 8.2, 8.3.1, 9.4.2, 10, 12, 14, 15.1.4

Suppliers  
1.5, 3.12.1, 4.2.4, 4.2.6, 5.2.1, 9.3, 9.4.2, 9.5.4, 9.6, 9.10.5, 14.2.1

Surety  
5.4.1.2, 9.6.8, 9.8.5, 9.10.2, 9.10.3, 11.1.2, 14.2.2, 15.2.7

Surety, Consent of  
9.8.5, 9.10.2, 9.10.3

Surveys  
1.1.7, 2.3.4

**Suspension by the Owner for Convenience**  
**14.3**

Suspension of the Work  
3.7.5, 5.4.2, 14.3  
Suspension or Termination of the Contract  
5.4.1.1, 14

**Taxes**  
3.6, 3.8.2.1, 7.3.4.4

**Termination by the Contractor**  
**14.1, 15.1.7**

**Termination by the Owner for Cause**  
5.4.1.1, **14.2**, 15.1.7

**Termination by the Owner for Convenience**  
**14.4**

Termination of the Architect  
2.3.3  
Termination of the Contractor Employment  
14.2.2

**TERMINATION OR SUSPENSION OF THE CONTRACT**

**14**

**Tests and Inspections**

3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 10.3.2, 12.2.1, **13.4**

**TIME**

**8**

**Time, Delays and Extensions of**

3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3.1, 7.4, **8.3**, 9.5.1, 9.7, 10.3.2, 10.4, 14.3.2, 15.1.6, 15.2.5

**Time Limits**

2.1.2, 2.2, 2.5, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2, 5.2, 5.3, 5.4, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3, 9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 12.2, 13.4, 14, 15.1.2, 15.1.3, 15.4

**Time Limits on Claims**

3.7.4, 10.2.8, 15.1.2, 15.1.3

**Title to Work**

9.3.2, 9.3.3

**UNCOVERING AND CORRECTION OF WORK**  
**12**

**Uncovering of Work**  
**12.1**

Unforeseen Conditions, Concealed or Unknown  
3.7.4, 8.3.1, 10.3

Unit Prices  
7.3.3.2, 9.1.2

Use of Documents  
1.1.1, 1.5, 2.3.6, 3.12.6, 5.3

**Use of Site**  
**3.13**, 6.1.1, 6.2.1

**Values, Schedule of**  
**9.2**, 9.3.1

Waiver of Claims by the Architect  
13.3.2

Waiver of Claims by the Contractor  
9.10.5, 13.3.2, **15.1.7**

Waiver of Claims by the Owner  
9.9.3, 9.10.3, 9.10.4, 12.2.2.1, 13.3.2, 14.2.4, **15.1.7**

Waiver of Consequential Damages  
14.2.4, 15.1.7

Waiver of Liens  
9.3, 9.10.2, 9.10.4

**Waivers of Subrogation**  
6.1.1, **11.3**

**Warranty**

**3.5**, 4.2.9, 9.3.3, 9.8.4, 9.9.1, 9.10.2, 9.10.4, 12.2.2, 15.1.2

Weather Delays  
8.3, 15.1.6.2

**Work, Definition of**  
**1.1.3**

**Written Consent**

1.5.2, 3.4.2, 3.7.4, 3.12.8, 3.14.2, 4.1.2, 9.3.2, 9.10.3, 13.2, 13.3.2, 15.4.4.2

**Written Interpretations**  
4.2.11, 4.2.12

**Written Orders**

1.1.1, 2.4, 3.9, 7, 8.2.2, 12.1, 12.2, 13.4.2, 14.3.1



## **ARTICLE 1 GENERAL PROVISIONS**

### **§ 1.1 Basic Definitions**

#### **§ 1.1.1 The Contract Documents**

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

#### **§ 1.1.2 The Contract**

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

#### **§ 1.1.3 The Work**

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

#### **§ 1.1.4 The Project**

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

#### **§ 1.1.5 The Drawings**

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

#### **§ 1.1.6 The Specifications**

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

#### **§ 1.1.7 Instruments of Service**

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

#### **§ 1.1.8 Initial Decision Maker**

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

### **§ 1.2 Correlation and Intent of the Contract Documents**

**§ 1.2.1** The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

**§ 1.2.1.1** The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining

provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

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

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

### **§ 1.3 Capitalization**

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

### **§ 1.4 Interpretation**

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

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

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

**§ 1.5.2** The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

### **§ 1.6 Notice**

**§ 1.6.1** Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

**§ 1.6.2** Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

### **§ 1.7 Digital Data Use and Transmission**

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

### **§ 1.8 Building Information Models Use and Reliance**

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building



information model, and each of their agents and employees.

## **ARTICLE 2 OWNER**

### **§ 2.1 General**

**§ 2.1.1** The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

**§ 2.1.2** The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

### **§ 2.2 Evidence of the Owner's Financial Arrangements**

**§ 2.2.1** Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

**§ 2.2.2** Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

**§ 2.2.3** After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

**§ 2.2.4** Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

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

**§ 2.3.1** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

**§ 2.3.2** The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

**§ 2.3.3** If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

**§ 2.3.4** The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the

site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

**§ 2.3.5** The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

**§ 2.3.6** Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

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

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

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

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

### **ARTICLE 3 CONTRACTOR**

#### **§ 3.1 General**

**§ 3.1.1** The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

**§ 3.1.2** The Contractor shall perform the Work in accordance with the Contract Documents.

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

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

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

**§ 3.2.2** Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's

capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

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

**§ 3.2.4** If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

### **§ 3.3 Supervision and Construction Procedures**

**§ 3.3.1** The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

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

**§ 3.3.3** The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

### **§ 3.4 Labor and Materials**

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

**§ 3.4.2** Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

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

### **§ 3.5 Warranty**

**§ 3.5.1** The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes

remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

**§ 3.5.2** All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

### **§ 3.6 Taxes**

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

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

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

**§ 3.7.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

**§ 3.7.3** If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

### **§ 3.7.4 Concealed or Unknown Conditions**

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

**§ 3.7.5** If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

### **§ 3.8 Allowances**

**§ 3.8.1** The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

**§ 3.8.2** Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and



- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

**§ 3.8.3** Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

**§ 3.9 Superintendent**

**§ 3.9.1** The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

**§ 3.9.2** The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

**§ 3.9.3** The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

**§ 3.10 Contractor's Construction and Submittal Schedules**

**§ 3.10.1** The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

**§ 3.10.2** The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

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

**§ 3.11 Documents and Samples at the Site**

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

**§ 3.12 Shop Drawings, Product Data and Samples**

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

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

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

**§ 3.12.4** Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

**§ 3.12.5** The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

**§ 3.12.6** By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

**§ 3.12.7** The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

**§ 3.12.8** The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

**§ 3.12.9** The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

**§ 3.12.10** The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

**§ 3.12.10.1** If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

**§ 3.12.10.2** If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the

time and in the form specified by the Architect.

### **§ 3.13 Use of Site**

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

### **§ 3.14 Cutting and Patching**

**§ 3.14.1** The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

**§ 3.14.2** The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

### **§ 3.15 Cleaning Up**

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

**§ 3.15.2** If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

### **§ 3.16 Access to Work**

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

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

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

### **§ 3.18 Indemnification**

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

**§ 3.18.2** In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

## ARTICLE 4 ARCHITECT

### § 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

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

### § 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

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

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

### § 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

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

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under



Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

**§ 4.2.8** The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

**§ 4.2.9** The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

**§ 4.2.10** If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

**§ 4.2.11** The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

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

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

**§ 4.2.14** The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## **ARTICLE 5 SUBCONTRACTORS**

### **§ 5.1 Definitions**

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

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

### **§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work**

**§ 5.2.1** Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

**§ 5.2.2** The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

**§ 5.2.3** If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the

Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

**§ 5.2.4** The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

### **§ 5.3 Subcontractual Relations**

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### **§ 5.4 Contingent Assignment of Subcontracts**

**§ 5.4.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

**§ 5.4.2** Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

**§ 5.4.3** Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

## **ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

### **§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts**

**§ 6.1.1** The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

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

**§ 6.1.3** The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate

Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

**§ 6.1.4** Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

## **§ 6.2 Mutual Responsibility**

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

**§ 6.2.2** If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

**§ 6.2.3** The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

**§ 6.2.4** The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

**§ 6.2.5** The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

## **§ 6.3 Owner's Right to Clean Up**

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

## **ARTICLE 7 CHANGES IN THE WORK**

### **§ 7.1 General**

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

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

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

### **§ 7.2 Change Orders**

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

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

### § 7.3 Construction Change Directives

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

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

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

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

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

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The



Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

**§ 7.3.10** When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

#### **§ 7.4 Minor Changes in the Work**

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

### **ARTICLE 8 TIME**

#### **§ 8.1 Definitions**

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

**§ 8.1.2** The date of commencement of the Work is the date established in the Agreement.

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

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

#### **§ 8.2 Progress and Completion**

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

**§ 8.2.2** The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

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

#### **§ 8.3 Delays and Extensions of Time**

**§ 8.3.1** If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

**§ 8.3.2** Claims relating to time shall be made in accordance with applicable provisions of Article 15.

**§ 8.3.3** This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

### **ARTICLE 9 PAYMENTS AND COMPLETION**

#### **§ 9.1 Contract Sum**

**§ 9.1.1** The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable

by the Owner to the Contractor for performance of the Work under the Contract Documents.

**§ 9.1.2** If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

### **§ 9.2 Schedule of Values**

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

### **§ 9.3 Applications for Payment**

**§ 9.3.1** At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

**§ 9.3.1.1** As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

**§ 9.3.1.2** Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

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

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

### **§ 9.4 Certificates for Payment**

**§ 9.4.1** The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

**§ 9.4.2** The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The

foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

### **§ 9.5 Decisions to Withhold Certification**

**§ 9.5.1** The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

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

**§ 9.5.2** When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

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

**§ 9.5.4** If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

### **§ 9.6 Progress Payments**

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

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

**§ 9.6.3** The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

**§ 9.6.4** The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers

to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

**§ 9.6.5** The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

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

**§ 9.6.7** Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

**§ 9.6.8** Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

#### **§ 9.7 Failure of Payment**

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

#### **§ 9.8 Substantial Completion**

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

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

**§ 9.8.3** Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

**§ 9.8.4** When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.



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

### **§ 9.9 Partial Occupancy or Use**

**§ 9.9.1** The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

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

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

### **§ 9.10 Final Completion and Final Payment**

**§ 9.10.1** Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

**§ 9.10.2** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

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

constitute a waiver of Claims.

**§ 9.10.4** The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

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

## **ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

### **§ 10.1 Safety Precautions and Programs**

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

### **§ 10.2 Safety of Persons and Property**

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

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

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

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

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

**§ 10.2.5** The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

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

**§ 10.2.7** The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

### **§ 10.2.8 Injury or Damage to Person or Property**

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

### **§ 10.3 Hazardous Materials and Substances**

**§ 10.3.1** The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

**§ 10.3.2** Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

**§ 10.3.3** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

**§ 10.3.4** The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

**§ 10.3.5** The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

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

### **§ 10.4 Emergencies**

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

## **ARTICLE 11 INSURANCE AND BONDS**

### **§ 11.1 Contractor's Insurance and Bonds**

**§ 11.1.1** The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the

endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

**§ 11.1.2** The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

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

**§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance.** Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

## **§ 11.2 Owner's Insurance**

**§ 11.2.1** The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

**§ 11.2.2 Failure to Purchase Required Property Insurance.** If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

**§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

## **§ 11.3 Waivers of Subrogation**

**§ 11.3.1** The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The



Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

**§ 11.3.2** If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

#### **§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance**

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

#### **§ 11.5 Adjustment and Settlement of Insured Loss**

**§ 11.5.1** A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

**§ 11.5.2** Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

### **ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

#### **§ 12.1 Uncovering of Work**

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

**§ 12.1.2** If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

#### **§ 12.2 Correction of Work**

##### **§ 12.2.1 Before Substantial Completion**

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the

Contractor's expense.

### **§ 12.2.2 After Substantial Completion**

**§ 12.2.2.1** In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

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

**§ 12.2.2.3** The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

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

**§ 12.2.4** The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

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

### **§ 12.3 Acceptance of Nonconforming Work**

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

## **ARTICLE 13 MISCELLANEOUS PROVISIONS**

### **§ 13.1 Governing Law**

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

### **§ 13.2 Successors and Assigns**

**§ 13.2.1** The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

**§ 13.2.2** The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

### § 13.3 Rights and Remedies

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

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

### § 13.4 Tests and Inspections

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

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

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

### § 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

## ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

### § 14.1 Termination by the Contractor

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

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

**§ 14.1.2** The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

**§ 14.1.3** If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

**§ 14.1.4** If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

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

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

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

**§ 14.2.2** When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**§ 14.2.3** When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

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

## **§ 14.3 Suspension by the Owner for Convenience**

**§ 14.3.1** The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

**§ 14.3.2** The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.



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

**§ 14.4.1** The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

**§ 14.4.2** Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

**§ 14.4.3** In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

### **ARTICLE 15 CLAIMS AND DISPUTES**

#### **§ 15.1 Claims**

##### **§ 15.1.1 Definition**

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

##### **§ 15.1.2 Time Limits on Claims**

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

##### **§ 15.1.3 Notice of Claims**

**§ 15.1.3.1** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

**§ 15.1.3.2** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

##### **§ 15.1.4 Continuing Contract Performance**

**§ 15.1.4.1** Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

**§ 15.1.4.2** The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

##### **§ 15.1.5 Claims for Additional Cost**

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

##### **§ 15.1.6 Claims for Additional Time**

**§ 15.1.6.1** If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section

15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

**§ 15.1.6.2** If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

#### **§ 15.1.7 Waiver of Claims for Consequential Damages**

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

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

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

#### **§ 15.2 Initial Decision**

**§ 15.2.1** Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

**§ 15.2.2** The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

**§ 15.2.3** In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

**§ 15.2.4** If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

**§ 15.2.5** The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

**§ 15.2.6** Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

### § 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

### § 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

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

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly

consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

**§ 15.4.4 Consolidation or Joinder**

**§ 15.4.4.1** Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

**§ 15.4.4.2** Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

**§ 15.4.4.3** The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

Sample

SECTION 00510

**NOTICE OF AWARD**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

This section describes the standardized Notice of Award form for use in the project.

**1.02 REFERENCES – Not Used**

**1.03 DEFINITIONS – Section 0700**

**PART 2 - PRODUCT – Not Used**

**PART 3 - EXECUTION (FORMS ON FOLLOWING PAGES)**

STANDARIZED FORM FOLLOWS

## NOTICE OF AWARD

Date

Owner: City of Edinburg

Owner's Project No. 2019-23

Architect: Amtech Solutions, Inc.

Project:

Bidder:

Bidder's Address:

You are notified that Owner has accepted your Proposal dated **(Date)** for the above Contract, and that you are the Successful Proposal and are awarded a Contract for:

### Base Proposal

The Contract Price of the awarded Contract is \_\_\_\_\_. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

**Four (4)** unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

Drawings will be delivered separately from the other Contract Documents by Engineer of Record.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **four (4)** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **City of Edinburg**

By *(signature)*:

Name *(printed)*: Mardoqueo Hinojosa, P.E., CFM, CPM

Title: City Engineer

Cc: Amtech Solutions, Inc.

**END OF SECTION**

SECTION 00550

**NOTICE TO PROCEED**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

This section describes the standardized Notice to Proceed form for use in the project.

**1.02 REFERENCES – Not Used**

**1.03 DEFINITIONS – Section 0700**

**PART 2 - PRODUCT – Not Used**

**PART 3 - EXECUTION**

**TO BE ISSUED BY ENGINEER**



**NOTICE TO PROCEED**

**Date:**

**To:**

**Project No.:** RFP# 2019-23

**Project:** Dustin Sekula Memorial Library Structural Repairs & Roof Replacement

You are notified that the Contract Time under the above contract will commence to run on \_\_\_\_\_ . By this date you are to start performing your obligations under the Contract Documents.

In accordance with the Agreement the date of Substantial Completion is \_\_\_\_\_ and Final Completion is \_\_\_\_\_, respectively.

Before you may start any Work at the site, the General Conditions and Contract Documents provides that you and Owner must each deliver to the other (with copies to ENGINEER) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also before you may start any work at the site you must

1. Notify the City 48 hours prior to beginning construction.
2. Setup construction barricades.
3. Setup erosion control measures.
4. \_\_\_\_\_
5. \_\_\_\_\_

Copy to ARCHITECT:

Amtech Solutions, Inc.

OWNER: City of Edinburg

By \_\_\_\_\_

By \_\_\_\_\_

Juan G. Guerra

\_\_\_\_\_  
Title

City Manager

\_\_\_\_\_  
Title

**ACCEPTANCE OF NOTICE BY BIDDER**

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by \_\_\_\_\_, this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_. (Contractor)

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

TITLE: \_\_\_\_\_

**END OF SECTION**

**PERFORMANCE BOND**

<p><b>Contractor</b>                  Name:                  Address <i>(principal place of business)</i>:</p>	<p><b>Surety</b>                  Name:                  Address <i>(principal place of business)</i>:</p>
<p><b>Owner</b>                  Name:                  Mailing address <i>(principal place of business)</i>:</p>	<p><b>Contract</b>                  Description <i>(name and location)</i>:</p> <p>Contract Price:                  Effective Date of Contract:</p>
<p><b>Bond</b>                  Bond                  Date of Bond:  <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i>                  Modifications to this Bond form:  <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.</p>	
<p>Contractor as Principal</p>	<p>Surety</p>
<p>_____  <i>(Full formal name of Contractor)</i></p>	<p>_____  <i>(Full formal name of Surety) (corporate seal)</i></p>
<p>By: _____  <i>(Signature)</i></p>	<p>By: _____  <i>(Signature)(Attach Power of Attorney)</i></p>
<p>Name: _____  <i>(Printed or typed)</i></p>	<p>Name: _____  <i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p>Attest: _____  <i>(Signature)</i></p>	<p>Attest: _____  <i>(Signature)</i></p>
<p>Name: _____  <i>(Printed or typed)</i></p>	<p>Name: _____  <i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
  - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
  - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
  - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
  - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
  - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to

- the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
- 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
    - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
    - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
  6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
  7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
    - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
    - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
    - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
  8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
  9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
  10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
  11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two

years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
14. Definitions
  - 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
  - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
  - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
  - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
  - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: **[None]**

**PAYMENT BOND**

<p><b>Contractor</b>                  Name:                  Address <i>(principal place of business)</i>:</p>	<p><b>Surety</b>                  Name:                  Address <i>(principal place of business)</i>:</p>
<p><b>Owner</b>                  Name:                  Mailing address <i>(principal place of business)</i>:</p>	<p><b>Contract</b>                  Description <i>(name and location)</i>:                   Contract Price:                  Effective Date of Contract:</p>
<p><b>Bond</b>                  Bond                  Date of Bond:  <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i>                  Modifications to this Bond form:  <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.</p>	
<p>Contractor as Principal</p>	<p>Surety</p>
<p>_____  <i>(Full formal name of Contractor)</i></p>	<p>_____  <i>(Full formal name of Surety) (corporate seal)</i></p>
<p>By: _____  <i>(Signature)</i></p>	<p>By: _____  <i>(Signature)(Attach Power of Attorney)</i></p>
<p>Name: _____  <i>(Printed or typed)</i></p>	<p>Name: _____  <i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p>Attest: _____  <i>(Signature)</i></p>	<p>Attest: _____  <i>(Signature)</i></p>
<p>Name: _____  <i>(Printed or typed)</i></p>	<p>Name: _____  <i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
  - 5.1. Claimants who do not have a direct contract with the Contractor
    - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
    - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
  - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
  - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
  - 7.2. Pay or arrange for payment of any undisputed amounts.
  - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire

as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.



## 16. Definitions

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

16.1.1. The name of the Claimant;

16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

16.1.4. A brief description of the labor, materials, or equipment furnished;

16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

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

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

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

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

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

Modifications to this Bond are as follows: **[None]**

Document 00625

**AFFIDAVIT OF INSURANCE**

THE STATE OF TEXAS

§  
§ KNOW ALL MEN BY THESE PRESENTS:

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

**BEFORE ME**, the undersigned authority, on this day personally appeared

\_\_\_\_\_, who  
[Affiant]

being by me duly sworn on his oath stated that he is \_\_\_\_\_, of  
[Title]

\_\_\_\_\_  
[Contractor's Company Name]

the Contractor named and referred to within the Contract Documents; that he is fully competent and authorized to give this affidavit and that the attached original insurance certificate truly and accurately reflects the insurance coverage that is now available and will be available during the term of the Agreement.

\_\_\_\_\_  
[Affiant's Signature]

SWORN AND SUBSCRIBED before me on \_\_\_\_\_.  
[Date]

\_\_\_\_\_  
Notary Public in and for the State of TEXAS

\_\_\_\_\_  
[Print or type Notary Public name]

[Notary Seal]

My Commission Expires: \_\_\_\_\_  
[Expiration Date]

**END OF DOCUMENT**

Page Intentionally Blank

Document 00630

**FORM OF BUSINESS**

Please, fill in the appropriate area describing your firm's form of business and include the relevant attachments.

**Corporation:**

Corporate Name: \_\_\_\_\_

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

Mailing Address: \_\_\_\_\_

- Certificate of Assumed Name, if operating under a name different than that on the corporate charter (the Certificate must have been issued within the past ten years to be valid)
- Certificate of Good Standing\*
- Certificate of Existence (if non-Texas corporation, Certificate of Authority) \*

**Partnership/Joint Venture:**

Partnership/Joint Venture Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

- Copy of the Partnership or Joint Venture Agreement, or Affidavit with the name of the partnership or joint venture, the names of the individual partners or participants in the joint venture, and a statement that the partnership or joint venture is in existence
- Certificate of Assumed Name, (the Certificate must have been issued within the past ten years to be valid)
- If firm is a limited partnership, the Certificate of Limited Partnership
- If any partner or joint venturer is a corporation, the above information relating to corporation must be included as to each sum partner or joint venturer.

**Sole Proprietorship**

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

Mailing Address: \_\_\_\_\_

- Certificate of Assumed Name, if operating under a name different than that of the sole proprietor (the Certificate must have been issued within the past ten years to be valid)

\* *Must be furnished upon request of the Owner and must be less than 90 days old.*

\_\_\_\_\_  
[Typed Name and Title of Authorized Representative]

\_\_\_\_\_  
[Signature of Authorized Representative]

\_\_\_\_\_  
[Typed Date]

**END OF DOCUMENT**

Page Intentionally Blank

Document 00631

**RESOLUTION OF CORPORATION**

I hereby certify that it was RESOLVED by a quorum of the directors of

\_\_\_\_\_

[Name of Corporation / Contractor]

meeting on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, that \_\_\_\_\_,  
[Corporate Representative]

be, and hereby is, authorized to act on behalf of the Corporation, as its representative, in all business transactions conducted in the State of Texas, and that the above resolution was unanimously ratified by the Board of Directors at said meeting and that the resolution has not been rescinded or amended and is now in full force and effect; and in authentication of the adoption of this resolution, I subscribe my name and affix the seal of the Corporation on this

\_\_\_\_\_ day of, \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Secretary/Assistant Secretary

\_\_\_\_\_  
[Seal]

**END OF DOCUMENT**

Page Intentionally Blank

**CONTRACTOR'S RESOLUTION  
ON  
AUTHORIZED REPRESENTATIVE (ED-104)**

\_\_\_\_\_  
Name or Names

I hereby certify that it was RESOLVED by a quorum of the directors of the

\_\_\_\_\_, meeting  
name of corporation

on the day of \_\_\_\_\_, 20\_\_, that \_\_\_\_\_,  
\_\_\_\_\_, and \_\_\_\_\_, be, and hereby is,  
authorized to act on behalf of \_\_\_\_\_, as its  
name of corporation

representative, in all business transactions conducted in the State of Texas, and;

That all above resolution was unanimously ratified by the Board of Directors at said  
meeting and that the resolution has not been rescinded or amended and is now in full forces  
and effect; and;

In authentication of the adoption of this resolution, I subscribe my name and  
affix the seal of the corporation this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Secretary

(seal)



Page Intentionally Blank

Document 00635

CONTRACTOR'S ACT OF ASSURANCE

THE STATE OF TEXAS

KNOW ALL MEN BY THESE PRESENTS:

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

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas,

on this day personally appeared \_\_\_\_\_, Affiant,  
[Affiant]

who being by me duly sworn on his oath stated that he is \_\_\_\_\_, of  
[Title]

the \_\_\_\_\_, Contractor, that he is authorized to represent Contractor  
[Contractor]

pursuant to provisions of a resolution adopted on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_. A duly certified copy of such resolution is attached to and is hereby made a part of this document.

Affiant, in such capacity declares and assures the City of Edinburg that Contractor will construct the Project in accordance with sound construction practice and all laws of the State of Texas.

\_\_\_\_\_  
[Affiant]

SWORN AND SUBSCRIBED before me on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public in and for the State of TEXAS

\_\_\_\_\_  
[Print or Type Notary Public Name]

\_\_\_\_\_  
[Seal]

My Commission Expires: \_\_\_\_\_  
[Expiration Date]

END OF DOCUMENT

Page Intentionally Blank

Document 00640

**CERTIFICATION REGARDING DEPARTMENT,  
SUSPENSION AND OTHER RESPONSIBILITY MATTERS**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal, State, or local department or agency;
- (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction: violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Section 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

\_\_\_\_\_  
[Typed Name of Company:]

\_\_\_\_\_  
[Typed Name & Title of Authorized Representative]

\_\_\_\_\_  
[Signature of Authorized Representative]

\_\_\_\_\_  
[Date]

If unable certify the above statements, explanation is attached.

**END OF DOCUMENT**



Page Intentionally Blank

## SECTION 00830

**WARRANTY****PART 1 - GENERAL****1.01 SECTION INCLUDES**

This section describes the warranty. The conditions contained in this Section are specific administrative and policy requirements in addition to the general conditions and other requirements listed in the contract documents.

**1.02 REFERENCES – Not Used****1.03 DEFINITIONS – Section 0700****1.04 CONTRACTOR'S WARRANTY OF TITLE**

CONTRACTOR warrants and guarantees that 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.

**1.05 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 therefore. 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.

**1.06 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.
- B. 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 therefore. If ENGINEER considers that part of the Work to be substantially complete, the above provisions 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. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirement of regarding property insurance.

**1.07 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.

**1.08 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; (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 above 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**

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 above provisions. 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**

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.

**D. Final Completion Delayed**

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 above, 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.

**1.09 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 the above, 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.



END OF SECTION

Document 00900

**ADDENDUM NO. \_\_\_\_\_  
(Sample Form)**

Date of Addendum: \_\_\_\_\_  
[Enter date]

PROJECT NAME: Dustin Sekula Memorial Library Structural Repairs & Roof Replacement

PROJECT NO: RFP# 2019-23

BID DATE: \_\_\_\_\_ . (There is no change to the Bid Date.)

FROM: City of Edinburg  
Att: Lorena Fuentes, Purchasing Agent  
415 W. University Drive  
Edinburg, Texas 78539  
Phone: (956) 388-1895

TO: **Prospective Bidders**

This Addendum forms a part of the Bidding Documents and will be incorporated into Contract Documents, as applicable. Insofar as the original Project Manual and Drawings are inconsistent, this Addendum governs. Acknowledge receipt of the Addendum by inserting its number in Document 00310 - Form of Proposal. **FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.**

\*\*\*\*\*

Use the following heading and select the appropriate wording for postponement of the Bid Date. Delete the statement beside Bid Date above which indicates that the Bid Date is unchanged. If change in Bid Date, issue as separate addendum. Delete this section entirely if there is no change in Bid Date.

\*\*\*\*\*

**CHANGE IN BID DATE**

The bid date for this Project has been changed from \_\_\_\_\_ to \_\_\_\_\_  
[Date] [Date]

[Time of day and place for submittal of bid remains the same]. [Time of submittal has been changed from \_\_\_\_\_ to \_\_\_\_\_. The place for submittal remains the same].  
[Time] [Time]

\*\*\*[OR]\*\*\*

The bid date for this project has been indefinitely postponed. Another Addendum will be issued to reset the bid date or to cancel bidding on this Project.

\*\*\*\*\*

Delete the following paragraph if the sole purpose of the Addendum is to postpone the Bid Date.

\*\*\*\*\*

This Addendum uses the change page method: remove and replace or add pages, or Drawing sheets, as directed in the change instructions below. Change bars ( | ) are provided in the right margins of pages from the Project Manual to indicate where changes have been made; no change bars are provided in added Sections. Reissued Drawing Sheets show the Addendum number above the title block and changes in the Drawing are noted by a revision mark.

\*\*\*\*\*  
Number each item of the Addendum beginning with 1 through the total number of change items in the Addendum. Sample entries are provided in brackets.  
\*\*\*\*\*

**CHANGES TO PREVIOUS ADDENDA**

\*\*\*\*\*  
Reference Addendum Number and item number to correct clarifications or make minor corrections of changes issued by previous Addenda.  
\*\*\*\*\*

**ADDENDUM NO.** \_\_\_\_\_

[1. Add item]

**CHANGES TO PROJECT MANUAL**

\*\*\*\*\*  
Follow this format to sequence changes to the Project Manual.  
\*\*\*\*\*

**BIDDING REQUIREMENTS**

\*\*\*\*\*  
Give the individual change instructions for each item of change by Document number and title. List changes in order of Document number.  
\*\*\*\*\*

[2. Add Item]

**CONTRACT FORMS**

[3. Add Item]

**CONDITIONS OF THE CONTRACT**

[4. Add Item]

**SPECIFICATIONS**

[5. Add Item]

**CHANGES TO DRAWINGS**

[6. Add Item]

**CLARIFICATIONS**

[7. Add Item]

**MINUTES OF PRE-BID CONFERENCE**

Minutes of the Pre-Bid Conference held on \_\_\_\_\_, \_\_\_\_\_, 20\_\_\_\_, are  
[Day] [Date]  
attached as a record and for the Bidders information.

END OF ADDENDUM NO. \_\_\_\_\_

\_\_\_\_\_  
Name, P.E. DATED: \_\_\_\_\_

**END OF DOCUMENT**

Page Intentionally Blank

## DOCUMENT 00910

**MODIFICATIONS****PART 1 - GENERAL****1.01 SECTION INCLUDES**

This section contains information pertaining to modifications and changes for the Contract Documents for the Project.

**1.02 REFERENCES – Not Used****1.03 DEFINITIONS - Section 0700****1.04 MODIFICATIONS OF 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.
- C. 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 adoption 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.

**PART 2 - PRODUCT – Not Used****PART 3 - EXECUTION – Not Used****END OF SECTION**

Page Intentionally Blank

# PROJECT MANUAL

## Dustin Sekula Memorial Library Structural Repairs & Roof Replacement

**REQUEST FOR PROPOSALS  
RFP# 2019-23**

BROWNSVILLE INDEPENDENT SCHOOL DISTRICT  
1900 PRICE ROAD, BROWNSVILLE, TEXAS 78521

**PUBLICATION DATE: July 17, 2019  
SUBMISSION DEADLINE: August 05, 2019 @ 3:00 PM**



1600 N. Jackson Road, Suite 3  
Pharr, Texas 78577  
Phone: (956) 686-3095  
Fax: (956) 686-2233



Austin 512-258-1661 • Dallas 927-690-6044 • Houston 713-266-4829

SET No. \_\_\_\_\_



# DOCUMENT 00 0010 - TABLE OF CONTENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>Pages</u>
<b><u>INTRODUCTORY INFORMATION</u></b>		
00 0001	PROJECT TITLE PAGE	00 0001 - 1 THRU 00 0001 - 1
00 0010	TABLE OF CONTENTS	00 0010 - 1 THRU 00 0010 - 3
<b><u>BIDDING REQUIREMENTS</u></b>		
AS MADE AVAILABLE IN OWNER DOCUMENTS PRECEDING ARCHITECTURAL PROJECT MANUAL		
<b><u>CONTRACTING REQUIREMENTS</u></b>		
00 4100	PROPOSAL FORM	00 4100 - 1 THRU 00 4100 - 12
00 7000	GENERAL CONDITIONS	00 7000 - 1 THRU 00 7000 - 17
00 8000	SUPPLEMENTARY GENERAL CONDITIONS	00 8000 - 1 THRU 00 8000 - 1

# DOCUMENT 00 0010 - TABLE OF CONTENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>Pages</u>
<b><u>CONSTRUCTION PRODUCTS AND ACTIVITIES</u></b>		
<b><u>DIVISION 01 - GENERAL REQUIREMENTS</u></b>		
01 1000	SUMMARY	01 1000 - 1 THRU 01 1000 - 3
01 2100	ALLOWANCES	01 2100 - 1 THRU 01 2100 - 2
01 2200	UNIT PRICES	01 2200 - 1 THRU 01 2200 - 1
01 2500	SUBSTITUTION PROCEDURES	01 2500 - 1 THRU 01 2500 - 3
01 2600	CONTRACT MODIFICATION PROCEDURES	01 2600 - 1 THRU 01 2600 - 2
01 2900	PAYMENT PROCEDURES	01 2900 - 1 THRU 01 2900 - 4
01 3000	ADMINISTRATIVE REQUIREMENTS	01 3000 - 1 THRU 01 3000 - 7
01 3100	PROJECT MANAGEMENT AND COORDINATION	01 3100 - 1 THRU 01 3100 - 5
01 3200	CONSTRUCTION PROGRESS DOCUMENTATION	01 3200 - 1 THRU 01 3200 - 4
01 3233	PHOTOGRAPHIC DOCUMENTATION	01 3233 - 1 THRU 01 3233 - 2
01 3300	SUBMITTAL PROCEDURES	01 3300 - 1 THRU 01 3300 - 8
01 4000	QUALITY REQUIREMENTS	01 4000 - 1 THRU 01 4000 - 6
01 4200	REFERENCES	01 4200 - 1 THRU 01 4200 - 7
01 5000	TEMPORARY FACILITIES AND CONTROLS	01 5000 - 1 THRU 01 5000 - 4
01 6000	PRODUCT REQUIREMENTS	01 6000 - 1 THRU 01 6000 - 6
01 6100	SUBSTITUTION REQUEST FORM	01 6100 - 1 THRU 01 6100 - 1
01 7300	EXECUTION	01 7300 - 1 THRU 01 7300 - 4
01 7329	CUTTING AND PATCHING	01 7329 - 1 THRU 01 7329 - 3
01 7700	CLOSEOUT PROCEDURES	01 7700 - 1 THRU 01 7700 - 5
01 7839	PROJECT RECORD DOCUMENTS	01 7839 - 1 THRU 01 7839 - 3
01 7850	APPLICATOR WARRANTY	01 7850 - 1 THRU 01 7850 - 2
01 7851	CERTIFICATE OF ASBESTOS-FREE CONSTRUCTION	01 7851 - 1 THRU 01 7851 - 1
<b><u>DIVISION 03 - CONCRETE</u></b>		
03 3000	CAST IN PLACE CONCRETE	03 3000 - 1 THRU 03 3000 - 11
<b><u>DIVISION 04 - MASONRY</u></b>		
04 0100	MASONRY REPAIRS T-WALL FLASHING	04 0100 - 1 THRU 04 0100 - 7
04 2000	UNIT MASONRY	04 2000 - 1 THRU 04 2000 - 8
04 5150	MASONRY TUCK POINTING REPAIR ANCHORAGE	04 5150 - 1 THRU 04 5150 - 5
<b><u>DIVISION 05 - STEEL</u></b>		
05 3123	STEEL ROOF DECK	05 3123 - 1 THRU 05 3123 - 3

## DOCUMENT 00 0010 - TABLE OF CONTENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>Pages</u>
<b><u>DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES</u></b>		
06 1000	CARPENTRY WORK (FOR ROOF)	06 1000 - 1 THRU 06 1000 - 5
06 1055	CARPENTRY	06 1055 - 1 THRU 06 1055 - 6
<b><u>DIVISION 07 - THERMAL AND MOISTURE PROTECTION</u></b>		
07 0150.19	ROOF REPLACEMENT PREPARATION	07 0150.19 - 1 THRU 07 0150.19 - 7
07 1000	DAMPPROOFING AND WATERPROOFING	07 1000 - 1 THRU 07 1000 - 5
07 2210	ROOF AND DECK INSULATION BOARDS AND ACCES.	07 2210 - 1 THRU 07 2210 - 4
07 2413	EIFS	07 2413 - 1 THRU 07 2413 - 11
07 6200	SHEET METAL FLASHING AND TRIM	07 6200 - 1 THRU 07 6200 - 15
07 5400	THERMOPLASTIC MEMBRANE ROOFING	07 5400 - 1 THRU 07 5400 - 19
07 6200	SHEET METAL FLASHING AND TRIM	07 6200 - 1 THRU 07 6200 - 12
07 6210	ES-1 CERTIFICATION OF AUTHORIZED FABRICATOR (SAMPLE)	07 6210 ES-1 - 1 THRU 07 6210 ES-1 - 7
07 7200	ROOF ACCESSORIES	07 7200 - 1 THRU 07 7200 - 9
07 9200	JOINT SEALANTS	07 9200 - 1 THRU 07 9200 - 6
<b><u>Division 09 - Finishes, Walls, Ceilings and Floors</u></b>		
09 2423	CEMENT STUCCO REPAIRS	09 2423 - 1 THRU 09 2423 - 3
09 5112	ACOUSTICAL TILE CEILINGS	09 5112 - 1 THRU 09 5112 - 6
09 9000	PAINTING (ALTERNATE BID)	09 9000 - 1 THRU 09 9000 - 7
09 9113	PAINTING (ROOF)	09 9113 - 1 THRU 09 9113 - 4
09 9600	HIGH PERFORMANCE COATINGS (BASE BID)	09 9600 - 1 THRU 09 9600 - 7
<b><u>DIVISION 22 - PLUMBING</u></b>		
22 0500	COMMON WORK RESULTS FOR PLUMBING	22 0500 - 1 THRU 22 0500 - 5
<b><u>DIVISION 23 - HEATING VENTING AND AIR CONDITIONING</u></b>		
23 0500	COMMON WORK RESULTS FOR HVAC	23 0500 - 1 THRU 23 0500 - 5
<b><u>DIVISION 26 - ELECTRICAL</u></b>		
26 0500	COMMON WORK RESULTS FOR ELECTRICAL	26 0500 - 1 THRU 26 0500 - 4

## DOCUMENT 00 0010 - TABLE OF CONTENTS

NUMBER                      TITLE    Pages

### LIST OF DRAWINGS

<u>DRAWING NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
T1	TITLE SHEET	JULY 17, 2019
A1.1	DEFICIENCIES (REFERENCE)	JULY 17, 2019
A1.2	LEAK MAP (REFERENCE)	JULY 17, 2019
A1.3	FLOOR PLAN	JULY 17, 2019
A1.4	ROOF PLAN	JULY 17, 2019
A1.5	MECHANICAL PLAN	JULY 17, 2019
A2.1	RCP - L01	JULY 17, 2019
A2.2	RCP - L02	JULY 17, 2019
A3.1	ELEVATIONS	JULY 17, 2019
D0	DETAILS	JULY 17, 2019
D1	GENERAL DETAILS	JULY 17, 2019
D2	CURB DETAILS	JULY 17, 2019
D3	GENERAL DETAILS	JULY 17, 2019
D4	GENERAL DETAILS	JULY 17, 2019
D5	WALL SECTION	JULY 17, 2019
D6	WALL DETAILS	JULY 17, 2019
D7	WALL DETAILS	JULY 17, 2019
S0	LADDER DETAILS	JULY 17, 2019
S1.0	STRUCTURAL NOTES	JULY 17, 2019
S2.0	HIGH WALL REINFORCEMENT PLAN	JULY 17, 2019
S3.1	SECTIONS A-A & B-B	JULY 17, 2019
S3.2	SECTION C-C	JULY 17, 2019
S3.3	STRUCTUAL DETAILS	JULY 17, 2019

**END OF TABLE OF CONTENTS**

## DOCUMENT 00 4100 - PROPOSAL FORM

**To:** THE CITY OF EDINBURG  
 415 W. University Drive, Edinburg TX 78539  
**ATTENTION: ENGINEERING DEPARTMENT**

**Project:** Dustin Sekula Memorial Library Structural Repairs & Roof Replacement

**Bidder:** \_\_\_\_\_

[Print or type full name of proprietorship, partnership, corporation, or joint venture]

1.1. Having examined the place of the Work and all matters and conditions referred to in the Bid Documents and having examined the Contract Documents prepared by Amtech Solutions, Inc., dated July 17, 2019 for the named Project, likely to affect the cost and schedule of this Work, we the undersigned hereby offer to enter into a Contract to perform the Work for the following Proposal Amounts:

### PART 1 - Roofing

<b><u>PART 1A</u></b> <b><u>ROOF</u></b> <b><u>BASE BID</u></b>	<b><u>TOTAL LUMP SUM PRICE FOR DESIGNATED ROOF REPLACEMENT (ROOF AREAS "A"; "B"; "C"; "D"; "E"; "F"); ROOF REPAIRS, MECHANICAL SYSTEM CURB REPLACEMENT AND FLASHING WORK, AND ALL INCIDENTAL WORK RELATED THERETO AS DESIGNED, DETAILED AND SPECIFIED - (NOT INCLUDING DESIGNATED CONTINGENCY ALLOWANCE)</u></b>	Offeror agrees to furnish for the sum of _____ Dollars, \$ _____
<b><u>PART 1B</u></b> <b><u>ALTERNATE 01</u></b>	<b><u>ALTERNATE 1 (Deduct)</u></b> <b><u>USE A TPO BASED MEMBRANE FOR THE ROOF SYSTEM AT DESIGNATED AREAS IN LIEU OF A PVC BASED MEMBRANE.</u></b>	Offeror agrees to furnish for the sum of _____ Dollars, \$ _____
<b><u>PART 1C</u></b> <b><u>ALTERNATE 02</u></b>	<b><u>ALTERNATE 2 (Add.)</u></b> <b><u>PROVIDE WARRANTY FOR A WIND SPEED OF VULT = 90 MPH INSTEAD OF A WARRANTY FOR VULT = 137 MPH (VASD=106 MPH).</u></b>	Offeror agrees to furnish for the sum of _____ Dollars, \$ _____

**Part 2 Structural Reinforcement & Repairs**

<p><b><u>PART 2A</u></b></p> <p><b><u>BASE BID</u></b></p>	<p><b><u>TOTAL LUMP SUM PRICE FOR DESIGNATED STRUCTURAL REINFORCEMENT AND REPAIRS FOR OVERBUILD AREA (ROOF AREAS "B": "C"): REMOVAL OF TAR AND GRAVEL OF LEGACY ROOF, STRUCTURAL REINFORCEMENT OF OVERBUILD STRUCTURE, ADDITION OF STEEL MEMBERS AS SPECIFIED, AND ALL INCIDENTAL WORK RELATED THERETO AS DESIGNED, DETAILED AND SPECIFIED - (NOT INCLUDING DESIGNATED CONTINGENCY ALLOWANCE)</u></b></p>	<p>Offeror agrees to furnish for the sum of _____ Dollars,          \$ _____</p>
---	---	--

**Part 3 Structural Reinforcement of Curbs**

<p><b><u>PART 3A</u></b></p> <p><b><u>BASE BID</u></b></p>	<p><b><u>TOTAL LUMP SUM PRICE FOR DESIGNATED STRUCTURAL REPAIRS (ROOF AREAS "A"; "B"; "E"; "F"): STRUCTURAL REINFORCEMENT OF MECHANICAL CURB STRUCTURE TO ROOF STRUCTURE, OPENING OF DECK, ADDITION OF STEEL SUPPORTS, RE-ATTACHING MECHANICAL UNITS, AND ALL INCIDENTAL WORK RELATED THERETO AS DESIGNED, DETAILED AND SPECIFIED - (NOT INCLUDING DESIGNATED CONTINGENCY ALLOWANCE)</u></b></p>	<p>Offeror agrees to furnish for the sum of _____ Dollars,          \$ _____</p>
---	--	--

**Part 4 Structural Reinforcement of Exterior Walls**

<p><b><u>PART 4A</u></b></p> <p><b><u>BASE BID</u></b></p>	<p><b><u>TOTAL LUMP SUM PRICE FOR DESIGNATED STRUCTURAL REINFORCEMENT AND FOR 30 FOOT HIGH WALLS: ADDITION OF STEEL "T" TO WALLS, AND ALL INCIDENTAL WORK RELATED THERETO AS DESIGNED, DETAILED AND SPECIFIED - (NOT INCLUDING DESIGNATED CONTINGENCY ALLOWANCE)</u></b></p>	<p>Offeror agrees to furnish for the sum of</p> <p>_____ Dollars,</p> <p>\$ _____</p>
---	--	---



**Part 5 Exterior Wall Façade Repairs & Painting**

<p><b><u>PART 5A</u></b></p> <p><b><u>BASE BID</u></b></p>	<p><b><u>TOTAL LUMP SUM PRICE FOR DESIGNATED EXTERIOR WALL REPAIRS, RENOVATIONS, AND FINISHES (ALL EXTERIOR WALLS): ONE COAT OF HIGH PERFORMANCE ELASTOMERIC COATING, PATCH AND REPAIR EXISTING CRACKED SURFACES, PROVIDE EXPANSION JOINTS AT DESIGNATED AREAS, SEAL ALL CONTROL/OTHER JOINTS OR MATERIAL TRANSITIONS AS DETAILED AND SPECIFIED, TRIM WORK, SEAL DOORS/WINDOWS, ADD EIFS/FOAM PILASTERS WITH SPLIT FACE WAINSCOT TO WALLS AS WELL AS RELATED CONCRETE LEDGE, AND ALL INCIDENTAL WORK RELATED THERETO AS DESIGNED, DETAILED AND SPECIFIED - (NOT INCLUDING DESIGNATED CONTINGENCY ALLOWANCE)</u></b></p>	<p>Offeror agrees to furnish for the sum of _____ Dollars, \$ _____</p>
<p><b><u>PART 5B</u></b></p> <p><b><u>ALTERNATE BID</u></b></p>	<p><b><u>ALTERNATE 1 (Deduct) USE LATEX PAINT IN LIEU OF HIGH PERFORMANCE COATING.</u></b></p>	<p>Offeror agrees to furnish for the sum of _____ Dollars, \$ _____</p>

**Part 6 Interiors**

<p><b><u>PART 6A</u></b></p> <p><b><u>BASE BID</u></b></p>	<p><b><u>TOTAL LUMP SUM PRICE FOR SPECIFIED FOR DESIGNATED INTERIOR RESTORATION OF DAMAGED SURFACES ( ALL AREAS DAMAGED BY WATER INTRUSION, CONTRACTOR TO FIELD VERIFY): REPLACE AND PAINT DAMAGED GYPSUM BOARD, THOROUGH CLEANING OF CARPET INCLUDING UNDER THE BOOK SHELVES, REPLACE DAMAGED CEILING TILES AND ALL INCIDENTAL WORK RELATED THERETO AS DESIGNED, DETAILED AND SPECIFIED - (NOT INCLUDING DESIGNATED CONTINGENCY ALLOWANCE)</u></b></p>	<p>Offeror agrees to furnish for the sum of _____ Dollars,          \$ _____</p>
---	---	--

1.2. The Bidder accepts the Drawings and Specifications as satisfactory and adequate for proper execution of the Work, and understands that claims for additional compensation or time, because Bidder did not familiarize itself with the Contract Documents or any existing condition that might affect the Work, will not be allowed.

1.3 The Bidder acknowledges that the Roof System and all rooftop equipment, accessories and appurtenances shall be installed, and otherwise secured in a manner to resist wind pressures as calculated by ASCE-7 and that all necessary requirements for installed components to Comply with Windstorm Certification (as per the Texas Department of Insurance) if required shall be provided by the bidder and that the cost of obtaining windstorm certification shall be included in the Base Bid and Alternate Bid Amounts.

**2. CONTINGENCY ALLOWANCE:**

2.1. Base Bid amount(s) includes Contingency Allowance(s) as described in Section 01 2100.  
**Fifty-Five Thousand Dollars (\$50,000)**

**3. CONTRACT TIME:**

Bidder agrees to substantially complete the Work in no more than: \_\_\_\_\_ calendar days for from date established in the Notice to Proceed.

**4. BID SECURITY:**

4.1. Following form of Bid Security, in the amount of five percent (5%) of the Base Bid, is attached as an integral part of this Bid Form:

4.2. (Check one of the following):

- Certified Check
- Cashier's Check
- Surety Bond written on AIA Document A310, Bid Bond.

4.3. This Bid Security is executed as a guaranty the Bidder will unconditionally execute a satisfactory contract and furnish the Payment and Performance bonds and Insurance specified in Contract Documents and required by these Bid Documents.

**5. ADDENDA:**

5.1. Bidder acknowledges receipt of following Addenda:

Addenda Number:	_____	Dated	_____
Addenda Number:	_____	Dated	_____
Addenda Number:	_____	Dated	_____

**6. CONTRACTORS QUALIFICATION STATEMENT:**

6.1. Completed AIA Form A305 – Contractor’s Qualification Statement must be attached as an integral part of this Bid Form. Failure to include a completed copy of this form may cause bid to be rejected.

**7. SCHEDULE OF ROOF AREAS AND INTENDED MANUFACTURER:**

7.1. Provide roof areas and proposed membrane manufacturer in spaces below.

**DUSTIN SEKULA MEMORIAL LIBRARY**

*(continues on next page)*

Roof Area	Sq.ft.	Cost per Area: Base Bid	Proposed Manufacturer for Base Bid
A			
B			
C			
D			
E			
F			

**8. PERFORMANCE AND PAYMENT BONDS:**

8.1. Bidder agrees to provide bonds covering faithful performance of the Contract and payment of all obligations arising from the Contract.

8.2. Base Bid amount includes the following amount for the required Bonds:

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )  
 [Print or type in words, Bidder's Total Bid Price. Written words govern.] [Print or type in figures]

**9. LIQUIDATED DAMAGES**

9.1. Bidder understands that Liquidated Damages, as defined in General Conditions, will be included in the Form of Agreement between Owner and Contractor.

**10. CONTRACTOR'S PERSONNEL:**

10.1. Bidder proposes the following full-time, fluent English speaking employees for this Project. If acceptable to the Owner and Architect, Bidder agrees to employ them for duration of the Work at the positions indicated, and agrees not to remove them from the Work nor replace them with others except as otherwise allowed in the Contract Documents.

Project Manager: \_\_\_\_\_

Project Superintendent: \_\_\_\_\_

**11. PROPOSED SUBCONTRACTORS:**

11.1. Bidder proposes following Subcontractors for the Work indicated. If acceptable to by the Owner and Architect, Bidder agrees to use the named Subcontractors for duration of the Project on Work indicated, and agrees not to remove them from the Work nor replace them with others except as otherwise allowed in the Contract Documents. Insert only one (1) name for each Work item, or if Work item is not to be subcontracted, insert Bidder's name:

	<b>Work Item</b>	<b>Proposed Subcontractor</b>	<b>Contract Amount</b>
11.2.	Carpentry	_____	(\$ _____ )
11.3.	Cement	_____	(\$ _____ )
11.4.	Mechanical	_____	(\$ _____ )
11.5.	Plumbing	_____	(\$ _____ )
11.6.	Electrical	_____	(\$ _____ )
11.7.	Masonry	_____	(\$ _____ )
11.8.	Roofing	_____	(\$ _____ )
11.9.	_____	_____	(\$ _____ )
11.10.	_____	_____	(\$ _____ )

(\*Base Bid only. No Breakdown is required for individual Roof Areas for this item.)

<u>SPECIFICATION SECTION</u>	<u>ITEM</u>	<u>UNIT PRICE</u>	<u>UNIT OF MEASURE</u>
07 0150.19	<b>Replace Metal Roof Deck (Following Sizes)</b>		
12.2	20 GA, G90 Galvanized 1.5 A, B or F Deck	\$ _____	per 3' x 20' Sheet
076200	<b>Sheet Metal Work (Following Sizes):</b>		
11.11.	5" x 5" Sheet Metal Downspout	\$ _____	per Ten Linear Ft
11.12.	6' Downspout Boot	\$ _____	per Each
11.13.	Collector Head	\$ _____	per Each
11.14.	Hooded Pitch Pan	\$ _____	per Each
11.15.	Conc. Splash block on Traffic Pad	\$ _____	per Each
061055	<b>Treated Wood Blocking Replacement (Following Nominal Sizes):</b>		
11.16.	2x4	\$ _____	per Ten Linear Ft
11.17.	2x6	\$ _____	per Ten Linear Ft
11.18.	2x8	\$ _____	per Ten Linear Ft
11.19.	2x10	\$ _____	per Ten Linear Ft
12.11	2x12	\$ _____	per Ten Linear Ft
12.12	¾" CDX Plywood	\$ _____	per 4' x 8' Sheet
07 9200	<b>Backer-Rod and Sealant</b>		
12.13	Backer rod & Sealant (up to ¾" joint)	\$ _____	per Ten Linear Ft
04 0100	<b>Thru-Wall Flashing</b>		
12.14	Including counter-flashing & masonry/stucco repairs	_____	per Ten Linear Ft

	22 0500	<b>Plumbing Repairs</b>		
12.15		4" Ø Roof Drain and Strainer	\$ _____	per Each
12.16		4" Ø Condensate Roof Drain and Strainer	_____	per Each
12.17		4" Ø Schedule 40 PVC, Insulated Drain Line	\$ _____	per Ten Linear Ft
12.18		1" Ø Copper A/C Condensate Line (w/supports)	\$ _____	per Ten Linear Ft
	26 0500	<b>Conduit Replacement (Following Sizes):</b>		
12.19		1-inch (conduit, conductors and supports)	\$ _____	per Ten Linear Ft
12.20		1-inch (conduit, conductors and supports)	\$ _____	per Ten Linear Ft

<u>Description</u>	<u>Unit Price</u>	<u>Unit of Measure</u>
Sealant		
Cement		
HP Elastomeric		
Latex Exterior Paint		
Exterior Wainscot		
Cornice		
Stucco Repair		
Interior Paint		

**12. CRIMINAL HISTORY RECORDS**

12.1. Refer to BISD's Purchasing Dept. Solicitation, Paragraph 22, Page 6 - Criminal Background Check Requirements.

**13. SIGNATURES:**

**Bidder:**

\_\_\_\_\_  
[Print or type full name of proprietorship, partnership, corporation, or joint venture\*]

**Organization:**  
[Check One]

Proprietorship     Partnership     Corporation     Joint Venture

\* If Bid is Joint Venture, add additional Bid Form signature sheets for each Joint Venture member.

**By:**

\_\_\_\_\_  
[Signature]

\_\_\_\_\_  
[Date]

**Name:**

\_\_\_\_\_  
[Print or type name ]

\_\_\_\_\_  
[Title]

**Address:**

\_\_\_\_\_  
[Mailing]

\_\_\_\_\_  
[Street, if different than mailing]

**Telephone:**

\_\_\_\_\_  
[Print or type telephone number]

\_\_\_\_\_  
[Print or type FAX number]

**State of Incorporation:** (if applicable) \_\_\_\_\_

[Seal if a Corporation]

**14. CERTIFICATIONS:**

14.1. I, \_\_\_\_\_, certify that I am a duly authorized officer of the Above named corporation, which is authorized to do business in the State of Texas. I further certify that the following named persons:

\_\_\_\_\_  
[Print or type name ]

\_\_\_\_\_  
[Title]

\_\_\_\_\_  
[Print or type name ]

\_\_\_\_\_  
[Title]

\_\_\_\_\_  
[Print or type name ]

\_\_\_\_\_  
[Title]

by authority of the above named corporation's board of directors and within the scope of its corporate power, are authorized to sign the Bid, Agreement, and all other Contract Documents related to this Contract.

**By:**

\_\_\_\_\_  
[Signature]

\_\_\_\_\_  
[Title]

**Name:**

\_\_\_\_\_  
[Print or type name ]

\_\_\_\_\_  
[Date]

**END OF SECTION 00 4100**

# DOCUMENT 00 7000 - GENERAL CONDITIONS

## B.01 DRAWINGS, SPECIFICATIONS AND RELATED DATA

### B.01.01 INTENT OF DRAWINGS AND SPECIFICATIONS

The intent of the Drawings and Specifications is that the Contractor furnish all labor, materials, equipment, and transportation necessary for the proper execution of the Work, unless specifically noted otherwise. The Contractor shall do all the Work shown on the drawings and as described in the Specifications and all incidental Work considered necessary to fully complete the Project in a substantial and acceptable manner ready for use, occupancy, and operation by the Owner.

### B.01.02 DEFINITIONS

Whenever used in the Contract Documents, the following terms shall have the meanings indicated, which shall be acceptable to both the singular and plural thereof:

**-ACT OF GOD-** An earthquake, cyclone, or other cataclysmic phenomenon of nature. Rain, wind, flood or other natural phenomenon of normal intensity for the locality shall not be construed as an Act of God and no representation shall be made to the Contractor for damages to the Work resulting therefrom.

**-ADDENDA-** Written or graphic instruments issued prior to the execution of the Agreement, which modify or interpret the Contract Documents, Drawings, and Specifications, by additions, deletions, clarifications, or corrections.

**-AGREEMENT-** The Contract executed by the Owner and Contractor covering the performance of the Work described in the Contract Documents.

**-BIDDER-** Any person, firm, or corporation submitting a Proposal for the Work,

**-CHANGE ORDER-** A written amendment of the Contract between the Owner and the Contractor, authorizing an addition, deletion, or revision in the work within the general scope of the Contract Documents, or authorizing an adjustment in the contract price or contract time.

**-CONTRACT AMOUNT-** The total monies payable to the Contractor under the terms and conditions of these Contract Documents.

**-CONTRACT DOCUMENTS-** The contract, including Advertisement, Instructions to Bidders, Proposal, Contract, Bonds, Certificate of Insurance, Contractors Declaration, General Conditions, Supplemental General Conditions, Construction Specifications, Supplemental Specifications, Drawings, Addenda, Notice of Award, Notice to Proceed, Change Orders and those documents necessary for the Project.

**-CONTRACT TIME-** The number of calendar days stated in the Proposal for the completion of the Work.

**-CONTRACTOR-** The Person, Firm, or Corporation with whom the Owner has executed the Agreement.

**-DRAWINGS-** The part of the Contract Documents that show the characteristics and scope of the Work to be performed and which have been prepared or approved by the Owner's Agent.

**-FIELD ORDER-** Written directives issued by the Owner's Agent as authorized by the Owner, to the Contractor. Field orders may take the form of instructions or authorizations in reference to performance of the Work. Field orders may also be interpretations or clarifications of the Contract Documents. Field orders do not change the content, nor shall they be interpreted as a change in the Contract Documents.

**-GOVERNING AGENCY-** Public authority (state, county, township, or other public agency), or their boards, commissions, departments, etc. which has statutory ownership or control of the referred to facility or area.



**-GROSS PROPOSAL AMOUNT-** The total sum of all of the amounts obtained by extending the Contractor's Proposal Prices, time the Owner's Agent Estimated Quantities; on Lump Sum Contracts, the Lump Sum Amount Proposal.

**-INCIDENTAL TO THE PROJECT-** Incidental items of Work required but not specifically listed in the Proposal and for which no separate payment will be made. The costs associated with such incidental items are to be included in the Proposal Prices Proposal for Items of Work, specifically listed in the Proposal and included in the Gross Proposal Amount.

**-INCIDENTAL TO ITEM (AS DESIGNATED)-** Incidental items of Work required but not specifically listed in the Proposal and for which no separate payment will be made. The costs associated with such Work are to be included in the Price Proposal for the specific Item so designated, and listed on the Proposal.

**-NOTICE OF AWARD-** The written notice of the acceptance of the Proposal from the Owner to the successful Bidder.

**-NOTICE TO PROCEED-** Written communication issued by the Owner to the Contractor authorizing him to proceed with the Work and establishing the commencement date and completion date for the Work.

**-OWNER-** A Public, quasi-public or authority, corporation, association, partnership, or individual for whom the Work is to be performed.

**-OWNER'S AGENT-** A duly appointed representative of the Owner, to perform as his Agent in the administration of the Work. All business conducted by an Owner's Agent shall be in the best interest of the Owner and shall be as if conducted by the Owner.

**-OWNER'S REPRESENTATIVE-** A duly appointed representative of the Owner delegated to assist in the administration of the Contract.

**-PLANS-** The Drawings as prepared by the Owner's Agent or Representative which will show the characteristics and scope of the Work to be performed and which are a part of the Contract Documents.

**-PROJECT-** The undertaking to be performed as provided in the Contract Documents.

**-PROPOSAL-** The offer of a bidder to perform the Work described in the Contract Documents when made out and submitted on the Prescribed Proposal Forms; properly signed and guaranteed.

**-PUNCH LIST-** A list of uncompleted work given to the Contractor by the Owner's Agent or Representative.

**-SHOP DRAWINGS-** All drawings, diagrams, illustrations, brochures, schedules, and other data prepared by the Contractor, a subcontractor, Manufacturer, Supplier or distributor that illustrates how specific portions of the Work shall be fabricated and/or installed.

**-SPECIFICATIONS-** A part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

**-SUBCONTRACTOR-** An individual, firm, or corporation having a direct contract with the Contractor, or with another Subcontractor, for the construction of a part of the project.

**-SUBSTANTIAL COMPLETION DATE-** That date as certified by the Owner's Agent or Representative when the construction of the Project, or a specified part thereof, is sufficiently completed in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purpose for which it is intended.

**-SUPPLIER-** Any person or organization who supplies materials or equipment for the work, including that fabricated to a special design, but who does not perform labor at the site.

**-WORK-** All labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in the Project.

**-WRITTEN NOTICE-** Any notice to any party of the Agreement relative to any part of this agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party or his authorized representative on the Work.

### **B.01.03 ABBREVIATIONS**

The following abbreviations, as used in the Contract Documents, have the listed meanings:

ABS	Amtech Building Sciences, Inc. (Roof Consultant, Architect, Special Consultant)
A.S.T.M.	American Society for Testing and Materials
BOCA	Building Officials Congress of America
F.M.	Factory Mutual
IN	Inches
LBS	Pounds
NBS	National Bureau of Standards
SPEC	Specification
U B C	Uniform Building Code
U.L.	Underwriters Laboratory

### **B.01.04 ADEQUACY OF DRAWINGS AND SPECIFICATIONS**

Responsibility for adequacy of the design and for sufficiency of the Drawings and Specifications shall be borne by the Owner. The complete requirements of the Work to be performed under the Contract shall be set forth in Drawings and Specifications to be supplied by the Owner through the Owner's Agent as representative of the Owner. Drawings and Specifications furnished shall be in accordance with the Contract Documents and shall be true and accurate developments thereof. All information concerning utilities shown on the Drawings were obtained using the best information available. No guarantee is given or implied that the information or the location shown is absolutely correct, or that other facilities, in addition to those shown, are not present and may be encountered.

### **B.01.05 DIMENSIONS**

Figured dimensions on the Drawings will be used in preference to scaling the Drawings. Where dimensions are not shown on the Drawings and are required for the Contractor to properly construct the work, he shall obtain such dimensions by field measurements.

### **B.01.06 CONFLICTS**

If there are conflicts among the Supplemental Specifications, the Drawings and/or the Detailed Specifications, unless the contractor has received written clarification to resolve the conflicts, the contractor shall calculate the cost of the work to be provided under the contract as the most expensive of the options represented that are in conflict.

### **B.01.07 DISCREPANCIES IN DRAWINGS AND SPECIFICATIONS**

Any discrepancies found between the Drawings and Specifications and site conditions, or any errors or omissions in the Drawings or Specifications shall be immediately reported to the Owner's Agent, who shall promptly correct such error or omission in writing. Any work done by the Contractor after his discovery of such discrepancies, errors, or omissions shall be done at the Contractor's risk.

### **B.01.08 SPECIFICATIONS BY REFERENCE**

Where reference is made in the Specifications to specifications or standards of any technical society association, governmental agency, etc., it is understood and agreed that such specifications or standards are a part of the Specification as though fully repeated therein. In interpreting any specification or standard referred to, terms such as "Purchaser", "Owner," and the like shall be understood to mean the person or the organization designated as the Owner in the Contract, acting

by and through its duly constituted legislative body. Terms such as "Supplier", and the like shall mean the Contractor. It is understood and agreed that the use or application of any specification or standard referred to shall not necessarily be restricted to that which may be named in the title or the specification or standard, but shall be used or applied as set forth in these specifications.

The Contractor shall secure copies of standards and specifications referred to herein. A copy of each specification or standard referred to is on file in the Owner's Representative's or Agent's Office. It is assumed that a Contractor bidding this Work shall be qualified and experienced in the type of Work involved and will have access to the specifications or standards referred to.

#### **B.01.09 COPIES OF THE DRAWINGS AND SPECIFICATIONS**

Except as provided for otherwise, all copies of the Drawings and Specifications reasonably necessary for the execution of the Work shall be furnished to the Contractor without charge.

#### **B.01.10 DRAWINGS AND SPECIFICATIONS AT THE JOB SITE**

One complete set of all Drawings and Specifications and other data prepared, shall be maintained at the job site and shall be available to the Owner, Owner's Agent or Rep. at all times.

#### **B.01.11 OWNERSHIP OF DRAWINGS AND SPECIFICATIONS**

All original or duplicate Drawings and Specifications, and other data prepared, shall remain the property of the Owner's Agent, and they shall not be reused on other work, but shall be returned to him upon completion of the work upon demand.

### **B.02 LIMITATION OF LIABILITY, INDEMNIFICATION AND INSURANCE**

#### **B.02.01 LIMITATION OF LIABILITY**

The Contractor affirmatively represents that he is skilled and experienced in the use and interpretation of Drawings and Specifications such as those included in the Bidding Documents of this Contract. Further, he also affirmatively represents that he has carefully reviewed the Drawings and Specifications of this Contract and that he has based his Proposal solely on these Documents, not relying in any way on any explanation or interpretation-oral or written-from any other source.

Unless the Contractor shall give written notice to the design professional of any ambiguities contained in the Drawings or Specifications prior to the Submission of his Proposal, the Contractor agrees that he shall be conclusively presumed that the Contractor has exercised his aforementioned skill and experience and found the Drawings and Specifications sufficient and free from ambiguities, errors, or omissions for the purpose of determining his Contract Proposal Price for the performance of the Work in conformity with the Drawings and Specifications.

Submission of a Proposal without prior written notice to the Owner's Agent or any claimed ambiguities, errors or omissions shall constitute a waiver of any and all Proposal-price-related claims by the Contractor that are based upon any alleged ambiguities, errors, omissions or the like in the Drawings or Specifications.

#### **B.02.02 INDEMNIFICATION**

The Contractor agrees to indemnify, defend and save harmless the Owner and the Consultant, their consultants, agents and employees from and against all loss or expense (including costs and attorney fees) by reason of liability imposed by law upon the Owner, Consultant, sub-consultants, agents and employees for damages because of bodily injury, including death at any time resulting therefore, sustained by any person or persons or on account of damage to property, including loss of use thereof, arising out of or in consequence of the performance of this Work, whether such injuries to person or damage to property is due or claimed to be due to the negligence of the Contractor, his sub- contractors, the Owner, the Consultant, their consultants, agents and employees, except only such injury or damage as shall have been occasioned by the sole negligence of the Owner, Consultant, and/or other Agents.

### **B.02.03 QUALIFICATION OF INSURANCE COMPANIES**

All insurance required under these Specifications shall be furnished by an insurance company qualified to do business in the state in which the Work is located and shall have a rating of "A" as listed in the current issue of A.M. Best's "Key Rating Guide".

### **B.02.04 WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE**

The contractor shall procure and maintain in force during the life of the Contract Workman's Compensation Insurance as required by the statutes of the state in which the Work is located for all his employees engaged in the Work connected with this Contract.

If the Work involves maritime or railroad exposure which requires coverage under Longshoreman's and Harbor Worker's Act or under the Maritime and Federal Employer's Liability Act, in lieu of or in addition to Worker's Compensation coverage, the Worker's Compensation policy shall be endorsed to provide such coverage. In addition, the Worker's Compensation policy shall be endorsed to define the scope of coverage for the Contractor's Corporate Officers or Partners if required by the Worker's Compensation Law of the state in which the Work is located.

The Contractor shall also procure, and maintain in force during the life of the Contract, Employer's Liability Insurance in an amount not less than \$500,000.00 for each accident, \$500,000.00 disease policy limit and \$500,000.00 disease each employee.

**Before starting the Work, the Contractor shall file with the Owner and the Owner's Agent certificates of the insurance(s) described above, in forms acceptable to the Owner. Submit insurance certificates that have the following wording; "Workers Compensation policy covers all employees working on this project (name project), including all employees of the contractor and all sub contractors as well as sole proprietors, partners and executive officers". List on the Insurance Certificate; Class codes and estimated payroll for the job (project). Forms may be required to state that the Insurance Company will notify by certified mail any terminations of policies that would take place during the life of the Contract.**

### **B.02.05 COMPREHENSIVE GENERAL LIABILITY INSURANCE**

The Contractor shall procure and maintain during the Life of this Project Comprehensive General Liability Insurance to protect from claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees including claims insured by personal injury during liability coverage and from claims for injury or destruction of tangible property including loss of use resulting therefrom -- any and all of which may arise out of or as a result from the Contractor's operations under the Contract whether such operations be by himself or by any Sub-Contractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be legally liable such insurance shall include coverage for:

- A. Operation and Premises
- B. Independent Contractor Protective Liability
- C. Contractual Liability
- D. Explosion, Collapse, or Underground Damage

The limits of Liability for bodily damage including accidental death shall be \$500,000.00 per occurrence and a total combined single limit policy aggregate amount of \$1,000,000.00. Property damage deductible shall not exceed \$500 per occurrence.

**Before starting the Work, the Contractor shall file with the Owner, certificates of the insurance described above, acceptable to the Owner.**

### **B.02.06 COMPREHENSIVE MOTOR VEHICLE LIABILITY INSURANCE**

The Contractor shall procure and maintain during the life of this Contract Comprehensive Motor Vehicle Liability Insurance in an amount not less than \$1,000,000.00 for combined single limit each occurrence. The policy shall include coverage for owned, non-owned, and hired motor vehicles.

### **B.02.07 UMBRELLA EXCESS LIABILITY INSURANCE**

The Contractor shall procure and maintain during the life of the Contract an Umbrella Excess Liability Insurance policy in the single limit of at least \$1,000,000.00 for this specific Project. This insurance shall cover at least all risks described in the Comprehensive General Liability and the Comprehensive Motor Vehicle Liability policies.

### **B.02.08 ADDITIONAL INSURED**

The Owner will be named as an additional insured on all required insurance.

### **B.02.09 IMMUNITY**

Any immunity of the Owner shall not be a defense from the insurance carrier.

## **B.03 CONTRACT BONDS**

### **B.03.01 PERFORMANCE BOND**

At the time of the execution of the Agreement by the Owner, the Contractor shall furnish a Performance Bond in an amount equal to 100% of the Contract Amount. The surety shall be authorized to do business in the state where the Work is located.

### **B.03.02 LABOR AND MATERIAL PAYMENT BOND**

At the time of execution of the Agreement by the Owner, the Contractor shall furnish a Labor and Material Bond in an amount equal to 100% of the Contract Amount. The surety shall be authorized to do business in the state where the work is located.

## **B.04 ROOF CONSULTANT - OWNER - CONTRACTOR RELATIONS AND AUTHORITY**

### **B.04.03 CONTRACTOR'S AUTHORITY AND RESPONSIBILITY**

The Contractor shall supervise and direct the Work efficiently and with his best skill and attention. He will be held solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor will be responsible for ensuring that the finished Work complies accurately with the Contract Documents.

The Contractor's attention is directed to the "Safety and Health Regulation for Construction: (and subsequent amendments) promulgated by the United States Department of Labor, identified as OSHA Safety and Health Standards General Industry Standards, covering Safety and Health Standards for construction. These rules and regulation are incorporated by reference in these Contract Documents and all Work under this Contract shall be performed in compliance with them.

### **B.04.04 CONTRACTOR'S SUPERINTENDENT**

A qualified superintendent who is acceptable to the Owner's Agent shall be maintained on the Work and at the job site at all times work is commencing and shall give efficient supervision to the Work until its completion. The superintendent shall have full authority to act in behalf of the Contractor.

### **B.04.05 CONTRACTOR'S RIGHT TO SUSPEND WORK OR TERMINATE CONTRACT**

The Contractor may suspend Work or terminate the Contract upon 10 days written notice to the Owner and the Consultant, for any of the following reasons:

- a. If an order of any court, or other public authority caused the Work to be stopped or suspended for a period of 6 months through no act or fault of the Contractor or his employees.
- b. If the Owner should fail to make any progress payments within 45 days after an Owner's Agent verification for payment has been issued or agreed upon.

### **B.04.06 SUSPENSION OF WORK BY THE OWNER**

The Work, or any portion thereof, may be suspended at any time by the Owner for his convenience, provided that he gives the Contractor five days (5) written notice of said suspension. The Contractor

shall resume the Work upon written notice from the Owner. If the Owner does not give written notice to resume work within 30 (thirty) days of the date of the notice of suspension, the Contractor may abandon that portion of the Work so suspended and shall be entitled to payment in accordance with these specifications.

#### **B.04.07 OWNERS RIGHT TO CORRECT DEFICIENCIES**

Upon failure of the Contractor to perform the Work in accordance with the Contract Documents, including any requirements with respect to the schedule of completion and after five (5) days written notice to the Contractor and the receipt of a written statement of deficiencies from the Owner's Agent, the Owner may, without prejudice to any other remedy he may have, correct such deficiencies.

#### **B.04.08 OWNER'S RIGHT TO TERMINATE CONTRACT AND COMPLETE THE WORK**

In the event of any default by the Contractor, and upon receiving written notice from the Owner's Agent certifying cause for such action, the Owner shall have the right to terminate the employment of the Contractor after giving ten (10) days written notice of termination. After such termination of employment the Owner may take possession of the Work and of all materials, tools, and equipment thereon and may finish the Work by what ever method and means he may elect. It shall be considered a default by the Contractor whenever he shall:

- a. Declare bankruptcy, becomes insolvent, or assigns his assets for the benefit of his creditors.
- b. Disregards or violates important provisions of the Contract Documents or Owner's Agent instructions, or fails to make prompt payment thereof.

#### **B.04.09 AUTHORITY OF OWNER'S AGENT**

No Agent of the Owner shall have power to revoke, alter, enlarge, or relax the stipulations or requirements of the Specifications without the Owners prior approval.

#### **B.04.10 OWNER'S ROOF CONSULTANT RESPONSIBILITY AND AUTHORITY**

The Roof Consultant shall assist the Owner in decisions pertaining to questions which may arise as to the quality and acceptability of the materials furnished, Work performed, rate of progress of Work, interpretation of Drawings and Specifications, and all questions as to the acceptable fulfillment of the Contract on the part of the Contractor.

The Owner's Roof Consultant will not be responsible for the construction means, methods, controls, techniques, sequences, procedures, or construction safety.

#### **B.04.11 ROOF CONSULTANT'S DECISIONS**

All claims of the Contractor shall be presented to the Roof Consultant for his assistance in the Owner's decision, which shall be made in writing within a reasonable amount of time. The Owner's decision shall then be final and conclusive.

#### **B.04.12 SUSPENSION OF WORK BY ROOF CONSULTANT**

The Roof Consultant shall have the authority (with Owner's permission) to suspend the Work, wholly or in part, for such period or periods as he may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for prosecution of the Work, or failure on the part of the Contractor to carry out the provisions of the Contract or to supply materials meeting the requirements of the Specifications. The Contractor shall not suspend operation without the Roof Consultant's Written Permission.

Should it become necessary to suspend work, Contractor shall pay for the:

- 1) Removal of all material from the job site.
- 2) Placement of all material into a secured and bonded type warehouse.
- 3) Costs of material storage until such time as approval from the Owner is given to resume.
- 4) Costs of installing water cutoffs that are expected to withstand protracted periods of exposure.

#### **B.04.13 RIGHTS OF VARIOUS INTEREST**

Whenever Work is being done by Owner's forces or by other Contractors adjoining to Work covered by this Contract, the respective rights of the various interests involved shall be established by the Roof Consultant and the Owner to secure the completion of the various portions of the Work in general harmony.

### **B.05 CONTRACT EXECUTION**

#### **B.05.01 ASSIGNMENT OF THE CONTRACT**

Neither the Contractor nor the Owner shall sublet, sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, there under, without written consent of the other party involved.

Signing the bid and signing the Contract Documents constitutes certification that to the best of Contractor's knowledge no officer, representative, agent or employee of Owner has benefited or will benefit financially or materially from this Contract. Contractor agrees that participation with an Owner-employee constitutes material breach of contract entitling Owner to terminate this contract for default.

#### **B.05.02 NOTICE OF AWARD**

Award of the Contract, if it is awarded, will be to the lowest responsible, responsive Bidder whose proposal complies with all requirements prescribed and whose Proposal is in the Owner's best interest. The Owner shall have the right to refuse any and all Proposals as he sees fit. The award, if made, will be made within the number of days specified in the Bidding Documents (if specified), after the scheduled closing time for receipt of the Proposals.

The Contract shall be deemed to have been awarded after the Owner has accepted the Proposal and a formal "Notice to Proceed" has been served upon the intended awardee by the Owner. Notice placed in the United States Mail properly addressed to the address given by the Bidder in his Proposal shall constitute valid service.

#### **B.05.03 NOTICE TO PROCEED**

Following execution of the Agreement by the Owner, a written Notice to Proceed with the Work shall be given to the Contractor. From then on the Contractor shall begin and shall prosecute the Work regularly without interruption thereafter (unless otherwise directed in writing by the Owner), with such forces as to secure the completion of the Work within the Contract Time.

#### **B.05.04 CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER AND ROOF CONSULTANT**

After receipt of the Notice to Proceed from the Owner and prior to the start of construction, the Contractor shall notify the Owner and Roof Consultant, when the Work is to commence. The Owner shall be allowed seventy-two (72) hours, if needed, to arrange for inspection and testing of the Work.

#### **B.05.05 CONTRACTOR'S RESPONSIBILITY TO NOTIFY GOVERNING AGENCIES**

The Contractor shall notify all governing agencies and all concerned utility companies 48 hours prior to the start of construction. Additional notification shall be given by the Contractor to all the above mentioned parties 48 hours prior to crossing, connecting to, or working in the vicinity of any right-of-way utility owned or controlled by any of the concerned parties.

#### **B.05.06 SEPARATE CONTRACTS**

The Owner may let other contracts in connection with the Work of the Contractor to other trades if the Project so requires. The Contractor shall cooperate with the other Contractors with the storage of materials and execution of their work. It shall be the Contractor's responsibility to inspect all Work by other Contractors affecting his Work and to report to the Roof Consultant any irregularities that will not permit him to complete his Work in a satisfactory manner. His failure to notify the roof Consultant of such irregularities shall indicate the Work of other Contractors has been satisfactorily completed to receive his Work.

#### **B.05.07 SUBCONTRACTS**

At the time specified by the Bidding and Contract Documents, or when requested by the Roof Consultant, the Contractor shall submit in writing to the Owner for the Owner's approval, the names of the Subcontractors proposed for scheduled Work. Subcontractors may not be changed except at the request, or with the approval of, the Owner.

The Contract Documents shall not be construed as creating any contractual relation between any Subcontractor and the Owner. The Contractor shall bind every Subcontractor by the terms of the Contract Documents.

#### **B.05.08 ORAL AGREEMENTS**

No oral agreement, order, objection, claim or notice by any party shall affect or modify any of the terms or obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason of any act what-so-ever, other than by a definitely agreed waiver or modification thereof in writing, and no evidence shall be introduced in any proceeding of any other waiver or modification. **Get agreements in writing!**

#### **B.05.09 CHANGES IN THE WORK**

The Owner may, as the need arises, order changes in the Work throughout additions, deletions, or modifications without invalidating the Contract. The Owner reserves the right to delete or add work costing up to 30% of the original total Contract Amount without penalty or changes in the Unit Prices shown in the Proposal. Payment and time of completion affected by such changes shall be adjusted at the time of ordering such changes.

#### **B.05.10 EXTRA WORK**

New and unforeseen items of work found to be necessary, and which cannot be covered by any item or combination of items for which there is a Contract Price, shall be classed as Extra Work. The Contractor shall do such Extra Work and furnish such materials as may be required for the proper completion or construction of the whole Work contemplated, upon written notice from the Owner as approved by the Roof Consultant. In the absence of such written notice, no claim for Extra Work shall be considered. Extra Work shall be performed in accordance with these specifications; or special provisions shall be done in accordance with the best practice as approved by the Consultant. Extra Work as required in an emergency to protect life and property shall be performed by the Contractor as required.

#### **B.05.11 TIME FOR COMPLETION AND LIQUIDATION DAMAGES**

It is hereby understood and mutually agreed by and between the Contractor and Owner that the date of beginning and the time for completion as specified in the Bidding Documents are **ESSENTIAL CONDITIONS** of this Contract; and it is further mutually understood and agreed that the Work embraced in this Contract shall be commenced on a date to be specified in the "Notice to Proceed". The Contractor agrees that said Work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will insure full completion, in an acceptable manner thereof, within the time specified.

The Contractor affirms that the time for completion of the Work described here is a reasonable time for completion of the Work and that he has sufficient plan, equipment and man power to accomplish the Work within the specified time for completion. It is further agreed that **TIME IS OF THE ESSENCE** of each and every portion of this Contract and of Individual Specification Sections wherein a definite and certain length of time is fixed for the performance of any act what so ever; and where under the Contract an additional time is allowed for the completion of any Work, the new time limit fixed by such extension shall become the essence of this Contract.

**WORK IS TO BE PERFORMED WITHIN TIME LIMITS ESTABLISHED IN THE BIDDING AND CONTRACT DOCUMENTS OR IN THE "NOTICE TO PROCEED." SHOULD THE WORK NOT BE COMPLETED BY THE SPECIFIED DATE, THE CONTRACTOR FURTHER AGREES TO**



**COMPENSATE THE OWNER AT THE RATE OF \$250.00 A DAY. THIS COMPENSATION WILL BE DEDUCTED FROM THE RETAINAGE HELD BY THE OWNER.**

**B.05.12 EXTENSION OF THE CONTRACT TIME**

A delay beyond the Contractor's control, occasioned by an Act Of God, or an act or omission on the part of the Owner, or by strikes, lockouts, fire, or similar occurrences, may entitle the Contractor to an extension of time by which to complete the Work, as determined by the Roof Consultant. However, the Contractor shall within five (5) days after the beginning of such delay, give written notice to the Owner of the cause of said delay.

**B.06 USE OF LANDS AND PROPERTY**

**B.06.01 PERMITS AND LICENSES**

The Contractor shall procure and pay for all permits, licenses and fees necessary for the execution of Work.

If the Contract Documents require the Contractor to satisfy standards more stringent than those required by public authorities, the contractor shall satisfy the contract requirements and not just the requirements of the public authorities.

**B.06.02 LANDS BY THE OWNER**

The Owner shall provide the lands upon which the Contractor and the Work of the Contract is to be performed and/or which is to be used for the rights-of-way or access all as shown on the Drawings. Any delay in furnishing these lands by the Owner shall be deemed proper cause of adjustment in the Contract Amount and in the Time of Completion.

**B.06.03 LANDS BY CONTRACTOR**

Any additional land and access thereto not shown on the Drawings that may be required for temporary construction procedures or facilities or for storage of materials shall be procured and provided by the Contractor with no liability to the Owner.

The Contractor shall confine his apparatus and storage of materials and operation of his workers to those areas described in the Drawings and Specifications and such additional areas which he may provide as approved by the Owner and Roof Consultant.

**B.06.04 PRIVATE PROPERTY**

The Contractor shall not enter upon private property for any purpose without obtaining written permission. Copies of such written permission shall be furnished to the Owner and Roof Consultant upon request. He shall be responsible for the preservation of all private property, trees, monuments, fences, etc., along the adjacent street, right-of-way, etc., and shall use every precaution necessary to prevent damage or injury thereto. He shall use suitable precautions to prevent damage to pipes, conduits, and other structures.

**B.06.05 PATENTS AND ROYALTIES**

If any design, device, material, or process covered by letters, patents or copyrights is used by the Contractor, he shall provide for such use by legal agreement with the Owner of the patent or copyright, or by a licensee of such Owner, and shall indemnify and save harmless the Owner of the Project from any and all loss or expense on account thereof, including its use by the Owner of the Project.

**B.06.06 LAWS TO BE OBSERVED**

The Contractor shall give all notices and comply with all federal, state, and local laws, ordinances, and regulations, in any manner affecting the conduct of the Work, and all such orders and decrees as exist or may be enacted by bodies or tribunals having any jurisdiction or authority over the Work, and shall indemnify and save harmless the Owner against any claim or liability arising from, or based

on, the violation of any such law, ordinance, regulation order, or decree, whether by himself, his employees or Subcontractors.

## **B.07 WORKMANSHIP AND MATERIALS**

### **B.07.01 QUALITY OF EQUIPMENT AND MATERIALS**

In order to establish standards of quality, the Roof Consultant and Owner have, in the Specifications, referred to certain products by name and catalog number. This procedure is not to be construed as eliminating from competition other manufacturers where fully suitable in design. However, if the Contractor does desire to make substitutions, he shall observe the following:

- a. The Contractor shall furnish the complete list of proposed desired substitutions prior to submitting his Proposal, together with such engineering, catalog and performance history data as the Owner and Consultant may require.
- b. The Contractor shall abide by the Owner's decision and judgement when proposed substitute materials or items of equipment are judged not acceptable and shall furnish those items, materials and/or equipment as specified.
- c. All proposed substitutions shall be submitted in accordance with specification sections 01 2500, 01 6000 and 01 6100.
- d. Approved changes must be in writing and no substitutes will be used unless the Contractor receives written approval from the Owner.

### **B.07.02 CHARACTER OF WORKERS**

The Contractor shall at all times be responsible for the conduct and discipline of his employees and/or any subcontractors or persons employed by the subcontractors. All workers must have sufficient knowledge, skill and experience to perform properly the Work assigned to them. Any foreman or workman employed by the Contractor or Subcontractor who, in the opinion of the Roof Consultant, does not perform his work in a skillful manner, or appears to be incompetent or to act in a disorderly or intemperate manner shall, at the written request of the Roof Consultant be immediately removed from the job site and shall not be employed again in any portion of the Work without the approval of the Roof Consultant.

#### Equal Employment Opportunity

Contractor shall provide all persons equal opportunity for Employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. Contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting forth the nondiscrimination provision of this contract.

#### Minimum Wage Rate

No worker employed directly at the Project site by the Contractor or any Subcontractor, agent or other person doing or contracting to do all or a part of the Work on the Project may work more hours than the prevailing hours of labor unless paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 ½ ) times the hourly basic rate of pay. If Contractor or any Subcontractor fails to pay any of its laborers or mechanics prevailing wages or overtime wages if applicable, Contractor or Subcontractor shall (a) immediately make payment of such prevailing wages to the laborers or mechanics that were underpaid; and (b) hold the Owner harmless for any claims, demands or causes of action (including reasonable attorney's fees and costs) arising for such failure.

See Section 00825 – Prevailing Wage Rate for Cameron and Hidalgo County

### **B.07.03 MATERIALS FURNISHED BY THE CONTRACTOR**

All materials used in the Work shall meet the requirements of the respective Specification and shall be new materials and no material shall be used until it has been approved by the Owner. All materials not otherwise specifically indicated shall be furnished by the Contractor.

## **B.08 PUBLIC SAFETY**

### **B.08.01 COMPLIANCE WITH APPLICABLE STANDARDS AND REGULATIONS**

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in conjunction with the Work. Contractor shall take all the necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to: All employees on the Work and to other persons who may be affected thereby; all the Work and all the materials or equipment to be incorporated therein whether in storage on or off the site; and other property at the site or adjacent thereto including trees, shrubs, lawns, walks, pavements, roadways, and those structures and utilities not designed for removal, relocation or replacement in the course of construction.

The Contractor shall comply with all applicable **laws, ordinances, rules, regulations, and orders** of any **public body** having jurisdiction. The Contractor shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. The Contractor shall notify the Owner of adjacent utilities and properties when prosecution of the Work may affect those items.

#### **B.08.01.a. PROTECTION OF PERSONS AND PROPERTY**

In the event the Contractor encounters on the site material reasonably believed to be asbestos or polychlorinated biphenyl (PCB) which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and Consultant in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Contractor, if in fact the material is asbestos or PCB and has not been rendered harmless. The Work in the affected areas shall be resumed in the absence of asbestos or PCB, or when it has been rendered harmless, by written agreement of the Owner and Contractor, or in accordance with final determination by the Consultant on which arbitration has not been demanded, or by arbitration under other articles. The Contractor shall not be required to perform without consent any Work relating to asbestos abatement or PCB.

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

### **B.08.02 WARNING SIGNS AND BARRICADES**

The Contractor shall provide adequate signs, fences, barricades, signal lights and watchmen, and shall take all necessary precautions for the protection of the Work and safety of the public. Said warning and protection devices shall comply with the requirements of the governing agencies involved.

### **B.08.03 PUBLIC SAFETY AND CONVENIENCE**

The Contractor shall at all times conduct his Work to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the Work, and to insure the protection of persons and property in a manner satisfactory to the Owner and proper governmental authority. All local, state and national laws, ordinances, rules, and regulations pertaining to the kind, use and loading of all apparatus, equipment, and material shall be complied with as well as all other reasonable precautions required by the Owner, to insure safe working conditions. Fire hydrants, water supply valves and gas valves on or adjacent to the Work shall be accessible at all times.

**The Contractor has sole responsibility for the proper construction of the Project and is solely responsible for the safety in, on and about the Job site; control of the safety or adequacy of any equipment, building component, scaffolding, sheeting, bracing, forms, or other Work aids; and superintending the Work.** Construction review or inspection by the Owner shall not relieve the Contractor from the above responsibilities.

### **B.08.04 WORK DURING AN EMERGENCY**

The Contractor shall perform any Work and shall furnish and install any materials and equipment necessary during an emergency endangering life and property. In all cases he shall notify the Roof Consultant and Owner of the emergency as soon as possible, but he shall not wait for instructions before proceeding to properly protect both life and property.

## **B.09 MEASUREMENT AND PAYMENT**

### **B.09.01 BREAKDOWN OF CONTRACT AMOUNT**

In cases where a Lump Sum Contract Amount forms the basis for payment under the Contract, the Contractor shall, within ten (10) days of receipt of the Notice to Proceed, submit a complete breakdown of the Contract Amount in the form of a Schedule of Values. The breakdown shall show the value assigned to each part of the Work, including an allowance for profit and overhead. Upon approval of the breakdown by the Owner, it shall be used as a basis for all requests for payment. The approved breakdown will not be considered as fixing a basis for additions to or deductions from the Contract Amount.

In cases where the Unit Prices form the basis for payment under the Contract, the summation of the amounts determined by multiplying the total number of each of the completed units of Work by the Unit Price stated in the Proposal for that item shall be used as the basis for payment requests. The number of units contained in the Proposal is approximate only, and final payment will be made for the actual number of units that are incorporated into or made necessary by the Work covered in the Contract.

“CERTIFICATE OF CURRENT COST AND PRICING”

“A certificate that cost and pricing data are accurate, complete and current must accompany Change Order proposals, application for payment, and requests for reimbursable expenses. An authorized official who has actual knowledge of the data shall execute the certificate. This clause shall be included in all subcontracts and be understood to require an authorized official of each subcontractor to execute the certificate.”

***“Certificate of Current Cost or Pricing Data”***

***This is to certify that, to the best of my knowledge and belief, the cost and pricing data submitted in support of Roof Replacement / Rivera H.S. CSP: #15-062) are accurate, complete, and current as of the Date of this Proposal.***

***Signature*** \_\_\_\_\_

Name \_\_\_\_\_

Firm Name \_\_\_\_\_

Date \_\_\_\_\_

#### **B.09.02 REQUESTS FOR PAYMENT**

Periodically (at the specified times, but not more than once a month), the Contractor shall submit to the Owner, a request for Payment for Work performed. A copy of the Contractor's Declaration (in a form attached at the rear of this division) shall be completed, signed and attached to each request for Payment. Also, to be included shall be any Waivers of Lien required from subcontractors and suppliers as well as any other periodic reports required (such as monthly payrolls, etc.).

In cases where a Lump Sum forms the basis for payment under the Contract, the Request for Payment shall indicate the Work completed to date on the items listed in the approved "Schedule of Values". If the Request for Payment includes materials and equipment, stored on the site, it shall be accompanied by **PAID INVOICES** from the manufacturer or supplier, or such other information satisfactory to the Owner.

In cases where Unit Prices form the basis for payment under the Contract, the Request for Payment shall state the Units of Work completed to date. If the Request for Payment includes materials and equipment stored at the site, it shall be accompanied by invoices from the manufacturer or supplier or such other information as deemed satisfactory to the Owner.

In cases where Lump Sum Items are included in a Unit Price Contract, the Contractor shall be paid for the percentage of Work completed, as determined by the Owner and assisted by the Roof Consultant.

#### **B.09.03 ROOF CONSULTANT'S VERIFICATION FOR PAYMENT**

If so requested by the Owner, the Roof Consultant shall review the Request for Payment from the Contractor to assist the Owner in making completion verification. Within ten (10) days of the Owner's request the Roof Consultant shall verify or estimate the Work completed and/ or the materials at the Job site.

#### **B.09.04 PROGRESS PAYMENTS TO THE CONTRACTOR**

Application for Payment must be received by the Architect seven days prior to the Owner's deadline for application for payment. Holidays may result in exceptions to the above stated deadline.

#### **B.09.05 OWNER'S RIGHT TO WITHHOLD PROGRESS PAYMENTS**

The Owner may withhold any Progress Payment, in whole or in part, on the Roof Consultant's verification for Payment, to the extent necessary to protect himself from loss on account of any of the following causes discovered subsequent to the submittal of the Roof Consultant's verification:

- A. Defective Work.
- B. Evidence indicating probable filing of claims by other parties against Contractor
- C. Failure of Contractor to make payment to Sub-Contractors and/or material suppliers.
- D. Damage to another Contractors Work.
- E. Failure to submit periodic reports required by the Contract Documents.
- F. Damage to Owner's premises other than scheduled Project Area.

#### **B.09.06 PAYMENT FOR REJECTED WORK AND MATERIALS**

The removal of rejected Work and materials and the execution of such Work in an acceptable state shall be done at the expense of the Contractor; and he shall pay the costs of replacing other Contractor's Work which is destroyed or damaged by the removal and subsequent replacement of the rejected Work or materials.

**B.09.07 PAYMENT FOR UNCORRECTED WORK**

Should the Owner or Consultant direct the Contractor not to correct Work that has been damaged or that has not been performed in accordance with the Contract Documents, an equitable deduction from the Contract Price shall be made to compensate the Owner for the uncorrected Work.

**B.09.08 PAYMENT FOR WORK DONE BY OTHERS**

The costs of the Work performed by the Owner in removing construction equipment, tools, and supplies and for correcting any deficiencies shall be paid by the Contractor.

**B.09.09 PAYMENT FOR WORK SUSPENDED BY THE OWNER**

If the Work or any part thereof shall be suspended by the Owner, through no fault of the Contractor, the Contractor will then be entitled to payment for all Work done up to that suspended Work plus a negotiated value (not to exceed 10%) of the uncompleted Work to compensate for overhead, plant expense, anticipated profit, and restock of material.

**B.10 PAYMENT FOR WORK DONE BY THE OWNER FOLLOWING HIS TERMINATION OF THE CONTRACT**

If the Owner terminates the Contract due to fault of the Contractor (as detailed in B.09.05), no further payments shall be due the Contractor until the Work is completed and settlements have been resolved by both parties. The costs incurred by the Owner to have the Work completed by another Contractor due to default as herein provided shall be as certified by the Owner and enter into resolution agreements.

**B.10.10 PAYMENT FOR EXTRA WORK**

Written notice of claims for payments for Extra Work shall be given by the Contractor within ten (10) days after the receipt of the Request for Extra Work from the Owner. No claim for payment of extra work shall be valid unless so made. In all cases the Contractor's itemized estimate sheets showing all labor and material shall be submitted to the Roof Consultant. The Owner's order for extra Work shall be in the form of a Change Order to be signed by both the Owner and Contractor and shall specify any extension of the Contract Time and one of the following methods of payment:

- A. Unit Price or combinations of unit prices which formed the basis of the original Contract.
- B. A Lump Sum Price based on the Contractor's estimate approved and accepted by the Owner.
- C. Actual Cost of Direct Work by the Contractor plus 15% mark-up for overhead and profit. Actual Cost of Subcontract Work plus 5% mark-up for overhead and profit. Actual costs are assigned the following:
  1. Labor costs shall be the amount shown on the Contractor's payroll plus benefits (workers compensation, taxes, union benefits, etc.)
  2. Material costs shall be the net price paid by the Contractor to his supplier for that material delivered to the site, verified by invoices.
  3. Equipment rental shall be the actual costs incurred for necessary equipment actually used for the Work. All costs shall be in accordance to the invoices provided by the rental company plus those fuel and lubricant rates as certified by the rental company.

**B.11 COMPLETION AND ACCEPTANCE OF THE WORK****B.11.01 GUARANTEES**

The Contractor shall warrant all materials and workmanship furnished for a period of two (2) years for the date placing the Work in service regardless of the terms of any manufacturer or supplier warranties.

### **B.11.02 USE OF COMPLETED PORTIONS OF THE WORK**

The Owner shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding that the time for completing the entire Work or such portions may not have expired; but such taking possession and use shall not be deemed as acceptance of any Work not completed in accordance with the Contract Documents.

If such prior use increases the cost of, or delays, the completion of uncompleted Work or causes refinishing of completed Work, the Contractor shall be entitled to such extra compensation, or extension of time or both as the Owner, Contractor and Consultant resolve.

### **B.11.03 RELEASE OF LIENS**

The Contractor shall deliver to the Owner a complete release of all liens or claims arising out of this Contract before any retained percentages or the final request for payment is paid. If any lien or claim remains unsatisfied after all payments are made, the Contractor shall refund to the Owner such amounts as the Owner may have been compelled to pay in discharging such liens or claims, including all costs and a reasonable attorney's fee.

### **B.11.04 ACCEPTANCE AND FINAL PAYMENT**

When the Contractor shall have completed all the Work in accordance with the terms of the Contract Documents, the Contractor shall submit to the Owner the following items for review.

- A. A signed Contractor's Declaration that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents.
- B. A signed Contractor's Affidavit on a form acceptable to the Owner.
- C. Release of Liens described above.
- D. Waiver of Liens from all supplies and Subcontractors indicating that all debts incurred have been paid in full.
- E. Letters of Release approving final payment to the Contractor from all parties concerned with the Work. This may include utilities, surety companies, municipalities, etc.

The Consultant shall assist the Owner in verifying these items if so requested and assist in verifying the Final Contract Amount which shall be the Contract Amount plus all extra work additions that have been approved and less all approved deletions or deductions, if requested.

Provided that the Owner receives notice of final completion and acceptance including of all punch list items and submittal of all close out documents and after recordation of an Affidavit of Completion in the Cameron County Clerk's office, no later than 15 calendar days prior to the next School Board meeting, Owner shall make payment to the Contractor within 30 days following that meeting. If the Owner does not receive such notice, final payment may be made no later 30 days after the next regularly scheduled meeting of the School Board.

### **B.11.05 CORRECTION OF FAULTY WORK AFTER FINAL ACCEPTANCE**

The approval by the Owner and Roof Consultant of the Final Request for Payment, and the making of the final payment by the Owner shall not relieve the Contractor of responsibilities for faulty materials or workmanship.

The Owner shall promptly give the Contractor notice of any faulty materials or workmanship discovered within the first 2 years after the date of written acceptance of the Work; and the Contractor shall promptly replace any such defects. The Roof Consultant may assist in resolving or deciding all conflicts of fact regarding such defects.

### **B.11.06 RIGHT TO AUDIT**

Contractor shall maintain accounting records relating to the performance of this contract in accordance with generally accepted accounting practices. Owner shall have the right to inspect and

copy all books, records, and documents (in whatever medium they exist). Contractor shall make such items available for inspection during normal business hours at Contractor's place of business. Contractor shall retain all such items during the term of this Contract and for a period of three (3) years after final acceptance. Contractor shall require subcontractors to allow the Owner to audit payments and change orders between the Contractor and subcontractor priced using cost reimbursement or time and materials. Computational or clerical errors made by the Contractor in the preparation of an invoice, final payment statement, or Change Order priced on a reimbursable or time and materials basis shall be corrected as follows. If the error favors the Owner, the Owner will issue a modification correcting the error and reimburse the Contractor for the error. If the error favors the Contractor, the Contractor shall make an adjustment on the next due progress payment invoice, identifying the basis for the correction and deducting the amount of overpayment. If final payment has been made, the Contractor shall make payment in response to a formal demand issued by the Owner. Should Contractor fail to make payment, Owner may set off under any contract between Owner and Contractor. This provision shall survive completion or termination of the contract.

**END OF SECTION 00 7000**



## DOCUMENT 00 8000 - SUPPLEMENTARY CONDITIONS

The following supplements add to the "GENERAL CONDITIONS".

### 1 DESCRIPTIONS OF PARTIES

- 1.1 **Owner:** **The City of Edinburg**  
415 W. University Drive, Edinburg Texas 78539  
Mr. Mardoqueo Hinojosa, City Engineer  
Telephone: (956) 388-8211
- 1.2 **Roof Consultant:** **Amtech Solutions, Inc.**  
1600 N. Jackson Rd., Ste. 3, Pharr, Texas 78577  
Allen Hibbs, AIA  
Telephone: (956) 686-3095

### 2 CONTRACTOR'S REPRESENTATIONS

- 2.1 The Contractor represents and warrants by submission of a Proposal that they:
1. are financially solvent;
  2. meet the qualifications specified in Individual Specifications;
  3. are experienced in and competent to perform the Work covered by Contract Documents and to provide the plant, materials, supplies, equipment, and manpower to perform the Work in the amount of Contract Time specified;
  4. are familiar with all applicable Federal, State, County, and Municipal laws, ordinances, and regulations that may affect the Work or those employed to perform the Work.
- 2.1.2 The Contractor shall make reasonable attempts to interpret the Contract Documents before asking the Roof Consultant for assistance in interpretation has carefully read and understands the Bidding Documents or Contract Documents, relating to the Work for which the Proposal is submitted.

### 3 SPECIFIC PROJECT REQUIREMENTS

- 3.1 All Owner Facilities are classified **Tobacco, Alcohol and Weapon Free Zones**; therefore, weapons, tobacco or alcohol products are not permitted on or at the Project site.
- 3.2 All personnel on this Project will be required to maintain **proper attire** while at the facility. Appropriate attire includes shoes, full-length trousers, and shirts.
- 3.3 **Profanity** on the facility will not be tolerated.
- 3.4 Entrance into Buildings will be limited to reasons of necessity and will be further limited to Contractor's Superintendent or Forman, unless specifically approved by Owner's Representative or for emergency situations.
- 3.5 The Contractor will be responsible for enforcement of all Rules and Regulations on the Project Site, including over Sub-Contractors, Material delivery personnel, and all others visiting the site for Project purposes.

### 4 TAXES

- 4.1 The Owner is exempt from Texas Sales Tax on any purchase, lease or rental of tangible personal property and will issue Certificates of Exemption from Texas Sales Tax on materials furnished by Contractors on School construction projects.
- 4.2 The Contractor shall obtain Certificates of Resale from their suppliers in order to avoid payment of State Sales Tax on materials incorporated in School Projects. Failure of the Contractor to obtain Certificates of Resale shall make the Contractor responsible for the payment of any resultant Sales Tax.

**END OF SECTION 00 8000**

## Section 01 1000 - SUMMARY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Work covered by the Contract Documents.
  - 2. Type of the Contract.
  - 3. Work under other contracts.
  - 4. Use of premises.
  - 5. Owner's occupancy requirements.
  - 6. Work restrictions.
  - 7. Specification formats and conventions.
- B. Related Sections include the following:
  - 1. Notice and Information for Proposers: Instructions for Proposal submittal; Notification of Pre-Proposal Conference; Locations for Drawings and Specifications Review; Proposing Procedures; and Award of Contract and Notice to Proceed Information.
  - 2. Proposal Forms: Breakdown of Contract Price; Schedule for Completion; Addenda acknowledgment; Required Proposal Documents and Due Times and Dates.
  - 3. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

#### 1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: The City of Edinburg.
  - 1. Project Location:

**Dustin Sekula Memorial Library**  
**1906 S. Closner Blvd.**  
**Edinburg, Texas 78539**
- B. Owner: **The City of Edinburg**, 415 W. University Drive Edinburg, Texas 78539
  - 1. Owner's Representative: Mr. Mardoqueo Hinojosa, City Engineer; Phone (956) 388-8211.
- C. Architect: **Amtech Solutions, Inc.**, 1600 N. Jackson Rd., Suite 3, Pharr, TX 78577
  - 1. Architect's Representative: Christopher Garza, (Assoc.) AIA, Project Manager; (956) 686-3095.
- D. The Work consists of the following:

The Work includes repairs and additions of damaged or improperly built areas of the roof deck and structure, replacement of metal panel roof system with single ply roof system with new insulation, replace mechanical curbs and reinforce attachments, addition of exterior wall reinforcement, addition of exterior wall pilasters to conceal structural reinforcement, exterior and interior wall repair and associated stucco and painting, and minor interior cosmetic repairs related to roof leaks, and at designated areas, provide alternate bids. Interior cosmetic repairs

consist of replacing damaged acoustical ceiling tiles, cleaning damaged carpets and interior painting at indicated locations. Other work includes the installation of metal wall flashing, base flashings as well as mechanical, plumbing and electrical work, as indicated in the Contract Documents.

#### 1.4 WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

#### 1.5 USE OF PREMISES

- A. General: Each Contractor shall have limited use of premises for construction operations, including use of Project site, during construction period. Each Contractor's use of premises is limited only by Owner's occupancy and right to perform work, or to retain other contractors on portions of Project.
- B. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  - 1. Limits: Confine constructions operations to building areas where work is indicated and immediately surrounding site areas, as agreed upon by Owner.
  - 2. Owner Occupancy: Owner intends to occupy space for library operations and keep open for the public in building areas where work is indicated, as well as furnishings and equipment will remain in place. Allow for Owner access to entire Project site.
  - 3. Driveways and Entrances: Keep driveways, loading areas, 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.
- C. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

#### 1.6 OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing buildings during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
  - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. Owner requires a feasibility plan for keeping operations functioning during construction with a detailed schedule of what areas will be worked on and whether special protections or closures of specific areas will be needed for certain phases of the work. This plan will also detail when HVAC, electrical, or plumbing systems may be interrupted for the work.

## 1.7 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, except otherwise indicated.
  - 1. Weekend Hours: No restrictions with Owner approval for interior access if required.
  - 2. Early Morning Hours: Comply with Owners ordinances.
  - 3. Hours for Utility Shutdowns: Only with Owner's written permission.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Architect and Owner not less than four days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Owner's written permission.
- C. Tobacco-Free Site: Tobacco products are not permitted anywhere on Owners Property.

## 1.8 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC's "MasterFormat" numbering system.
  - 1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
  - 2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
- 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 1000**

## SECTION 01 2100 - ALLOWANCES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
  - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
  - 1. Contingency allowances.
  - 2. Unit Price Work Allowances
- C. Related Sections include the following:
  - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders for allowances.
  - 2. Division 01 Section "Unit Prices" for procedures for using unit prices.
  - 3. Divisions 02 through 49 Sections for items of Work covered by allowances.

#### 1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

#### 1.4 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
- B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

#### 1.5 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

## 1.6 CONTINGENCY ALLOWANCE

- A. Use the CONTINGENCY ALLOWANCE only as directed by Architect for Owner's purposes and only by Allowance Authorization or Change Orders that indicate amounts to be charged to the CONTINGENCY ALLOWANCE.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the CONTINGENCY ALLOWANCE are included in the allowance and are part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Allowance Authorization or Change Orders authorizing use of funds from the CONTINGENCY ALLOWANCE will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the CONTINGENCY ALLOWANCE to Owner by Change Order.

## 1.7 ALLOWANCES

- A. Contractor shall Maintain detailed records of work done under these Allowances, including photographs and size and location notations on Record Drawings. Submit full information for all Allowance work on a bi-weekly basis.
  - 1. If installed quantities exceed Allowance amounts, all additional work shall be undertaken under a Unit Pricing basis.
  - 2. If final installed quantities are less than Allowance amounts, at contract closeout, funds remaining will be credited to the owner by Change Order.

## PART 2 - EXECUTION

### 2.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

### 2.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

### 2.3 SCHEDULE OF AMOUNT OF **CONTINGENCY ALLOWANCE**

- A. **Contingency Allowance:** Include in Proposal Form Item No. 2.1, stipulated sum/prices as follows for use upon Owner's instruction: **\$50,000.00 (Fifty Thousand Dollars)**.
- B. Provide a Line Item in the Schedule of Values for the **Contingency Allowance**.

**END OF SECTION 01 2100**

## SECTION 01 2200 - UNIT PRICES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. Related Sections include the following:
  - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

#### 1.3 DEFINITIONS

- 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 the Contract Sum or deducted from the Betterment Fund, Allowances or the Contract Sum by appropriate modification, as quantities of Work required by the Contract Documents are completed, increased or decreased.

#### 1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves 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 surveyor acceptable to Contractor.

### PART 2 - PRODUCTS (NOT USED)

### PART 3 - EXECUTION

#### 3.1 LIST OF UNIT PRICES

- A. Required Unit Prices are listed in the Proposal Form.

**END OF SECTION 01 2200**



# SECTION 01 2500 - SUBSTITUTION PROCEDURES

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Sections:
  - 1. Division 01 Section "Allowances" for products selected under an allowance.
  - 2. Division 01 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
  - 3. Divisions 02 through 49 Sections for specific requirements and limitations for substitutions.

### 1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

### 1.4 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use facsimile of form provided in the Project Manual.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication, or installation cannot be provided, if applicable.
    - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - e. Samples, where applicable or requested.
  - f. Certificates and qualification data, where applicable or requested.
  - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
  - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
  - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
  - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
  - k. Cost information, including a proposal of change, if any, in the Contract Sum.
  - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
  - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

## 1.6 PROCEDURES

- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

## PART 2 - PRODUCTS

### 2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied,

Architect will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- b. Substitution request is fully documented and properly submitted.
- c. Requested substitution will not adversely affect Contractor's construction schedule.
- d. Requested substitution has received necessary approvals of authorities having jurisdiction.
- e. Requested substitution is compatible with other portions of the Work.
- f. Requested substitution has been coordinated with other portions of the Work.
- g. Requested substitution provides specified warranty.
- h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Architect will consider requests for substitution if received within 15 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Architect.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
- b. Requested substitution does not require extensive revisions to the Contract Documents.
- c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- d. Substitution request is fully documented and properly submitted.
- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

### **PART 3 - EXECUTION (NOT USED)**

**END OF SECTION 01 2500**

# SECTION 01 2600 - CONTRACT MODIFICATION PROCEDURES

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
  - 1. Division 01 Section "Unit Prices" for administrative requirements for using unit prices.
  - 2. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

### 1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

### 1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

C. Proposal Request Form: Use AIA Document G709 for Proposal Requests.

#### 1.5 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

#### 1.6 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

### **PART 2 - PRODUCTS (NOT USED)**

### **PART 3 - EXECUTION (NOT USED)**

**END OF SECTION 01 2600**

## SECTION 01 2900 - PAYMENT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
  - 1. Division 01 Section "Allowances" for procedural requirements governing handling and processing of allowances.
  - 2. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 3. Division 01 Section "Unit Prices" for administrative requirements governing use of unit prices.
  - 4. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

#### 1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

#### 1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
  - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with Continuation Sheets.
    - b. Submittals Schedule.
    - c. Contractor's Construction Schedule.
  - 2. Submit the Schedule of Values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
  - 1. Identification: Include the following Project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Name of Architect.
    - c. Architect's project number.
    - d. Contractor's name and address.
    - e. Date of submittal.
  - 2. Submit draft of AIA Document G703 Continuation Sheets.

3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
  - a. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
6. Contingency Allowances: Provide a separate line item in the Schedule of Values for each contingency allowance.
7. Complete each item in the Schedule of Values and Applications for Payment. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
8. Windstorm Certification: The cost of obtaining windstorm certification shall be included in the Base Bid and Alternate Bid Amounts and expressed as a line item in the Schedule of Values.
9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

#### 1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
  1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Progress payments shall be submitted to Architect by the 25th of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
- D. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.
- E. Payment Application Forms: Use forms provided by Owner for Applications for Payment. Sample copies are included at end of this Section.
- F. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
  1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
  2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

- G. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- H. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  2. When an application shows completion of an item, submit final or full waivers.
  3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
  4. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- I. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  2. When an application shows completion of an item, submit final or full waivers.
  3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
  4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
  5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- J. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
  2. Schedule of Values.
  3. Contractor's Construction Schedule (preliminary if not final).
  4. Products list.
  5. List of Contractor's staff assignments.
  6. Copies of building permits.
  7. Initial progress report.
  8. Report of preconstruction conference.
  9. Certificates of insurance and insurance policies.
  10. Performance and payment bonds.
  11. Data needed to acquire Owner's insurance.
  12. Initial settlement survey and damage report if required.
- K. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.



- L. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
  2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  3. Updated final statement, accounting for final changes to the Contract Sum.
  4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
  5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
  6. AIA Document G707, "Consent of Surety to Final Payment."
  7. Evidence that claims have been settled.
  8. Final, liquidated damages settlement statement.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**END OF SECTION 01 2900**

## SECTION 01300 - ADMINISTRATIVE REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Project Management and Coordination:
  - 1. Coordination and project conditions.
  - 2. Preconstruction / Site Mobilization meeting.
  - 3. Progress meetings.
  - 4. Preinstallation meetings.
- B. Construction Progress Documentation:
  - 1. Pre-Construction Conditions Survey and Documentation.
  - 2. Construction Photographs.
  - 3. Periodic Site Observation.
  - 4. Progress Schedules and Reports.
  - 5. Scheduling of Construction.
- C. Submittal Procedures:
  - 1. Certificates.
  - 2. Design Data.
  - 3. Proposed Products list.
  - 4. Shop Drawings.
  - 5. Product Data.
  - 6. Samples.
- D. Special Procedures: Manufacturers' Instructions.

#### 1.2 RELATED SECTIONS

- A. Section 012900 - Payment Procedures: Schedule of Values.
- B. Section 014000 - Quality Requirements: Manufacturers' field services and reports.
- C. Section 017300 – Execution Requirements: Field Engineering, Contract Warranty, Manufacturer's Certificates, and Closeout Submittals.

#### 1.3 PROJECT MANAGEMENT AND COORDINATION

- A. Coordinate scheduling, submittals, and Work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate completion and clean up of Work of separate Sections in preparation for Substantial Completion, and for portions of Work designated for Owner's occupancy.
- D. After Owner acceptance of Work, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

## 1.4 PROJECT MEETINGS

### A. PRECONSTRUCTION / SITE MOBILIZATION CONFERENCE

1. Architect will schedule a conference after Notice of Award.
2. Attendance Required: Owner, Architect, Contractor and Contractor's Superintendent and major Subcontractors.
3. Agenda:
  - a. Execution of Owner-Contractor Agreement.
  - b. Submission of executed bonds and insurance certificates.
  - c. Distribution of Contract Documents.
  - d. Submissions of list of Subcontractors, list of Products, Schedule of Values, and progress schedule.
  - e. Designation of personnel representing the parties in Contract and the Architect, including:
    - 1) Contractor personnel designated to be on call for emergencies 24-hours a day/7 days a week for the duration of the Project. Provide phone numbers for office, home, and pagers (if available) for:
      - a) Project Foreman
      - b) Project Superintendent
      - c) Owner or Responsible Company Officer
  - f. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders and Contract closeout procedures.
  - g. Scheduling.
  - h. Use of premises by Owner and Contractor.
  - i. Owner's requirements and occupancy.
  - j. Construction facilities and controls provided by Owner.
  - k. Temporary utilities provided by Owner.
  - l. Survey and building layout.
  - m. Security and housekeeping procedures.
  - n. Schedules.
  - o. Procedures for testing.
  - p. Procedures for maintaining Project Record Documents.
  - q. Requirements for start-up of equipment.
  - r. Inspection and acceptance of equipment put into service during construction period.

### B. PROGRESS MEETINGS

1. Schedule and administer meetings throughout progress of the Work as required.
2. Arrange for meetings, prepare agenda with copies for participants, preside at meetings, record minutes, and distribute copies within two days to Owner's Representative, participants, and those affected by decisions made.
3. Attendance Required: Job superintendent, major Subcontractors, and suppliers, Owner, and Architect as appropriate to agenda topics for each meeting.
4. Agenda:
  - a. Review minutes of previous meetings.
  - b. Review of Work progress.
  - c. Field observations, problems, and decisions.
  - d. Identification of problems that might impede planned progress.
  - e. Review of submittals schedule and status of submittals.
  - f. Review of offsite fabrication and delivery schedules.
  - g. Maintenance of progress schedule.
  - h. Corrective measures to regain projected schedules.
  - i. Planned progress during succeeding work period.

- j. Coordination of projected progress.
- k. Maintenance of quality and work standards.
- l. Effect of proposed changes on progress schedule and coordination.
- m. Other business relating to Work.

C. PRE-INSTALLATION CONFERENCES

- 1. When required in individual specification Section, convene a pre-installation conference at work site prior to commencing work of the Section.
- 2. Require attendance of parties directly affecting, or affected by, work of the specific Section.
- 3. Notify Owner's Representative, Manufacturers' Representatives and Architect, ten days in advance of meeting date.
- 4. Prepare agenda, preside at conference, record minutes, and distribute copies within two days after conference to participants, with three copies to Owner's Representative.
- 5. Review conditions of installation, preparation and installation procedures, and coordination with related work.
- 6. Agenda: As described under Article A. PRECONSTRUCTION / SITE MOBILIZATION CONFERENCE above.

1.5 PRE-CONSTRUCTION CONDITIONS AND SURVEY DOCUMENTATION

- A. Contractor is advised to prepare, prior to start of any Work, a photographic or videotape survey of existing conditions throughout Project Site. Survey and document any item that might be altered, damaged, stained, or otherwise impacted.
  - 1. Exterior Areas: Condition of exterior building surfaces; lawn areas, plants, trees, shrubs, and landscape features; roads, driveways, sidewalks, and paved or graded surfaces; enclosures, sheds, fences, and all items or appurtenances.
  - 2. Interior Areas: Condition of ceilings, walls, floors, furniture, fixtures, and accessories in all building areas within or adjacent to Work or Staging locations.
- B. Make specific note of existing damage, markings, and missing items or appurtenances that might be identified as caused by, or resulting from, installation or activities performed under this Project.
- C. Arrange and schedule this survey with Owner's Representative and invite active participation by Owner's Representatives or Agents familiar with existing conditions.
- D. Make copies of survey documentation and attach labels with project name, date of survey, names of participants, and other pertinent information. Distribute copies to Owner and Architect/Special Consultant.
- E. This Documentation to be used to establish Pre-Construction conditions in any Post-Construction dispute on requested restoration work.

1.6 CONSTRUCTION PROGRESS DOCUMENTATION

- A. Construction Photographs:
  - 1. Each month submit photographs to Owner's Representative Application for Payment.
  - 2. Photographs: Two sets matte color prints; 4x6-inch size; mounted in 8-1/2x11 inch clear plastic holders in three ring binders.
  - 3. Take minimum four photographs from differing directions of each roof or building area, indicating relative progress of Work; four (4) days maximum prior to submitting.
  - 4. Include photographs clearly depicting extent of all Work repaired or replaced under Unit Price procedures.
  - 5. Identify photographs with date, time, orientation and Project identification.

- B. Progress Schedules and Reports:
  - 1. Submit initial schedule in duplicate within 10 after date of Owner-Contractor Agreement for Owner's Representative review.
  - 2. Revise and resubmit as required.
  - 3. Submit revised schedules with each Application for Payment, identifying changes since previous version.
  - 4. Submit a horizontal bar chart with separate line for each section of Work, identifying first workday of each week. Use Roof Plan to indicate each day's work and sequence of Work.
  - 5. Indicate estimated percentage of completion for each item of Work at each submission.
  - 6. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates.
- C. Periodic Site Observations: Schedule and arrange periodic site observations by manufacturer's representative as required in individual Sections. Submit reports as described elsewhere in this Section.

## 1.7 SUBMITTAL PROCEDURES

- A. Transmit each submittal with AIA Form G810 or Owner accepted form.
- B. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite the Project, and deliver to Owner's Representative at business address. Coordinate submission of related items.
- F. For each submittal for review, allow 5 days excluding delivery time to and from the contractor.
- G. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- H. Provide space for Contractor and Architect review stamps.
- I. Revise and resubmit submittals as required, identify all changes made since previous submittal.
- J. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- K. Submittals not requested in individual sections will not be recognized or processed.

## 1.8 CERTIFICATES

- A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the Contractor to Owner's Representative, in quantities specified for Product Data.

- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on materials or Products, but must be acceptable to Owner's Representative.

#### 1.9 DESIGN DATA

- A. Submit for the Architect's knowledge as contract administrator or for the Owner.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

#### 1.10 TEST REPORTS

- A. Submit for the Architect's knowledge as contract administrator or for the Owner.
- B. Submit test reports for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- C. Submit reports in triplicate within 5 days to Architect for information.

#### 1.11 PROPOSED PRODUCTS LIST

- A. Within 10 days after date of Owner-Contractor Agreement, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number or each Product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

#### 1.12 SHOP DRAWINGS

- A. Shop Drawings For Review:
  1. Submitted to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
  2. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 017300 - EXECUTION REQUIREMENTS.
- B. Shop Drawings For Information:
  1. Submitted for the Architect's knowledge as contract administrator or for the Owner.
- C. Shop Drawings For Project Closeout:
  1. Submitted for the Owner's benefit during and after project completion.
- D. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. Submit in the form of one reproducible transparency or the number of opaque reproductions that Contractor requires, plus three copies that will be retained by Architect.

#### 1.13 PRODUCT DATA

- A. Product Data For Review:
  1. Submitted to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

2. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 017300 - EXECUTION REQUIREMENTS.

B. Product Data For Information:

1. Submitted for the Architect's knowledge as contract administrator or for the Owner.

C. Product Data For Project Closeout:

1. Submitted for the Owner's benefit during and after project completion.

D. Submit the number of copies that the Contractor requires, plus three copies that will be retained by the Architect's.

E. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.

F. Indicate Product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

G. After review distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 017300 - EXECUTION REQUIREMENTS.

#### 1.14 SAMPLES

A. Samples For Review:

1. Submitted to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

2. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 017300 - EXECUTION REQUIREMENTS.

B. Samples For Information:

1. Submitted for the Architect's knowledge as contract administrator or for the Owner.

C. Samples For Selection:

1. Submitted to Architect for aesthetic, color, or finish selection.

2. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 017300 - EXECUTION REQUIREMENTS.

D. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

E. Include identification on each sample, with full Project information.

F. Submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for Owner's Architect's selection.

G. Submit the number of samples specified in individual specification Sections; two of which will be retained by Architect.

H. Reviewed samples which may be used in the Work are indicated in individual specification Sections.

I. Samples will not be used for testing purposes unless specifically stated in the specification section.

1.15 MANUFACTURERS' INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, to Architect's for delivery to Owner in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- C. Identify conflicts between manufacturers' instructions and Contract Documents.
- D. Refer to Section 014000 - QUALITY REQUIREMENTS, Manufacturers' Field Services article.

1.16 SOURCE QUALITY CONTROL AND MANUFACTURER'S FIELD REPORTS

- A. Submit for Architect's knowledge and benefit as contract administrator or for the Owner.
- B. Submit reports for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- C. Submit reports in triplicate within 5 days of observation to Architect for information.

1.17 ALTERATION AND CUTTING OR PATCHING PROJECT PROCEDURES

- A. Submit written request in advance of cutting or altering elements which affect:
  - 1. Structural integrity of element.
  - 2. Integrity of weather-exposed or moisture-resistant elements.
  - 3. Efficiency, maintenance, or safety of element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of Owner or separate contractor.

**PART 2 - PRODUCTS**

Not Used

**PART 3 - EXECUTION**

Not Used

**END OF SECTION 01 3000**



## SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. Administrative and supervisory personnel.
  - 2. Project meetings.
  - 3. Requests for Interpretation (RFIs).
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.
- C. Related Sections include the following:
  - 1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
  - 2. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 3. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

#### 1.3 DEFINITIONS

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

#### 1.4 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 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. Preinstallation conferences.
7. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

## 1.5 SUBMITTALS

- A. Key Personnel Names: Within 7 days of Notice from Owner of Intent to Award Contract, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

## 1.6 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

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

## 1.7 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
  2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 7 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  2. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Tentative construction schedule.
    - b. Critical work sequencing and long-lead items.
    - c. Designation of key personnel and their duties.
    - d. Procedures for processing field decisions and Change Orders.
    - e. Procedures for RFIs.
    - f. Procedures for testing and inspecting.
    - g. Procedures for processing Applications for Payment.
    - h. Distribution of the Contract Documents.
    - i. Submittal procedures.

- j. Preparation of Record Documents.
  - k. Use of the premises and existing building.
  - l. Work restrictions.
  - m. Owner's occupancy requirements.
  - n. Responsibility for temporary facilities and controls.
  - o. Construction waste management and recycling.
  - p. Parking availability.
  - q. Office, work, and storage areas.
  - r. Equipment deliveries and priorities.
  - s. First aid.
  - t. Security.
  - u. Progress cleaning.
  - v. Working hours.
3. Minutes: Architect will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
  - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
    - a. The Contract Documents.
    - b. Related RFIs.
    - c. Related Change Orders.
    - d. Purchases.
    - e. Deliveries.
    - f. Submittals.
    - g. Possible conflicts.
    - h. Compatibility problems.
    - i. Time schedules.
    - j. Weather limitations.
    - k. Manufacturer's written recommendations.
    - l. Warranty requirements.
    - m. Compatibility of materials.
    - n. Acceptability of substrates.
    - o. Temporary facilities and controls.
    - p. Space and access limitations.
    - q. Regulations of authorities having jurisdiction.
    - r. Testing and inspecting requirements.
    - s. Installation procedures.
    - t. Coordination with other work.
    - u. Required performance results.
    - v. Protection of adjacent work.
    - w. Protection of construction and personnel.
  - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
  - 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
  - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

## 1.8 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
  2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name.
  2. Date.
  3. Name of Contractor.
  4. Name of Architect.
  5. RFI number, numbered sequentially.
  6. Specification Section number and title and related paragraphs, as appropriate.
  7. Drawing number and detail references, as appropriate.
  8. Field dimensions and conditions, as appropriate.
  9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  10. Contractor's signature.
  11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
    - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Hard-Copy RFIs: CSI Form 13.2A.
1. Identify each page of attachments with the RFI number and sequential page number.
- D. Software-Generated RFIs: Software-generated form with substantially the same content as indicated above.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow three working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for coordination information already indicated in the Contract Documents.
    - d. Requests for adjustments in the Contract Time or the Contract Sum.
    - e. Requests for interpretation of Architect's actions on submittals.
    - f. Incomplete RFIs or RFIs with numerous errors.
  2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.

3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
  - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 5 days of receipt of the RFI response.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within three days if Contractor disagrees with response.
- G. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly. Use CSI Log Form 13.2B or Software log with not less than the following:
  1. Project name.
  2. Name and address of Contractor.
  3. Name and address of Architect.
  4. RFI number including RFIs that were dropped and not submitted.
  5. RFI description.
  6. Date the RFI was submitted.
  7. Date Architect's response was received.
  8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**END OF SECTION 01 3100**

## SECTION 01 3200 - CONSTRUCTION PROGRESS DOCUMENTATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Contractor's Construction Schedule.
  - 2. Daily construction reports.
  - 3. Field condition reports.
  - 4. Special reports.
- B. Related Sections include the following:
  - 1. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
  - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
  - 3. Division 01 Section "Photographic Documentation" for submitting construction photographs.
  - 4. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
  - 5. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

#### 1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
  - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
  - 2. Predecessor Activity: An activity that precedes another activity in the network.
  - 3. Successor Activity: An activity that follows another activity in the network.
- B. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- C. Event: The starting or ending point of an activity.
- D. Major Area: A story of construction, a separate building, or a similar significant construction element.
- E. Milestone: A key or critical point in time for reference or measurement.
- F. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

#### 1.4 SUBMITTALS

- A. Contractor's Construction Schedule: Submit three opaque copies of initial schedule, large enough to show entire schedule for entire construction period.

- B. Daily Construction Reports: Submit three copies at weekly intervals.
  - C. Field Condition Reports: Submit three copies at time of discovery of differing conditions.
  - D. Special Reports: Submit three copies at time of unusual event.
- 1.5 COORDINATION
- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
  - B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
    - 1. Secure time commitments for performing critical elements of the Work from parties involved.
    - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

## **PART 2 - PRODUCTS**

### 2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."
- B. Time Frame: Extend schedule from date established for the Notice of Award to date of Final Completion.
  - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
  - 1. Activity Duration: Define activities so no activity is longer than 5 days, unless specifically allowed by Architect.
  - 2. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
  - 3. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
  - 1. Work Restrictions: Show the effect of the following items on the schedule:
    - a. Coordination with existing construction a feasibility plan.
    - b. Limitations of continued occupancies.
    - c. Uninterruptible services.
    - d. Use of premises restrictions.
    - e. Seasonal variations.
    - f. Environmental control.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.

- F. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.
- G. Computer Software: Prepare schedules using a program that has been developed specifically to manage construction schedules.

## 2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 15 days of date established for the Notice of Award. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
  - 1. For construction activities that require 3 months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

## 2.3 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
  - 1. List of subcontractors at Project site.
  - 2. List of separate contractors at Project site.
  - 3. Approximate count of personnel at Project site.
  - 4. Equipment at Project site.
  - 5. Material deliveries.
  - 6. High and low temperatures and general weather conditions.
  - 7. Accidents.
  - 8. Meetings and significant decisions.
  - 9. Unusual events (refer to special reports).
  - 10. Stoppages, delays, shortages, and losses.
  - 11. Emergency procedures.
  - 12. Orders and requests of authorities having jurisdiction.
  - 13. Change Orders received and implemented.
  - 14. Construction Change Directives received and implemented.
  - 15. Services connected and disconnected.
  - 16. Substantial Completions authorized.
- B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation on CSI Form 13.2A. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

## 2.4 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.



## **PART 3 - EXECUTION**

### **3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE**

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule with Application for Payment.
- B. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
  - 1. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

**END OF SECTION 01 3200**

## SECTION 01 3233 - PHOTOGRAPHIC DOCUMENTATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
  - 1. Preconstruction photographs.
  - 2. Periodic construction photographs.
- B. Related Sections include the following:
  - 1. Division 01 Section "Submittal Procedures" for submitting photographic documentation.
  - 2. Division 01 Section "Closeout Procedures" for submitting digital media as Project Record Documents at Project closeout.

#### 1.3 SUBMITTALS

- A. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph and videotape. Indicate elevation or story of construction. Include same label information as corresponding set of photographs and videotape.
- B. Construction Photographs: Submit two prints of each photographic view within seven days of taking photographs.
  - 1. Format: 8-by-10-inch smooth-surface matte prints on single-weight commercial-grade photographic paper, enclosed back to back in clear plastic sleeves that are punched for standard 3-ring binder.
  - 2. Identification: On back of each print, provide an applied label or rubber-stamped impression with the following information:
    - a. Name of Project.
    - b. Name of Architect.
    - c. Name of Contractor.
    - d. Date photograph was taken if not date stamped by camera.
    - e. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
    - f. Unique sequential identifier.

### PART 2 - PRODUCTS

#### 2.1 PHOTOGRAPHIC MEDIA

- A. Digital Images: Provide images in uncompressed TIFF format, produced by a digital camera with minimum sensor size of 4.0 megapixels, and at an image resolution of not less than 1024 by 768 pixels.

## **PART 3 - EXECUTION**

### **3.1 CONSTRUCTION PHOTOGRAPHS**

- A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
  - 1. Maintain key plan with each set of construction photographs that identifies each photographic location.
- B. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
  - 1. Date and Time: Include date and time in filename for each image.
  - 2. Field Office Images: Maintain one set of images on CD-ROM in the field office at Project site, available at all times for reference. Identify images same as for those submitted to Architect.
- C. Preconstruction Photographs: Before starting construction, take, digital photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect.
  - 1. Take photographs to show existing conditions adjacent to property before starting the Work.
  - 2. Take photographs of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.
  - 3. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
- D. Periodic Construction Photographs: Take digital photographs weekly, with timing each month adjusted to coincide with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.
- E. Additional Photographs: Architect may issue requests for additional photographs, in addition to periodic photographs specified. Additional photographs will be paid for by Change Order and are not included in the Contract Sum.
  - 1. Three days' notice will be given, where feasible.
  - 2. In emergency situations, take additional photographs within 24 hours of request.
  - 3. Circumstances that could require additional photographs include, but are not limited to, the following:
    - a. Special events planned at Project site.
    - b. Immediate follow-up when on-site events result in construction damage or losses.
    - c. Photographs to be taken at fabrication locations away from Project site. These photographs are not subject to unit prices or unit-cost allowances.
    - d. Substantial Completion of a major phase or component of the Work.
    - e. Extra record photographs at time of final acceptance.
    - f. Owner's request for special publicity photographs.

**END OF SECTION 01 3233**

## SECTION 01 3300 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals, including the following:
  - a. Manufacturers' Instructions.
  - b. Alteration Procedures.
- B. Related Sections include the following:
  - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
  - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
  - 3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
  - 4. Division 01 Section "Photographic Documentation" for submitting construction photographs and construction videotapes.
  - 5. Division 01 Section "Quality Requirements" for submitting test and inspection reports.
  - 6. Division 01 Section "Closeout Procedures" for submitting warranties.
  - 7. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 8. Divisions 02 through 49 Sections for specific requirements for submittals in those Sections.

#### 1.3 DEFINITIONS

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

#### 1.4 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals, but may be provided upon written request, if deemed to be in the interest of the Owner.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
  - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- D. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  1. Initial Review: Allow 7 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow 7 days for review of each resubmittal.
- E. Identification: Place a permanent label or title block on each submittal for identification.
  1. Indicate name of firm or entity that prepared each submittal on label or title block.
  2. Provide a space approximately on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
  3. Include the following information on label for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name and address of Architect.
    - d. Name and address of Contractor.
    - e. Name and address of subcontractor.
    - f. Name and address of supplier.
    - g. Name of manufacturer.
    - h. Submittal number or other unique identifier, including revision identifier.
      - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06 1000.01.A).
    - i. Number and title of appropriate Specification Section.
    - j. Drawing number and detail references, as appropriate.
    - k. Location(s) where product is to be installed, as appropriate.
    - l. Other necessary identification.
- F. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- G. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
  1. Additional copies submitted for maintenance manuals will be marked with action taken and will be returned.

- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will discard submittals received from sources other than Contractor.
  - 1. Transmittal Form: Use AIA Document G810 or CSI Form 12.1A.
  - 2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
- I. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
  - 1. Note date and content of previous submittal.
  - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
    - 1. Resubmit submittals until they are marked "Approved" or "Approved as Corrected."
- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Use for Construction: Use only final submittals with mark indicating "Approved" or "Approved as Corrected" taken by Architect.

## **PART 2 - PRODUCTS**

### **2.1 ACTION SUBMITTALS**

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product List: Prepare list of products that Contractor intends to utilize for Project, based on Part 2 for each Specification Section. List by paragraph and subparagraph number every Product included in Part 2 of each Section. For Product not required for the Work, indicate "Not Applicable" or "N/A" to indicate Contractor believes Product is not required to comply with Contract Documents and manufacturer's written installation instructions.
  - 1. Architect may accept a complete Product List based on specified Products as a replacement for Product Data.
- C. 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. Standard color charts.
    - e. Manufacturer's catalog cuts.
    - f. Mill reports.
    - g. Standard product operation and maintenance manuals.

- h. Compliance with specified referenced standards.
  - i. Testing by recognized testing agency.
  - j. Application of testing agency labels and seals.
  - k. Notation of coordination requirements.
4. Submit Product Data before or concurrent with Samples.
  5. Number of Copies: Submit five copies of Product Data, unless otherwise indicated. Architect will return two copies. Mark up and retain one returned copy as a Project Record Document.
- D. 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: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Dimensions.
    - b. Identification of products.
    - c. Fabrication and installation drawings.
    - d. Roughing-in and setting diagrams.
    - e. Shop-work manufacturing instructions.
    - f. Templates and patterns.
    - g. Schedules.
    - h. Design calculations.
    - i. Compliance with specified standards.
    - j. Notation of coordination requirements.
    - k. Notation of dimensions established by field measurement.
    - l. Relationship to adjoining construction clearly indicated.
    - m. Seal and signature of professional engineer if specified.
  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 40 inches.
  3. Number of Copies: Submit three opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Submit five copies where copies are required for operation and maintenance manuals. Architect will retain three copies; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.
- E. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  2. Identification: Attach label on unexposed side of Samples that includes the following:
    - a. Generic description of Sample.
    - b. Product name and name of manufacturer.
    - c. Sample source.
    - d. Number and title of appropriate Specification Section.
  3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    - a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
    - a. Number of Samples: Submit three full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
  5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
    - a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.
      - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
      - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- F. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- G. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- H. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A. Include the following information in tabular form:
1. Name, address, and telephone number of entities performing subcontract or supplying products.
  2. Number and title of related Specification Section(s) covered by subcontract.
  3. Drawing number and detail references, as appropriate, covered by subcontract.
  4. Number of Copies: Submit five copies of subcontractor list, unless otherwise indicated. Architect will return two copies.
    - a. Mark up and retain one returned copy as a Project Record Document.

## 2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
1. Number of Copies: Submit three copies of each submittal, unless otherwise indicated. Architect will not return copies.
  2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
  3. Test and Inspection Reports: Comply with requirements specified in Division 01 Section "Quality Requirements."



- B. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- G. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- J. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- K. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
  - 1. Name of evaluation organization.
  - 2. Date of evaluation.
  - 3. Time period when report is in effect.
  - 4. Product and manufacturers' names.
  - 5. Description of product.
  - 6. Test procedures and results.
  - 7. Limitations of use.
- L. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- M. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."

- N. 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.
- O. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
  - 1. Preparation of substrates.
  - 2. Required substrate tolerances.
  - 3. Sequence of installation or erection.
  - 4. Required installation tolerances.
  - 5. Required adjustments.
  - 6. Recommendations for cleaning and protection.
- P. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
  - 1. Name, address, and telephone number of factory-authorized service representative making report.
  - 2. Statement on condition of substrates and their acceptability for installation of product.
  - 3. Statement that products at Project site comply with requirements.
  - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  - 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  - 6. Statement whether conditions, products, and installation will affect warranty.
  - 7. Other required items indicated in individual Specification Sections.
- Q. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- R. Construction Photographs and Videotapes: Comply with requirements specified in Division 01 Section "Photographic Documentation."
- S. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect.

## 2.3 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 Architect.

- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit five copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

### **PART 3 - EXECUTION**

#### **3.1 CONTRACTOR'S REVIEW**

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

#### **3.2 ARCHITECT'S / ACTION**

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
  - 1. "Approved": Fabrication / installation may be undertaken. Approval does not authorize changes to Contract Sum or Contract Time.
  - 2. "Approved as Corrected": Fabrication / installation may be undertaken by including notations and corrections indicated. Approval does not authorize changes to Contract Sum or Contract Time.
  - 3. "Revise and Resubmit": Fabrication and / or installation MAY NOT be undertaken. In resubmitting, limit corrections to items marked.
  - 4. "Rejected": Fabrication and / or installation MAY NOT be undertaken. In resubmitting, limit corrections to items marked.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

**END OF SECTION 01 3300**

# SECTION 01 4000 - QUALITY REQUIREMENTS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
  - 1. Division 01 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
  - 2. Division 01 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
  - 3. Divisions 02 through 49 Sections for specific test and inspection requirements.

### 1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- D. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- E. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

- F. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- G. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
  - 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 tradespeople of the corresponding generic name.
- H. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

#### 1.4 CONFLICTING REQUIREMENTS

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

#### 1.5 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, and telephone number of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making tests and inspections.
  - 6. Description of the Work and test and inspection method.
  - 7. Identification of product and Specification Section.
  - 8. Complete test or inspection data.
  - 9. Test and inspection results and an interpretation of test results.
  - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
  - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  - 12. Name and signature of laboratory inspector.
  - 13. Recommendations on retesting and reinspecting.

- C. 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.

## 1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
  - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
  - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- G. 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.
- H. Windstorm Certification: The Roof System and all rooftop equipment, accessories and appurtenances shall be installed, or otherwise secured in a manner to resist wind pressures as calculated by ASCE-7. All necessary requirements for Compliance with Windstorm Certification (as per the Texas Department of Insurance) shall be provided by the Roofing Contractor and the cost of obtaining windstorm certification shall be included in the Base Bid and Alternate Bid Amounts.

## 1.7 QUALITY CONTROL

- A. Contractor Responsibilities: When specified in individual sections, restrict execution of specified Work to Applicators and Personnel meeting indicated qualifications.

1. Install all roofing materials using personnel directly employed by Roofing Contractor with NDL certification from roofing material manufacturer - no Sub-Contracting permitted.
  2. Assign a qualified, full time, non-working supervisor to be on Project site at all times during installation of Work. This supervisor to have good communication skills and be able to communicate with staff and Applicator's workers.
  3. Designate a responsible Project Manager or Superintendent to inspect all installed Work, particularly tie-ins and temporary flashings, at end of each working day and as otherwise required to ensure water-tightness. Inspection to be verified by signature on a Form signifying installation is in accordance with specified requirements.
- 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 types of testing and inspecting they are engaged to perform.
  2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
  3. 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, and the Contract Sum will be adjusted by Change Order.
- C. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
    - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- D. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- E. Retesting/Reinspection: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
  3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  6. Do not perform any duties of Contractor.
- G. 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. Delivery of samples to testing agencies.
  6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

### **3.1 TEST AND INSPECTION LOG**

- A. Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
  2. Description of the Work tested or inspected.
  3. Date test or inspection results were transmitted to Architect.
  4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

### **3.2 REPAIR AND PROTECTION**

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
  2. Comply with the Contract Document requirements for Division 01 Section "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 4000**

## SECTION 01 4200 - REFERENCES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes:
  - 1. Schedule of references.
  - 2. Definitions of terms commonly used in Contract Documents.
  - 3. Applicability of Industry Standards and abbreviations and acronyms for Standards and Regulations.
  - 4. Abbreviations and acronyms for Industry Organizations, Code Agencies, Federal and State Governmental Agencies.
- B. Related Sections include:
  - 1. Division 01 Section "Quality Requirements" for procedures for applying standards.
  - 2. Divisions 02 through 49 Sections for specific Reference Standards that apply to Work in those Sections.

#### 1.3 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "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. "Project Site": Space available for performing construction activities. The extent of Project 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.

#### 1.4 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. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
  - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

#### 1.5 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 indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. 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 sites 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) www.aluminum.org	(703) 358-2960
AAMA	American Architectural Manufacturers Association www.aamanet.org	(847) 303-5664
ACI	ACI International (American Concrete Institute) www.aci-int.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
AGC	Associated General Contractors of America (The) www.agc.org	(703) 548-3118
AI	Asphalt Institute www.asphaltinstitute.org	(859) 288-4960
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300

AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
ALSC	American Lumber Standard Committee, Incorporated www.alsc.org	(301) 972-1700
ANSI	American National Standards Institute www.ansi.org	(202) 293-8020
ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org	(202) 207-0917
ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute (See ASCE)	
ASHRAE	American Society of Heating, Refrigerating and Air- Conditioning Engineers www.ashrae.org	(800) 527-4723 (404) 636-8400
ASME	ASME International (The American Society of Mechanical Engineers International) www.asme.org	(800) 843-2763 (973) 882-1170
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9585
AWPA	American Wood-Preservers' Association www.awpa.com	(205) 733-4077
AWS	American Welding Society www.aws.org	(800) 443-9353 (305) 443-9353
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122
BIA	Brick Industry Association (The) www.bia.org	(703) 620-0010
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(423) 892-0137
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583

CRRC	Cool Roof Rating Council www.coolroofs.org	(866) 465-2523 (510) 485-7175
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
DHI	Door and Hardware Institute www.dhi.org	(703) 222-2010
EIMA	EIFS Industry Members Association www.eima.com	(800) 294-3462 (770) 968-7945
EJMA	Expansion Joint Manufacturers Association, Inc. www.ejma.org	(914) 332-0040
FM Approvals	FM Approvals www.fmglobal.com	(781) 762-4300
FM Global	FM Global (Formerly: FMG - FM Global) www.fmglobal.com	(401) 275-3000
FMRC	Factory Mutual Research (Now FM Global)	
GA	Gypsum Association www.gypsum.org	(202) 289-5440
GANA	Glass Association of North America www.glasswebsite.com	(785) 271-0208
GRI	(Now GSI)	
HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)	
ICRI	International Concrete Repair Institute, Inc. www.icri.org	(847) 827-0830
MBMA	Metal Building Manufacturers Association www.mbma.com	(216) 241-7333
MHIA	Material Handling Industry of America www.mhia.org	(800) 345-1815 (704) 676-1190
MPI	Master Painters Institute www.paintinfo.com	(888) 674-8937
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc. www.mss-hq.com	(703) 281-6613

NAAMM	National Association of Architectural Metal Manufacturers www.naamm.org	(312) 332-0405
NAIMA	North American Insulation Manufacturers Association www.naima.org	(703) 684-0084
NCMA	National Concrete Masonry Association www.ncma.org	(703) 713-1900
NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NeLMA	Northeastern Lumber Manufacturers' Association www.nelma.org	(207) 829-6901
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NFPA	NFPA (National Fire Protection Association) www.nfpa.org	(800) 344-3555 (617) 770-3000
NHLA	National Hardwood Lumber Association www.natlhardwood.org	(800) 933-0318 (901) 377-1818
NLGA	National Lumber Grades Authority www.nlga.org	(604) 524-2393
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
NRMCA	National Ready Mixed Concrete Association www.nrmca.org	(888) 846-7622 (301) 587-1400
PDCA	Painting & Decorating Contractors of America www.pdca.com	(800) 332-7322 (314) 514-7322
PDI	Plumbing & Drainage Institute www.pdionline.org	(800) 589-8956 (978) 557-0720
SDI	Steel Deck Institute www.sdi.org	(847) 458-4647
SDI	Steel Door Institute www.steeldoor.org	(440) 899-0010
SJI	Steel Joist Institute www.steeljoist.org	(843) 626-1995
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association www.smacna.org	(703) 803-2980

SPIB	Southern Pine Inspection Bureau (The) www.spib.org	(850) 434-2611
SPRI	Single Ply Roofing Industry www.spri.org	(781) 647-7026
TMS	The Masonry Society www.masonrysociety.org	(303) 939-9700
UL	Underwriters Laboratories Inc. www.ul.com	(877) 854-3577 (847) 272-8800
UNI	Uni-Bell PVC Pipe Association www.uni-bell.org	(972) 243-3902
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(800) 283-1486 (503) 639-0651
WWPA	Western Wood Products Association www.wwpa.org	(503) 224-3930

C. 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 sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ICC	International Code Council www.iccsafe.org	(888) 422-7233 (703) 931-4533
ICC-ES	ICC Evaluation Service, Inc. www.icc-es.org	(800) 423-6587 (562) 699-0543

D. 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 sites 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 www.cpsc.gov	(800) 638-2772 (301) 504-7923
DOE	Department of Energy www.energy.gov	(202) 586-9220
EPA	Environmental Protection Agency www.epa.gov	(202) 272-0167
GSA	General Services Administration www.gsa.gov	(800) 488-3111
NIST	National Institute of Standards and Technology www.nist.gov	(301) 975-6478

OSHA Occupational Safety & Health Administration (800) 321-6742  
www.osha.gov (202) 693-1999

PHS Office of Public Health and Science (202) 690-7694  
www.osophs.dhhs.gov/ophs

USPS Postal Service (202) 268-2000  
www.usps.com

E. 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 sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG Americans with Disabilities Act (ADA) (800) 872-2253  
Architectural Barriers Act (ABA) (202) 272-0080  
Accessibility Guidelines for Buildings and Facilities  
Available from Access Board  
www.access-board.gov

CFR Code of Federal Regulations (866) 512-1800  
Available from Government Printing Office (202) 512-1800  
www.gpoaccess.gov/cfr/index.html

FED-STD Federal Standard  
(See FS)

FS Federal Specification (215) 697-2664  
Available from Department of Defense Single Stock Point  
http://dodssp.daps.dla.mil

Available from Defense Standardization Program  
www.dps.dla.mil

Available from General Services Administration (202) 619-8925  
www.gsa.gov

Available from National Institute of Building Sciences (202) 289-7800  
www.wbdg.org/ccb

FTMS Federal Test Method Standard  
(See FS)

MILSPEC Military Specification and Standards (215) 697-2664  
Available from Department of Defense Single Stock Point  
http://dodssp.daps.dla.mil

UFAS Uniform Federal Accessibility Standards (800) 872-2253  
Available from Access Board (202) 272-0080  
www.access-board.gov



**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**END OF SECTION 01 4200**

# SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections include the following:
  - 1. Division 01 Section "Summary" for limitations on utility interruptions and other work restrictions.
  - 2. Division 01 Section "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
  - 3. Division 01 Section "Execution" for progress cleaning requirements.

### 1.3 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Water Service: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

### 1.4 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

### 1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

### 1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, 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 rails.
- 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 concrete or galvanized steel bases for supporting posts.
- C. Lumber and Plywood: Comply with requirements in Division 06 Section "Roofing Carpentry."

### **2.2 TEMPORARY FACILITIES**

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
  - 1. Store combustible materials apart from building.

### **2.3 EQUIPMENT**

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION, GENERAL**

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

### **3.2 TEMPORARY UTILITY INSTALLATION**

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
  - 1. Where installations below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize water damage. Drain accumulated water promptly from pans.

- C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- D. Electric Power Service: Use of Owner's existing electric power service will be permitted, as long as equipment is maintained in a condition acceptable to Owner.
- E. Telephone Service: Provide temporary or cellular telephone service accessible for use by all construction personnel. Install one telephone line(s) for each field office.
  - 1. At each telephone, provide a list of important telephone numbers.
    - a. Police and fire departments.
    - b. Ambulance service.
    - c. Contractor's home office.
    - d. Architect's office.
    - e. Engineers' offices.
    - f. Owner's office.
    - g. Principal subcontractors' field and home offices.

### 3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
  - 1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with NFPA 241.
  - 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Parking: Arrange with Owner for temporary parking areas for construction personnel.
  - 1. Restrict Contractors' personnel to assigned areas.
  - 2. When site space is not adequate, provide additional off-site parking.
- C. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.
- D. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
  - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

### 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
  - 1. Comply with work restrictions specified in Division 01 Section "Summary."
- B. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- C. Equipment Enclosure Fence: Before construction operations begin, furnish and install enclosure fence around operating equipment in a manner that will prevent people and animals from easily entering area except by entrance gates.
  - 1. Extent of Fence: As required to enclose operating equipment and staging areas or as determined sufficient to accommodate construction operations.

- D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- E. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
  - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.

### 3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
  - 2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

**END OF SECTION 01 5000**

# SECTION 01 6000 - PRODUCT REQUIREMENTS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
  - 1. Document 00 2000 "Instructions to Bidders" for Product options and substitution procedures during Bidding.
  - 2. Division 01 Section "Alternates" for products selected under an alternate.
  - 3. Division 01 Section "References" for applicable industry standards for products specified.
  - 4. Division 01 Section "Substitution Request Form" to submit Substitution Requests.
  - 5. Division 01 Section "Closeout Procedures" for submitting warranties for Contract closeout.
  - 6. Divisions 02 through 49 Sections for specific requirements for warranties on products and installations specified to be warranted.

### 1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
  - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

## 1.4 SUBMITTALS

- A. Product List: Submit a list in tabular form, showing Contractor's selections from specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
  2. Form: Tabulate information for each product under the following column headings:
    - a. Specification Section number and title.
    - b. Generic name used in the Contract Documents.
    - c. Proprietary name, model number, and similar designations.
    - d. Manufacturer's name and address.
    - e. Supplier's name and address.
    - f. Installer's name and address.
    - g. Projected delivery date or time span of delivery period.
    - h. Identification of items that require early submittal approval for scheduled delivery date.
  3. Completed List: Within 10 days after date of Notice to Proceed, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
  4. Architect's Action: Architect will respond in writing to Contractor within 5 days of receipt of completed product list. Architect's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect's response, or lack of response, does not constitute a waiver of requirement to comply with the Contract Documents.
- B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Substitution Request Form: Facsimile of Division 01 Section "Substitution Request Form" provided at end of Section.
  2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified material or product cannot be provided.
    - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
    - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - e. Samples, where applicable or requested.
    - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
    - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
    - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.

- i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
      - j. Cost information, including a proposal of change, if any, in the Contract Sum.
      - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
      - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
    - 3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 10 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
      - a. Form of Acceptance: Signed Division 01 Section "Substitution Request Form".
      - b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.
  - C. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
    - 1. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 10 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
      - a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
      - b. Use product specified if Architect cannot make a decision on use of a comparable product request within time allocated.
  - D. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.
- 1.5 QUALITY ASSURANCE
- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
    - 1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
    - 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.
- 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING
- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.



- B. Delivery and Handling:
  1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- C. Storage:
  1. Store products to allow for inspection and measurement of quantity or counting of units.
  2. Store materials in a manner that will not endanger Project structure.
  3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  4. Store cementitious products and materials on elevated platforms.
  5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  7. Protect stored products from damage and liquids from freezing.
  8. For exterior storage of fabricated Products, place on sloped supports, above ground.
  9. Periodically inspect to assure Products are undamaged and are maintained under specified conditions.
  10. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.

## 1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
  1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
  2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
  1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
  3. Refer to Divisions 02 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

## **PART 2 - PRODUCTS**

### **2.1 PRODUCT SELECTION PROCEDURES**

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
  4. Where products are accompanied by the term "as selected," Architect will make selection.
  5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
  6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
  2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
  3. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
  4. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
  5. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
  6. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
    - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
    - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

## 2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Architect will consider requests for substitution if received within 10 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Architect.
- B. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
  2. Requested substitution does not require extensive revisions to the Contract Documents.
  3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
  4. Substitution request is fully documented and properly submitted.
  5. Requested substitution will not adversely affect Contractor's Construction Schedule.
  6. Requested substitution has received necessary approvals of authorities having jurisdiction.
  7. Requested substitution is compatible with other portions of the Work.
  8. Requested substitution has been coordinated with other portions of the Work.
  9. Requested substitution provides specified warranty.
  10. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

## 2.3 COMPARABLE PRODUCTS

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

## PART 3 - EXECUTION (NOT USED)

**END OF SECTION 01 6000**

# SECTION 01 6100 - SUBSTITUTION REQUEST FORM

TO: AMTECH SOLUTIONS, INC. DATE: \_\_\_\_\_  
 PROJECT: DUSTIN SEKULA MEMORIAL LIBRARY STRUCTURAL REPAIRS & ROOF REPLACEMENT

This Proposed Substitution is hereby submitted for consideration for the Specified Product listed below.

Section	Paragraph	Specified Product
---------	-----------	-------------------

Proposed Substitution: \_\_\_\_\_

Provide complete technical information on Proposed Substitution, including laboratory tests, if applicable. Include complete information on changes to the Work required for proper installation of proposed Product, including revisions to Contract Documents; effect on other Sections or other Trades. Provide specific information on manufacturer, model, accessories, options, etc.

Information Attached  No Changes Require

Does proposed substitution affect dimensions shown on Contract Drawings in any way?  
 \_\_\_\_\_

Primary effect(s) on other Trades?  
 \_\_\_\_\_

Primary difference(s) between Proposed Substitution and Specified Product (if none, state none):  
 \_\_\_\_\_

Location and source for service and parts for Proposed Substitution:  
 \_\_\_\_\_

Contract Time will be:

Increased  Decreased  Unchanged  
 By: \_\_\_\_\_ Days

Contract Sum will be:

Increased  Decreased  Unchanged  
 By: \$ \_\_\_\_\_ (Amount)

Reason for substitution:  
 \_\_\_\_\_

The undersigned Contractor (Design/Builder) has reviewed fully this Proposed Substitution, including its impact on the Work, and certifies it matches or exceeds the performance, durability, appearance, size and other characteristics of the Specified Product. The Contractor (Design/Builder) further agrees to execute all work required to properly install the Proposed Substitution in accordance with the Contract Documents.

<p><b>SUBMITTED:</b></p> <p>_____ CONTRACTOR</p> <p>_____ ADDRESS</p> <p>_____ SIGNATURE</p> <p>_____ PRINTED NAME AND TITLE</p> <p>_____ DATE</p>	<p><b>APPROVED:</b></p> <p><b>Amtech Solutions, Inc.</b> Architect</p> <p>1600 N. Jackson Rd, Suite 3</p> <p>Pharr, TX 78577</p> <p>_____ ADDRESS</p> <p>_____ SIGNATURE:</p> <p>_____ PRINTED NAME AND TITLE</p> <p>_____ DATE</p>	<p><b>ACCEPTED:</b></p> <p><b>The City of Edinburg Attn: Engineering</b> OWNER</p> <p>1906 Clossner Blvd.</p> <p>Edinburg, TX 78539</p> <p>_____ ADDRESS</p> <p>_____ SIGNATURE</p> <p>_____ PRINTED NAME AND TITLE</p> <p>_____ DATE</p>
--	---	---

**END OF DOCUMENT 01 6100**

## SECTION 01 7300 - EXECUTION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. General installation of products.
  - 2. Progress cleaning.
  - 3. Protection of installed construction.
  - 4. Correction of the Work.
- B. Related Sections include the following:
  - 1. Division 01 Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
  - 2. Division 01 Section "Submittal Procedures" for submitting surveys.
  - 3. Division 01 Section "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.
  - 4. Division 01 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

### PART 2 - PRODUCTS (NOT USED)

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
  - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
  - 1. Before construction, verify the location and points of connection of utility services.
  - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
  - a. Description of the Work.
  - b. List of detrimental conditions, including substrates.
  - c. List of unacceptable installation tolerances.
  - d. Recommended corrections.
2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents. Submit requests on CSI Form 13.2A, "Request for Interpretation."

### 3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  1. Make vertical work plumb and make horizontal work level.
  2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  - 2. Allow for building movement, including thermal expansion and contraction.
  - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

### 3.4 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
  - 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 in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

### 3.5 PROTECTION OF INSTALLED CONSTRUCTION

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

### 3.6 CORRECTION OF THE WORK

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

**END OF SECTION 01 7300**



## SECTION 01 7329 - CUTTING AND PATCHING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following:
  - 1. Divisions 02 through 49 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

#### 1.3 DEFINITIONS

- A. Cutting: Removal of in-place 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 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 5 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
  - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
  - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
  - 3. Products: List products to be used and firms or entities that will perform the Work.
  - 4. Dates: Indicate when cutting and patching will be performed.
  - 5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
  - 6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
  - 7. Architect's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

#### 1.5 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
  - 1. Fire-suppression systems.
  - 2. Mechanical systems piping and ducts.
  - 3. Control systems.
  - 4. Communication systems.
  - 5. Electrical wiring systems.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
  - 1. Exterior curtain-wall construction.
  - 2. Equipment supports.
  - 3. Piping, ductwork, vessels, and equipment.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

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

## **PART 3 - EXECUTION**

### **3.1 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 in-place 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 in-place 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 Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption 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 in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 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. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 5. 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.
  - 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.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  - 3. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  - 4. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- 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 7329**

# SECTION 01 7700 - CLOSEOUT PROCEDURES

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Warranties.
  - 3. Closeout Documentation
  - 4. Final cleaning.
- B. Related Sections include the following:
  - 1. Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
  - 2. Division 01 Section "Photographic Documentation" for submitting Final Completion construction photographs and negatives.
  - 3. Division 01 Section "Execution" for progress cleaning of Project site.
  - 4. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 5. Division 01 Section "Closeout Documents" for submitting closeout binders.
  - 6. Divisions 02 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

### 1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Advise Owner of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
  - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
  - 7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  - 8. Complete final cleaning requirements, including touchup painting.

9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

#### 1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

#### 1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A.

1. Include the following information at the top of each page:
  - a. Project name.
  - b. Date.
  - c. Name of Architect.
  - d. Name of Contractor.
  - e. Page number.

#### 1.6 WARRANTIES

A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
  - 1. Bind warranties and bonds in THREE (3) heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
  - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  - 3. Include Warranties in "PROJECT CLOSEOUT DOCUMENTS" binder.
  - 4. Identify each binder on the front and spine with the typed or printed title "PROJECT CLOSEOUT DOUUMENTS," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

## **PART 2 - PRODUCTS**

### **2.1 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.

### **2.2 CLOSEOUT DOCUMENTS**

- A. Prepare all data in the form of an informational manual.
- B. Submittal Time: Submit Closeout Documents for all portions of the Work with Final Completion documentation.
- C. Organize Closeout Documents into an orderly sequence based on the table of contents of the Project Manual.
  - 1. Binders: Bind documents in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper. One (1) Original and two (2) Copies. Clearly mark the original "Original."
  - 2. Dividers: Provide heavy paper dividers with plastic-covered tabs for each separate Part. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  - 3. Covers: Identify each binder with typed or printed titles, "PROJECT CLOSEOUT DOCUMENTS", list title of Project; identify subject matter of contents.
  - 4. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified.
  - 5. Arrangement: Internally subdivide binder contents into logically organized parts as described below.
    - a. Part 1: Directory, listing names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, and major equipment suppliers.
    - b. Part 2: Items Required by Document 00 0700 "General Conditions" including:
      - 1) Certificate of Substantial Completion.
      - 2) Contractor's Affidavit of Payment of Debts and Claims (*AIA Document G706*).

- 3) Contractor's Affidavit of Release of Liens (*AIA Document G706A*).
  - 4) Release of Lien from all Subcontractors.
  - 5) Release of Lien from all Suppliers.
  - 6) Certificate of Liability Insurance (ACORD 25-S 1/95).
  - 7) Consent of Surety.
- c. Part 3: Project documents and certificates, including the following:
- 1) Declaration, Certificates and other submittals listed above.
  - 2) Original and photocopies of Contractor's and Manufacturers' warranties.
  - 3) Shop drawings and product data.
- d. Part 4 (if required): Operation and maintenance instructions arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
- 1) Significant design criteria.
  - 2) List of equipment.
  - 3) Parts list for each component.
  - 4) Operating instructions.
  - 5) Maintenance instructions for equipment and systems.
  - 6) Maintenance instructions for finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
6. Text: Manufacturer's printed data or typewritten data on 20-pound white paper.
7. Drawings: Provide with reinforced punched binder tab. Bind in with text; folded to size of text.
- D. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of manual assembly. Architect will review draft and return one copy with comments.

## 2.3 OPERATION AND MAINTENANCE DATA

- A. Prepare data in the form of an instructional manual. Include in "PROJECT CLOSEOUT DOCUMENTS" binder if possible.
- B. Submit an electronic copy of the completed volumes in final form 10 days prior to final inspection. This copy will be returned after final inspection, with Owner comments. Revise content of documents as required prior to final submittal.
- C. Submit three final volumes revised, within ten days after final inspection. One original, and two copies. Clearly mark the original as such.

## PART 3 - EXECUTION

### 3.1 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 Substantial Completion for entire Project or for a portion of Project:
  - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
  - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
  - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
  - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
  - e. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
  - f. Remove labels that are not permanent.
  - g. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
    - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
  - h. 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.

### 3.2 POST CONSTRUCTION INSPECTION

- A. Inspection: Architect will submit a request for Contractor to participate in an inspection prior to expiration of Contractor's Two-Year Warranty period. Contractor may inspect separately and remedy any deficiencies not acceptable to manufacturer's Warranty requirements and terms. Architect may proceed with inspection alone and notify Contractor of deficiencies that need to be resolved prior to release from Contractor Warranty. Architect will prepare a notice of acceptance after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before release from Contractor Warranty will be issued.
  1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  2. Results of completed inspection will form the basis for release from Contractor Warranty.

**END OF SECTION 01 7700**



# SECTION 01 7839 - PROJECT RECORD DOCUMENTS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
  - 1. Record Drawings.
  - 2. Record Specifications.
  - 3. Record Product Data.
- B. Related Sections include the following:
  - 1. Division 01 Section "Closeout Procedures" for general closeout procedures.
  - 2. Divisions 02 through 49 Sections for specific requirements for Project Record Documents of the Work in those Sections.

### 1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit one set(s) of marked-up Record Prints.
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one copy of each Product Data submittal.
  - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

## PART 2 - PRODUCTS

### 2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.
  - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an understandable drawing technique.
    - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
  - 2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Dimensional changes to Drawings.
    - b. Revisions to details shown on Drawings.
    - c. Revisions to routing of piping and conduits.

- d. Revisions to electrical circuitry.
  - e. Actual equipment locations.
  - f. Locations of concealed internal utilities.
  - g. Changes made by Change Order or Construction Change Directive.
  - h. Changes made following Architect's written orders.
  - i. Details not on the original Contract Drawings.
  - j. Field records for variable and concealed conditions.
  - k. Record information on the Work that is shown only schematically.
- 3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
  - 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  - 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
  - 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
- 1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  - 2. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Architect.
    - e. Name of Contractor.

## 2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
- 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
  - 3. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

## 2.3 RECORD PRODUCT DATA

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

## 2.4 MISCELLANEOUS RECORD SUBMITTALS

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

## **PART 3 - EXECUTION**

### 3.1 RECORDING AND MAINTENANCE

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

**END OF SECTION 01 7839**

## SECTION 01 7850- APPLICATOR WARRANTY

WHEREAS

\_\_\_\_\_  
[PRINT OR TYPE FULL NAME OF PROPRIETORSHIP, PARTNERSHIP, CORPORATION, OR JOINT VENTURE]

OF (ADDRESS): \_\_\_\_\_

HEREIN CALLED THE "CONTRACTOR", HAS PERFORMED ROOFING, ASSOCIATED STRUCTURAL REPAIR WORK AND RENOVATIONS ON THE FOLLOWING PROJECT.

OWNER: THE CITY OF EDINBURG

ADDRESS: 415 W. UNIVERSITY DRIVE, EDINBURG, TEXAS 78539

BUILDING NAME AND AREAS: DUSTIN SEKULA MEMORIAL LIBRARY

BUILDING ADDRESS: 1906 S. CLOSNER BLVD, EDINBURG, TEXAS 78539

AREA (S) OF WORK: \_\_\_\_\_ DATE OF ACCEPTANCE: \_\_\_\_\_

WARRANTY PERIOD: TWO (2) YEARS DATE OF EXPIRATION: \_\_\_\_\_

AND WHEREAS THE CONTRACTOR HAS CONTRACTED WITH OWNER TO WARRANT SAID WORK AGAINST LEAKS AND FAULTY OR DEFECTIVE MATERIALS AND WORKMANSHIP FOR DESIGNATED WARRANTY PERIOD.

NOW THEREFORE THE CONTRACTOR HEREBY WARRANTS, SUBJECT TO TERMS AND CONDITIONS HEREIN SET FORTH, THAT DURING WARRANTY PERIOD HE WILL AT HIS OWN COST AND EXPENSE, MAKE OR CAUSE TO BE MADE SUCH REPAIRS TO OR REPLACEMENTS OF SAID WORK AS ARE NECESSARY TO CORRECT FAULTY AND DEFECTIVE WORK, AND AS ARE NECESSARY TO MAINTAIN SAID WORK IN WATERTIGHT CONDITION.

THIS WARRANTY IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. SPECIFICALLY EXCLUDED FROM THIS WARRANTY ARE DAMAGES TO WORK AND OTHER PARTS OF THE BUILDING, AND TO BUILDING CONTENTS, CAUSED BY: (A) LIGHTNING, WINDSTORM IN EXCESS OF 90 MILES PER HOUR WINDSPEED, HAILSTORM, AND OTHER UNUSUAL PHENOMENA OF THE ELEMENTS; (B) FIRE; (C) FAILURE OF ROOFING SYSTEM SUBSTRATE INCLUDING CRACKING, SETTLEMENT, EXCESSIVE DEFLECTION, DETERIORATION, AND DECOMPOSITION; (D) FAULTY CONSTRUCTION OF VENTS, EQUIPMENT SUPPORTS, AND OTHER PENETRATIONS OF THE WORK; (E) REPEATED VAPOR CONDENSATION ON BOTTOM OF ROOFING; AND (F) ACTIVITY ON ROOFING BY OTHER PERSONS INCLUDING CONSTRUCTION CONTRACTORS AND MAINTENANCE PERSONNEL, WHETHER AUTHORIZED OR UNAUTHORIZED BY OWNER. WHEN WORK HAS BEEN DAMAGED BY ANY OF THE FOREGOING CAUSES, WARRANTY SHALL BE NULL AND VOID UNTIL SUCH DAMAGE HAS BEEN REPAIRED BY THE CONTRACTOR, AND UNTIL COST AND EXPENSE THEREOF HAS BEEN PAID BY THE OWNER OR BY ANOTHER RESPONSIBLE PARTY SO DESIGNATED.
2. THE CONTRACTOR IS RESPONSIBLE FOR WORK COVERED BY THIS WARRANTY, BUT IS NOT LIABLE FOR CONSEQUENTIAL DAMAGES TO BUILDING OR BUILDING CONTENTS RESULTING FROM LEAKS OR FAULTS OR DEFECTS OF WORK.
3. DURING WARRANTY PERIOD, IF THE OWNER ALLOWS ALTERATIONS OF WORK BY ANYONE OTHER THAN THE CONTRACTOR, INCLUDING CUTTING, PATCHING AND MAINTENANCE IN CONNECTION WITH PENETRATIONS, ATTACHMENT OF OTHER WORK, AND POSITIONING OF ANYTHING ON ROOF, THIS

WARRANTY SHALL BECOME NULL AND VOID UPON DATE OF SAID ALTERATIONS, BUT ONLY TO EXTENT SAID ALTERATIONS AFFECT WORK COVERED BY THIS WARRANTY. IF THE OWNER ENGAGES THE CONTRACTOR TO PERFORM SAID ALTERATIONS, WARRANTY SHALL NOT BECOME NULL AND VOID, UNLESS THE CONTRACTOR, PRIOR TO PROCEEDING WITH SAID WORK, SHALL HAVE NOTIFIED THE OWNER IN WRITING THAT SAID ALTERATIONS WOULD LIKELY DAMAGE OR DETERIORATE THE WORK, THEREBY REASONABLY JUSTIFYING A LIMITATION OR TERMINATION OF THIS WARRANTY.

4. DURING WARRANTY PERIOD, IF ORIGINAL USE OF ROOF IS CHANGED AND IT BECOMES USED FOR, BUT WAS NOT ORIGINALLY SPECIFIED FOR, A PROMENADE, WORK DECK, SPRAY COOLED SURFACE, FLOODED BASIN, OR OTHER USE OR SERVICE MORE SEVERE THAN ORIGINALLY SPECIFIED, THIS WARRANTY SHALL BECOME NULL AND VOID UPON DATE OF SAID CHANGE, BUT ONLY TO EXTENT SAID CHANGES AFFECT WORK COVERED BY THIS WARRANTY.
5. THE OWNER SHALL PROMPTLY NOTIFY THE CONTRACTOR OF OBSERVED, KNOWN, OR SUSPECTED LEAKS, DEFECT OR DETERIORATION, AND SHALL AFFORD REASONABLE OPPORTUNITY FOR THE CONTRACTOR TO INSPECT THE WORK, AND TO EXAMINE EVIDENCE OF SUCH LEAKS, DEFECTS OR DETERIORATION.
6. THIS WARRANTY IS RECOGNIZED TO BE THE ONLY WARRANTY OF THE CONTRACTOR ON SAID WORK, AND SHALL NOT OPERATE TO RESTRICT OR CUT OFF THE OWNER FROM OTHER REMEDIES AND RESOURCES LAWFULLY AVAILABLE TO HIM IN CASES OF ROOFING FAILURE. SPECIFICALLY, THIS WARRANTY SHALL NOT OPERATE TO RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PERFORMANCE OF ORIGINAL WORK.

IN WITNESS THEREOF, THIS INSTRUMENT HAS BEEN DULY EXECUTED THIS \_\_\_\_ DAY OF \_\_\_\_, **20** \_\_\_\_.

**SIGNATURES:**

**CONTRACTOR:**

\_\_\_\_\_  
[PRINT OR TYPE FULL NAME OF PROPRIETORSHIP, PARTNERSHIP, CORPORATION, OR JOINT VENTURE\*]

**ORGANIZATION:**

PROPRIETORSHIP     PARTNERSHIP     CORPORATION     JOINT VENTURE

[CHECK ONE]

\* IF JOINT VENTURE, ADD ADDITIONAL BID FORM SIGNATURE SHEETS FOR EACH JOINT VENTURE MEMBER.

**BY:**

\_\_\_\_\_  
[SIGNATURE]

\_\_\_\_\_  
[DATE]

**NAME:**

\_\_\_\_\_  
[PRINT OR TYPE NAME ]

\_\_\_\_\_  
[TITLE]

**ADDRESS:**

\_\_\_\_\_  
[MAILING]

\_\_\_\_\_  
[STREET, IF DIFFERENT THAN MAILING]

**TELEPHONE:**

\_\_\_\_\_  
[PRINT OR TYPE TELEPHONE NUMBER]

\_\_\_\_\_  
[PRINT OR TYPE FAX NUMBER]

**STATE OF INCORPORATION:** (IF APPLICABLE) \_\_\_\_\_

**END OF APPLICATOR WARRANTY**

**SECTION 01 7851 - CERTIFICATE OF ASBESTOS-FREE CONSTRUCTION**

STATE OF TEXAS

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

**PROJECT:**

Owner: **The City of Edinburg**

Address: 415 W. University Drive, Edinburg, Texas 78539

Building Name and Areas: **Dustin Sekula Memorial Library**

Building Address: 1906 S. Closner Blvd, Edinburg, Texas 78539

Area (s) of Work: \_\_\_\_\_ Date of Acceptance: \_\_\_\_\_

The undersigned, pursuant to the General and Supplementary Conditions of the Contract for Construction, hereby certifies that to the best of his/her knowledge, information and belief, the materials incorporated into the project, and as used during the construction process, are free of any type of asbestos material.

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

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

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

(SIGNATURE)

TITLE \_\_\_\_\_

Subscribed and Sworn to me this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

Notary Public: \_\_\_\_\_

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

**Amtech Solutions, Inc.** \_\_\_\_\_ **City** **of**  
**Edinburg**  
AUSTIN • CORPUS • DALLAS • HOUSTON • RIO GRANDE VALLEY • DENVER **DUSTIN SEKULA MEMORIAL**  
LIBRARY

## SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

### PART 1 - GENERAL

#### 1.1 SCOPE

- A. Furnish all labor, materials, services and equipment as required in conjunction with or properly incidental to placing of concrete as described herein and/or as shown on the Drawings.
- B. Includes all cast-in-place concrete building members.

#### 1.2 CODES AND STANDARDS

- A. The Work described in this Section, unless otherwise noted on the Drawings, or herein specified, shall be governed by the latest editions of the following codes or specifications.
  - 1. ACI 211.1-81, "Recommended Practice for Selecting Proportions of Normal Weight Concrete".
  - 2. ACI 301, "Specifications for Structural Concrete for Buildings".
  - 3. ACI 304, "Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete".
  - 4. ACI 305, "Hot Weather Concreting".
  - 5. ACI 306, "Cold Weather Concreting".
  - 6. ACI 309, "Standard Practice for Consolidation of Concrete".
  - 7. ACI 311, "ACI Manual of Concrete Inspection".
  - 8. ACI 318, "Building Code Requirements for Reinforced Concrete".
  - 9. ASTM C33, Standard Specification for Concrete Aggregate.
  - 10. ASTM C94, Standard Specification for Ready-Mix Concrete.
  - 11. ASTM C136, Standard Method for Sieve Analysis of Fine and Coarse Aggregates.
  - 12. ASTM C150, Standard Specification for Portland Cement.
  - 13. ASTM C260, Standard Specification for Air-Entraining Admixtures.
  - 14. ASTM C330, Standard Specification for Lightweight Aggregates for Structural Concrete.
  - 15. ASTM C494, Standard Specification for Chemical Admixtures for Concrete.
  - 16. ASTM C595, Standard Specification for Blended Hydraulic Cements.
  - 17. ASTM C617, Practice for Capping Cylindrical Concrete Specimens
  - 18. ASTM C618, Standard Specification for Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.
  - 19. ASTM C1074, Standard Practice for Estimating Concrete Strength By The Maturity Method.

### 1.3 QUALITY ASSURANCE

#### A. Source Quality Control:

1. Concrete production facilities shall meet the requirement for certification by the National Ready Mixed Concrete Association.
2. Concrete batchers shall be completely interlocked semi-automatic or automatic batchers, as defined by the Concrete Plant Manufacturers Bureau.
3. Concrete batchers shall have graphic, digital, or photographic recorders, which shall register both empty balance and total weight (or volume of water or admixture) of each batched material, time to the nearest minute, date, identification of batch, and numerical count of each batch. Copies of the record shall be furnished to the Testing Laboratory.
4. The Testing Laboratory shall provide concrete batch plant inspection as follows:
  - a. Provide a qualified inspector with necessary equipment and apparatus to inspect weighing and batching of controlled concrete at batch plant on a random basis, approximately once daily as the concrete is being placed on this project.
  - b. Make certain that materials and batch equipment used are in accordance with requirements of Specifications.
  - c. Check for adjustment in batch weights to compensate for variations in moisture content.
  - d. Submit promptly to Architect, certification of weights used in loads of acceptable concrete which has been batched during plant inspection time.

#### B. Concrete Mix Design Criteria

1. Design concrete mixes in accordance with Part 2 of this Section.
2. For each concrete mix type proposed, make trial mix using aggregate proposed.
3. Determination of required average strength above specified strength shall be in accordance with ACI 318.
4. Make advance tests of trial mixes with proposed materials. Mold and cure test cylinders in accordance with ASTM C39. Do not place concrete on project until laboratory reports and results of confirmation cylinder tests have been evaluated by the Testing Laboratory and results indicate that proposed mixes will develop required strengths.
5. Testing Laboratory shall furnish the Architect with a written evaluation of each proposed concrete mix design submitted by the Contractor.
6. Check mix designs and revise if necessary wherever changes are made in aggregates or in surface water content of aggregate or workability of concrete. Slump shall be minimum to produce workable mix. Laboratory shall prescribe maximum quantity of water.

### 1.4 SUBMITTALS

- #### A. Mix Designs:
- The Contractor shall submit proposed mix designs in accordance with ACI 318, Section 5.3 to the Testing Laboratory and structural engineer for evaluation a minimum of 14 days prior to placing concrete. Show:
1. Proportions of cement, including fly ash content, fine and coarse



- aggregates, and water.
2. Combined aggregate gradation.
3. Aggregate specific gravities and gradations.
4. Water-cement ratio, design strength, slump and air content.
5. Type of cement and aggregates.
6. Type and dosage of admixtures.
7. Type, color and dosage of integral coloring compounds, where applicable.
8. Special requirements for pumping.
9. Range of ambient temperature and humidity for which design is valid.
10. Any special characteristics of mix which require precautions in mixing, placing, or finishing techniques to achieve finished product.
11. Test data showing an acceptable strength history as specified in Section 5.3 of ACI 318. For mixes specified as requiring concrete strengths of 7,000 psi or higher, regardless of age acceptance, minimum 30 consecutive tests shall be provided per ACI 318-5.3.1.1. Exceptions per ACI 318-5.3.1.2 and 5.3.3 shall not be allowed except as approved in writing by the structural engineer.
12. Test data showing modulus of elasticity for the specific mix proposed, if listed on contract documents. Compressive strength of MOE test cylinders shall not exceed specified concrete strength by more than 500 psi.

- B. Mix designs based on trial mixes accordance with Section 5.3.3.2 of ACI 318 may be submitted in lieu of mix designs required above, provided all necessary information is included.
- C. The Contractor shall furnish duplicate delivery tickets for each load of ready-mix concrete delivered to site, in accordance with ASTM C94. Show batch weights on each ticket.
- D. The Contractor shall furnish mill test reports on an as-used basis for each type and brand of cementitious material used, including fly ash.
- E. The Testing Laboratory shall furnish a statistical analysis for each class of concrete placed on the project as specified in this section.

#### 1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Mix and deliver concrete to project ready-mixed in accordance with ASTM C94. Mix concrete a minimum of 70 revolutions of transit mix drum at mixing speed. A minimum of 40 revolutions shall be at the production plant.
- B. Schedule delivery so that continuity of any pour will not be interrupted for over 15 minutes.
- C. Place concrete on site within 90 minutes after proportioning materials at batch plant.

#### 1.6 JOB CONDITIONS

- A. Hot Weather Concreting:
  1. Follow ACI 301 and ACI 305R.

2. Provide retarding type admixture conforming to ASTM C494, Type A or D in accordance with manufacturer's recommendations.
  3. Maximum concrete temperature shall not exceed 95 degrees F at time of placement.
    - a. Concrete with temperatures above 90 degrees F shall be placed only if a high range water reducer (super plasticizer) is added to the mix as directed by the Testing Laboratory to maintain the specified slump during placement.
- B. Cold Weather Concreting: Protect concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or low temperatures.
1. Follow ACI 301 and ACI 306.1.
  2. When ambient temperature at site is below 40 degrees F or is expected to fall to that temperature within ensuing 24 hours, heat water and/or aggregate prior to adding to mix so that temperature of concrete will be between 55 degrees F and 85 degrees F at time of placement.
  3. Maintain temperature of deposited concrete between 50 degrees F and 70 degrees F for minimum of seven days after placing.
- C. Temperature Changes: Maintain changes in concrete temperature as uniformly as possible, but in no case exceed change of 5 degrees F per hour or 25 degrees F in any 24 hour period.
- D. Combustion heaters shall not be used during the first 48 hours without precautions to prevent exposure of concrete and workmen to exhaust gasses containing carbon dioxide and/or carbon monoxide.
- E. Admixtures intended to accelerate hardening of concrete or produce higher than normal strength at early periods will not be permitted unless approved by the Architect. The use of calcium chloride is specifically prohibited.

## 1.7 SEQUENCING/SCHEDULING

- A. Coordinate Work of this Section with work of other Sections as required to properly execute the Work and as necessary to maintain satisfactory progress of the work of other Sections.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cement/Fly Ash:
1. Portland Cement, Type I or III, conforming to the requirements of ASTM C150. Portland Cement shall be produced by a dry kiln process, unless specifically authorized by the owner.
  2. Fly Ash, Class C or F, conforming to the requirements of ASTM C618. The use of Fly Ash shall be subject to review by the Architect. Where Fly Ash is used in the mix design, Fly Ash shall comprise no more than 20% by weight of the total cementitious material in the mix for horizontal applications (slabs, beams, etc.). Where Fly Ash is used in the mix design, Fly Ash shall comprise no more than 30% by weight of the total

cementitious material in the mix for vertical applications (columns, shearwalls, etc.).

3. Cementitious materials shall conform to the requirements of ACI 318 Chapter 4 based on the exposure classification listed on the drawings.

B. Aggregate:

1. Fine: ASTM C33; clean, hard, durable, uncoated, natural sand, free of silt, loam or clay.
2. Coarse: ASTM C33; hard, durable, uncoated, crushed stone; gradation in accordance with Size No. 467 for piers and Size No. 67 for all other concrete. Maximum aggregate size in accordance with ACI 318.
3. Coarse aggregate for structural lightweight concrete shall conform to the applicable requirements of ASTM C330 suitably processed, washed and screened, and shall consist of durable particles without adherent coatings. Gradation in accordance with Size Designation 3/4 inch to No. 4, Table 1, ASTM C330.
4. Grading shall be in accordance with "Standard Method for Fine Analysis of Sieve and Coarse Aggregates" (ASTM C136).

- C. Water: ASTM C94, Paragraph 4.1.3; potable, clean and free from oil, acid and injurious amount of vegetable matter, alkalis, and other impurities.

D. Admixtures:

1. Cement-dispersing, water-reducing types. Admixtures shall conform to ASTM C494, Type A or D, and shall be used strictly in accordance with manufacturer's recommendations and as determined by the Testing Laboratory. Admixture shall not discolor concrete or in any way affect the appearance of the concrete.
  - a. High-range water reducing admixture conforming to ASTM C494, Type F, may be used as required and shall be one of the following types or equal:
    - (1) Master Builders Rheobuild 1000/Glenium 3000 NS
    - (2) SIKA Sikament
    - (3) W.R. Grace WRDA-35
2. An air-entraining admixture conforming to ASTM C260 shall be used as required on the Drawings and shall be one of the following types or equal:
  - a. Master Builders MB-VR
  - b. SIKA AER
  - c. W.R. Grace Darex AEA
3. Use of calcium chloride is specifically prohibited.
4. All Admixtures shall be certified by manufacturer to contain not more than 0.1% water-soluble chloride ions by mass of cementitious materials.

E. Non-Shrink Cement Grout:

1. Qualities: Premixed non-shrink grout requiring only addition of water. Non-metallic type grout where grout will be sight exposed.
  - a. Minimum compressive strength of 5000 PSI at 7-days and 7500 PSI at 28-days when placed at a plastic consistency of 115% flow

- factor.
    - b. Free of chloride, sulphates or gas producing agents.
  - 2. Standards:
    - a. Overall product: CRD-C-621.
    - b. Compressive Strength: ASTM C109, 2 inch cubes.
    - c. Bleed Performance: CRD C-611.
    - d. Flow Factor: ASTM C230.
- F. Miscellaneous Structural Metals Associated with Structural Concrete:
  - 1. All structural steel pieces including miscellaneous structural metals placed in concrete exposed to weather, in permanent contact with soil, or accessible to salt intrusion shall be hot dipped galvanized in accordance with ASTM A123.
  - 2. All structural steel pieces embedded in concrete shall conform to ASTM A36, unless noted otherwise on the Drawings.
  - 3. Welding of inserts, anchors and other steel pieces used in conjunction with structural concrete shall conform to AWS D1.1.
  - 4. Welding of reinforcing steel used in conjunction with structural concrete shall conform to AWS D1.4.
  - 5. Headed stud anchors shall conform to ASTM A108, minimum tensile strength 65,000 PSI.
  - 6. Concrete expansion anchors shall be wedge-type anchors, meeting the requirements of Federal Specification FF-S-325, Group II, Type 4, Class 1, plated in accordance with Federal Specification QQ-Z-325C, Type II, Class 3. Size and location shall be as indicated on the Drawings.

## 2.2 CONCRETE MIXES

- A. Strength: Concrete is classified and specified by ultimate compressive strength ( $f'_c$ ) at the age of 28 days or 56 days as indicated by the contract documents.
- B. Design concrete to yield strengths indicated on the Drawings.
- C. Proportions: Proportions of cement, aggregate, and water to attain required plasticity and compressive strength shall be in accordance with ACI 318. Do not make changes in proportions without submitting proposed changes to Testing Laboratory for evaluation.
  - 1. Mix designs furnished by the concrete supplier, and accompanied by test data showing an acceptable strength history meeting the requirements as specified in section 5.3 of ACI 318, will be considered an acceptable alternative to the procedure described in paragraphs below.
    - a. Temperature of concrete in test data shall be within 5 degrees F of maximum temperature specified for this project.
    - b. Strengths indicated in test data shall be in accordance with ACI 318, Section 5.3.2.
    - c. The specified strength of concrete used in supporting test data shall vary no more than 500 PSI plus or minus from that specified for this project.
  - 2. If test data showing an acceptable strength history is not available trial mixtures as specified in Section 5.3.3.2 of ACI 318 having proportions

and consistencies suitable for the work shall be made based on ACI 211.1, using at least three different water-cement ratios which will produce a range of strengths encompassing those required for this project. This method shall not be used for concrete specified at  $f'c=7,000$  psi or greater.

- a. Trial mixes shall be designed to produce a slump within 3/4" of the maximum permitted, and for air-entrained concrete, within 0.5 percent of maximum allowable air content. The temperature of concrete used in trial batches shall not exceed the maximum temperature specified.
- b. For each water-cement ratio, at least three confirmation compression test cylinders for each test age shall be made and cured in accordance with ASTM C192. Confirmation cylinders shall be tested at seven and twenty-eight days in accordance with ASTM C39.
- c. From the results of the twenty-eight day confirmation tests, a curve shall be plotted showing the relationship between the water-cement ratio and compressive strengths. From this curve, the water-cement ratio to be used in the concrete shall be selected to produce the average strength required.
- d. The cement content and mixture proportions to be used shall be such that this water-cement ratio is not exceeded when slump is the maximum permitted. Control in the field shall be based upon maintenance of proper cement content, slump and air content.

3. The Testing Laboratory shall keep a strength history record of all concrete for the duration of the project as specified in this section.

### **PART 3 - EXECUTION**

#### **3.1 GENERAL**

A. Inserts: Give the various trades and subcontractors ample notification and opportunity to furnish any and all anchors, nailers, pipes, conduits, boxes, inserts, thimbles, sleeves, frame vents, wires, supports, or other items required to be built into the concrete by the provisions of the Drawings or of the Specification governing the work of such trades and subcontractors, or as it may be necessary for the proper execution of their work. Obtain suitable templates or instructions for the installation of such items which are required to be placed in the forms.

B. Slump:

1. Concrete not containing a high range water reducing admixture shall not be placed when its plasticity, as measured by slump test, is outside the following limits:

Unit	Slump
Structural Concrete	5" maximum, 3" minimum

2. Concrete containing a high range water reducing admixture shall not be placed when its plasticity, as measured by slump test, is outside the following limits:
  - a. Prior to addition high range water reducer: 3 inch maximum, 1 inch minimum.
  - b. After addition of high range water reducer: 10 inch maximum.
- C. Classes of Concrete and Usage: Concrete shall conform to the specified usage groups, characteristics and exposure classifications indicated on the drawings.
- D. Mixing:
  1. Transit-mixed concrete conforming to the requirements of ASTM C94, ACI 304 and ASTM C1116 shall be used in lieu of concrete mixed at the job site. Concrete shall not be transported or used in any case after a period in excess of ninety (90) minutes has elapsed after the introduction of water into the mixer.
  2. Indiscriminate addition of water to increase slump of concrete is prohibited. Add water only at the direction of the Testing Laboratory. No water shall be added which increases the water cement ratio of the concrete in excess of the water cement ratio indicated on the approved mix design. At the direction of the Testing Laboratory the addition of a high range water reducing admixture may be used to retemper concrete.
  3. The agency supplying transit-mixed concrete shall have a plant of sufficient capacity and adequate transportation facilities, to assure continuous delivery at the rate required. The frequency of deliveries to the site of the work must be such as to provide for placing the concrete continuously throughout any one (1) pour.
- E. Conveying Concrete: Convey concrete from the mixer to the place of final deposit by methods which will prevent the separation or loss of the ingredients. Concrete to be conveyed by pumping shall be submitted to the Testing Laboratory for evaluation for each class of concrete specified before being used. Test cylinders for pumped concrete shall be taken at the discharge end of the pumping equipment.
- F. Equipment for chuting, pumping, and pneumatically conveying concrete shall be of such size and design as to assure a practically continuous flow of concrete at the delivery end without separation of the materials. The use of gravity-flow or aluminum chutes or conveyors for transporting concrete horizontally will not be permitted.

### 3.2 CONCRETE CONTROL AND TESTING

- A. Testing laboratory services shall be in accordance with Section 014326.
- B. Sample and test concrete placed at the job site in accordance with ASTM C172. Each sample shall be obtained from a different batch of concrete on a random basis.
- C. All concrete shall be tested as follows:
  1. For concrete with an acceptance age of 28 days, mold and cure five (5) specimens from each sample in accordance with ASTM C31. All specimens shall be minimum 6" diameter X 12" long per ASTM C31.

4. Two (2) specimens shall be tested at seven days for information, two shall be tested at 28 days for acceptance, and the remaining cylinder shall be tested as directed.
  3. For concrete with an acceptance age of 56 days, mold and cure seven (7) specimens from each sample in accordance with ASTM C31. All specimens shall be minimum 6" diameter X 12" long per ASTM C31.
  4. Two (2) specimens shall be tested at seven days for information, two shall be tested at 28 days for information, two shall be tested at 56 days for acceptance, and the remaining cylinder shall be tested as directed.
  5. If maturity methods are used for early strength verification for horizontal construction, one (1) 7 day cylinder may be omitted for each class of concrete.
- D. Specimens for pumped concrete shall be taken at the discharge end of pumping equipment.
- E. Any deviations from the requirements of ASTM Specifications shall be recorded in the test report. Test concrete specimens in accordance with ASTM C39. All specimens for concrete specified  $f'c = 7,000$  psi or greater shall be capped in accordance with ASTM C617. Strength of capping material to be used shall exceed required compressive strength of sample by at least 2,000 psi.
- F. Make at least one strength test (five or seven specimens) for each 100 cu. yd. or fraction thereof, of each mix design of concrete placed in any one day. Determine slump of the concrete sample for each strength test and whenever consistency appears to vary, in accordance with ASTM C143. Concrete for columns exceeding  $f'c = 5000$  psi shall have one strength test for each 50 cu. yd. or fraction thereof, of each mix design of concrete placed in any one day.
- G. Determine air content of air-entrained, normal weight and/or lightweight, concrete sample for each strength test in accordance with either ASTM C231 or ASTM C173. Determine the unit weight of the concrete sample for each strength test.
- H. Inspect each batch of concrete, monitor addition of mixing water to assure uniform consistency from truck to truck. Check mixing form mixers before mix begins to set and within time limits set forth in ASTM C94.
1. Monitor addition of water and high-range water reducer to concrete at job site and length of time concrete is allowed to remain in truck during placement.
  2. Certify each delivery ticket indicating class of concrete delivered, amount of water added and time at which cement and aggregate was discharged into truck, and time at which concrete was discharged from truck.
- I. Should the strength of concrete fall below the minimum, then additional tests, including load tests, may be required. These tests, if required, shall be made at the Contractor's expense and shall be in accordance with ASTM C42 and ACI 318. If tests do not meet the applicable requirements, then the structure, or any part of the structure, shall be removed and replaced at the Contractor's expense.
- J. Test reports shall include but not be limited to the following information: date of concrete placement, concrete mix identification number or proportion of ingredients, truck ticket number, time test was made, time of batching, location of each placement, slump, unit

weight and air content of concrete sampled and date and results of strength test.

- K. Report promptly to Architect all details of reasons for rejection of any and all quantities of concrete. Give all information concerning locations of the concrete pours, quantities, date of pours, and other pertinent facts concerning concrete represented by the specimens.
- L. The General Contractor shall be responsible for making and curing concrete cylinders, cured under field conditions, for the purpose of determining concrete strength at time of form and shore removal. Such cylinders shall be made by and tested by the testing laboratory at the contractor's expense. Alternatively, the in situ strength of concrete may be determined by the maturity method following the requirements of ASTM C 1074.
- M. Furnish a statistical analysis for each class of concrete placed on the project in accordance with ACI 214-77 and ACI 318. Information shall be updated and distributed once a month as directed by the Architect.

For concrete with an acceptance of 28 days, Information shall include, but not be limited to, the following:

1. Strength tests at 7 days of 2 cylinder averages.
2. Strength tests at 28 days of 2 cylinder averages.
3. 28-day moving average strength tests of last 3 test groups.
4. Standard deviation and coefficient of variation based on 28 day strength tests.
5. Average strength and number of 28 days tests for most recent month.

For concrete with an acceptance of 56 days, Information shall include, but not be limited to, the following:

1. Strength tests at 7 days of 2 cylinder averages.
2. Strength tests at 28 days of 2 cylinder averages.
3. Strength tests at 56 days of 2 cylinder averages.
4. 56-day moving average strength tests of last 3 test groups.
5. Standard deviation and coefficient of variation based on 56 day strength tests.
6. Average strength and number of 56 days tests for most recent month.

### 3.3 PLACING CONCRETE

- A. Place concrete in reasonably uniform and horizontal layers, exercising care to avoid vertical joints or inclined planes. The piling up of concrete in the forms in such a manner as to cause the separation or loss of any of its ingredients will not be permitted. Concrete which has partially set or hardened shall not, under any circumstances, be deposited in the work.
- B. Do not place concrete on previously deposited concrete which has hardened sufficiently to cause the formation of seams or planes of weakness within the respective member of section.
- C. Vibration: As soon as concrete is deposited, thoroughly agitate same by means of mechanical vibrators and suitable hand tools, so manipulated as to work the mixture



well into all parts and corners of the pans, and entirely around the reinforcement and inserts. Mechanical vibrators shall maintain frequencies in accordance with the recommendations of ACI 309R, Table 5.1.4, and shall be operated by competent workmen. Over vibrating and use of vibrators to transport concrete within forms shall not be allowed.

- E. Bonding: Before depositing any new concrete on or against previously deposited concrete which has partially or entirely set, the surface of the latter shall be thoroughly roughened and cleaned of all foreign matter, scum and laitance.
- F. Construction Joints: Except as otherwise specifically indicated on the Drawings, each concrete member shall be considered as a single unit of operation, and all concrete for the same shall be placed continuously in order that such unit will be monolithic in construction.
- G. Protect all freshly placed concrete from washing by rain, flowing water, etc. Do not allow the concrete to dry out from the time it is deposited in the forms until the expiration of the curing period.
- H. Grout shall be mixed only in such quantities as are needed for immediate use. No retempering shall be permitted and materials which have been mixed for a period exceeding thirty (30) minutes shall in no case be used upon any portion of the work.
- I. Imperfect or damaged work, or any material damaged or determined to be defective before final completion and acceptance of the entire job, shall be satisfactorily replaced at the Contractor's expense and shall be in conformity with all of the requirements of the Contract Documents. Removal and replacement of concrete work shall be done in such a manner as not to impair the appearance or strength of the structure in any way.
- J. Cleaning: Upon completion of the work, all forms, equipment, protective coverings and any rubbish resulting therefrom shall be removed from the premises. Finished concrete surfaces shall be left in clean and perfect condition, satisfactory to the Owner. Sweep with an ordinary broom and remove all mortar, concrete droppings, loose dirt, mud, etc.

#### 3.4 FIELD QUALITY CONTROL AND TESTING

- A. Provide all inspections and testing as required by the 2012 International Building Code.

**END OF SECTION 03 3000**

## **SECTION 04 0100 – MASONRY REPAIRS, THRU-WALL FLASHING & ANCHORAGE**

### **PART 1 - GENERAL**

#### **1.01 WORK INCLUDED**

- A. Surface of masonry courses to achieve installation of new thru-finish (stucco) flashings, where shown on the Drawings.
- B. Installation of new thru-finish (stucco) flashing and waterproofing membrane where shown on the Drawings.
- C. Tuck-pointing at Scheduled Areas and areas that may be identified as unit price repairs.
- D. Anchorage of Wood Nailers at top of parapet walls surrounding Metal Roofing.
- E. Preparing split face masonry for new bump out of split face wainscot.

#### **1.02 RELATED DOCUMENTS**

Uniform General Conditions, Forms, Specification Sections found in Division 01 through Division 16, and all Drawings apply to Work specified in this Section.

#### **1.03 RELATED SECTIONS**

- A. Division 06 Section – Carpentry Work for Roofing
- B. Division 07 Section – Roofing System
- C. Division 07 Section – Flashing and Sheet Metal

#### **1.04 SUBMITTALS**

- A. Comply with provisions of the appropriate Division 01 Section. Submit manufacturer's literature and letters attesting that the cleaning and waterproofing products used meet or exceed these Specifications.
- B. Proposed method of access, including detailed site plan and sections showing locations of staging, scaffolding and protected openings for access and egress by the Owner.
- C. Provide pointing mortar mix with manufacturer's literature for all components attesting they meet the requirements of this Section.
- D. Provide one complete representative 48-inch long sample in place in the field of the new thru-finish flashings. The sample shall have the entire thru-finish flashing membrane and metal components, and include re-installed stucco finish for 24 inches of the sample.
- E. Submit Material Safety Data Sheets (MSDS) on each proposed product to the Architect prior to Work beginning. One copy each will be retained for the Architect and the Owner's designated personnel. Keep at least one of the returned copies of the sheets on site and available to the Contractor and his personnel at all times,

#### **1.05 QUALITY ASSURANCE**

- A. Manufacturers, suppliers and Contractor shall be firms of long term operation, technically proficient and experienced in this trade. Contractor shall have been in business a minimum of five (5) years and be able to show proof of successful completion of at least three (3) projects of similar scope, cost and complexity to that being bid.
- B. It is anticipated that this Work will be accomplished by a subcontractor to the Prime Contractor, although it is not the intent of this Specification to direct the structure of the Contractor's personnel approach to this Work. For purposes of this Section it is assumed that this trade will be provided by a subcontractor.
- C. Applicable Standards and Specifications:
  1. Portland Cement: ASTM C-150, Type I. Color: Gray standard or white, as required.
  2. Hydrated Lime: ASTM C-207.
  3. Sand: Where required, pure natural sand or ground stone, conforming to ASTM C-144. Dye to color if required.
  4. Federal Specification: QQ-B-101c.
  5. ANSI Specifications: A42.2 and A42.3.
  6. ANSI/ASTM Specification: C926.
  7. International Building Code; edition adopted by local authorities having jurisdiction.

1.06 PRODUCT HANDLING, STORAGE AND DELIVERY

- A. Deliver packaged materials to site in manufacturer's original, unopened, labeled containers. Labels shall remain on the cans, with those labels properly identifying the material contained within. Materials shall not be placed in containers other than those designated for that material, with manufacturer's label. Correct labels shall remain on containers while and where the materials are being applied.
- B. Masonry cement, dye and lime products are to be stored off the ground in a dry location and be covered with waterproof coverings. Sand is to be stored in a dry well-drained location and covered during rain conditions.
- C. All mortar shall be mixed on the ground and transported to the Work area. No mortar shall be mixed on scaffolding or on existing or new roof surfaces.

1.07 ENVIRONMENTAL CONDITIONS

- A. Outside temperatures for the masonry related Work must be a minimum of fifty (50) degrees Fahrenheit and rising. Do not store materials at temperatures lower than 25 degrees F or higher than 90 degrees F.
- B. Do not remove brick from existing wall material during or under threat of rain. Do not install Work of this Section during or under threat of rain.

1.08 JOB CONDITIONS

- A. Maintain all exterior exits and doorways from buildings in operating condition continuously throughout the Work. Construct temporary structures as required from plywood and framing lumber and maintain those structures in a safe manner until Work is complete and the structures may be removed.

- B. All mixing of masonry mortar materials shall remain in a temporary fenced area where designated. At no time shall these materials be stored outside of the designated fenced areas. Upon completion of the Work all evidence of this operation shall be cleaned-up and removed to the satisfaction of the Owner.

#### 1.09 WARRANTY

Provide a two-year written Installer's warranty against defects in materials and workmanship, commencing on the Date of Substantial Completion for the overall project.

### PART 2 - PRODUCTS

#### 2.01 MASONRY MATERIALS

- A. Mortar for general use shall match the existing in color and texture, and except as otherwise specified herein, and be mixed in the proportion of one (1) part Portland Cement, Hydrated Lime of not less than one-quarter (1/4) and not more than one-half (1/2) parts, and sand aggregate of not less than two-and-one-quarter (2-1/4) and not more than three (3) times the sum of the volume of cement and lime used, to produce a Type N mortar, 1500 psi minimum compressive strength at 28 days. (if it is determined that the existing Mortar, is Type S, a type S mixture may be substituted for what is indicated above.)
- B. Pointing mortar shall be made of as dry a consistency as shall produce plasticity to be worked into the joints.
- C. Pre-mixed masonry mortar mixes will not be allowed.
- D. Do not add admixtures, including air-entraining agents, accelerators, set retarders, water repellent agents, anti-freeze compounds or other admixtures, unless otherwise indicated. Coloring pigments may be added in limited quantities to achieve a color matching the existing mortar.
- E. Split face unit masonry shall match existing in size, texture, color and shape. Mortar joints shall match existing in size, texture, color and finish.

#### 2.02 THRU-FINISH FLASHING PRODUCTS

- A. Thru-finish Flashing: Grace Construction Products' "Perm-A-Barrier," or an approved equal, of 40.0 mm thickness, self-adhering rubberized asphalt and cross-laminated polyethylene film designed to meet test requirements of ASTM D-412, D-570, D-1004, D-1876, D-1938, D-1970, D-3767, E-96, and E-154. Supply membranes in factory-cut strips of 18-inch, 24-inch or 36-inch widths.
- B. Accessory Materials:
  - 1. Primers: Grace Construction Products' "Perm-A-Barrier WB Primer," and "Bituthane Primer B2," when required for substrate conditions.
  - 2. Mastic: "Bituthane Mastic."
- C. Termination Bars: 12-gauge or 1/8-inch x 1-inch hot dipped galvanized steel bar stock.

- D. Pin Anchors: ¼-inch x 1-1/2 inch zinc-jacketed pin anchors: “Zamac Hammer-Screw,” or an approved equal. **Drive Pins are not acceptable.** Where the substrate masonry will not accept pin anchors, the Contractor may request to substitute Buildex “Tapcon” screws, or an approved equal, of appropriate diameter and length.

## 2.03 REPAIR TIES AND WOOD TO MASONRY ANCHORS

- A. REPAIR TIES: (All Ties, relevant drill bits and setting tools shall be supplied by: Helifix North America Corporation, 110 Maplecrete Road, Concord, Ontario, Canada L4K 1A4. Toll free: 888-992-9989; Fax:: 905-761-0045: [www.helifix.com](http://www.helifix.com), or Approved Equal.)
1. 10MM HELIFIX 304 STAINLESS STEEL REMEDIAL WALL TIE (Length to be 195MM 250MM or 300MM as required for the repair)
  2. 6.5MM Drill Bits
  3. HELIFIX “DRYFIX” SETTING TOOL
  4. S.D.S ROTARY HAMMER DRILL
- B. WOOD TO MASONRY ANCHORS: (All Anchors, relevant drill bits and setting tools shall be supplied by: Helifix North America Corporation, 110 Maplecrete Road, Concord, Ontario, Canada L4K 1A4. Toll free: 888-992-9989; Fax:: 905-761-0045: [www.helifix.com](http://www.helifix.com) or Approved Equal)
1. 10MM/250MM HELIFIX 304 STAINLESS STEEL REMEDIAL WALL TIE
  2. 6.5MM Drill Bits
  3. HELIFIX “DRYFIX” SETTING TOOL
  4. S.D.S ROTARY HAMMER DRILL

## PART 3 - EXECUTION

### 3.01 INSPECTION

Examine the Contract Documents and all conditions which affect the quality of the Work. Report deviations or other unsatisfactory conditions to the Architect. No Work shall proceed until conditions are satisfactory to meet requirements of the Contract Documents.

### 3.02 PREPARATION

- A. Review the Contract Documents to determine and locate all Work required by this Section and the Work of any other trade which affects the Work of this Section.
- B. Coordinate the installation of flashings, reglets, flashing receivers, anchors, etc., requiring embedment in masonry removal and repair Work.

### 3.03 TUCK POINTING

#### A. CUT OUT OF EXISTING MORTAR JOINTS

1. Cut out existing mortar joints and remove by means of a toothing chisel or a special pointer's grinder, to a uniform depth of to 19 mm (3/4-inch), or until sound mortar is reached. Take care to not damage edges of existing masonry units to remain. Where veneer ties are in areas to be ground, grind tie material back from face of brick a minimum of 1".
2. Remove dust and debris from the joints by brushing, blowing with air or rinsing with water. Do not rinse when temperature is below freezing.

#### B. JOB CONDITIONS

1. Protection: Protect newly pointed joints from rain, until pointed joints are sufficiently hard enough to prevent damage.
2. Cold Weather Protection:
  - a. Tuck pointing may be performed in freezing weather when methods of protection are utilized.
  - b. Comply with applicable sections of "Recommended Practices for Cold Weather Construction" as published by International Masonry Industry All Weather Council.
  - c. Existing surfaces at temperatures to prevent mortar from freezing or causing other damage to mortar.

#### C. INSTALLATION OF TUCK POINTING MORTAR

1. Immediately prior to application of mortar, dampen joints to be tuck pointed. Prior to application of pointing mortar, allow masonry units to absorb surface water.
2. Tightly pack mortar into joints in thin layers, approximately 6 mm (1/4-inch) thick maximum.
3. Allow layer to become "thumbprint hard" before applying next layer.
4. Pack final layer flush with surfaces of masonry units. When mortar becomes "thumbprint hard", tool joints.

#### D. TOOLING OF JOINTS

1. Tool joints with a jointing tool to produce a smooth, compacted, joint.
2. Tool joints in patch work with a jointing tool to match the existing surrounding joints. Refer to drawings for profiles of head and bed joints.

### 3.04 MASONRY SURFACE AND THRU-FINISH FLASHING INSTALLATION

#### A. At existing masonry walls:

1. Clean face of backup CMU completely of all mortar prior to installing sheet metal receiver and membrane flashing materials.

#### B. Install new sheet metal receiver, as shown on Drawings as specified.

- C. Install new thru-finish membrane materials. Make sure membrane is fully bonded and slightly sloped to the exterior. Lap ends at least 6 inches and make sure membrane is fully adhered in a watertight manner at end laps and corners. Anchor top edge of flashing with termination bar and masonry drive pins spaced at 12 inches on centers.

### 3.05 INSTALLATION OF MASONRY UNITS

- A. Match existing split face masonry units at wainscot. Contractor shall procure submittal upon commencement of the work so as not to delay if special order wait times are needed to attain. If a comparable sample is unavailable, contractor to notify architect immediately upon determination of availability.
- B. Do not lay masonry in freezing weather. No anti-freeze ingredient shall be used. Comply with recommendations of Brick Institute of America Technical Notes 1A, most current edition. Do not lay units that are chipped, moist or frozen.
- C. Tests:
  - 1. Perform absorption tests as described above prior to beginning Work.
  - 2. If determined by the Architect the Contractor may be required to perform absorption tests as its expense per ASTM C-67.
  - 3. Variation of Mortar Joint Thickness: Do not exceed existing average bed joint thickness by more than plus or minus 1/8-inch. Do not exceed head joint thickness by more than plus or minus 1/8-inch. Joints shall match existing to the greatest extent possible.
- D. Fill all horizontal and vertical joints with average 3/8-inch thick, full mortar coverage of face and width. Fill horizontal bed joints full depth of unit. If unit is moved after setting, remove, clean and reset the unit. Tool all joints to match existing solid adjacent joints.
- E. At locations of new split face masonry wainscot, grind down split face surface to provide a smooth attachment of steel reinforcement "T".

### 3.07 WOOD TO MASONRY ANCHORS

- A. A treated wood parapet cap nailer is to be attached to the existing brick parapet cap by means of a 10MM/250MM Helifix 304 Stainless steel Remedial Wall Tie at the parapets at the sides of the Roof Areas.
  - 1. Install Helifix Stainless steel ties into the existing masonry using a "DRYFIX" technique at 8" O.C., staggered, after the wooden nailer is set onto the masonry parapet and either properly shimmed to produce the required slope or directly over the masonry as per the particular detail. Drill at an angle to the nailer to produce a "toe-nail" effect, alternating at every other fastener to enhance pull-out of nailer from top of parapet.
    - a. a 6.5MM entry hole shall be drilled through the wood into the masonry back-up material. This drill procedure shall be carried out by means of an electric hammer drill (3 Jaw Chuck). Note: If required, site testing will verify drill entry hole sizes and depths and any necessary adjustments may be made at that time
    - b. The 10MM Helifix tie shall then be driven into position and recessing by means of a Helifix "Dryfix" Setting tool mounted to an S.D.S. Rotary Hammer Drill.

3.08 CLEANING

- A. Clean exposed masonry surfaces on completion.
- B. Remove mortar droppings and other foreign substances from wall surfaces.
- C. First wet surfaces with clean water, then wash down with cleaning solution as specified in Section 04900.
- D. Brush with stiff fiber brushes while washing, and immediately thereafter hose down with clean water.
- E. Free clean surfaces from traces of detergent, foreign streaks or stains. Protect materials during cleaning operations including adjoining construction.

3.09 FINAL CLEANING

- A. Remove temporary fencing and barricades and restore grounds to prior Work condition. Replace any permanently damaged vegetation as required. Remove excess materials from roof surfaces.
- B. Clean excess mortar from all joints and face of brick.

**END OF SECTION 04 0100**



## SECTION 04-2000- UNIT MASONRY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 DESCRIPTION OF WORK

- A. Work Included: Furnish all materials, equipment, transportation and facilities, and perform all labor necessary for reinforced and non-reinforced unit masonry, including but not limited to the following:

1. Masonry reinforcement.
2. Masonry anchoring devices and accessories.
3. Anchor bolts, plates, and built-in anchorage assemblies for other work.
4. Loose steel lintels.
5. Decorative Concrete Masonry Units
6. Pre-faced concrete masonry units
7. Face Brick

- B. Related Work Specified Elsewhere:

1. Cast-in-place concrete: Section 03 3000.

#### 1.3 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

#### 1.4 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Owner will engage a qualified independent testing agency to perform preconstruction testing indicated below. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.

1. Clay Masonry Unit Test: For each type of unit required, according to ASTM C 67 for compressive strength.
2. Concrete Masonry Unit Test: For each type of unit required, according to ASTM C 140 for compressive strength.

#### 1.5 QUALITY ASSURANCE

- A. Laboratory Testing and Inspection: Refer to Section 01 4529 for requirements.
- B. Materials and installation of masonry shall be subject to testing and inspection by an independent testing laboratory. Such tests and inspections shall not relieve Contractor of responsibilities for providing materials and procedures which comply with Contract Documents. Promptly remove and replace materials which do not comply.
- C. Latest adopted edition of all standards referenced in this Section shall apply, unless noted otherwise. In case of conflict between Contract Documents and a referenced

standard, Contract Documents shall govern. In case of conflict between Contract Documents and Building Code, the more stringent shall govern.

- D. Comply with provisions of the following codes, Specifications and standards:
- E. International Building Code, 2012.
- F. "Building Code Requirements for Masonry Structures," (ACI 530).
- G. "Specifications for Masonry Structures," (ACI 530.1).

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in covered weatherproof dispensing silos.
- C. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

#### 1.7 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
- B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
  - 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
  - 2. Protect sills, ledges, and projections from mortar droppings.
  - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
  - 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- C. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

### **PART 2 - PRODUCTS**

#### 2.1 MASONRY UNITS, GENERAL

- A. Fire-Resistance Ratings: Where indicated, provide units that comply with requirements for fire-resistance ratings indicated as determined by testing according to ASTM E 119, by equivalent masonry thickness, or by other means, as acceptable to authorities having jurisdiction.
- B. Match Existing as per drawings.

## 2.2 CONCRETE MASONRY UNITS

- A. Face Brick: Modular size, conforming to ASTM C 216, Grade SW, 4400 psi minimum compressive strength.
- B. Building (common) Brick: ASTM C 62, Grade SW or MW, modular size, 4400 psi minimum compressive strength.
- C. Concrete Masonry: Hollow load bearing units ASTM C 90, Grade N, lightweight aggregate, 1900 psi minimum compressive strength on net area. Furnish required sizes, shapes, lintels, and miscellaneous shown on Drawings or required to complete bond.
- D. Portland Cement: ASTM C 150, Type I or III. (Do not use masonry cement.)
- E. Lime: Hydrated lime meeting requirements of ASTM C 207, Type N or S.
- F. Sand: Mason's Sand, ASTM C 144 or comparable gradation having a history of successful use.
- G. Coarse Aggregate: ASTM C 404, maximum size 3/8".
- H. Water: Clean and potable, free of organic matter.
- I. Joint Reinforcement: Galvanized deformed wire side rods, truss design, as manufactured by Hohmann & Barnard or Wire-Bond. Width shall be 2" less than nominal width of wall. Provide prefabricated corner ties and tee shapes at all wall intersections. Provide size as stated on Drawings.
- J. Z-ties: 3/16" steel galvanized Z wire ties, ASTM A 82, by Hohmann & Barnard or Wire-Bond.
- K. Reinforcing Steel: ASTM A 615, Grade 60.
- L. Forms: Form grade plywood with wood studs and wales as required.
- M. Shores: Patented shores of design and manufacture sufficient to safely support imposed loads.
- N. Soffit Joint Strips: 3/8" by 1/2" high wood or neoprene strips, attached to form face of soffit forms. Lay out strips in grid pattern conforming to face brick size, providing a strip at each brick joint.
- O. Premolded Filler: Fibrous mastic strips containing 35% to 50% asphaltic impregnation, ASTM D 1751.
- P. Cleaner: "Deox" chemical cleaner, by National Chemsearch or "Sure Klean," by ProSoCo, Inc.
- Q. Thru-wall Flashing: "Nervastral Seal-Pruf H-D," 20 millimeters elastomeric sheeting, by Rubber and Plastics Compound Co., Inc., or equal by Wasco Products, Inc.
- R. Flashing Cement: "Nervaplast" cold setting mastic, by Rubber and Plastics Compound Co., Inc.
- S. Building Felt: No. 15 asphalt saturated felt, ASTM D 226.
- T. Weep Hole Material: Sash cord.
- U. Control Joints: RS Standard - Rubber Control Joint, by Hohmann & Barnard or #2901 Rubber Control Joint, by Wire-Bond.

- V. Dovetail Anchors: 14 gauge galvanized Seismic Dovetail masonry anchor, 1" X 3 1/2", by Hohmann & Barnard or Wire-Bond.
- W. Steel Shapes and Plates: ASTM A 36.
- X. Headed Stud Anchor: Welded by full-fusion process, as furnished by TRW Nelson Stud Welding Division.
- Y. Bolts: ASTM A 307. Furnish with carbon steel washers.
- Z. Deformed Bar Anchors: Welded by full-fusion process, as furnished by TRW Nelson Stud Welding Division.
- AA. Reinforcing Bars to be Welded: ASTM A 706.
- BB. BB. Drilled Expansion Bolts in Masonry Shall Be One of the Following:
- CC. Strong-Bolt 2, Simpson Strong-Tie Co., Pleasanton, CA Kwik Bolt TZ, Hilti Fastening Systems, Tulsa, OK
- DD. CC. Drilled Adhesive Anchors in Masonry Shall Be One of the Following Anchoring Systems:
- EE. SET Epoxy Tie, Simpson Strong-Tie Co., Pleasanton, CA Powers Standard Set Power-Fast+, Powers Fasteners, Brewster, NY HIT-HY 70 Adhesive Anchor System, Hilti Fastening Systems, Tulsa, OK

## 2.3 CONCRETE AND MASONRY LINTELS

- A. General: Provide one of the following:
- B. Concrete Lintels: ASTM C 1623, matching CMUs in color, texture, and density classification; and with reinforcing bars indicated. Provide lintels with net-area compressive strength not less than CMUs.
- C. Concrete Lintels: Precast or formed-in-place concrete lintels complying with requirements in Section 03 30 00 "Cast-in-Place Concrete," and with reinforcing bars indicated.
- D. Masonry Lintels: Prefabricated or built-in-place masonry lintels made from bond beam CMUs with reinforcing bars placed as indicated and filled with coarse grout. Cure precast lintels before handling and installing. Temporarily support built-in-place lintels until cured.

## 2.4 BRICK

- A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:
  1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
  2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
  3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.

4. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.

B. Face Brick: Match Existing.

## 2.5 MORTAR AND GROUT MATERIALS

- A. Match existing color and grout line.
- B. Mortar Mix: Type S Mortar, conforming to ASTM C 270, consisting of 1 part Portland Cement, 1/2 part hydrated lime and 3 1/2 to 4 1/2 parts sand. Do not use air entraining lime, masonry cement, or admixtures in mortar. Proportions are by volume, using a box, not by shovel.
- C. Fine Grout: Conforming to ASTM C 476 and consisting of 1 part Portland Cement and 2 1/4 to 3 parts mason's sand by volume.
- D. Coarse Grout Mix: Conforming to ASTM C 476 and consisting of 1 part Portland Cement, 2 1/4 to 3 parts sand and 1 to 2 parts coarse aggregate (pea gravel).
- E. Mixing Mortar and Grout: Mix cementitious material and aggregate for a minimum of 5 minutes in a mechanical batch mixer. Add water in amounts required for workability. If mortar begins to stiffen from evaporation or absorption of a part of mixing water, retemper by adding water and remix. Grout shall have a slump of 10" to 11" at time of placement. Mortar and grout shall be used within 2 1/2 hours of initial mixing and no mortar or grout shall be used after it has begun to set.

## 2.3 MASONRY STRENGTH

- A. A. Ultimate compressive strength of masonry as required by design and determined by prism tests shall not be less than 1500 psi.

## PART 3 EXECUTION

### 3.1 FORMS AND SHORES

- A. Provide forms and shores sufficiently strong and rigid as required to support brick soffits, beams, and lintels during construction.
- B. Build forms to conform to shape, line, and dimension of masonry members as detailed, substantial and sufficiently tight to prevent leakage of mortar, grout or concrete. Properly brace or tie together so as to maintain position and shape.
- C. Provide joint strips on form face of soffit forms at each brick joint.

### 3.2 INSTALLATION

- A. Joint Reinforcement: Provide horizontal joint reinforcing of size and at spacing stated on Drawings. Maintain a minimum mortar cover of 5/8" at exterior face and 1/2" at interior face. Lap side rods at least 75 diameters at splices. Provide prefabricated corner and tee sections to match horizontal reinforcement at all wall intersections. Provide supplemental reinforcing or ties as required to resist grout pressure.
- B. Anchors: Provide Z-tie anchors at masonry beams, columns, pilasters, lintels, and soffits as detailed. Install dovetail anchors where detailed.

- C. Brick Soffits: Lay in place on shored wood form faced with strip grid. Embed Z-ties in joints as detailed. Tamp brick to promote bond and remove excess mortar.
- D. Prewetting: All clay brick having an initial rate of absorption exceeding 0.025 ounces per square inch per minute shall be presoaked with water, 3 to 24 hours prior to laying units. Concrete masonry units shall not be prewetted.
- E. Laying Masonry: Lay units plumb, level, and true to line with full head and bed joints. Butter ends of brick with sufficient mortar to fill head joints. Do not furrow bed joints. Slope top of bed joint toward center of wall to minimize amount of mortar forced into grout space. Remove mortar, protruding from joints into grout space, before pouring grout.
- F. Reinforcing Bars:
1. Hold vertical bars in position at top and bottom and at intervals not exceeding eight 8'-0" with a minimum clearance of 1/4" from masonry and not less than one bar diameter between bars.
  2. When a foundation dowel is not in alignment with a vertical block cell or pilaster, slope it not more than 1 horizontal in 6 vertical to bring it into proper alignment before grouting.
  3. Place horizontal reinforcing bars in continuous masonry courses, consisting of bond- beam or trough block units, and solidly grout in place.
  4. Use straight reinforcing bars except for bends around corners and where bends or hooks are detailed on plans.
  5. Lap reinforcing steel 48 bar diameters minimum where spliced and wire together.
- G. Grouting: Where detailed place grout in reinforced masonry beams, walls, columns, and pilasters. All cells and spaces containing reinforcing bars shall be filled with grout. Wherever possible grouting shall be done from inside face of masonry. Exercise extreme care to prevent grout from staining face of masonry. Immediately remove any spilled grout from face and top of masonry.
1. Prior to grouting clean space so that all spaces to be filled with grout do not contain mortar projections greater than 1/2", mortar droppings or other foreign material. Grout shall be placed so all spaces designated to be grouted shall be filled with grout and grout shall be confined to those specific spaces.
  2. Grout materials and water content shall be controlled to provide adequate fluidity for placement, without segregation of constituents and shall be mixed thoroughly.
  3. Between grout pours a horizontal construction joint shall be formed by stopping all wythes at the same elevation and with grout stopping a minimum of 1 1/2" below a mortar joint, except at top of wall. Where bond beams occur, stop grout pour a minimum of 1/2" below top of masonry.
  4. Reinforcement shall be placed prior to grouting. Bolts shall be accurately set with templates or by approved equivalent means and held in place to prevent movement.
  5. Segregation of grout materials and damage to masonry shall be avoided during the grouting process. Adequately brace masonry to prevent displacement or cracking during grouting operations.
  6. Grout shall be consolidated by mechanical vibrator during placing, before loss of plasticity, in a manner to fill grout space. Grout pours greater than 12" shall be

reconsolidated by mechanical vibration to minimize voids due to water loss. Grout pours 12" or less in height shall be mechanically vibrated, or puddled.

7. In multi-wythe grouted masonry, vertical barriers of masonry shall be built across grout space. Grouting any section of wall between barriers shall be completed in 1 day with no interruption longer than 1 hour.
8. Grout shall not be handled nor pumped utilizing aluminum equipment.
9. Size and height limitations of grout space or cell shall be as follows:
  - a. Match Existing
10. Where required, cleanouts shall be provided in the bottom course at every vertical bar but not more than 32" on center for solidly grouted masonry. Cleanouts shall be sealed after inspection and before grouting.
11. Concreting: Supervise placing of concrete in cores of masonry beams and lintels and over masonry soffits where structural concrete is detailed. Report discrepancies or procedures which may adversely affect performance of masonry work.

### 3.3 REMOVAL OF FORMS AND SHORES

- A. Do not remove shores and forms under reinforced masonry beams, lintels, and soffits until members have hardened sufficiently to carry their own weight and other super imposed loads. Providing that sufficient curing has taken place, leave forms and shores in place as follows:
- B. Beam and lintels: minimum 10 days.
- C. Brick soffits: minimum 7 days.
- D. Allow 16 hours to elapse after completion of masonry columns and walls before placing floor or roof construction loads on them. Allow an additional 48 hours before applying concentrated loads such as trusses, girders, and beams.

### 3.4 CLEANING EXPOSED MASONRY SURFACES

- A. All holes in exposed masonry shall be pointed, and defective joints shall be cut out and repointed with mortar.
- B. All exposed unglazed masonry shall be thoroughly cleaned using water and stiff brushes. If stiff brushes and water do not suffice surface of unglazed masonry, on which no green efflorescence appears, shall be thoroughly wetted with clean water and scrubbed with a solution of not more than 1 part hydrochloric (muriatic) acid to 9 parts water or other cleaning agent approved by Architect, followed immediately by a thorough rinsing with clear water. Before applying any cleaning agent to the entire wall, it shall be applied to a sample wall area of approximately 20 square feet, in a location approved by Architect. No further cleaning work may proceed until the sample area has been approved by Architect, after which, the same cleaning materials and method shall be used on remaining wall area. If masonry is cleaned with an acid solution all sash, metal lintels and other corrodible parts shall be thoroughly protected. Green efflorescence shall be removed in accordance with brick manufacturer's recommendations.
- C. All surfaces of glazed units shall be washed with soap powder and warm water, applied with a scrubbing brush and then rinsed thoroughly with clear water. Metal

cleaning tools and brushes or abrasive powders shall not be used. When necessary, ceramic glazed units may be scrubbed with a solution of no more than 1 part hydrochloric acid to 25 parts clean water.

### 3.5 CLEAN UP

- A. Imperfect or damaged work, or any material damaged or determined to be defective before final completion and acceptance of the entire job, shall be satisfactorily replaced at Contractor's expense and in conformity with all requirements of Drawings and Specifications. Removal and replacement of masonry work shall be done in such a manner as not to impair the appearance or strength of the structure in any way.
- B. Clean up all debris caused by work of this Section, keeping the area clean and neat at all times.

**END OF SECTION 04 2000**



## SECTION 04 5150 – MASONRY TUCK POINTING / REPAIR / ANCHORAGE

### PART 1 - GENERAL

#### 1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and samples for mortar and repair ties

#### 1.2 WORK INCLUDED

- A. Tuck pointing at scheduled areas and areas that may be identified as unit price repairs.
- B. Brick Replacement if required in identified work areas may be identified as unit price repairs.
- C. Wall stabilization at scheduled areas and at walls that may be identified as unit price repairs during the construction.
- D. Anchorage of wood nailers at top of parapet
- E. Split Face CMU

### PART 2 - PRODUCTS

#### 2.1 REPLACEMENT MASONRY UNITS

- A. Split Face Masonry Unit: Match existing grade, size, color and texture of units to be replaced.

#### 2.2 TUCK POINTING MORTAR

- A. Mortar: Match existing. Submit Mortar Design mix and color samples for approval prior to undertaking work.

#### 2.3 REPAIR TIES AND WOOD TO MASONRY ANCHORS

- A. REPAIR TIES: (All Ties, relevant drill bits and setting tools shall be supplied by: Helifix North America Corporation, 110 Maplecrete Road, Concord, Ontario, Canada L4K 1A4. Toll free: 888-992-9989; Fax:: 905-761-0045: [www.helifix.com](http://www.helifix.com), or Approved Equal.)
  - 1. 10MM HELIFIX 304 STAINLESS STEEL REMEDIAL WALL TIE (Length to be 195MM 250MM or 300MM as required for the repair)
  - 2. 6.5MM Drill Bits

3. HELIFIX "DRYFIX" SETTING TOOL

4. S.D.S ROTARY HAMMER DRILL

B. WOOD TO MASONRY ANCHORS: (All Anchors, relevant drill bits and setting tools shall be supplied by: Helifix North America Corporation, 110 Maplecrete Road, Concord, Ontario, Canada L4K 1A4. Toll free: 888-992-9989; Fax:: 905-761-0045: [www.helifix.com](http://www.helifix.com) or Approved Equal)

1. 10MM/250MM HELIFIX 304 STAINLESS STEEL REMEDIAL WALL TIE

2. 6.5MM Drill Bits

3. HELIFIX "DRYFIX" SETTING TOOL

4. S.D.S ROTARY HAMMER DRILL

#### 2.4 MISCELLANEOUS MASONRY ACCESSORIES

A. Refer to Section 04900 for Masonry Cleaning Agents.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION, GENERAL

A. In the absence of specific installation instructions for any specific, specified product, all specified products shall be installed in compliance with the Manufacturer's written instructions for installation.

#### 3.2 TUCK POINTING

##### A. CUT OUT OF EXISTING MORTAR JOINTS

1. Cut out existing mortar joints and remove by means of a toothing chisel or a special pointer's grinder, to a uniform depth of to 19 mm (3/4-inch), or until sound mortar is reached. Take care to not damage edges of existing masonry units to remain. Where veneer ties are in areas to be ground, grind tie material back from face of brick a minimum of 1".
2. Remove dust and debris from the joints by brushing, blowing with air or rinsing with water. Do not rinse when temperature is below freezing.

##### B.. JOB CONDITIONS

1. Protection: Protect newly pointed joints from rain, until pointed joints are sufficiently hard enough to prevent damage.

2. Cold Weather Protection:

- a. Tuck pointing may be performed in freezing weather when methods of protection are utilized.
- b. Comply with applicable sections of "Recommended Practices for Cold Weather Construction" as published by International Masonry Industry All Weather Council.
- c. Existing surfaces at temperatures to prevent mortar from freezing or causing other damage to mortar.

C. INSTALLATION OF TUCK POINTING MORTAR

1. Immediately prior to application of mortar, dampen joints to be tuck pointed. Prior to application of pointing mortar, allow masonry units to absorb surface water.
2. Tightly pack mortar into joints in thin layers, approximately 6 mm (1/4-inch) thick maximum.
3. Allow layer to become "thumbprint hard" before applying next layer.
4. Pack final layer flush with surfaces of masonry units. When mortar becomes "thumbprint hard", tool joints.

D. TOOLING OF JOINTS

1. Tool joints with a jointing tool to produce a smooth, compacted, joint.
2. Tool joints in patch work with a jointing tool to match the existing surrounding joints. Refer to drawings for profiles of head and bed joints.

E. REPLACEMENT OF MASONRY UNITS

1. Cut out mortar joints surrounding masonry units that need to be removed and replaced.
  - a. Units removed may be broken and removed, providing surrounding units to remain are not damaged.
  - b. Once the units are removed, carefully chisel out the old mortar and remove dust and debris.

- c. If units are located in exterior wythe of a cavity or veneer wall, exercise care to prevent debris falling into cavity.
2. Dampen surfaces of the surrounding units before new units are placed.
- a. Allow existing masonry to absorb surface moisture prior to starting installation of the new replacement units.
  - b. Butter contact surfaces of existing masonry and new replacement masonry units with mortar.
  - c. Center replacement masonry units in opening and press into position.
  - d. Remove excess mortar with a trowel.
  - e. Point around replacement masonry units to ensure full head and bed joints.
  - f. When mortar becomes "thumbprint hard", tool joints.

### 3.3 REPAIR TIES (for brick Veneer)

- A. Where the existing masonry requires stabilization, it is to be stabilized at areas where the masonry has separated by means of a 10MM Helifix 304 Stainless steel Remedial Wall Tie.
  - 1. Install Helifix Stainless steel ties used in a "DRYFIX" technique at locations requiring repair as per the following procedures
    - a. Drill a 6.5MM entry hole through the bed joint (at the approximate center) of the brick material to be anchored, continuously into the backup substrate to a min. depth of 3" into the back-up (Actual depth to be as required for the wall tie used - either 195MM, 250MM or 300MM, as required for the repair). This drill procedure shall be carried out by means of an electric hammer drill (3 Jaw Chuck). Note: If required, site testing will verify drill entry hole sizes and depths and any necessary adjustments may be made at that time
    - b. Install the 10MM Helifix tie by driving into position and recessing by means of a Helifix "Dryfix" Setting tool mounted to an S.D.S. Rotary Hammer Drill.
    - c. Patch all penetrations to match existing.
    - d. Repair Ties used to supplement deteriorated ties at Allen ES shall be located only in bed joints and be spaced at no more than 18" O.C. horizontally and no more than 18" o.c. vertically.

### 3.4 WOOD TO MASONRY ANCHORS

- A. A treated wood parapet cap nailer is to be attached to the existing brick parapet cap by means of a 10MM/250MM Helifix 304 Stainless steel Remedial Wall Tie at the entire outer perimeter of the roof.
  - 1. Install Helifix Stainless steel ties into the existing masonry using a “DRYFIX” technique at 8” O.C., staggered, after the wooden nailer is set onto the masonry parapet and either properly shimmed to produce the required slope or directly over the masonry as per the particular detail. Drill at an angle to the nailer to produce a “toe-nail” effect, alternating at every other fastener to enhance pull-out of nailer from top of parapet.
    - a. a 6.5MM entry hole shall be drilled through the wood into the masonry back-up material. This drill procedure shall be carried out by means of an electric hammer drill (3 Jaw Chuck). Note: If required, site testing will verify drill entry hole sizes and depths and any necessary adjustments may be made at that time
    - b. The 10MM Helifix tie shall then be driven into position and recessing by means of a Helifix “Dryfix” Setting tool mounted to an S.D.S. Rotary Hammer Drill.

### 3.5 CLEANING

- A. Clean exposed masonry surfaces on completion.
- B. Remove mortar droppings and other foreign substances from wall surfaces.
- C. First wet surfaces with clean water, then wash down with cleaning solution as specified in Section 04900.
- D. Brush with stiff fiber brushes while washing, and immediately thereafter hose down with clean water.
- E. Free clean surfaces from traces of detergent, foreign streaks or stains. Protect materials during cleaning operations including adjoining construction.

**END OF SECTION 04 5150**

## SECTION 05 3123 - STEEL ROOF DECKING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Steel roof deck.
- B. Related Sections:
  - 1. Division 01: Administrative, procedural, and temporary work requirements.
  - 2. Division 01: Section "Unit Prices."
  - 3. Division 09: Section "Painting."

#### 1.2 REFERENCES

- A. American Iron and Steel Institute (AISI) ([www.steel.org](http://www.steel.org)) - Specifications for Design of Light Gage Structural Members.
- B. American Welding Society (AWS) ([www.aws.org](http://www.aws.org)) D1.3/D1.3M - Structural Welding Code - Sheet Steel.
- C. ASTM International (ASTM) ([www.astm.org](http://www.astm.org)):
  - 1. A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - 2. A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
- D. Society for Protective Coatings (SSPC) ([www.sspc.org](http://www.sspc.org)) - Painting Manual.
- E. Steel Deck Institute (SDI) ([www.sdi.org](http://www.sdi.org)) - Design Manual for Composite Decks, Form Decks, and Roof Decks.

#### 1.3 SUBMITTALS

- A. Submittals for Review:
  - 1. Shop Drawings: Indicate decking plan, support locations, projections through decking, openings, pertinent details, and accessories.
  - 2. Product Data: Provide deck profile, characteristics, dimensions, structural properties, and finish.

#### 1.4 QUALITY ASSURANCE

- A. Manufacturer and Installer Qualifications: Minimum 5 years of experience in work of this Section.
- B. Design Requirements: Design decking including layout, spans, fasteners, and joints under supervision of a Professional Structural Engineer experienced in this work and registered in the State in which the project is located.
- C. Welder Qualifications: AWS D1.3/D1.3M.

D. Perform work in accordance with SDI Manual.

#### 1.5 DELIVERY, STORAGE AND HANDLING

A. Store decking off ground at site, with one end elevated to provide drainage; protect with waterproof covering, properly vented.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

A. Acceptable Manufacturers:

1. Epic Metals Corp.
2. Vulcraft.
3. Wheeling.

B. Substitutions: Under provisions of Division 01.

#### 2.2 MATERIALS

A. Steel Sheet:

1. ASTM A653/A653M, Structural Quality, G90.

#### 2.3 ACCESSORIES

A. Touch Up Paint: SSPC Paint 20, Type I or II.

B. Fasteners: Hot-dip galvanized steel, self-tapping.

C. Welding Materials: AWS D1.1 and D1.3; type required for materials being welded.

#### 2.4 FABRICATION

A. Fabricate deck and accessories to SDI Design Manual.

B. Deck Type: Match existing.

C. Minimum Material Thickness: Match existing.

D. Formed Sheet Width: 36 inches.

E. Minimum Depth: Match existing.

F. Side Joints: Lapped.

G. Form units to span two or more supports, with lapped ends and nesting side laps.

H. Accessory Strips: Fabricate metal closure strips and cover plates of 22 gage sheet steel.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. Install decking and accessories in accordance with manufacturer's instructions, SDI Design Manual, and approved Shop Drawings.
- B. Lap ends 12 inches. Center laps over supports.
- C. Side laps 2 flutes or 3" whichever is greater.
- D. Do not stretch or contract side lap interlocks.
- E. Place deck units flat and square, without warp or deflection.
- F. Provide minimum 1-1/2 inch bearing on steel supports, minimum 4 inch bearing on other materials.
- G. Mechanically fasten decking to supporting members.
- H. Mechanically fasten side laps between adjacent deck units at maximum 18 inches on center.
- I. Cut and fit deck and accessories at perimeter and around projections and openings. Make cuts neat and trim.
- J. Provide strips for support of roof insulation where rib openings in top surface of roof decking occur adjacent to edges and openings. Weld strips into position.
- K. Install closures and angle flashings to close openings between deck and walls, columns, and openings.

### **3.2 FIELD QUALITY CONTROL**

- A. Testing and Inspection Services:
  - 1. Inspect decking for conformance to requirements of Contract Documents, including:
    - a. Deck type and gage.
    - b. Deck placement and alignment.
    - c. Welds and weld pattern.
    - d. Fastener types, locations, quantities, and placement.

### **3.3 ADJUSTING**

- A. Touch Up:
  - 1. Wire brush and clean scarred areas, welds, and rust spots on decking units and supporting steel members.
  - 2. Touch up galvanized coatings with galvanizing repair paint; apply as recommended by manufacturer.

**END OF SECTION 05 3123**



## SECTION 06 1000 - CARPENTRY WORK (FOR ROOFING)

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Wood blocking, cants, and nailers.
  - 2. Preservative Treated Wood (PTW)

- B. Refer to schedule at end of Section.

#### 1.3 DEFINITIONS

- A. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
  - 1. NHLA: National Hardwood Lumber Association.
  - 2. NLGA: National Lumber Grades Authority.
  - 3. SPIB: The Southern Pine Inspection Bureau.
  - 4. WCLIB: West Coast Lumber Inspection Bureau.
  - 5. WWPA: Western Wood Products Association.

#### 1.4 REFERENCES

- A. American Lumber Standards Committee (ALSC): National Design Specification for Wood Construction.
- B. American Wood Preservers' Association (AWPA): AWPA Book of Standards.
- C. American Wood Preservers Bureau (AWPB): APA Design Construction Guide.
- D. Product Standard of NBS (PS):
  - 1. PS 1 - Construction and Industrial Plywood.
  - 2. PS 20 - American Softwood Lumber Standard.

#### 1.5 SUBMITTALS

- A. Submit under provisions of Division 1.
- B. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.
- C. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.

2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
  3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
- D. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, finishes, accessories, and locations to a minimum scale of 1-1/2 inch to one foot.
- E. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
1. Preservative-treated wood.
  2. Power-driven fasteners.
  3. Powder-actuated fasteners.
  4. Expansion anchors.
- F. Manufacturer's Certifications: Submit certification that preservative wood treatment is in accordance with applicable requirements and that preservative formulator/treater warrants PTW material for intended use.
- 1.6 QUALITY ASSURANCE
- A. Rough Carpentry Lumber: Visible grade stamp, of agency certified by National Forest Products Association (NFPA).
- 1.7 DELIVERY, STORAGE, AND HANDLING
- A. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.
- B. Deliver interior wood materials that are to be exposed to view only after building is enclosed and weatherproof, wet work other than painting is dry, and HVAC system is operating and maintaining temperature and humidity at occupancy levels.

## **PART 2 - PRODUCTS**

### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
  2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
- B. Provide dressed lumber, S4S, unless otherwise indicated.

### 2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWWA C2, except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWWA C31 with inorganic boron (SBX).
1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

2. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
  3. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
  4. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by inspection agency.
- B. Application: Treat all miscellaneous carpentry, unless otherwise indicated.
1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
  2. Wood blocking and similar concealed members in contact with masonry or concrete.

## 2.3 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
1. Blocking.
  2. Nailers.
  3. Rooftop equipment bases and support curbs.
  4. Cants.
  5. Coping
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber with 19 percent maximum moisture content and any of the following species:
1. Mixed southern pine; SPIB.
  2. Spruce-pine-fir; NLGA.
  3. Hem-fir; WCLIB, or WWPA.
  4. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
- C. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

## 2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or of Type 304 stainless steel.
  2. Where lumber is pressure-preservative treated with ACQ (Alkaline Copper Quaternary), provide fasteners of Type 304 stainless steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts: ASME B18.2.1.
1. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

- F. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
  - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
  - 2. Material (for fastening into ACO treated lumber): Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.

### **PART 3 - EXECUTION**

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

- A. Verify that surfaces are ready to receive work and field measurements are as shown on shop drawings.
- B. Verify mechanical, electrical, and building items affecting work of this Section are placed and ready to receive this Work.
- C. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

#### **3.2 INSTALLATION, GENERAL**

- A. Discard units or material with defects that might impair quality of work and units that are too small to use in fabricating work with minimum joints.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- D. Comply with AWWA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
  - 1. Use inorganic boron for items that are continuously protected from liquid water.
  - 2. Use copper naphthenate for items not continuously protected from liquid water.
- E. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - 1. NES NER-272 for power-driven fasteners.
  - 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
- F. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, unless otherwise indicated.
- G. Install components with fasteners suited to materials.

- H. Nailable Surfaces: Galvanized or galvanically compatible nails or stainless steel into ACO treated lumber; sized as follows:
    - a. 3/4 and 1-inch materials: 8d nails.
    - b. 1-1/2 or 2-inch materials: 16d nails.
  - 2. Hollow Masonry Walls: Toggle bolts.
  - 3. Solid Masonry: Rawl Zamac pin drive.
  - 4. Steel Members: Bolts or Power actuated Hilti pin.
  - 5. Maximum Spacing: 12-inches on center, unless noted otherwise.
  - 6. Top of Hollow Masonry Wall: Set 12-inch minimum J-bolts in fully set bed of concrete; minimum 18-inches on center.
  - I. Remove all bent or deformed nails from finished work and dispose of.
- 3.3 WOOD BLOCKING, AND NAILER INSTALLATION
- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
  - B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.
- 3.4 SITE TREATMENT OF WOOD MATERIALS
- A. Treat site-sawn ends. Allow preservative to cure prior to erecting materials.
- 3.5 PROTECTION
- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
  - B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
- 3.6 CLEANING
- A. Pick up spilled and unused nails and fasteners daily.
- 3.7 SCHEDULE
- A. Rough Carpentry Work:
    - 1. Miscellaneous blocking and canting for roofing system and related flashings and sheet metal.
    - 2. Blocking and canting for roof mounted mechanical items.

**END OF SECTION 06 1000**

## SECTION 06 1055 - CARPENTRY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  1. Wood furring and grounds.
  2. Wood sleepers.
  3. Utility shelving.
  4. Plywood backing panels.

- B. Refer to schedule at end of Section.

#### 1.3 DEFINITIONS

- A. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
  1. NeLMA: Northeastern Lumber Manufacturers' Association.
  2. NHLA: National Hardwood Lumber Association.
  3. NLGA: National Lumber Grades Authority.
  4. SPIB: The Southern Pine Inspection Bureau.
  5. WCLIB: West Coast Lumber Inspection Bureau.
  6. WWPA: Western Wood Products Association.

#### 1.4 REFERENCES

- A. American Lumber Standards Committee (ALSC): National Design Specification for Wood Construction.
- B. Product Standard of NBS (PS):
  1. PS 1 - Construction and Industrial Plywood.
  2. PS 20 - American Softwood Lumber Standard.

#### 1.5 UNIT PRICES - MEASUREMENT AND PAYMENT

- A. Replacement of Damaged or Deteriorated Wood Blocking With New Wood Blocking:
  1. Basis of Measurement: By the linear foot, by nominal size.
  2. Basis of Payment: Includes demolition and disposal of existing blocking materials; installation of new fire retardant treated wood blocking appropriately sized, cut and site treated; anchors, fasteners, and accessories.

#### 1.6 SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.

- B. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
- C. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, finishes, accessories, and locations to a minimum scale of 1-1/2 inch to one foot.
- D. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
  - 1. Power-driven fasteners.
  - 2. Powder-actuated fasteners.
  - 3. Expansion anchors.

#### 1.7 QUALITY ASSURANCE

- A. Rough Carpentry Lumber: Visible grade stamp, of agency certified by National Forest Products Association (NFPA).

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.
- B. Deliver interior wood materials that are to be exposed to view only after building is enclosed and weatherproof, wet work other than painting is dry, and HVAC system is operating and maintaining temperature and humidity at occupancy levels.

### **PART 2 - PRODUCTS**

#### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  - 1. Factory mark each piece of lumber with grade stamp of grading agency.
  - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
- B. Provide dressed lumber, S4S, unless otherwise indicated.

#### 2.2 LUMBER

- A. General: Provide lumber indicated and lumber for support or attachment of other construction, including the following:
  - 1. Blocking.
  - 2. Nailers.
  - 3. Cants.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber with 15 percent maximum moisture content and any of the following species:
  - 1. Mixed southern pine; SPIB.
  - 2. Spruce-pine-fir; NLGA.
  - 3. Hem-fir; WCLIB, or WWPA.

- 4. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
  - C. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.
- 2.3 WOOD-PRESERVATIVE-TREATED MATERIALS (Not used unless specifically identified in the drawings)
- A. Preservative Treatment by Pressure Process: AWWPA C2 (*except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWWPA C31 with inorganic boron (SBX).*)
    - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
  - B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
  - C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
  - D. Application: Treat items indicated on Drawings, and the following:
    - 1. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
- 2.4 PLYWOOD / OSB
- A. DOC PS 1, Exposure 1, C-D Plugged, in thickness indicated or, if not indicated, minimum 3/4-inch thickness or to match existing.
- 2.5 FASTENERS
- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
    - 1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or of Type 304 stainless steel.
    - 2. Where lumber is pressure-preservative treated with ACQ (Alkaline Copper Quaternary), provide fasteners of Type 304 stainless steel.
  - B. Nails, Brads, and Staples: ASTM F 1667.
  - C. Power-Driven Fasteners: NES NER-272.
  - D. Wood Screws: ASME B18.6.1.
  - E. Lag Bolts: ASME B18.2.1.
  - F. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
  - G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
    - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.



2. Material (for fastening into ACQ treated lumber): Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.
- H. Pin Anchors: Zamac Hammer-Screws by Powers. (Drive Pins are not acceptable.)

### **PART 3 - EXECUTION**

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

- A. Verify that surfaces are ready to receive work and field measurements are as shown on shop drawings.
- B. Verify mechanical, electrical, and building items affecting work of this Section are placed and ready to receive this Work.
- C. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.
- D. Where treated lumber is in contact with Ferrous metal Fabrications, such as metal decking, (uncoated, painted, or galvanized), install an isolation layer of Ice and Water Shield between the Metal and the treated Lumber.

#### **3.2 INSTALLATION, GENERAL**

- A. Discard units or material with defects that might impair quality of work and units that are too small to use in fabricating work with minimum joints.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Do not splice structural members between supports, unless otherwise indicated.
- D. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- E. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  1. NES NER-272 for power-driven fasteners.
  2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
- F. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, unless otherwise indicated.
- G. Install components with fasteners suited to materials.
  1. Nailable Surfaces: Galvanized or galvanically compatible nails or stainless steel into ACQ treated lumber; sized as follows:
    - a. 3/4 and 1-inch materials: 8d nails.
    - b. 1-1/2 or 2-inch materials: 16d nails.
  2. Hollow Masonry Walls: Toggle bolts.
  3. Solid Masonry: Zamac Hammer-Screws.

4. Steel Members: Bolts or Power actuated Hilti pin.
5. Maximum Spacing: 12-inches on center, unless noted otherwise.
6. Top of Hollow Masonry Wall: Set 12-inch minimum J-bolts in fully set bed of concrete; minimum 18-inches on center.
7. Parapet Caps (where indicated in drawings): Helical Ties (See Section 04 0121)

H. Remove all bent or deformed nails from finished work and dispose of.

### 3.3 WOOD BLOCKING AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

### 3.4 FIBER-CEMENT PANELS AND TRIM INSTALLATION

- A. Install flashing around all wall openings.
- B. Install fascia panels over structural framing with joints centered over a framing member.
- C. Fasten through panels into structural framing at maximum 16-inches on center.
  1. Fastener Spacing from Panel Edges: Minimum 3/4-inch and maximum 2-inches from sides of trim board and minimum 1-inch from ends.
- D. At corners, install first board then align second board to outside edge of first. Do not fasten one fiber-cement board to another fiber-cement board.
  1. Allow 1/8-inch gap between trim and siding.
  2. Seal gap with high quality, paintable caulk.

### 3.5 FIBER-CEMENT PANELS AND TRIM FINISHING

- A. Finish in accordance with Division 09 Section "Painting".
- B. Finish unprimed panels with minimum one coat alkali-resistant primer and two coats acrylic based exterior grade paint within 90 days of installation.
- C. Finish factory primed panels with minimum two coats acrylic based exterior grade paint within 180 days of installation.

### 3.6 PROTECTION

- A. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
- B. Protective Walkways - Traffic Area Protection: Install full sheets of 3/4-inch exterior grade plywood and min. 1/2-inch wood fiber insulation to those areas of new roof surface to be trafficked by personal and wheeled vehicles.

### 3.7 CLEANING

- A. Pick up spilled and unused nails and fasteners daily.

### 3.8 SCHEDULE

- A. Rough Carpentry Work:
  1. Miscellaneous blocking and canting

2. Blocking and canting for roof mounted mechanical items.

**END OF SECTION 06 1055**

## SECTION 07 0150.19 – ROOF REPLACEMENT PREPARATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Roof tear-off.
  - 2. Base flashings removal.
  - 3. Protection of existing roofing system that is not reroofed.
  - 4. Modify rooftop appurtenances where required to achieve minimum recommended heights and clearances for new roof installation.
- B. Related Sections include the following:
  - 1. Division 1 Section "Summary" for use of the premises and phasing requirements.
  - 2. Division 1 Section "Work Restrictions" for restrictions on use of the premises due to Owner or tenant occupancy.
  - 3. Division 1 Section "Construction Progress Documentation" for photographs taken before roof replacement preparation.
  - 4. Division 1 Section "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for reroofing preparation.
  - 5. Division 1 Section "Cutting and Patching" for cutting and patching procedures for reroofing preparation.
  - 6. Division 6 Section "Carpentry (for Roofing)" for wood nailers, cants, curbs, and blocking.
  - 7. Division 7 Section "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counterflashings.
  - 8. Division 7 Section "Roof Accessories."
  - 9. Division 22 Section "Basic Plumbing Requirements" for plumbing equipment modifications, removal, and reinstallation.
  - 10. Division 23 Section "Basic Mechanical Requirements" for HVAC equipment modifications, removal, and reinstallation.
  - 11. Division 26 Section "Basic Electrical Requirements" for electrical equipment disconnection and reconnection.

#### 1.3 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

#### 1.4 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Legacy Roofing System: Built-up asphalt roofing membrane, surfacing, and components and accessories between deck and original roofing membrane.

- C. Substrate Board: Rigid board or panel products placed over the roof deck that serve as thermal barriers, provide a smooth substrate, or serve as a component of a fire-resistance-rated roofing system.
  - D. Roof Tear-Off: Removal of existing membrane roofing system from deck.
  - E. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.
  - F. Existing to Remain: Existing items of construction that are not indicated to be removed.
- 1.5 UNIT PRICE - MEASUREMENT AND PAYMENT
- A. Demolition and Replacement of Damaged or Deteriorated Lightweight Insulating Concrete Roof Deck:
    - 1. Basis of Measurement: By area size(s) listed in Bid Form.
    - 2. Basis of Payment: Includes complete removal and proper disposal of existing materials.
  - B. Demolition and Replacement of Damaged or Deteriorated Wood Blocking:
    - 1. Basis of Measurement: By ten linear feet.
    - 2. Basis of Payment: Includes demolition and disposal of existing blocking materials; installation of new fire-retardant treated wood blocking appropriately sized, cut and site treated; anchors, fasteners, and accessories.
- 1.6 SUBMITTALS
- A. Submit under provisions of Division 1 Section "Administration Requirements".
  - B. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.
  - C. Product Data: For each type of product indicated or required to perform the Work.
    - 1. Provide data for each required product indicating characteristics, performance criteria, mixing and preparation requirements, limitations, and Material Safety Data Sheets (MSDS).
  - D. Demolition and Removal Procedures and Schedule: Outline all work tasks and schedule them, showing clearly when each area is to be performed. Coordinate with Owner and other contractors to avoid impact to other work and Owner's occupancy.
  - E. Test Reports:
    - 1. Fastener Pull Test Results: Provide complete testing results in an organized and understandable format, including:
      - a. Roof plan indicating location and designation for each pullout test;
      - b. Fastener type(s), installation method(s) used, and value result for each test performed;
      - c. Type of tester (equipment) used and calibration certification by Independent Laboratory within previous 12 months.
  - F. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces that might be misconstrued as having been damaged by reroofing operations. Submit before Work begins.
  - G. Project Record Documents: Indicate extent of work installed, actual locations of appurtenances and items that will be hidden from view at completion of work.

## 1.7 QUALITY ASSURANCE

- A. Provide certification of inspection confirming approvals by all authorities having jurisdiction.
- B. Roof Replacement Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to roofing system including, but not limited to, the following:
  - 1. Meet with Owner; Owner's Representative; Owner's insurer if applicable; testing and inspecting agency representative; roofing system manufacturer's representative; deck Installer; roofing Installer including project manager, superintendent, and foreman; and installers whose work interfaces with or affects reroofing including installers of roof accessories and roof-mounted equipment.
  - 2. Review methods and procedures related to reroofing preparation, including membrane roofing system manufacturer's written instructions.
  - 3. Review temporary protection requirements for existing roofing system that is to remain, during and after installation.
  - 4. Review roof drainage during each stage of reroofing and review roof drain plugging and plug removal procedures.
  - 5. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 6. Review existing deck removal procedures and Owner notifications.
  - 7. Review procedures to determine condition and acceptance of existing deck for reuse.
  - 8. Review structural loading limitations of deck during reroofing.
  - 9. Review base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect reroofing.
  - 10. Review HVAC shutdown and sealing of air intakes.
  - 11. Review shutdown of fire-suppression, -protection, and -alarm and -detection systems.
  - 12. Review procedures for asbestos removal or unexpected discovery of asbestos-containing materials.
  - 13. Review governing regulations and requirements for insurance and certificates if applicable.
  - 14. Review existing conditions that may require notification of Owner's Representative before proceeding.

## 1.8 PROJECT CONDITIONS

- A. Owner will occupy all portions of building immediately below reroofing area. Conduct reroofing so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
  - 1. Coordinate work activities daily with Owner so Owner can place protective dust or water leakage covers over sensitive equipment or furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below the work area if desired.
  - 2. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below the affected area. Verify that occupants below the work area have been evacuated prior to proceeding with work over the impaired deck area.

- B. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
  - C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
  - D. Owner assumes no responsibility for condition of areas to be reroofed.
    - 1. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
  - E. Limit construction loads on roof to 200 lb rooftop equipment wheel loads and 20 PSF for uniformly distributed loads.
  - F. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering into existing roofing system or building.
  - G. Hazardous Materials: It is not expected that hazardous materials such as asbestos-containing materials will be encountered in the Work.
    - 1. Hazardous materials will be removed by Owner before start of the Work. Existing roof will be left no less watertight than before removal.
    - 2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Owner's Representative and Owner. Hazardous materials will be removed by Owner under a separate contract.
- 1.9 WARRANTY
- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during reroofing, by methods and with materials so as not to void existing roofing system warranty. Notify warrantor before proceeding.
    - 1. Notify warrantor of existing roofing system on completion of reroofing, and obtain documentation verifying that existing roofing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

## **PART 2 - PRODUCTS**

### **2.1 INFILL MATERIALS**

- A. Use deck repair and infill materials matching existing deck materials, unless otherwise indicated.
- B. All Decks: Align top plane with existing deck.
- C. Curbs and Support Members: Wood or metal curbs and support items as indicated and required for existing conditions.
- D. Miscellaneous Metals: Conform to existing Products and installations.
- E. Mechanical Piping and Equipment: Match existing where practical and conform to products and execution specified in Division 15 Section "Basic Mechanical Requirements".
- F. Electrical Fixtures and Equipment: Match existing where practical and conform to products and execution specified in Division 16 Section "Basic Electrical Requirements".

## 2.2 TESTS

- A. Provide fastener pullout testing in each roof area for each type of roof deck under the provisions of Division 1 Section "Quality Requirements" and in accordance with SPRI - Standard Pullout Test Procedure.
- B. Perform pull tests in accordance with applicable standards using certified equipment and personnel.
- C. Use results to determine fasteners and patterns for each deck type and roof area.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that areas to be demolished are clear of encumbrances.
- B. Examine existing mechanical and electrical items to determine conditions and operability.
- C. Verify existing roof drains and drain piping are clear of debris, open and functional, that piping is properly connected and sealed to drain bowls and all drain components are in serviceable condition.
- D. Notify Owner's Representative in writing of any inoperable items or unsafe conditions.
- E. Beginning work indicates acceptance of existing conditions, including operability of mechanical and electrical items.

### 3.2 PREPARATION

- A. Prevent movement or settlement of adjacent structures and paving. Provide bracing and shoring.
- B. Protect existing landscaping materials, appurtenances, structures, paving, roofing and siding, roof mounted equipment, roof deck and structures which are not to be demolished.
- C. Coordinate with Owner to shut down air intake equipment in the vicinity of the Work. Cover air intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- D. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- E. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
  - 1. If roof drains will be temporarily blocked or unserviceable due to roofing system removal or partial installation of new membrane roofing system, provide alternative drainage method to remove water and eliminate ponding. Do not permit water to enter into or under existing membrane roofing system components that are to remain.
- F. Verify that rooftop utilities and service piping have been shut off before commencing Work.



### 3.3 FASTENER PULL-OUT TESTING

- A. Retain independent testing and inspecting agency to conduct fastener pull-out tests according to SPRI FX-1, and submit test report to membrane manufacturer to determine fastener pattern required to resist uplift pressure at corners, perimeter, and field of roof as indicated Article on Performance Requirements.
  - 1. Obtain Architect's approval to proceed with membrane manufacturer's recommended fastening pattern. Architect may furnish revised fastening pattern commensurate with pull-out test results.

### 3.4 ROOF TEAR-OFF

- A. General: Notify Owner each day of extent of roof tear-off proposed.
- B. Remove loose debris and superfluous equipment from the roof prior to demolition.
- C. Roof Tear-Off – **Section A, D, E, F**: Remove existing metal roof panel system and components down to the roof deck. Sub-ceiling fireproofing and insulation materials are to be removed and disposed of per Sub-Section 3.10 below.
  - 1. Remove roof system fasteners from deck. Fasteners used to attach deck to the joist structure shall remain.
  - 2. Remove cover boards, roof insulation, and substrate boards.
  - 3. Remove all existing coping
  - 4. Remove access ladders at 1<sup>st</sup> level and roof level.
- D. Roof Tear-Off – **Section B and C**: Remove existing overlay metal roof panel system, batts insulation and original built-up “tar and gravel” system and components. Legacy lightweight insulating concrete and corrugated deck can remain. Sub-ceiling fireproofing and insulation materials are to be removed and disposed of per Sub-Section 3.10 below.
  - 1. Remove fasteners used to attach metal roofing panels to the structure.
  - 2. Remove cover boards, roof insulation, and substrate boards.
  - 3. Remove access ladders<sup>1st</sup> level and roof level
- E. DO NOT use power cutting tools on materials identified as ACRM.

### 3.5 DECK PREPARATION

- A. Inspect deck after tear-off. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Owner's Representative. Do not proceed with installation until directed by Owner's Representative.
- B. If deck surface is not suitable for receiving new roofing, or if structural integrity of deck is suspect, immediately notify Owner's Representative. Do not proceed with installation until directed by Owner's Representative.

### 3.6 DECK AND SUPPORT REPLACEMENT AND REPAIR

- A. Replace damaged and deteriorated deck under Unit Prices as required. Replacement deck to match existing.
- B. Install new deck and accessories as required and directed by Owner's Representative.
- C. Remove damaged and deteriorated deck by cutting in straight lines. Coordinate cuts with structural supports to ensure proper installation of replacement materials.

- D. Where necessary, grind away existing welds and protrusions. Provide smooth and even surface for new deck on existing structural framing.
  - E. Install new deck repair materials with all edges properly supported on structural members or adjacent decking. Secure with approved fasteners, spaced as indicated or maximum 8-inches on center.
  - F. For Roof Areas B and C, purlin additions and related components:
    - 1. Install 1 ½" X 22 Gauge "F" Deck diaphragm screwed to existing Z-Purlins using #12 Tek screws at 36/4 pattern to existing Z-Purlin.
    - 2. New Added "C-Stud" post at every vertical web member of bar joist below.
    - 3. New Added "U-Track" for "C-stud" to connect at every vertical web member for bar joist to distribute load.
  - G. Sections A, B, C, D, E, and F
    - a. Exposed Structural Framing - Surface preparation and treatment per Specification 09 9113.
- 3.7 DECK INFILL FOR ABANDONED OPENINGS
- A. Prepare openings as indicated in previous Article on Deck and Support Replacement and Repair.
  - B. Infill roof deck openings where abandoned equipment is removed and not replaced.
- 3.8 EXISTING VENTILATORS REPLACEMENT
- A. Remove all existing non-mechanically operated vents and ventilators and replace with new Products of identical design, function, and configuration, unless otherwise indicated.
  - B. Install curbs for all ventilators with a deck opening of 12-inches or greater.
- 3.9 EXISTING MECHANICAL AND ELECTRICAL ITEMS MODIFICATIONS
- A. When required to achieve recommended clearances, minimum curb heights, or other modifications, disconnect, modify, and reconnect mechanical and electrical services using qualified and licensed personnel.
  - B. Do not disrupt any services unless specifically approved by Owner's Representative and on-site personnel.
  - C. Restore services and verify proper operational conditions to satisfaction of Owner's Representative.
- 3.10 DISPOSAL
- A. Collect and place demolished materials in containers. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
    - 1. Storage or sale of demolished items or materials on-site will not be permitted.
  - B. Transport demolished materials off Owner's property and legally dispose of them.

**END OF SECTION 07 0150.19**

## SECTION 07 1000 - DAMP PROOFING AND WATERPROOFING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Provide and install or repair existing below-grade waterproofing.
  - 2. Provide and install or repair existing weather side of the inside wythe of all exterior masonry cavity walls.
  - 3. Provide and apply or repair existing damp proofing and joint taping on weather side of gypsum board sheathing.
  - 4. Provide and apply or repair existing waterproofing (flashing) at exterior walls as indicated in the drawings and specified herein.
- B. Related Sections:
  - 1. Concrete Masonry Units
  - 2. Gypsum Sheathing
  - 3. Roof Flashing
  - 4. Plastic Vapor Retarder under slab on grade
  - 5. Water Stops
  - 6. Metal Through Wall Flashing

#### 1.3 SUBMITTAL

- A. Product Data:
  - 1. Submit manufacturer's specifications, standard detail drawings, and installation instructions.
- B. Shop Drawings:
  - 1. Submit one PDF file of their shop drawing indicating locations of where and which product shall be used.
- C. Samples:
  - 1. Submit two samples, 12-inches x 12-inches panel showing proposed material to be used.
  - 2. Submit standard color samples of metal finish for Owner's selection.
- D. Test Reports:
  - 1. Submit test reports prepared by (UL) Underwriters Laboratories, Inc. or ICC-ES indicating wind uplift rating of proposed S-Corrugated metal building panel system.
- E. Certification:
  - 1. Submit manufacturers certification that materials and finishes meet specification requirements.
- F. Applicator's and Manufacturer's Experience Records:
  - 1. Submit list of completed projects and name of Owner and Consultant.

#### 1.4 QUALITY ASSURANCE

##### A. Manufacturer's Qualifications:

1. Ten years minimum experience in producing material.
2. Substitution requests must be submitted in writing at time of bid date accompanied by product literature, technical information, and product sample. Approved substitutions will be set forth in an addendum.
3. No substitutions will be permitted after bid date.

##### B. Applicator Qualifications:

1. Five (5) years minimum experience in application of material.
2. Minimum of five satisfactory projects on similar projects within the past two years.

##### C. Regulatory Requirements:

1. Comply with requirements of applicable building codes and other agencies having jurisdiction of wind uplift rating for building.
2. 2012 International Existing Building Code.
3. 2012 International Building Code.
  - a. Class A Exterior Fire Exposure Rating
  - b. Severe Hail (SH) exposure rating.
4. 2012 International Energy Conservation Code.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Protect products and accessories from damage, galvanic/battery current, and discoloration during transit and at project site. Store sheets and components in dry storage area to prevent condensation and water between S-Corrugated panels. On-site storage of materials must be pre-approved by owner.
- B. Do not overload roof structure with stored materials. Do not permit material storage or traffic on completed roof surfaces.

#### 1.6 WARRANTY

- A. Furnish contractor's standard 3-year warranty against defects in material and workmanship for the Work under this section from the Substantial Completion Date.

### **PART 2 - PRODUCTS**

#### 2.1 WALL MATERIALS

1. MEMBRANE FLASHING: 40 mil thick polyethylene backed SBS modified bitumen self-adhering black membrane; "Protecto Flash" as manufactured by Protecto Wrap Co. or "Perm-A-Barrier" as manufactured by W.R. Grace and Co. Membrane shall comply with the following:
  - a. Tensile Strength: ASTM D412; 46 psi.
  - b. Elongation: ASTM D412; 300% min.
  - c. Water Vapor Permeability: ASTM E96; 0.1 perms max.
2. DAMPPROOFING: Non-asbestos emulsion type coating No. 352 over No. 207 adhesive primer, as manufactured by Gulf States Asphalt or approved equivalent by Monsey, Kamak, W.R. Meadows, Celotex, or Sonneborn. Comply with ASTM D1227, Type 1.
3. SHEATHING TAPE: 4-inches wide glass fabric scrim complying with ASTM D1668 or 40 mil thick polyethylene backed SBS modified bitumen self-adhering

tape as manufactured by Protecto Wrap Co. or equivalent by W.R. Grace and Co. Verify compatibility of tape with proposed damp proofing.

## 2.2 BELOW GRADE WATERPROOFING

1. WALLS: "Hydrocide Liquid Membrane 5000T", one part cold applied elastomeric, modified urethane. Trowel applied, non-sag, as manufactured by MasterSeal or approved equivalent by Toch Bros. or Tremco.
2. SLABS: "Hydrocide Liquid Membrane, HLM 5000" Cold Applied Seamless Elastomeric, Modified Urethane for use between concrete seal slab and concrete slab-on-grade as manufactured by MasterSeal or approved equivalent by Toch Bros. or Tremco.
3. PROTECTION BOARD: Water-resistant, semi-rigid panel composed of a core of asphalt and inorganic mineral filler particles, bottom reinforcing cover of asphalt-saturated felt and top cover of fiber glass mat weather-coated with a bond-breaking film, as manufactured by W.R. Meadows, Inc.

## 2.3 SHOWER PANS

- A. Membrane Shower Pans of 0.030-inch (30 mil) thick synthetic, heavy duty, flexible membrane PVC sheet.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Substrate:
  1. Examine substrate to ensure it is properly secured and prepared to receive new material.
  2. Do not proceed with installation until unsatisfactory conditions have been corrected.

### 3.2 MEMBRANE FLASHING

- A. Prime concrete and masonry surfaces scheduled to receive membrane flashing using flashing manufacturer's recommended primer to ensure good adhesion.
- B. WALL FLASHINGS: Shall be installed above all openings occurring in an exterior wall, at base of exterior wall, and at wall interruptions by columns, beams, slabs, spandrels and other locations as indicated in the drawings. Flashing shall extend to within 1-inch of outside face of wall, shall be continuous and shall extend through cavity and be turned up to the top first course above finish floor on face of inner wythe, and to extend 1-inch minimum into back up or inner wythe. End laps to be 9-inches and side laps 6-inches.
- C. STEEL STRUCTURE: Cover all steel columns or beams in exterior walls not protected by damp proofed concrete block or sheathing. Cover steel completely with membrane flashing lap 6-inches on to masonry on each side of columns. Conform and adhere to steel shapes not fireproofed. Cover all protruding angles or miscellaneous steel.
- D. FRAMES: Install at exterior window and door frames and other locations as indicated in the drawings.
- E. SHEATHING: Wrap all corners of gypsum board sheathing. See drawings for other details.

3.3 SHEATHING TAPE: Use one of the following systems:

- A. Imbed and cover glass fabric scrim tape in damp proofing mastic at all joints, cracks, and penetrations at gypsum board sheathing.
- B. Apply specified self-adhering tape continuously over all joints, cracks and penetrations prior to beginning Damp proofing operations.

3.4 DAMPPROOFING

- A. Spray or brush apply damp proofing coating to weather side of all gypsum sheathing and primed concrete block back-up at exterior masonry cavity walls in accordance with the following:
  - 1. Primer: Minimum ½ gallon material per 100 sq. ft. of wall surface.
  - 2. Coating: Minimum 1/32-inch dry film thickness and minimum 5 gallons material per 100 sq. ft.
- B. Cover all corners and work thoroughly into all joints, cracks, or crevices. Finished coating shall be monolithic and free of pin holes or cracks. Seal cracks, voids and joints at dissimilar materials with glass fabric embedded in damp proofing coating.
- C. Seal around penetrations including all masonry anchors.
- D. Damp proofing shall be applied only when temperature is at 40 degrees F. and rising or above, and when no rain is forecast for the 24-hour period following application. No damp proofing shall be covered by masonry prior to observation by the Architect. All damp proofing shall dry for a minimum of 24-hours prior to being covered by finish masonry.

3.5 BELOW GRADE WATERPROOFING

A. LIQUID MEMBRANE:

- 1. Install liquid membrane systems at earth side of all below grade walls, between sub-slab (“mud-slab”) and structural slab, and all outside surfaces of elevator pit. Allow concrete work to cure a minimum of 14 days. All surfaces shall be smooth, dry, sound and free of honeycombs. Concrete shall be free of curing and parting compounds, wax or other foreign materials.
- 2. Static joints or cracks less than 1/8-inch wide shall be sealed with “HLM” as manufactured by waterproofing manufacturer. Material shall fill and over-lap the edges of the joint to a width of 4-inches on both sides and shall have a minimum surface thickness of 55 (+5) mils.
- 3. Immediately prior to application of membrane, remove all dust and dirt by use of high-pressure air, by brushing with a soft broom or vacuum cleaning.
- 4. Apply material at a rate of 4 gallons per 100 square feet of surface to produce a membrane of 55 (+5) mil thick. Carefully control application to avoid runs and sags of fresh material.
- 5. Apply membrane to pre-stripped areas at cracks, joints, intersections, penetrations, etc., to provide - a minimum total thickness of 110 mils over these areas. Mask any membrane edge exposed to view to provide a straight clean edge.
- 6. Before the membrane attains a final set, verify the applied thickness by use of a mil-thickness gauge. Where readings indicate a thickness less than specified, immediately apply additional membrane to produce required thickness.

7. Following the application of the membrane, place protection boards over the membrane waterproofing at walls receiving backfill. Use membrane material as required to adhere protection boards. Boards shall be firmly in place with joints closely butted and sealed with gusset tape before backfilling is started.
8. Protect membrane during construction. Any punctures or cuts in the membrane shall be patched and sealed in the manner described above for sealing joints in the sheeting.

3.6 CLEANING

- A. Clean exposed surfaces of work promptly after completion of installation.

3.7 PROTECTION

- A. Protect work as required to ensure installed material will be without damage at time of final completion.

**END OF SECTION 07 1000**

## SECTION 07 2210

### ROOF AND DECK INSULATION BOARDS AND ASSOCIATED ACCESSORIES

#### PART 1 - GENERAL

##### 1.1 SECTION INCLUDES:

- A. Complete Tear-off Roofs: Substrate preparation-removal of all existing roof membranes and flashings, roof insulations, gypsum boards, down to the existing roof structural deck. Removal of flashings, existing leads, and metal jacks.
- B. Demolition: Remove all abandoned roof penetrations (pipes, curbs, etc.) as designated by the Owner, from roof surface and patch roof deck to match existing. Raise all curbs as required by code to accommodate new roof system.
- C. Remove and seal off all existing drainage scuppers that divert water through the existing wall cavities.
- D. Preparation (or removal) of existing roof insulation, installation of new roof insulation.
- E. Installation of new coated glass facer, polyisocyanurate roof insulation over prepared existing insulation and/or prepared roof deck, with insulation joints staggered (offset).
- F. Installation of new tapered roof insulation (crickets) at high side of curbs.
- G. Install new ½-inch gypsum overlayment board over new polyisocyanurate roof insulation as specified, with mechanical fasteners.

##### 1.2 GENERAL REQUIREMENTS:

- A. Flat and tapered insulation types and overlay insulation board shall be supplied by roofing material manufacturer.
- B. Insulation shall be approved by the Building Code, Factory Mutual (FM), and Underwriters Laboratories (UL) for use as roofing insulation.
- C. Minimum basis of LTTR aged R-Values are:
  - 1. ½-inch Gypsum roof cover board is R-0.45.
  - 2. Polyisocyanurate insulation only is R-5.5 per inch.
    - a. (2) layers of 1.750-inches for R-20 min.
- D. All products shall be from one manufacturer and intermixing between manufacturers is not allowed.

##### 1.3 SUBMITTALS:

- A. Product cut sheets marked to define specific products to be bought and used on this project.
- B. Product assembly figures showing how the products will be assembled with attachment/fasteners being used defined.
- C. Screw fastening pattern for wind speed defined on **Drawing T1** for all roof zones calculated per ASCE 7 as shown on the Drawing with an additional **Factor of Safety of 2**.

#### PART 2 - PRODUCTS

- 2.1 VAPOR RETARDER: (Not Required in this Climate Zone and building location)
- 2.2 FLAT POLYISOCYANURATE INSULATION:
  - A. Flat Polyisocyanurate Insulation with Coated Glass Facer:



1. ASTM C1289, Type II, Class 2 Standard Specification for Polyurethane and Polyisocyanurate Roof Insulation.
  2. Fill Board (for taper) Thickness: Maximum thickness of fill boards is 1.750-inch thick.
    - a. Maximum board size to be 96-inches x 48-inches in size.
    - b. Minimum board size to be 24-inches by 24-inches in size.
  3. Overall Thickness: three-point-five inches (3.5-inches) thick consisting of two (2) layers of one-point-seven five (1.75-inches).
  4. Approved flat polyisocyanurate insulation are:
    - a. Sarnafil – Sarnatherm Polyisocyanurate
    - b. Carlisle - SecurShield Polyisocyanurate
    - c. Versico - SecurShield Polyisocyanurate
- B. Fully Tapered Polyisocyanurate Insulation with Coated Glass Facer:
1. ASTM C1289, Type II, Class 2 Standard Specification for Polyurethane and Polyisocyanurate Roof Insulation.
  2. Fill Taper Board Thickness: Maximum thickness of fill boards is 2-inches thick with a:
    - a. Maximum board size to be 96-inches x 48-inches in size.
    - b. Minimum board size to be 24-inches by 24-inches in size.
  3. Taper Slope shall be by the design documents to provide positive drainage off of the roof surfaces. Typical cricket slopes are:
    - a. 1/8-inch to 12-inches slope.
    - b. 1/4-inch to 12-inches slope.
    - c. 1/2-inch to 12-inches slope.
  4. Minimum Cover Board Thickness:
    - a. Zero-point-five-inch (0.5-inch) thick.
  5. Approved taper polyisocyanurate insulation are:
    - a. Sarnafil – Sarnatherm Polyisocyanurate
    - b. Carlisle - SecurShield Polyisocyanurate
    - c. Versico - SecurShield Polyisocyanurate
- 2.3 TAPERED OVERLAY CRICKETS:
- A. Where shown on drawings and behind the high side of all roof curbs.
  - B. Tapered Polyisocyanurate Overlay Crickets with Coated Glass Facer:
    1. ASTM C1289, Type II, Class 2 Standard Specification for Polyurethane and Polyisocyanurate Roof Insulation.
    2. Minimum Thickness: 1/2-inch.
      - a. Tapered Insulation panels are to be pre-fabricated sloped panels with a slope of 1/2-inch to 12-inches slope (where indicated on roof plans and at the high side of all curbs).
      - b. Install 6-inches T.E.S. (tapered edge strip) at the low side of the tapered crickets.
    3. Approved cricket polyisocyanurate insulation are:
      - a. Sarnafil – Sarnatherm Polyisocyanurate
      - b. Carlisle - SecurShield Polyisocyanurate
      - c. Versico - SecurShield Polyisocyanurate
- 2.4 ROOF COVER BOARD:
- A. Dens-Deck<sup>®</sup> Prime: Basis of Design

1. A fire-tested, gypsum hardboard with glass-mat facers and a pre- primed surface on one side. Dens-Deck<sup>®</sup> Prime is provided in a 96-inches or 48-inches x 48-inches in thickness of ½-inch. Install directly over the new insulation as shown on Drawing.
- B. Securerock<sup>®</sup> Gypsum-Fiber Roof Board:
1. A fire-tested, fiber-reinforced, water-resistant hardboard. Securerock<sup>®</sup> is provided in a 96-inches or 48-inches x 48-inches in thickness of ½-inch. Install directly over the new insulation as shown on Drawing.
- C. EVERBOARD™ Closed Loop Roof Board: (for possible LEED credit)
1. A fire-tested, plastic and cellulosus fiber-reinforced, water-resistant hardboard. EVERBOARD is provided in a 96-inches or 48-inches x 48-inches in thickness of ½-inch. Install directly over the new insulation as shown on Drawing.
- 2.5 ACCESSORIES
- A. Tapered Edge Strip (TES):
1. 1½-inch x 18-inch tapered edge strip (at high side of roof curbs, at scuppers/roof drains, etc.)
  2. ½-inch x 6-inch tapered edge strip at start of taper cricket system
- B. Insulation/Cover Board Screw Plates:
1. 3-inch square, round, or hexagonal, stamping of SAE 1010 steel with an AZ55 Galvalume coating.
  2. Approved manufacturers are:
    - a. Sarnafil – 3” Round Steel Sarnaplate Insulation Stress Plates
    - b. Versico – 2-7/8" Hex Galvalume Coated-Steel SecurFast Insulation Plates
    - c. Carlisle – 2-7/8" Hex Galvalume Coated-Steel SecurFast Insulation Plates
- C. Insulation Fasteners:
1. Number 14 (minimum) corrosion-resistant fastener with a buttress thread, used with insulation plates to attach insulation boards to steel or wood roof decks:
    - a. Sarnafil – Sarnafastener #15 XP
    - b. Carlisle – HP-X Fasteners
    - c. Versico - HPV Fasteners
  2. Insulation fasteners protruding through an exposed roof decks SHALL best match the existing inside color of the roof deck.

## PART 3 - EXECUTION

### 3.1 SUBSTRATE EXAMINATION:

- A. Verify that deck/substrate is dry, clean, smooth and free of sharp edges, burrs, deep depressions, loose material, oil, grease or other foreign material.
- B. Verify proper placement of all roof openings, pipes, curbs, sleeves, ducts, vents and drains.
- C. Beginning installation means acceptance of all existing surfaces conditions.

### 3.2 SUBSTRATE PREPARATION:

- A. Comply with manufacturer's instructions for preparation of substrate to receive elastomeric sheet roofing.

- B. Preparation (or removal) of existing roof insulation.
  - C. Metal Roof Decks:
    - 1. Remove existing roof membrane, wood fiber board, and insulation, down to the existing metal roof deck. Prepare the existing metal roof deck to receive the proposed new roof assembly.
  - D. Clean substrate of dust, debris, and other substances detrimental to elastic sheet roofing work.
  - E. Beginning of installation means acceptance of conditions as satisfactory.
  - F. Remove old membrane flashings, pitch pans, metal and lead flashings.
  - G. A positive slope is recommended to provide adequate drainage. No ponding water should remain on the roofing system 48 hours after rain has stopped.
  - H. Thoroughly clean all surfaces against or into which work will be installed. Ensure that all surfaces are clean and dry before starting and during performance of work. Follow roofing system manufacturer's recommendations.
- 3.3 FASTENING STRIPS, NAILERS, BLOCKING:
- A. Install fastening strips at the base of roof projections, penetrations and non-roof edge perimeters as detailed.
  - B. Install treated wood nailers at roof edge details, at roof perimeters and around specified roof penetrations.
    - 1. Total nailer height must be a minimum of 2-inches above the finished roof surface at all perimeter locations. Install with 1/8-inch gap between each length and ensure each subsequent layer has a minimum 12-inch material stagger.
    - 2. Firmly fasten nailer to the deck or existing structurally sound and secured nailers at (12-inch) O.C. maximum, to resist a force of 200 lbs. per linear foot in any direction.
    - 3. Taper nailer, where applicable, to be flush at point of contact with membrane in either the vertical or horizontal applications.
- 3.4 INSULATION APPLICATION
- A. Installation of polyisocyanurate roof insulation as Drawings show:
    - 1. Furnish and install two (2) layers of new **1.75-inches (one-point-seven five inch)** thick polyisocyanurate roof insulation (total thickness 3.5-inches – Refer to Detail 2 and 4 on Drawing sheet D0), with a minimum 6-inches (twelve inch) material stagger in all directions. Insulation joints shall be 1/8-inch or less in width. Neatly cut and fit insulation around roof penetrations and projections. Install only dry insulation and only as much insulation as can be covered the same day with membrane and completed.
      - a. Insulation that has become wet during storage will be marked and removed from site by the contractor.
    - 2. Mechanically fastened insulation in a sandwich assembly between the gypsum cover board and the steel roof deck diaphragm. Attachment requirements:
      - a. Contractor to confirm ultimate wind speed defined on Drawing T1, Factor of Safety defined 2X, with manufacturers requirements and submit screw fastening pattern for wind uplift with submittals.

**END OF SECTION 07 2210**

# SECTION 07 2413 - POLYMER-BASED EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. Section Includes:

- 1. EIFS-clad barrier-wall assemblies that are field applied over substrate.
- 2. Finish Coat that is applied over existing Finish Coat over existing Portland Cement Stucco.

- B. Related Requirements:

- 1. Section 07 9200 "Joint Sealants" for sealing joints in EIFS with elastomeric joint sealants and for perimeter joints between EIFS and other materials.

### 1.3 DEFINITIONS

- A. Definitions in ASTM E 2110 apply to Work of this Section.
- B. EIFS: Exterior insulation and finish system(s).
- C. IBC: International Building Code.
- D. Polymer-Based Exterior Insulation and Finish System: Class PB EIFS, as defined in ASTM E 2568.

### 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

### 1.5 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.
- B. Product Data: For each EIFS component, trim, and accessory.
- C. Samples: For each exposed product and for each color and texture specified, 8 inches square in size.
- D. Samples for Initial Selection: For each type of finish-coat color and texture indicated.
  - 1. Include similar Samples of exposed accessories involving color selection.

- E. Samples for Verification: 24-inch- square panels for each type of finish-coat color and texture indicated, prepared using same tools and techniques intended for actual work including corners, splices openings, etc.
  - 1. Include exposed trim and accessory Samples to verify color selected.
  - 2. Include a typical control joint filled with sealant of color selected, as specified in Section 07 9200 "Joint Sealants."

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Manufacturer Certificates: Signed by EIFS manufacturer certifying the following:
  - 1. EIFS substrate is acceptable to EIFS manufacturer.
  - 2. Accessory products installed with EIFS, including joint sealants, flashing, water-resistant barriers, trim, whether or not furnished by EIFS manufacturer and whether or not specified in this Section, are acceptable to EIFS manufacturer.
- C. Product Certificates: For cementitious materials and aggregates and for insulation.
- D. Product Test Reports: For each EIFS assembly and component, for tests performed by a qualified testing agency.
- E. Field quality-control reports and special inspection reports.
- F. Evaluation Reports: For EIFS, including insulation fasteners, flexible membrane flashing, from ICC-ES.
- G. Sample Warranty: For manufacturer's special warranty.

#### 1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For EIFS to include in maintenance manuals.

#### 1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An installer certified in writing by EIFS manufacturer as qualified to install manufacturer's system using trained workers.
- B. Fabricator/Erector Qualifications: Certified in writing by EIFS manufacturer as qualified to fabricate and erect manufacturer's prefabricated panel system using skilled and trained workers.
- C. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, to set quality standards for materials and execution, and to set quality standards for fabrication and installation.
  - 1. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original, unopened packages with manufacturers' labels intact and clearly identifying products.
- B. Store materials inside and under cover; keep them dry and protected from weather, direct sunlight, surface contamination, aging, corrosion, damaging temperatures, construction traffic, and other causes.
  - 1. Stack insulation board flat and off the ground.
  - 2. Protect plastic insulation against ignition at all times. Do not deliver plastic insulating materials to Project site before installation time.
  - 3. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

## 1.10 FIELD CONDITIONS

- A. Weather Limitations: Maintain ambient temperatures above 40 deg F for a minimum of 24 hours before, during, and after adhesives or coatings are applied. Do not apply EIFS adhesives or coatings during rainfall. Proceed with installation only when existing and forecasted weather conditions and ambient outdoor air, humidity, and substrate temperatures permit EIFS to be applied, dried, and cured according to manufacturers' written instructions and warranty requirements.

## 1.11 WARRANTY

- A. Manufacturer's Special Warranty: Manufacturer agrees to repair or replace EIFS that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Bond integrity and weathertightness.
    - b. Deterioration of EIFS finishes and other EIFS materials beyond normal weathering.
  - 2. Warranty coverage includes the following EIFS components:
    - a. EIFS finish, including base and finish coats and reinforcing mesh.
    - b. Insulation installed as part of EIFS including build-outs.
    - c. Insulation adhesive and mechanical fasteners.
    - d. EIFS accessories, including trim components and flashing.
  - 3. Warranty Period: 10 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, [provide products by the following] [provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide comparable product by one of the following:
  - 1. BASF Wall Systems.
  - 2. Corev America, Inc.
  - 3. Dryvit Systems, Inc.

4. Master Wall, Inc.
5. Omega Products International, Inc.
6. Parex USA, Inc.
7. Sto Corp.
8. Total Wall, Inc.
9. Other Manufacturer, subject to Provisions of 01 2500

- C. Source Limitations: Obtain EIFS from single source from single EIFS manufacturer and from sources approved by EIFS manufacturer as tested and compatible with EIFS components.

## 2.2 PERFORMANCE REQUIREMENTS

- A. EIFS Performance: Comply with ASTM E 2568 and ICC-ES AC219 and with the following:
1. Weathertightness: Resistant to water penetration from exterior.
  2. System Fire Performance: Fire-resistance rating of wall assembly.
  3. Delegated Design: Design EIFS attachment based on engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
    - a. Structural Performance: EIFS assembly and components shall comply with ICC-ES AC219 when tested according to ASTM E 2568. EIFS shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7
    - b. Wind Loads: Uniform pressure calculated in Accordance with ASCE/AEI 7, acting inward or outward.
  4. Impact Performance: ASTM E 2568, High impact resistance.
  5. Bond Integrity: Free from bond failure within EIFS components or between EIFS and substrates, resulting from exposure to fire, wind loads, weather, or other in-service conditions.
  6. Abrasion Resistance of Finish Coat: Sample consisting of 1-inch- thick EIFS mounted on 1/2-inch- thick gypsum board; cured for a minimum of 28 days and shows no cracking, checking, or loss of film integrity after exposure to 528 quarts of sand when tested according to ASTM D 968, Method A.
  7. Mildew Resistance of Finish Coat: Sample applied to 2-by-2-inch clean glass substrate; cured for 28 days and shows no growth when tested according to ASTM D 3273 and evaluated according to ASTM D 3274.

## 2.3 EIFS MATERIALS

- A. Primer/Sealer: EIFS manufacturer's standard substrate conditioner designed to protect substrates from moisture penetration and to improve the bond between substrate and insulation adhesive.
- B. Flexible-Membrane Flashing: Cold-applied, self-adhering, self-healing, rubberized-asphalt and polyethylene-film composite sheet or tape and primer; EIFS manufacturer's standard or product recommended in writing by EIFS manufacturer.
- C. Insulation Adhesive: EIFS manufacturer's standard formulation designed for indicated use; compatible with substrate and complying with the following:

1. Factory-mixed noncementitious formulation designed for adhesive attachment of insulation to substrates of type indicated, as recommended by EIFS manufacturer.
- D. Molded, (Expanded) Rigid Cellular Polystyrene Board Insulation (EPS): Comply with ASTM C 578, Type I; and with EIFS manufacturer's requirements for most stringent requirements for material performance and qualities of insulation, including dimensions and permissible variations, and the following:
1. Aging: Before cutting and shipping, age insulation in block form by air drying for not less than six weeks.
  2. Flame-Spread and Smoke-Developed Indexes: 25 and 450 or less, respectively, according to ASTM E 84.
  3. Dimensions: Provide insulation boards of not more than 24 by 48 inches thick or in other thickness indicated, but not more than 4 inches thick or less than the thickness allowed by ASTM C 1397.
  4. Foam Build-Outs: Provide with profiles and dimensions indicated on Drawings.
- E. Reinforcing Mesh: Balanced, alkali-resistant, open-weave, glass-fiber mesh treated for compatibility with other EIFS materials, made from continuous multiend strands with retained mesh tensile strength of not less than 120 lbf/in. according to ASTM E 2098 and the following:
1. Reinforcing Mesh for EIFS, General: Not less than weight required to meet impact-performance level specified in "Performance Requirements" Article.
- F. Base-Coat Materials: EIFS manufacturer's standard mixture complying with one of the following:
1. Job-combined formulation of manufacturer's standard polymer-emulsion adhesive and manufacturer's standard dry mix containing portland cement.
  2. Factory-blended dry formulation of portland cement, dry polymer admixture, and inert fillers to which only water is added at Project site.
  3. Factory-mixed noncementitious formulation of polymer-emulsion adhesive and inert fillers that is ready to use without adding other materials.
- G. Waterproof Adhesive/Base-Coat Materials: EIFS manufacturer's standard waterproof formulation complying with the following:
1. Job-combined formulation of manufacturer's standard polymer-emulsion adhesive and manufacturer's standard dry mix containing portland cement.
- H. Mechanical Fasteners: EIFS manufacturer's standard corrosion-resistant fasteners consisting of thermal cap, standard washer and shaft attachments, and fastener indicated below; designed to resist Project's design loads; capable of pulling fastener head below surface of insulation board; and complying with the following:
1. For attachment to steel studs from 0.033 to 0.112 inch in thickness, provide steel drill screws complying with ASTM C 954.
  2. For attachment to light-gage steel framing members not less than 0.0179 inch in thickness, provide steel drill screws complying with ASTM C 1002.
  3. For attachment to wood framing members and plywood sheathing, provide steel drill screws complying with ASTM C 1002, Type W.
  4. For attachment to masonry and concrete substrates, provide sheathing dowel in form of a plastic wing-tipped fastener with thermal cap, sized to fit insulation thickness indicated and to penetrate substrate to depth required to secure anchorage.



5. For attachment to other substrates, provide manufacturer's standard fasteners suitable for substrate.
- I. Primer: EIFS manufacturer's standard factory-mixed, elastomeric-polymer primer for preparing base-coat surface for application of finish coat.
- J. Finish-Coat Materials: EIFS manufacturer's standard acrylic-based coating complying with the following:
  1. Factory-mixed formulation of polymer-emulsion binder, colorfast mineral pigments, sound stone particles, and fillers.
  2. Colors: To match Existing.
  3. Textures: To match Existing.
- K. Sealer: Manufacturer's waterproof, clear acrylic-based sealer for protecting finish coat.
- L. Water: Potable.
- M. Trim Accessories: Type as designated or required to suit conditions indicated and to comply with EIFS manufacturer's written instructions; manufactured from UV-stabilized PVC; and complying with ASTM D 1784 and ASTM C 1063.
  1. Casing Bead: Prefabricated, one-piece type for attachment behind insulation, of depth required to suit thickness of coating and insulation, with face leg perforated for bonding to coating and back leg.
  2. Drip Screed/Track: Prefabricated, one-piece type for attachment behind insulation with face leg extended to form a drip, of depth required to suit thickness of coating and insulation, with face leg perforated for bonding to coating and back leg.
  3. Expansion Joint: Prefabricated, one-piece V profile; designed to relieve stress of movement.
  4. Windowsill Flashing: Prefabricated type for both flashing and sloping sill over framing beneath windows; with end and back dams; designed to direct water to exterior.
  5. Parapet Cap Flashing: Type for both flashing and covering parapet top with design complying with ASTM C 1397.

## 2.4 MIXING

- A. Comply with EIFS manufacturer's requirements for combining and mixing materials. Do not introduce admixtures, water, or other materials except as recommended by EIFS manufacturer. Mix materials in clean containers. Use materials within time period specified by EIFS manufacturer or discard.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roof edges, wall framing, flashings, openings, substrates, and junctures at other construction for suitable conditions where EIFS will be installed.

- C. Proceed with installation only after unsatisfactory conditions have been corrected.
  - 1. Begin coating application only after surfaces are dry.
  - 2. Application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Protect contiguous work from moisture deterioration and soiling caused by application of EIFS. Provide temporary covering and other protection needed to prevent spattering of exterior finish coats on other work.
- B. Protect EIFS, substrates, and wall construction behind them from inclement weather during installation. Prevent penetration of moisture behind EIFS and deterioration of substrates.
- C. Prepare and clean substrates to comply with EIFS manufacturer's written instructions to obtain optimum bond between substrate and adhesive for insulation.
  - 1. Concrete Substrates: Provide clean, dry, neutral-pH substrate for insulation installation. Verify suitability of substrate by performing bond and moisture tests recommended by EIFS manufacturer.

### 3.3 EIFS INSTALLATION, GENERAL

- A. Comply with ASTM C 1397, ASTM E 2511, and EIFS manufacturer's written instructions for installation of EIFS as applicable to each type of substrate.

### 3.4 SUBSTRATE PROTECTION APPLICATION

- A. Primer/Sealer: Apply over substrates and where required by EIFS manufacturer for improving adhesion of insulation to substrate.
- B. Flexible-Membrane Flashing: Apply and lap to shed water; seal at openings, penetrations, terminations, and where required by EIFS manufacturer. Prime substrates if required and install flashing to comply with EIFS manufacturer's written instructions and details.

### 3.5 TRIM INSTALLATION

- A. Trim: Apply trim accessories at perimeter of EIFS, at expansion joints, at door and window heads, at windowsills, and elsewhere as indicated. Coordinate with installation of insulation. Trim to match existing, and submittals shall be provided to owner's representative.
  - 1. Drip Screed/Track: Use at bottom edges of EIFS unless otherwise indicated.
  - 2. Windowsill Flashing: Use at windows unless otherwise indicated.
  - 3. Expansion Joint: Use where indicated on Drawings.
  - 4. Casing Bead: Use at other locations.
  - 5. Parapet Cap Flashing: Use where indicated on Drawings.

### 3.6 INSULATION INSTALLATION

- A. Board Insulation: Attach insulation to substrate in compliance with ASTM C 1397 and the following (note insulation will be attached in same manner as existing for each substrate encountered and as required to attain required wind resistance):

1. Sheathing: Apply adhesive to insulation by notched-trowel method in a manner that results in coating the entire surface of sheathing with adhesive once insulation is adhered to substrate. Apply adhesive to a thickness of not less than 1/4 inch for factory mixed and not less than 3/8 inch for field mixed, measured from surface of insulation before placement.
2. Concrete or Masonry: Apply adhesive by ribbon-and-dab method.
3. Press and slide insulation into place. Apply pressure over the entire surface of insulation to accomplish uniform contact, high initial grab, and overall level surface.
4. Allow adhered insulation to remain undisturbed for not less than 24 hours, before installing mechanical fasteners, beginning rasping and sanding insulation or before applying base coat and reinforcing mesh.
5. Mechanically attach insulation to substrate. Install top surface of fastener heads flush with plane of insulation. Install fasteners into or through substrates with the following minimum penetration:
  - a. Steel Framing: 5/16 inch.
  - b. Wood Framing: 1 inch.
  - c. Concrete and Masonry: 1 inch.
6. Apply insulation over dry substrates in courses with long edges of boards oriented horizontally.
7. Begin first course of insulation from a level base line and work upward.
8. Begin first course of insulation from screed/track and work upward. Work from perimeter casing beads toward interior of panels if possible.
9. Stagger vertical joints of insulation boards in successive courses to produce running bond pattern. Locate joints so no piece of insulation is less than 12 inches wide or 6 inches high. Offset joints not less than 6 inches from corners of window and door openings and not less than 4 inches from aesthetic reveals.
  - a. Adhesive Attachment: Offset joints of insulation not less than 6 inches from horizontal and 4 inches from vertical joints in sheathing.
  - b. Mechanical Attachment: Offset joints of insulation from horizontal joints in sheathing.
10. Interlock ends at internal and external corners.
11. Abut insulation tightly at joints within and between each course to produce flush, continuously even surfaces without gaps or raised edges between boards. If gaps greater than 1/16 inch occur, fill with insulation cut to fit gaps exactly; insert insulation without using adhesive or other material.
12. Cut insulation to fit openings, corners, and projections precisely and to produce edges and shapes complying with details indicated.
13. Rasp or sand flush entire surface of insulation to remove irregularities projecting more than **1/16 inch** from surface of insulation and to remove yellowed areas due to sun exposure; do not create depressions deeper than 1/16 inch. Prevent airborne dispersal and immediately collect insulation raspings or sandings.
14. Cut aesthetic reveals in outside face of insulation with high-speed router and bit configured to produce grooves, rabbets, and other features that comply with profiles and locations indicated. Do not reduce insulation thickness at aesthetic reveals to less than 3/4 inch.
15. Install foam build-outs and attach to substrate.
16. Interrupt insulation for expansion joints where indicated.
17. Form joints for sealant application by leaving gaps between adjoining insulation edges and between insulation edges and dissimilar adjoining surfaces. Make

- gaps wide enough to produce joint widths indicated after encapsulating joint substrates with base coat and reinforcing mesh.
18. Form joints for sealant application with back-to-back casing beads for joints within EIFS and with perimeter casing beads at dissimilar adjoining surfaces. Make gaps between casing beads and between perimeter casing beads and adjoining surfaces of width indicated.
  19. Fully wrap board edges with strip reinforcing mesh.
  20. Treat exposed edges of insulation as follows:
    - a. Except for edges forming substrates of sealant joints, encapsulate with base coat, reinforcing mesh, and finish coat.
    - b. Encapsulate edges forming substrates of sealant joints within EIFS or between EIFS and other work with base coat and reinforcing mesh.
    - c. At edges trimmed by accessories, extend base coat, reinforcing mesh, and finish coat over face leg of accessories.
  21. Coordinate installation of flashing and insulation to produce wall assembly that does not allow water to penetrate behind flashing and EIFS lamina.
- B. Expansion Joints: Install at locations indicated, where required by EIFS manufacturer, and as follows:
1. At expansion joints in substrates behind EIFS.
  2. Where EIFS adjoin dissimilar substrates, materials, and construction, including other EIFS.
  3. At floor lines in multilevel wood-framed construction.
  4. Where wall height or building shape changes.
  5. Where EIFS manufacturer requires joints in long continuous elevations.
  6. Where panels abut one another.

### 3.7 BASE-COAT INSTALLATION

- A. Waterproof Adhesive/Base Coat: To exposed surfaces of insulation, apply in minimum thickness recommended in writing by EIFS manufacturer over sloped surfaces, windowsills, parapets and foam build-outs.
- B. Base Coat: Apply to exposed surfaces of insulation and foam build-outs, in minimum thickness recommended in writing by EIFS manufacturer, but not less than 1/16-inch dry-coat thickness.
- C. Reinforcing Mesh: Embed reinforcing mesh in wet base coat to produce wrinkle-free installation with mesh continuous at corners, overlapped not less than 2-1/2 inches or otherwise treated at joints to comply with ASTM C 1397 and EIFS manufacturer's written instructions. Do not lap reinforcing mesh within 8 inches of corners. Completely embed mesh, applying additional base-coat material if necessary, so reinforcing-mesh color and pattern are invisible.
- D. Double-Layer Reinforcing-Mesh Application: Where indicated or required, apply second base coat and second layer of reinforcing mesh, overlapped not less than 2-1/2 inches or otherwise treated at joints to comply with ASTM C 1397 and EIFS manufacturer's written instructions in same manner as first application. Do not apply until first base coat has cured.
- E. Additional Reinforcing Mesh: Apply strip reinforcing mesh around openings, extending 4 inches beyond perimeter. Apply additional 9-by-12-inch strip reinforcing mesh

diagonally at corners of openings (re-entrant corners). Apply 8-inch- wide, strip reinforcing mesh at both inside and outside corners unless base layer of mesh is lapped not less than 4 inches on each side of corners.

1. At aesthetic reveals, apply strip reinforcing mesh not less than 8 inches wide.
2. Embed strip reinforcing mesh in base coat before applying first layer of reinforcing mesh.

F. Foam Build-Outs: Fully embed reinforcing mesh in base coat.

G. Double Base-Coat Application: Where indicated, apply second base coat in same manner and thickness as first application, except without reinforcing mesh. Do not apply until first base coat has cured.

### 3.8 FINISH-COAT INSTALLATION

A. Primer: Apply over dry base coat (and over existing, properly cleaned and prepped existing, adjacent EIFS and existing Finish Coat over existing portland cement stucco – to obtain a finish and color match) according to EIFS manufacturer's written instructions.

B. Finish Coat: Apply over primed base coat (and over existing, properly cleaned and prepped existing, adjacent EIFS and existing Finish Coat over existing portland cement stucco – to obtain a finish and color match), maintaining a wet edge at all times for uniform appearance, in thickness required by EIFS manufacturer to produce a uniform finish of color and texture matching approved sample and free of cold joints, shadow lines, and texture variations.

1. Embed aggregate in finish coat according to EIFS manufacturer's written instructions to produce a uniform applied-aggregate finish of color and texture matching approved sample.

C. Sealer Coat: Apply over dry finish coat, in number of coats and thickness required by EIFS manufacturer.

### 3.9 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections:

1. As stipulated in Ch. 17 of the IBC.
2. According to ICC-ES AC219.

B. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

C. EIFS Tests and Inspections: According to ICC-ES AC219.

D. EIFS will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

3.10 CLEANING AND PROTECTION

- A. Remove temporary covering and protection of other work. Promptly remove coating materials from window and door frames and other surfaces outside areas indicated to receive EIFS coatings.

**END OF SECTION 07 2413**

## SECTION 07 5400 - THERMOPLASTIC MEMBRANE ROOFING

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

1. Scope - To install a fully adhered thermoplastic PolyVinyl Chloride (PVC) single ply roofing membrane with flashings and other components that comprises a complete roofing system.
  - a. Thermoplastic Membrane Roofing System Roof Areas A, B, C, D, E, & F (All Roof Areas) consisting of:
    - 1) Thermoplastic Roofing Membrane (Versico Basis of Design)
      - a) PVC (Prime)
      - b) TPO (Add Alternate)
      - c) Membrane Full Adhered Method
    - b. Gypsum Cover Board (Densdeck Basis of Design)
      - 1) Screwed to Metal Roof Deck through Cover Board and Insulation.
    - c. Polyisocyanurate Insulation:
      - 1) (2) Layers of 1.750-inches thick
    - d. Existing or New Steel Deck Roof Diaphragm.
- B. Related Work - The work includes but is not necessarily limited to the installation of:
  1. Removal of Existing Roofing
  2. Substrate Preparation
  3. Wood Blocking
  4. Insulation
  5. Roof Membrane
  6. Fasteners
  7. Adhesive for Flashings
  8. Roof Membrane Flashings
  9. Walkways
  10. Metal Flashings
  11. Sealants
- C. Upon successful completion of work the following warranties will be obtained:
  1. Manufacturer's Warranty
  2. Roofing Contractor's Warranty

#### 1.2 RELATED SECTIONS AND DRAWING

- A. Alterations project procedures – Division One.
- B. Section 06 1000 – Rough Carpentry
- C. Section 06 1600 – Roof Sheathing
- D. Section 07 0150 – Minor Demolition Work and Renovation Work
- E. Section 07 2210 – Roof Deck and Insulation
- F. Section 07 6200 – Sheet Metal Flashing and Trim
- G. Drawings

#### 1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):

1. A 653 - Steel Sheet, Zinc Coated, (galvanized) by the Hot-Dip process, Structural (Physical) Quality Property.
  2. C 578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
  3. C 1289 - Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
  4. **D 1079** - Terminology Relating to Roofing, Waterproofing, and Bituminous Materials.
- B. **American Society of Civil Engineers (ASCE): ASCE 7-10:** Minimum Design Loads for Buildings and Other Structures.
1. Component and Cladding – New Roof Systems.
- C. National Roofing Contractors Association (NRCA):
1. Manual of Roof Maintenance and Roof Repair.
  2. Roofing and Waterproofing Manual.
- D. Single Ply Roofing Institute (SPRI):
1. *Flexible Membrane Roofing: A Professional's Guide to Specifications, "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems."*
  2. ANSI/SPRI/FM 4435/ES-1 – Test Standard for Edge Systems Used with Low Slope Roofing Systems.
- E. Sheet Metal and Air Conditioning Contractors National Association (SMACNA):
1. Architectural Sheet Metal Manual
- F. Underwriters' Laboratories (UL): Fire Hazard Classifications.

#### 1.4 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Design Uplift Pressure: The uplift pressure, calculated according to procedures in ASCE 7-10 (Ultimate Wind Speed) including multiplication by a safety factor.

#### 1.5 SUBSTITUTIONS

- A. Substitutions shall comply with procedures specified in Division One.

#### 1.6 QUALITY ASSURANCE

- A. This roofing system shall be applied only by a Roofing Contractor authorized by the roof Manufacturer prior to bid ("Installer").
- B. A single Installer with a minimum of 10-years previous successful experience in installation of similar systems with five (5) roofs of like size completed within the past 2-years.
- C. All the Installer's personal on property shall be "employees" of the Installers. The Installer is not permitted to sub-contract out the labor to another firm or use independent contractors on this project.
- D. Shall maintain a permanent office within 65 miles distance of project site to satisfy Owner that projects can be properly supported during warranty phase.
- E. A technical representative of the approved manufacturer shall visit the job site on a weekly basis during the application of the roofing system to confirm its application is proceeding in compliance with the specifications and in a manner that will permit issuance of the specified manufacturer's system warranty.
- F. Upon completion of the installation and the delivery to the manufacturer by the Installer of a certification that all work has been done in strict accordance with the contract specifications, building permit, and the manufacturer's requirements, an inspection



shall be made by a Technical Representative of the manufacturer to review the installed roof system.

- G. There shall be no deviation made from the Project Specification or the approved shop drawings without prior written approval by the Owner, the Owner's Representative and the manufacturer.
- H. All work pertaining to the installation of the manufacturer membrane and flashings shall only be completed by Installer's personnel trained and authorized by the manufacturer in those procedures.
- I. Pre-Installation Conference:
  - 1. Prior to installation of roofing system, conduct a Pre-Installation conference at the project site.
  - 2. Attendance: Owner, Roofing Consultant, Contractor, project superintendent, project foreperson, and Roof Manufacturer's Technical Representative. Allow 14 days' notice to manufacturer for scheduling of their representative.
  - 3. Agenda: Refer to Division One requirements.
- J. Daily Job Reports
  - 1. Contractor is responsible for providing daily job reports which will include a minimum of the following information: Crew size, weather conditions, description of work completed, date, change order items, job problems, etc. Contractor will email daily job reports daily to the roof consultant.

## 1.7 SUBMITTALS

- A. Shop Drawings:
  - 1. Submit one PDF file of their shop drawing indicating roof size, location and type of penetrations, perimeter and penetration details. Indicate complete installation details of roofing and flashing, including roof slopes, flashing details, penetration details and accessories, and technical acceptance, of Installer's details from the manufacturer.
    - a. Dimensioned shop drawings which shall include:
      - 1) Outline of roof with roof size and elevations above grade shown.
      - 2) Details of flashing methods for penetrations.
      - 3) Technical acceptance from approved Manufacturer.
  - 2. Sheet metal shop drawings: Submit one PDF File of sheet metal shop drawings showing size, layout and location of all sheet metal items.
    - a. Dimensioned shop drawings which shall include:
      - 1) Outline of roof with roof size and elevations above grade shown.
      - 2) Details of flashing methods for penetrations.
      - 3) Technical acceptance from approved Manufacturer.
  - 3. Submit two (2) copies of MSDS data directly to the owner for their files, on all roofing, insulation, adhesive and other related materials.
  - 4. Submit three (3) 12" x 12" samples of thermoplastic roof membrane to be used, taken from rolls on the roof. Provide "Lot Numbers" from roll goods taken from rolls on the roof.
- B. Product Data:
  - 1. Submit one PDF copy of latest edition of manufacturer's roofing and flashing installation instructions which will include a list of materials proposed for use, and manufacturer's product cut and data sheets for all products to be bought and used on this project.
- C. Progress Schedule Plan:

1. At the Pre-Construction Conference on site the Installer shall provide their Work Plan defining the areas they are to work from the start to the end defined by work week.
  2. Submit a complete progress schedule and phasing plan indicating complete sequence of removal and replacement of roofing for each area defined in the Work Plan.
  3. Include a roof plan with layout indicating amount of roof area included in each day/week to be worked.
  4. Indicate dates for beginning and completing each roof area and activity.
  5. Identify other related work affecting roof replacement and phasing.
- D. Warranty:
1. Submit specimen copy of contractor's and manufacturer's roofing warranty (that complies with guaranty requirements as listed in paragraph 1.10 below), with Product Data submittal, including evidence of application for warranty.
- E. Manufacturer's Review:
1. Concurrent with Shop Drawings submittal; submit (in writing) roof manufacturer's review and acceptance of Contract Documents (plans, specifications, application requirements, etc.) and approval of Installer. Certifications by manufacturers of roofing and insulating materials that all materials supplied exceed the requirements of the identified ASTM and industry standards or practices.
  2. Certification from the Installer that the system specified meets all identified code and insurance requirements as required by the Specification.
- F. Maintenance Data:
1. Compile and submit maintenance instructions in accordance with Division One. Include complete manufacturer's instructions for periodic inspection and maintenance of roofing system, including precautions and warnings to prevent damage and deterioration to roofing system.
- 1.8 CODE REQUIREMENTS
- A. The Installer shall submit evidence that the proposed roof system meets the requirements of the local building code, project code requirements, and has been tested and approved or listed by the following test organizations. These requirements are minimum standards and no roofing work shall commence without written documentation of the system's compliance, as required in the "Submittals" section of this specification.
- B. Factory Mutual Research Corporation (FM) - Norwood, MA
1. Class 1-120 (for high wind exposure)
- C. Underwriters Laboratories, Inc. - Northbrook, IL
1. Class A assembly
- D. ICC-ES ESR Report stating the roof system meets the wind loads defined on **Drawing T1**.
- E. Governing Building Department is the City of Edinburg.
1. 2012 International Existing Building Code.
  2. 2012 International Building Code.
    - a. Class A Exterior Fire Exposure Rating
    - b. Severe Hail (SH) exposure rating.
  3. 2009 International Energy Conservation Code (IECC). Except the membrane is required to meet the current requirements of the 2015 IECC being:
    - a. Energy Performance:

- 1) Provide roofing system that meet or exceed any of the following options for Reflectance and Emittance (in accordance with Table C402.2.11 of the 2015 International Energy Conservation Code):
- 2) Three-year aged solar reflectance of 0.55 and three-year aged thermal emittance of 0.75.
- 3) Initial solar reflectance of 0.70 and initial thermal emittance of 0.75.
- 4) Three-year aged solar reflectance index of 64.
- 5) Initial solar reflectance index of 82.

#### 1.9 PRODUCT 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. A maximum of one (1) weeks' worth of roof insulation and roll goods may be stored on the roof, as long as materials are on raised platforms (pallets), roof structure is not overloaded, and materials are covered with watertight tarpaulins.
  1. Visqueen/plastic is not an acceptable watertight material for protecting roof materials.
- C. Materials loaded on roof levels for immediate (within one week) use shall be:
  1. Distributed to prevent concentrated loads that would impose excessive strain on deck or structural members.
  2. Positively secured to prevent displacement or liberation by excessive wind forces.
- D. 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.
- E. Provide continuous protection of materials against wetting and absorption; site. All materials which are determined to be damaged (i.e. wet materials and marked materials that have been wet) by the Owner's Representative or the manufacturer are to be removed from the job site and replaced at no cost to the Owner.
- F. All adhesives shall be stored at temperatures between 40° F and 80° F.
- G. 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.

#### 1.10 JOB CONDITIONS

- A. Existing Conditions:
  1. Examine existing building and existing roofing to determine existing physical conditions that affect removal of existing roofing and installation of new roofing.
  2. Photographically document all work areas prior to starting the work.
- B. Only as much of the new roofing as can be made weathertight each day, including all flashing and detail work, shall be installed. Do not remove existing roofing and flashing in inclement weather or when rain is predicted (30% or more possibility). 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 always be protected against all risks at ALL times.

- D. All surfaces to receive new insulation, membrane, or flashings shall be dry. Should surface moisture occur, the Installer 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 water-stops shall be installed at the end of each day's work and shall be completely removed before proceeding with the next day's work. Water-stops 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. The Installer is cautioned that certain roof membranes are incompatible with asphalt, coal tar, heavy oils, roofing cements, creosote and some preservative materials. Such materials shall not remain in contact with the manufacturer membranes. The Installer shall consult the manufacturer regarding compatibility, precautions and recommendations.
- H. 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 Installer shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas. A substantial protection layer consisting of plywood over PVC Membrane or plywood over insulation board shall be provided for all new and existing roof areas that receive rooftop traffic during construction.
- I. Prior to and during application, all dirt, debris and dust shall be removed from surfaces by vacuuming, sweeping, blowing with compressed air and/or similar methods.
- J. The Installer shall follow all safety regulations as required by OSHA and any other applicable authority having jurisdiction.
- K. All roofing, insulation, flashings and metal work removed during construction shall be immediately taken off site to a legal dumping area authorized to receive such materials. Hazardous materials, such as materials containing asbestos, are to be removed and disposed of in strict accordance with applicable City, State and Federal requirements.
- L. All new roofing waste material (i.e., scrap roof membrane, empty cans of adhesive) shall be immediately removed from the site by the Installer and properly transported to a legal dumping area authorized to receive such material.
- M. The Installer shall take precautions that storage and/or application of materials and/or equipment does not overload the roof deck or building structure.
- N. Flammable adhesives and deck primers shall not be stored and not be used in the vicinity of open flames, sparks, and excessive heat.
- O. All rooftop contamination that is anticipated or that is occurring shall be reported to the manufacturer to determine the corrective steps to be taken.
- P. The Installer shall verify that all roof drain pipes/lines are functioning correctly (not clogged or blocked) before starting work. Installer shall report any such blockages in writing (letter copy to the manufacturer) to the Owner's Representative for corrective action prior to installation of the roof system.
- Q. Installer shall immediately notify the owner's representative if any unusual or concealed condition is discovered that adversely affects the work, for determination of how to proceed.
- R. Site cleanup, including both interior and exterior building areas that have been affected by construction, shall be completed to the Owner's satisfaction.

- S. All landscaped areas damaged by construction activities shall be repaired at no cost to the Owner.
  - T. The Installer shall conduct fastener pullout and/or adhesive pull tests in accordance with the latest revision of the ANSI/SPRI Fastener Pullout Standard to help verify condition of deck/substrate prior to beginning the reroof work, and to confirm expected pullout values.
  - U. Contractor is required to coordinate with both Owner and Owner's Consultant prior to any work that will be conducted around vents and air intakes. No work around these areas will be allowed prior to approval from both the Owner and the Owner's Consultant.
    - 1. The work plan must be meet when planned work shall be occurring around the outside air intakes into the labs of the building!
  - V. **Precautions shall be taken when using 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. Installer's crew shall keep lids on unused cans at all times.**
    - 1. **The work plan must be meet when planned work shall be occurring around the outside air intakes into the labs of the building!**
  - W. Appropriate protective wear shall be worn when using solvents or adhesives or as required by job conditions and MSDS.
  - X. Emergency Equipment: Maintain on-site equipment necessary to apply emergency temporary edge seal in the event of sudden storms or inclement weather.
  - Y. Restrictions:
    - 1. Comply with requirements of Division One on use of site.
      - a. Smoking is prohibited on roof areas or in existing buildings or on grounds.
      - b. Radios, boom boxes, etc. are not allowed on the job site.
  - Z. Continuation of Services: Comply with requirements of Division One.
- 1.11 BIDDING REQUIREMENTS
- A. Pre-Bid Meeting:
    - 1. A pre-bid meeting shall be held with the Owner, Owner's Representative, Manufacturer's Representative, and any other involved trades to discuss all aspects of the project. The Installer's representative for the work shall be in attendance.
  - B. Site Visit:
    - 1. Bidders shall visit the site and carefully examine the areas in question as to conditions that may affect proper execution of the work. All dimensions and quantities shall be determined or verified by the contractor. No claims for extra costs will be allowed because of lack of full knowledge of the existing conditions unless agreed to in advance with the Owner or Owner's Representative
- 1.12 WARRANTIES
- A. Installer/Roofing Contractor 2 Year MRCA Warranty - The Installer shall supply the Owner with a separate materials and workmanship warranty. In the event any work related to roofing, flashing, or metal is found to be within the Installer warranty term, defective or otherwise not in accordance with the Contract Documents, the Installer shall repair that defect at no cost to the Owner. The Installer's warranty obligation shall run directly to the Owner.
  - B. The Manufacturer "20-Year No Dollar Limit (NDL) Total System Warranty" - Upon successful completion of the work, the Manufacturer's 20 Year No Dollar Limit (NDL)

Total System Warranty shall be issued covering all materials and workmanship including the following:

1. Include repairs required to maintain roof and flashing in a watertight condition.
2. Make repairs at no expense to Owner.
3. Warranty coverage to include:
  - a. All roof insulations, insulation fasteners, insulation adhesives, vapor retarders (where applicable), membrane fasteners, and adhesives.
  - b. Roof membrane components and adhesives. All accessory products required for installation of membrane roofing system, including bonding adhesive, flashing membrane, stripping plies, clad metal, pipe boots, pourable sealant pockets, etc.
4. The warranty shall not exclude coverage as a result of small areas of standing or ponding water.
5. Warranty shall include hail (up to 1½") coverage for 20 years.
6. Warranty shall not exclude coverage, as a result, of winds less than 138 mph ultimate.
7. Warranty shall not be limited by a dollar amount.

C. Owner Responsibility - Owner shall notify both the manufacturer and the Installer of any leaks as they occur during the warranty time period when both warranties are in effect.

#### 1.13 ROOF ASSEMBLIES

A. Basis of Design:

1. **Fully-adhered PVC single-ply Thermoplastic membrane** system tested and approved by Factory Mutual Research Corporation (FM) and ICC-ES ESR with the following components:
  - a. 0.060-Inch PVC roof membrane fully adhered.
    - 1) Color: White
    - 2) SRI > 0.72
  - b. 1/2-inch thick gypsum cover board screwed through board and insulation to roof diaphragm.
  - c. Two layers Factory–Mutual tested insulation adhered providing a total R-value of 20 or higher. Both layers to be 1.75-inches.
  - d. Existing or new metal roof diaphragm.

B. Add Alternate Roof Membrane:

1. **Fully-adhered TPO single-ply Thermoplastic membrane** system tested and approved by Factory Mutual Research Corporation (FM) and ICC-ES ESR with the following components:
  - a. 0.060-inch TPO roof membrane fully adhered.
    - 1) Color: White
    - 2) SRI > 0.72
  - b. 1/2-inch thick gypsum cover board screwed through board and insulation to roof diaphragm.
  - c. Two layers Factory–Mutual tested insulation adhered providing a total R-value of 20 or higher. Both layers to be 1.75-inches.
  - d. Existing or new metal roof diaphragm.

## **PART 2 - PRODUCTS**

### **2.1 GENERAL:**

- A. Base Bid: The components of the thermoplastic Adhered roof system are to be products of Sarnafil, Versico, or Carlisle as specified.
- B. (Note accessories listed are listed by respective manufacturer).

### **2.2 FLASHING MATERIALS**

- A. Wall/Curb Flashing
  - 1. Per roof membrane manufacturer.
- B. Perimeter Edge Flashing
  - 1. Per roof membrane manufacturer.
- C. Miscellaneous Flashing
  - 1. Termination Bar:
    - a. A heavy-duty, extruded aluminum flashing termination bar used at walls and large curbs. 1/8" x 1" x 10-foot lengths.
  - 2. Prefabricated vent pipe flashing
    - a. Per roof membrane manufacturer.
  - 3. PVC-coated, heavy-duty aluminum roof drain insert that mechanically seals to the drainpipe interior
    - a. Per roof membrane manufacturer.
  - 4. T-Joint membrane patches welded over T-joints
    - a. Per roof membrane manufacturer.
  - 5. Urethane sealant used for pitch pocket topping
    - a. Per roof membrane manufacturer.
  - 6. Prefabricated outside and inside flashing corners
    - a. Per roof membrane manufacturer.
  - 7. Sealant used at flashing terminations
    - a. Per roof membrane manufacturer.
  - 8. Bonding Adhesive for Field Membrane
    - a. Per roof membrane manufacturer.
    - b. All adhesive to be low or VOC-free.
  - 9. Bonding Adhesive for Flashing Membrane
    - a. Per roof membrane manufacturer.
    - b. All adhesive to be low or VOC-free.

### **2.3 ATTACHMENT COMPONENTS**

- A. Insulation Plates:
  - 1. 3-inch square, round, or hexagonal, stamping of SAE 1010 steel with an AZ 55 Galvalume coating:
    - a. Sarnafil – 3" Round Steel Sarnaplate Insulation Stress Plates
    - b. Versico – 2-7/8" Hex Galvalume Coated-Steel SecurFast Insulation Plates
    - c. Carlisle – 2-7/8" Hex Galvalume Coated-Steel SecurFast Insulation Plates
- B. Substrate/Insulation Fasteners:
  - 1. A number 14 (minimum) corrosion-resistant screw fastener with a buttress thread, used with insulation plates to attach insulation boards to steel or wood roof decks:
    - a. Sarnafil – Sarnafastener #15 XP

- b. Carlisle – HP-X Fasteners
      - c. Versico - HPV Fasteners
    - 2. Substrate/Insulation fasteners that penetrate an exposed ceiling shall best match the exposed ceiling color!
  - C. Termination Bar:
    - 1. An extruded aluminum, low profile bar used with approved fasteners 1-inch wide, flat aluminum bar 1/8-inch thick that has predrilled holes every 6 inches on center.
      - a. Sarnafil – Sarnastop
      - b. Versico – Termination Bar
      - c. Carlisle – Termination Bar
  - D. Peel/batten Bar:
    - 1. An FM-approved, heavy-duty, 14 gauge(minimum), galvanized or stainless, roll-formed steel bar used to attach membrane to roof decks.
      - a. Sarnafil – Sarnabar
      - b. Versico – Metal Fastening Bar
      - c. Carlisle – Metal Fastening Bar
- 2.4 WALKWAY PROTECTION:
- A. A layer of specified walkway installed **around all curbs and at all roof access locations**, adhered to the prepared roof surface per manufacturers requirements and specifications.
    - 1. Sarnafil – Sarnatred - A polyester reinforced weldable membrane with surface embossment. Used as a protection layer from rooftop traffic.
    - 2. Versico – PVC Heat Weldable Walkway Roll – Slip resistant weldable walkways pad with a weathering package. Used in areas exposed to repetitive foot traffic.
    - 3. Carlisle - Sure-Flex PVC Walkway Rolls – A textured surface to resist slipping formulated with a weathering packaged. Use in areas exposed to heavy foot traffic.
- 2.5 ROOF INSULATION
- A. Polyisocyanurate Board Insulation: ASTM C 289, Type II, felt or glass-fiber mat facer on both major surfaces; Class 1, Grade 3 rigid polyisocyanurate based closed-cell foam; CRC free; with appropriate facer to accommodate placement within cold adhered roof system; with following characteristics:
    - 1. Board density: 2 pounds per cubic foot
    - 2. Compressive Strength 20 pounds per square inch minimum
    - 3. Board size: 96 x 48 inch ideal
    - 4. Board Thickness: 1-inch minimum
    - 5. Thermal Conductivity: K factor of 0.36
    - 6. Aged Thermal Value: R of 5.5 per inch minimum
    - 7. Board Edges: Square
- 2.6 MISCELLANEOUS ACCESSORIES
- A. Aluminum Tape - A 2-inch-wide pressure-sensitive aluminum tape used as a separation layer between small areas of asphalt contamination and the membrane and as a bond-breaker under the cover-strip at clad-metal joints.
  - B. Sealing Tape Strip - Compressible foam with pressure-sensitive adhesive on one side. Used with metal flashings as a preventive measure against air and windblown moisture entry.



- C. Multi-Purpose Tape - A high performance sealant tape with used with metal flashings as a preventive measure against air and windblown moisture entry.
  - D. Solvent Cleaner - A high quality solvent cleaner used for the general cleaning of residual asphalt, scuff marks, etc., from the membrane surface. Solvent cleaner is also used daily to clean seam areas prior to hot-air welding in tear off or dirty conditions or if the membrane is not welded the same day it is unrolled.
    - 1. Sarnafil – Sarnasolv
    - 2. Versico – PVC Membrane Cleaner
    - 3. Carlisle – PVC Membrane Cleaner
  - E. Care must be used within 40 feet of outside air intakes!
- 2.7 SEALANTS AND PITCH POCKET FILLERS
- A. Caulking/Sealant - (for termination details)
    - 1. Sarnafil - Multi-Purpose Sealant
    - 2. Versico – Universal Single-Ply Sealant
    - 3. Carlisle – Universal Single-Ply Sealant
  - B. Pourable Sealant
    - 1. Sarnafil - Sarnafiller (two-part urethane filler for pitch pocket toppings)
    - 2. Versico – PVC One-Part Pourable Sealer
    - 3. Carlisle – PVC One-Part Pourable Sealer
  - C. Depending on substrates, the following sealants are options for **temporary** overnight tie-ins:
    - 1. Type III hot asphalt conforming to ASTM D312 (latest revision).
    - 2. Pourable Sealants.
    - 3. Multiple layers of roofing cement and felt.
    - 4. Spray-applied, water-resistant urethane foam.
    - 5. Mechanical attachment with rigid bars and compressed sealant.
- 2.8 MISCELLANEOUS FASTENERS AND ANCHOR
- A. All fasteners, anchors, nails, straps, bars, etc. shall be post-galvanized steel, aluminum or stainless steel. Mixing metal types and methods of contact shall be assembled in such a manner as to avoid galvanic corrosion. Fasteners for attachment of metal to masonry shall be expansion type fasteners with stainless steel pins. All concrete fasteners and anchors shall have a minimum embedment of 1¼-inch and shall be approved for such use by the fastener manufacturer. All miscellaneous wood fasteners and anchors used for flashings shall have a minimum embedment of 1-inch and shall be approved for such use by the fastener manufacturer.
- 2.9 RELATED MATERIALS
- A. Wood Nailer:
    - 1. Treated wood nailers shall be installed at the perimeter of the entire roof and around such other roof projections and penetrations as specified on Project Drawings. Thickness of nailers must match the insulation thickness to achieve a smooth transition. Wood nailers shall be treated for rot resistance (wolmanized or osmose treated) and be #2 quality or better lumber. Creosote or asphalt-treated wood is not acceptable. Wood nailers shall conform to Factory Mutual Loss Prevention Data Sheet 1-49. All wood shall have a maximum moisture content of 19% by weight on a dry-weight basis.
  - B. Plywood:

1. When bonding directly to plywood, a minimum ½-inch fire-treated CDX © side out, smooth-surfaced exterior grade plywood with exterior grade glue shall be used. Rough-surfaced plywood or high fastener heads will require the use of felt behind the flashing membrane. Plywood shall have a maximum moisture content of 19% by weight on a dry weight basis.
- C. Gas Pipe/Electrical Conduit Supports:
  1. Furnish and install Miro Industries gas pipe roller supports Model Numbers 4-RAH or 6-RAH (hot dipped galvanized) (size as required for gas pipe on roof) per manufacturer requirements and spaced a minimum of 10 feet on center and at all corners. Install over an extra layer of specified walkway pad.
- D. Electrical Conduit Supports:
  1. Furnish and install Miro Industries Pillow Block Pipe Stands Model 1.5 with 1.5 Spacer (for electrical conduits 3" or less above finished roof height).

### **PART 3 - EXECUTION**

#### **3.1 PRE-CONSTRUCTION CONFERENCE**

- A. The Installer, Owner's Representative, Designer of Record, and Manufacturers shall attend a preconstruction conference.
- B. The meeting shall discuss all aspects of the project including but not limited to:
  1. Set up
  2. Current property condition
  3. Construction schedule
  4. Contract conditions
  5. Coordination of the work

#### **3.2 SUBSTRATE CONDITION**

- A. Installer shall be responsible for acceptance or provision of proper substrate to receive new roofing materials.
- B. Installer shall verify that the work done under related sections meets the following conditions:
  1. Roof drains and/or scuppers have been reconditioned and/or replaced and installed properly.
  2. Roof curbs, nailers, equipment supports, vents and other roof penetrations are properly secured and prepared to receive new roofing materials.
  3. All surfaces are smooth and free of dirt, debris and incompatible materials.
  4. All roof surfaces shall be free of water, ice and snow.

#### **3.3 SUBSTRATE PREPARATION**

- A. The roof deck and existing roof construction must be structurally sound to provide support for the new roof system. The Installer shall load materials on the rooftop in such a manner to eliminate risk of deck overload due to concentrated weight.
- B. Reroofing with Removal of Existing Roofing:
  1. All existing roofing, base flashing, deteriorated wood blocking or deteriorated metal flashings shall be removed down to the existing structural substrate diaphragm. Remove only that amount of roofing and flashing which can be made weathertight with new materials during a one-day period and before the onset of inclement weather.
  2. Exercise care in removal so as not to damage existing roof deck or adjacent surfaces.

3. Do not stockpile debris on roof surface. Promptly remove debris each day. Use chutes to transfer debris from roof surface.
4. Do not haul debris over newly installed roof membranes. Keep debris well downwind of prevailing wind.
5. Provide a clean tarp over the previous days roofing, prior to tear-off start, to protect new roofing from dust, dirt, debris, etc., and from current days tear-off.
6. Steel Deck:
  - a. FM Approved Steel Deck - Completely clean metal deck ribs of **all** roof debris, trash, etc. prior to installation of new roof insulation. All rusted or deteriorated decking shall be brought to the attention of the Owner's Representative and to determine method of treatment or replacement. Surface-only rusted metal shall be sanded, wire brushed, and treated with rust-inhibiting cold galvanizing compound paint. Sections that have rusted deeper than the surface or are not structurally sound shall be removed and replaced. Deck type shall match existing and shall conform to FM's recommendations as outlined in FM Loss Prevention data Sheet I-28 and local requirements.
7. Insulating Fill Substrate: All wet or deteriorated insulating fill shall be removed and replaced. All accumulations of bitumen shall be removed, and the surface of the deck shall be smooth, and free of ridges and depressions. See steel/concrete requirements.

#### 3.4 SUBSTRATE INSPECTION

- A. A dry, clean and smooth substrate shall be prepared to receive the thermoplastic Adhered roof system.
- B. The Installer shall inspect the substrate for defects such as excessive surface roughness, contamination, structural inadequacy, or any other condition that will adversely affect the quality of work.
- C. The substrate shall be clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil and grease. Roofing shall not start until all defects have been corrected.
- D. All roof surfaces shall be free of water, ice and snow.
- E. The roof membrane shall be applied over compatible and accepted substrates only.

#### 3.5 WOOD NAILER INSTALLATION

- A. Install continuous wood nailers at the perimeter of the entire roof and around roof projections and penetrations as shown on the Detail Drawings.
- B. Nailers shall be anchored to resist a minimum force of 200 pounds per lineal foot in any direction. Individual nailer lengths shall not be less than 3 feet long. Nailer fastener spacing shall be at 12-inches on center or 16-inches on center if necessary, to match the structural framing. Fasteners shall be staggered 1/3 the nailer width and installed within 6-inches of each end. Two fasteners shall be installed at ends of nailer lengths. Nailer attachment shall meet this requirement and that of the current Factory Mutual Loss Prevention Data Sheet 1-49.
- C. Total nailer height must be a minimum of 2-inches above the finished roof surface at all perimeter locations. Install with 1/8-inch gap between each length and ensure each subsequent layer has a minimum 12-inch material stagger.
- D. Thickness shall be as required to match substrate or insulation height to allow a smooth transition.
- E. Any existing nailer woodwork which is to remain shall be firmly anchored in place to resist a minimum force of 200 pounds per lineal foot in any direction and shall be free of rot, excess moisture or deterioration. Only woodwork shown to be reused in Detail Drawings shall be left in place. All other nailer woodwork shall be removed.

### 3.6 INSTALLATION OF INSULATION

- A. Ensure existing roof deck is clean and dry.
- B. Coordinate installing membrane roofing system components, so insulation is not exposed to precipitation or left exposed at the end of the workday.
- C. Comply with membrane roofing system manufacturer's written instructions for installing roof insulation.
- D. Install tapered cricket insulation under area of roofing to conform to slopes indicated and to roof gutters.
- E. Install one or more layers of insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 1.50-inches or greater to achieve R-20, install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6-inches in each direction.
  - 1. Minimum Total Insulation Thickness:
    - a. Metal panel area:
      - 1) (2) layers of 1.750-inches minimum.
- F. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 0.250-inch with foam insulation.
  - 1. Cut and fit insulation within 0.250-inch of nailers, projections, and penetrations.
- G. Mechanically Fastened Insulation (Metal Panel Area):
  - 1. Installation defined in the basis of design is a sandwich assembly with a fastener holding down the gypsum cover board and connecting to the steel roof deck diaphragm sandwiching the insulation between.
    - a. Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
    - b. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof as required for project's wind speed requirements as defined on **Drawing T1** with a **Safety Factor of 2**.

### 3.7 INSTALLATION OF GYPSUM COVER BOARD

- A. Ensure existing roof deck is clean and dry.
- B. Coordinate installing membrane roofing system components, so insulation is not exposed to precipitation or left exposed at the end of the workday.
- C. Comply with membrane roofing system manufacturer's written instructions for installing roof insulation.
- D. Install tapered cricket insulation under area of roofing to conform to slopes indicated and to roof gutters. All crickets to be located under the cover board.
- E. Install one layer of ½-inch roof gypsum cover board over installed insulation with joints of each succeeding layer staggered from joints of previous layer a minimum of 6-inches in each direction.
- F. Install cover board with long joints of cover board in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 0.250-inch with foam insulation.
  - 1. Cut and fit cover board within 0.250-inch of nailers, projections, and penetrations.
- G. Mechanically Fastened Insulation (Metal Panel Area):
  - 1. Installation defined in the basis of design is a sandwich assembly with a fastener holding down the gypsum cover board and connecting to the steel roof deck diaphragm sandwiching the insulation between.

- a. Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified cover board-type roof insulation to deck type.
- b. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof as required for project's wind speed requirements as defined on **Drawing T1** with a **Safety Factor of 2**.

### 3.8 INSTALLATION OF THERMOPLASTIC MEMBRANE

- A. The surface of the insulation or substrate shall be inspected prior to installation of the thermoplastic 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.

### 3.9 HOT-AIR WELDING OF SEAM OVERLAPS

#### A. General

- 1. All seams shall be hot-air welded. All field seams exceeding 10 feet in length shall be welded with an approved automatic temperature compensating welder. Seam overlaps should be 3-inches wide when automatic machine-welding and 4-inches wide when hand-welding, except for certain details.
- 2. Welding equipment shall be provided by or approved by the manufacturer. All mechanics intending to use the equipment shall have successfully completed a training course provided by the manufacturer Technical Representative prior to welding.
- 3. All membrane to be welded shall be clean and dry.

#### B. Hand-Welding - 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.

- 1. 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.
- 2. 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 wide nozzle is recommended for use. For corners and compound connections, the ¾-inch wide nozzle shall be used.

#### C. Machine Welding

- 1. Machine welded seams are achieved by the use of the manufacturer's automatic welding equipment. When using this equipment, the manufacturer's instructions 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 Installer 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 Installer to locations as directed by the Owner's Representative or the manufacturer's representative. One-inch wide cross-section samples of welded field seams shall be taken at least three times a day and labeled with date and time. Correct welds display

failure from shearing of the membrane prior to separation of the weld. Each test cut shall be patched by the Installer at no extra cost to the Owner.

### 3.10 MEMBRANE FLASHINGS

- A. All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and the 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 Installer's expense. Flashing shall be adhered to compatible, dry, smooth, and solvent-resistant surfaces. Use caution to ensure adhesive fumes are not drawn into the building.
- B. Adhesive for Membrane Flashings
  - 1. Over the properly installed and prepared flashing substrate, approved bonding adhesive shall be applied according to instructions found on the Product Data Sheet. The bonding adhesive shall be applied in smooth, even coats with no gaps, globs or similar inconsistencies. 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.
  - 2. No adhesive shall be applied in seam areas that are to be welded. All panels of membrane shall be applied in the same manner, overlapping the edges of the panels as required by welding techniques.
- C. Install termination bars and batten/peel bars according to the Shop and Detail Drawings with approved fasteners into the structural deck at the base of parapets, walls and curbs.
- D. The manufacturer's requirements and recommendations and the specifications shall be followed. All material submittals shall have been accepted by the manufacturer prior to installation.
- E. All flashings shall extend a minimum of 8-inches above roofing level unless otherwise accepted in writing by the Owner's Representative and the manufacturer Technical Department.
- F. 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 thermoplastic membrane.
- G. All flashing membranes shall be mechanically fastened along the counter-flashed top edge with termination bar at 6-8 inches on center.
- H. Roof flashings shall be terminated according to the manufacturer recommended details.
- I. All flashings that exceed 30 inches in height shall receive additional securement. Consult The manufacturer Technical Department for securement methods.

### 3.11 METAL FLASHINGS

- A. Metal details, fabrication practices and installation methods shall conform to the applicable requirements of the following:
  - 1. Factory Mutual Loss Prevention Data Sheet 1-49 (latest issue).
  - 2. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - latest issue.
- B. Metal, other than that provided by the manufacturer, is not covered under the manufacturer warranty.
- C. Complete all metal work in conjunction with roofing and flashings so that a watertight condition exists daily.

- D. Metal shall be installed to provide adequate resistance to bending to allow for normal thermal expansion and contraction.
- E. Metal joints shall be watertight.
- F. Metal flashings shall be securely fastened into solid wood blocking. Fasteners shall penetrate the wood nailer a minimum of 1-inch.
- G. Airtight and continuous metal hook strips are required behind metal fascias. Hook strips are to be fastened 6-inches on center into the wood nailer or masonry wall.
- H. Counter flashings shall overlap base flashings at least 4-inches.
- I. Hook strips shall extend past wood nailers over wall surfaces by 1½-inch minimum and shall be securely sealed from air entry.

### 3.12 CLAD METAL EDGE METAL

- A. All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and the manufacturer. Acceptance shall only be for specific locations on specific dates. If any water intrudes under the newly completed roofing due to incomplete flashings, the affected area shall be removed and replaced at the Installer's expense.
- B. Clad metal flashings shall be formed and installed per the Shop and Detail Drawings.
  - 1. All metal flashings shall be fastened into solid wood nailers with two rows of post galvanized flat head annular ring nails, 4-inches on center staggered. Fasteners shall penetrate the nailer a minimum of 1½-inch.
  - 2. Metal shall be installed to provide adequate resistance to bending and allow for normal thermal expansion and contraction.
- C. Adjacent sheets of clad metal shall be spaced ¼-inch apart. The joint shall be covered with 2-inch wide aluminum tape. A 4-inch minimum wide strip of roof flashing membrane shall be hot-air welded over the joint.

### 3.13 WALKWAY INSTALLATION

- A. Specified Walkway:
  - 1. Roofing membrane to receive walkway shall be clean and dry. Place chalk lines on deck sheet to indicate location of Walkway. Apply a continuous coat of bonding adhesive to the deck sheet and the back of Walkway in accordance with the manufacturer's technical requirements and press Walkway into place with a water-filled, foam-covered lawn roller. Clean the deck membrane in areas to be welded. Hot-air weld the entire perimeter of the Walkway to the thermoplastic deck sheet. Check all welds with a rounded screwdriver. Re-weld any inconsistencies.
    - a. Important: Check all existing deck membrane seams that are to be covered by Walkway with rounded screwdriver and reweld any inconsistencies before Walkway installation. Do not run Walkway over termination/batten/peel bars.

### 3.14 TEMPORARY CUT-OFF

- A. All flashings shall be installed concurrently with the roof membrane in order to maintain a watertight condition as the work progresses. All temporary water-stops shall be constructed to provide a 100% watertight seal. The stagger of the insulation joints shall be made even by installing partial panels of insulation. The new membrane shall be carried into the water-stop. The water-stop shall be sealed to the deck and/or substrate so that water will not be allowed to travel under the new or existing roofing. The edge of the membrane shall be sealed in a continuous heavy application of sealant as described in this section. When work resumes, the contaminated membrane shall be cut out. All sealant, contaminated membrane, insulation fillers, etc. shall be removed

from the work area and properly disposed of offsite. None of these materials shall be used in the new work.

- B. If inclement weather occurs while a temporary water-stop is in place, the Installer shall provide the labor necessary to monitor the situation to maintain a watertight condition.
  - 1. **IMPORTANT:** This is a 24/7 requirement for this lab building with the Installer staff responding to any water intrusion when they are noticed!

- C. If any water intrudes under the newly-completed roofing, the affected area shall be removed and replaced at the Installer's expense.

### 3.15 FIELD QUALITY CONTROL:

#### A. Roofing Contractor's Quality Control:

- 1. During construction, contractor is to provide daily supervision of the project, performed by the contractor's field superintendent (not to be confused with the project foreperson who is on site at all times).
- 2. Contractor's project manager is to perform regular site inspections at the minimum rate of one site visit per week.
- 3. Upon completion of installation, contractor is to perform their own final inspection by their quality control person to confirm that roofing system has been installed in accordance with the construction documents and manufacturer's requirements. Contractor is to produce a written punch list and roof diagram of deficiencies found during their final inspection. A copy of this punch list, diagram and signed completion letter, will be provided to the consultant prior to the owner and consultant performing their final inspection.

#### B. Manufacturer's Field Service:

- 1. During installation, provide for a minimum of weekly on-site inspections of roof installation by qualified distributor technical representatives of roofing manufacturer and submit an e-mail status.
- 2. During the work the manufacturer's area representative (not manufacturer's qualified distributor representative) shall visit the site two (2) times a month and issue a report of observed work.
- 3. Upon completion of installation, provide a final inspection by a technical representative of roofing manufacturer to confirm that roofing system has been installed in accordance with manufacturer's requirements. The Installer, owner, and roof consultant are required to be present for this inspection. The manufacturer is to produce a written punch list and roof diagram of deficiencies found during their final inspection. A copy of this punch list, diagram and signed completion letter, will be provided to the owner's roof consultant prior to the owner and consultant performing their final inspection.

- C. The manufacturer and Installer are to perform an 18-month inspection of the entire guaranteed roof system 18 months after the warranty issuance date. The Installer, owner, and roof consultant are required to be present for this inspection.

### 3.16 CLEANING AND PATCHING:

- A. Clean up debris, excess materials and equipment and remove from site.
- B. Remove drippage or spills of coatings, sealant, adhesives or primers from finish surfaces.
- C. Patch misaligned or inadequately lapped seams, inadequately adhered areas, punctures or other damage to membrane with a patch of membrane sheet that extends at least 6-inches in each direction from deficiency.



3.17 PROTECTION:

- A. Provide special protection (i.e. use of tarps and plywood) and avoid heavy traffic on completed work.
- B. Restore to original condition or replace work or materials damaged during handling of roofing materials.

3.18 COMPLETION

- A. Prior to demobilization from the site, the work shall be reviewed by the Owner's Representative and the Installer. All defects noted and non-compliance with the Specifications or the recommendations of the manufacturer shall be itemized in a punch list. These items must be corrected immediately by the Installer to the satisfaction of the Owner's Representative and the manufacturer prior to demobilization.
- B. All punch-lists shall have been completed, and warranties referenced in this Specification shall have been delivered to the Owner's Representative prior to the Owner accepting the project for final payment.

**END OF SECTION 07 5400**

## SECTION 07 6200 - SHEET METAL FLASHING AND TRIM

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Manufactured or contractor formed coping cap, at contractor's option, meeting current ES1 requirements for location.
  - 2. Counterflashing's
  - 3. Formed roof-drainage sheet metal fabrications.
  - 4. Formed low-slope roof sheet metal fabrications.
  - 5. Formed wall sheet metal fabrications.
  - 6. Formed equipment support flashing.
  - 7. Miscellaneous sheet metal accessories.
  - 8. Precast concrete splash blocks.
- B. Related Requirements:
  - 1. Section 06 1055 "Roofing Carpentry" for wood nailers, curbs, and blocking.
  - 2. Section 07 5400 "Thermoplastic Membrane Roofing" for installing sheet metal flashing and trim integral with membrane roofing.

#### 1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):
  - 1. A 153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware
  - 2. A 240 - Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
  - 3. A 755 - Steel Sheet, Metallic Coated by the Hot-Dip Process and Pre-painted by the Coil-Coating Process for Exterior Exposed Building Products.
  - 4. A 792 - Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
  - 5. C 920 -Elastomeric Joint Sealants.
- B. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.
- C. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA): Architectural Sheet Metal Manual.
- D. National Association of Architectural Metal Manufacturers (NAAMM): Metal Finishes Manual for Architectural and Metal Products

#### 1.4 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.
  - 1. Meet with PA, Architect / Engineer, Installer, and installers whose work interfaces with or affects sheet metal flashing and trim including installers of roofing materials, roof accessories, unit skylights, and roof-mounted equipment.
  - 2. Review construction schedule. Verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 3. Review special roof details, roof drainage, roof-penetration flashing, equipment curbs, and condition of other construction that affect sheet metal flashing and trim.
  - 4. Review requirements for insurance and certificates if applicable.
  - 5. Review sheet metal flashing observation and repair procedures after flashing installation.

6. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
7. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

#### 1.5 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.
- B. Product Data: For each type of product indicated.
  1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.
- C. Shop Drawings: Show fabrication and installation layouts of sheet metal flashing and trim. Include the following:
  1. Plans, elevations, sections, and attachment details.
  2. Detail fabrication and installation layouts, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.
  3. Identification of material, thickness, weight, and finish for each item and location in Project.
  4. Details for forming, including profiles, shapes, seams, and dimensions.
  5. Details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
  6. Details of termination points and assemblies.
  7. Details of expansion joints and expansion-joint covers, including showing direction of expansion and contraction from fixed points.
  8. Details of edge conditions, including eaves, ridges, valleys, rakes, crickets, and counter flashings as applicable.
  9. Details of special conditions.
  10. Details of connections to adjoining work.
  11. Detail formed flashing and trim at a scale of not less than 3 inches per 12 inches.
- D. Samples for Initial Selection: For each type of sheet metal flashing, trim, and accessory indicated with factory-applied color finishes involving color selection.
- E. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
  1. Sheet Metal Flashing: 12 inches long by actual width of unit, including finished seam and in required profile. Include fasteners, cleats, clips, closures, and other attachments.
  2. Trim, Metal Closures, Expansion Joints, Joint Intersections, and Miscellaneous Fabrications: 12 inches long and in required profile. Include fasteners and other exposed accessories.
  3. Accessories and Miscellaneous Materials: Full-size Sample.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified fabricator.
- B. Product Certificates: For each type of coping and roof edge flashing that is SPRI ES-1 tested.
- C. Product Test Reports: For each product, for tests performed by a qualified testing agency.
- D. Warranty: Sample of special warranty.

#### 1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For sheet metal flashing, trim, and accessories to include in maintenance manuals.

- B. Warranty: Executed copies of special warranty.

## 1.8 QUALITY ASSURANCE

- A. General: Work of this Section to physically protect membrane roofing, base flashings, and expansion joints from damage that would permit water leakage to building interior.
- B. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance, with three years minimum experience.
  - 1. For copings and roof edge flashings that are SPRI ES-1 tested, shop shall be listed as able to fabricate required details as tested and approved.

## 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sheet metal flashing materials and fabrications undamaged. Protect sheet metal flashing and trim materials and fabrications during transportation and handling.
- B. Unload, store, and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting, and surface damage.
- C. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- D. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

## 1.10 COORDINATION

- A. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.
- B. Coordinate with demolition work and with work of other trades to ensure sufficient materials and manpower are available to completely replace and make watertight all roofing removed each day.
- C. Limit removal of existing sheet metal components, to ensure new membrane installation can be made watertight by end of day.
- D. Coordinate installation of flanged metal components, including gravel guards, pitch pans, and accessories to ensure strip-in with flashing membrane on same day they are installed.
- E. Schedule work to avoid storage on, and traffic over finished work.

## 1.11 WARRANTY

- A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: 20 years from date of Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Brand or other manufacturer's references are descriptive only, and indicate type and quality to be provided. All references to brand or manufacturer names shall be interpreted to include the language "or A/E approved equal", unless advertised as a proprietary purchase

under Government Code. Title 10, Subtitle D Section 2155.067. Any brand or manufacturer meeting specifications will be considered for approval, irrespective of the language "or A/E approved equal" appearing in conjunction with the brand or manufacturer name.

- B. General: Sheet metal flashing and trim assemblies to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- C. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
- D. Coping / Edge Design: Furnish and install or fabricate and install coping and roof edge flashing that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist wind design pressure (P) calculated according to ANSI/SPRI-ES-1.
  - 1. Wind Speed: 120 mph.
  - 2. Horizontal Design Pressure: 54.6 lb./psf @ perimeter; 67.5 lb./psf @ corner
  - 3. Vertical Design Pressure: 84.6 lb./psf @ perimeter; 127.1 lb./psf @ corner
- E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F ambient; 180 deg F, material surfaces.
- F. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

## 2.2 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.
- B. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and pre-painted by the coil-coating process to comply with ASTM A 755.
  - 1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653, G90 coating designation; structural quality.
  - 2. Aluminum-Zinc Alloy-Coated (Galvalume) Steel Sheet: ASTM A 792, Class AZ50 coating designation, Grade 40; structural quality.
  - 3. Surface: Smooth, flat.
- C. Pre-painted Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and pre-painted by the coil-coating process to comply with ASTM A 755.
  - 1. Aluminum-Zinc Alloy-Coated (Galvalume) Steel Sheet: ASTM A 792, Class AZ50 coating designation, Grade 40; structural quality.
  - 2. Surface: Smooth, flat.
  - 3. Exposed Coil-Coated Finish:
    - a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - b. Minimum Exposure Tests:
      - 1) Humidity Resistance: 2000 hours.
      - 2) Salt-Spray Resistance: 2000 hours.
  - 4. Color: As selected by Architect from manufacturer's full range.

5. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.
- D. Stainless-Steel Sheet: ASTM A 240 or ASTM A 666, Type 304, dead soft, fully annealed.
    1. Finish: 2D (dull, cold rolled).
    2. Surface: Smooth, flat.
  - E. Thermoplastic-Coated Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and pre-painted with 20-mil unsupported heat-weldable membrane laminated on one side; acceptable to selected membrane manufacturer; color as selected by Architect from manufacturer's standard selections.
    1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653, G90 coating designation; structural quality.
    2. Aluminum-Zinc Alloy-Coated (Galvalume) Steel Sheet: ASTM A 792, Class AZ50 coating designation, Grade 40; structural quality.
- 2.3 UNDERLAYMENT MATERIALS
- A. Polyethylene Sheet: 6-mil- thick polyethylene sheet complying with ASTM D 4397.
- 2.4 MISCELLANEOUS MATERIALS
- A. General: Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal unless otherwise indicated.
  - B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal.
    1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
      - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
      - b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
    2. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
    3. Fasteners for Metallic-Coated and Pre-Painted Metallic-Coated Steel Sheet: Hot-dip galvanized steel according to ASTM A 153 or ASTM F 2329 or Series 300 stainless steel.
    4. Rust-resistant and compatible with materials to be joined.
    5. Length: As required for thickness of material to penetrate substrate 1/2-inch minimum.
  - C. Mechanical Fasteners for Sheet Metal to Substrate Anchorage:
    1. Masonry: One-step, screw-type drive anchor (nailin); heat-treated, stress relieved, stainless steel pin; zinc jacketed; sized for intended application; minimum 1-1/4-inch length x 1/4-inch diameter; Hammer-Screw<sup>®</sup> manufactured by Powers Fasteners, Inc. or A/E approved equal.
    2. Wood Blocking: Hexagonal head screws, stainless steel, with neoprene rubber washers; jacket color to match pre-painted sheet metal.
    3. Concrete: Same as masonry, or other power actuated fasteners, suitable for application.
  - D. Roofing Nails: Stainless steel (for fastening into ACQ treated lumber), hot-dipped galvanized or non-ferrous type (for fastening into non-treated lumber); with annular rings, size as required to suit application; minimum 11-gauge with 3/8-inch diameter head.

- E. Mechanical Fasteners for Sheet Metal to Metal Fabrications (Support Framing) Anchorage: Appropriate for purpose intended, size as required to suit application and achieve positive anchorage to substrate material.
- F. Solder:
  - 1. For Stainless Steel: ASTM B 32, Grade Sn60, with an acid flux of type recommended by stainless-steel sheet manufacturer.
  - 2. For Metallic-Coated (Galvanized) Steel: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead or Grade Sn60, 60 percent tin and 40 percent lead.
- G. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, non-staining tape 1/2-inch-wide and 1/8 inch thick.
- H. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant; low modulus, as specified in Division 7 section "Sealants (for Roofing)"; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- I. Splash Blocks: Precast concrete of size and profile indicated; minimum 3000 psi at 28 days, with minimum 5 percent air entrainment; suitable for downspouts discharging at grade level or onto roof surface.

## 2.5 MANUFACTURED SHEET METAL FLASHING AND TRIM

- A. Pre-engineered Coping: Units of type, material, and profile indicated, formed to interlock with hold-down cleats and metal drain chairs or splice plates, and compatible with flashing indicated. Provide factory-mitered and -welded corners and junctions. Pre-engineered system to include slope provisions for drainage to the roof interior together with pre-punched holes and stainless-steel fasteners for attachment to substrate. Provide assembly meeting project wind uplift pressures in accordance with ANSI/SPRI/FM 4435/ES-1 Roof Edge Standard Test Protocol RE-3 for coping.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Carlisle SynTec, Incorporated
    - b. GAF
    - c. Johns Manville.
    - d. Sika-Sarnafil, Inc.
    - e. Or A/E approved equal.
  - 2. Material
    - a. Coping Panels and Drain Chairs or Splice Plates: Prepainted Galvanized steel, 0.022 inch (24-gage) thick.
    - b. Hold-Down Cleats: Stainless or galvanized steel as engineered and supplied by manufacturer 0.0375 inch (20-gage) minimum thickness.
  - 3. Surface: Smooth, flat.
  - 4. Color: As selected by Architect from manufacturer's full range of Standard Colors

## 2.6 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
  - 1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
  - 2. Obtain field measurements for accurate fit before shop fabrication.

3. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
  4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.
- B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines as indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- C. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1-inch deep, filled with elastomeric sealant concealed within joints.
1. Form expansion joints of intermeshing hooked flanges, not less than 1-inch deep, filled with butyl sealant concealed within joints.
  2. Use lapped expansion joints only where indicated on Drawings.
  3. Fabricate all components with allowance for expansion at joints. Provide enlarged or oval holes at all piercing fasteners.
  4. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.
- D. Sealed Joints: Form non-expansion but movable joints in metal to accommodate elastomeric sealant.
- E. Form all sheet metal components (except corners) in longest practical length up to 10-feet maximum; true to shape, square, accurate in size, and free from distortion or defects detrimental to appearance or performance.
- F. Fabricate corners on all sheet metal components (gravel guards, copings, cap flashings, etc.) to form one piece with minimum 18-inch and maximum 36-inch long legs.
- G. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.
- H. Soldered Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.
- I. Unsoldered Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength.
- J. Hem exposed edges of metal 1/2-inch; miter and seam corners.
- K. Fabricate vertical faces with bottom edge formed outward 3/4-inch at 30 degrees and hemmed to form drip.
1. Where vertical height exceeds 8-inches, fabricate with stiffing grooves in accordance with SMACNA, unless specifically approved otherwise.
- L. Form all sheet metal material to provide watertight joints:
1. Unprotected Horizontal Surfaces (expansion joint covers, etc.): Standing seam or drive cleat joints.
  2. Wall Copings:
    - a. Where wall thickness is less than 8-inches: Cover and backer plates may be used.
    - b. Where wall thickness is 8-inches or more: Standing seam or drive cleat joints.
  3. Vertical Surfaces (copings, cap flashings, gravel guards, etc.): Flat lock or cover and backer plate seams.
- M. Miter all sheet metal corners and solder, weld, or fasten and seal all joints watertight:
1. Metallic-Coated Steel Sheet: Solder joints watertight.
  2. Stainless Steel: Solder joints watertight.



3. After soldering, remove flux. Wipe and wash solder joints clean.
4. Pre-painted Metallic-Coated Steel Sheet: Apply minimum 1/4-inch bead of sealant between connecting metal flanges and drill and fasten with rivets at 2-inches O.C.
5. Thermoplastic-coated metallic-coated steel sheet: Cover joints with 2-inch wide aluminum tape and heat weld 4-inch wide Thermoplastic Membrane over aluminum tape. Cover membrane with a 6-inch wide Thermoplastic-coated metallic-coated steel cover plate.
6. Install sealant so it will not be visible on outside of joints.

- N. Fabricate elements complete with required connection pieces.
- O. Fabricate all components with horizontal (flat) surfaces with built-in slope for drainage toward roof unless indicated otherwise.
- P. Do not use graphite pencils to mark metal surfaces.
  1. -

## 2.7 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Copings: Furnish and install pre-engineered system or fabricate in minimum 96-inch- long, but not exceeding 10-foot- long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and drill elongated holes for fasteners on interior leg. Miter corners, seal, and solder or weld watertight. Coping installation must be uniform throughout.
  1. Coping Profile: SMACNA figure designation 3-4A.
  2. Joint Style: Butt, with 12-inch- wide, concealed backup plate and 6-inch- wide, exposed cover plates.
  3. Fabricate copings from following materials:
    - a. Pre-painted, Metallic-Coated Steel: 0.022 inch (24-gage) thick.
  4. Fabricate coping cleats from following material:
    - a. Metallic-Coated Steel: 0.028 inch (22-gage) thick.
- B. Counterflashing: Fabricate from following materials:
  1. Pre-painted Metallic-Coated Steel: 0.022 inch (24-gage) thick.
- C. Flashing Receivers: Fabricate from following materials:
  1. Metallic-Coated Steel: 0.022 inch (24-gage) thick.
- D. Roof-Penetration Flashing: Fabricate from following materials:
  1. Thermoplastic-Coated Metallic-Coated Steel: 0.022 inch (24-gage) thick.

## 2.8 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. Exposed to View Metallic-Coated Steel Components: Paint to match pre-painted metallic-coated steel prior to installation:
  1. Clean: Comply with SSPC-1 - Solvent Wipe.
  2. Primer: Apply specified or finish paint manufacturer's recommended primer in accordance with manufacturer's instructions.

3. Finish Coat: Apply powder coating or approved urethane enamel in accordance with manufacturer's instructions.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.
  1. Verify compliance with requirements for installation tolerances of substrates.
  2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
  3. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
  4. Verify membrane termination and base flashings are in place, sealed, and secure.
- B. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### **3.2 UNDERLAYMENT INSTALLATION**

- A. General: Install underlayment as recommended by SMACNA and as indicated on Drawings.
- B. Polyethylene Sheet: Install polyethylene sheet with adhesive for anchorage to minimize use of mechanical fasteners under sheet metal flashing and trim. Apply in shingle fashion to shed water, with lapped and taped joints of not less than 2 inches.

#### **3.3 INSTALLATION, GENERAL**

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  1. Field measure site conditions prior to fabricating work.
  2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
  3. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
  4. Provide continuous cleats fastened not more than 12-inches on center. Anchor cleats with a minimum two fasteners.
  5. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
  6. Install sealant tape where indicated.
  7. Torch cutting of sheet metal flashing and trim is not permitted.
  8. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
  1. Coat concealed side of uncoated galvanized, stainless-steel and lead sheet metal flashing and trim with approved water cut-off mastic bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
    - a. Minimum Dry Film Thickness: 15-mils.

2. Underlayment: Where installing metal flashing and trim directly on cementitious or wood substrates, install a course of polyethylene sheet.
  3. Bed flanges in thick coat of water cut-off mastic where required for waterproof performance.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10-feet. Provide joints no less than 18-inches and no more than 36-inches of all corners or intersections.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
  2. Use lapped expansion joints only where indicated on Drawings.
- D. Fasteners: Use fasteners sizes that will penetrate wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws and other substrates not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction.
1. Use sealant-filled joints unless otherwise indicated. Embed hooked flanges of joint members not less than 1-inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F.
- G. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches; however, reduce pre-tinning where pre-tinned surface would show in completed Work.
1. Do not solder pre-painted metallic-coated steel sheet.
  2. Do not use torches for soldering.
  3. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.
  4. Stainless Steel Soldering: Tin edges of uncoated sheets, using solder for stainless steel and acid flux. Promptly remove acid flux residue from metal after tinning and soldering. Comply with solder manufacturer's recommended methods for cleaning and neutralization.
- H. Rivets: Rivet joints in where indicated and where necessary for strength.
- I. Protect all membrane penetrations as indicated and as recommended in SMACNA and NRCA manuals.
- J. -

### 3.4 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal flashing and trim to comply with performance requirements and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
1. Install starter and edge strips, and cleats before starting installation.
  2. Strip in all sheet metal flanges the same day they are installed.
- B. Copings: Anchor to resist uplift and outward forces specified in "Performance Requirements" Article unless otherwise indicated.

1. Interlock exterior bottom edge of coping with continuous cleat anchored to substrate at 12-inch centers.
  2. Anchor interior leg of coping with pre-engineered spring cleats or washers and screw fasteners through slotted holes 12-inch at centers.
- C. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending a minimum of 4-inches over base flashing o. Install stainless-steel draw band and tighten.
- D. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4-inches over base flashing. Lap counterflashing joints a minimum of 4-inches and bed with elastomeric sealant. Secure in a waterproof manner by means of interlocking folded seam or blind rivets and sealant unless otherwise indicated.
1. Sawcut new reglets where required.
    - a. Provide bayonet style lap joints, minimum 4-inch overlap.
    - b. Fill voids between wedges with backer rod.
    - c. Seal receiver to vertical face of wall.
  2. Install surface mounted reglets true to lines and levels.
    - a. Seal top of reglets with sealant.
    - b. Secure in place with neoprene head screws at maximum 12-inches on center.
- E. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Install flashing as follows:
1. Provide prefabricated thermoplastic flashings wherever possible.
  2. Seal with elastomeric sealant and clamp flashing to pipes penetrating roof except for lead flashing on vent piping.
- F. Protect all membrane penetrations as indicated and as recommended in SMACNA and NRCA manuals.

### 3.5 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

### 3.6 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of installation, remove unused materials and clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a clean condition during construction.
- E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

### 3.7 SCHEDULE - MATERIALS

- A. Exposed to View Components:
1. One-Piece Flashing and Expansion Joint Terminations: Metallic-coated steel sheet, powder-coated to match adjacent pre-painted metallic-coated steel sheet components.
  2. All Other Components: Pre-painted metallic-coated steel sheet.

- B. Concealed from View Components:
1. Receivers, Counter flashings, Through-Wall Flashings, Expansion Joint Covers, Etc.:  
Pre-painted Metallic-coated steel sheet or Stainless-steel sheet.
  2. Roof Penetration Flashings: Thermoplastic-coated metallic-coated steel sheet.
  3. Rain Hoods and Umbrellas: Metallic-coated steel sheet.

**END OF SECTION 07 6200**

# SECTION 07 6210 ES-1

CERTIFICATION OF AUTHORIZED FABRICATOR  
For  
Shop-Fabricated Edge Metal Flashings  
As Tested By

## NATIONAL ES TESTING SERVICE, INC.

---

**Instructions:** Please complete and return the following information for each sheet metal fabrication shop location (e.g., shops at different addresses) to be included in your company's authorized certification of tested products per ANSI/SPRI ES-1 2003 guidelines.

**FAX BACK TO: 866-298-6767**

Primary Contact Person: \_\_\_\_\_

Title (Primary Contact): \_\_\_\_\_

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

---

City, State, ZIP: \_\_\_\_\_

Telephone: \_\_\_\_\_

FAX: \_\_\_\_\_

Website: \_\_\_\_\_

E-Mail (Primary Contact): \_\_\_\_\_

Equipment List (All Equipment Used To Fabricate Submitted Details):

---

---

---

---

---

# NATIONAL

ES TESTING SERVICE, INC.

---

## Authorized Fabricator Agreement

### Enabling Shop Fabricated Products to be Compliant to the Guidelines of ANSI/SPRI ES-1 2003/2007

This agreement is made the \_\_\_\_\_ day of \_\_\_\_\_, 200\_\_\_\_  
by and between National ES Testing Service, Inc. (NESTS) 312 Penwood  
Trail, Dacula, Georgia 30019 and:

Company Name: \_\_\_\_\_  
(Hereinafter "Authorized Fabricator")

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

City, State, ZIP: \_\_\_\_\_

Phone Number: \_\_\_\_\_

NESTS has developed a purpose built ANSI/SPRI ES-1 Test Apparatus in strict accordance to the guidelines of the Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems approved December 11,2003, for the purpose of testing wind resistance of specific shop fabricated, metal roof edge flashing, fascias and coping systems. NESTS's tests performed on behalf of the Authorized Fabricator signifies specific shop fabricated metal roof edge flashing, fascias and coping systems fabricated and installed in accordance with the Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems are in compliance with ANSI/SPRI ES-1 for the specific loads indicated as listed in the Certificate of Compliance document.

Now therefore, and in consideration of the mutual covenants herein expressed and other lawful valuable consideration, the parties hereto agree as follows:

1. NESTS agrees to:provide the Authorized Fabricator with one copy of each tested product's Certificate of Compliance and the accompanying test data in Microsoft Excel 2003 format;provide the Authorized Fabricator a one (1) year Certificate of Compliance from the date of full payment of testing services

performed, renewable for additional one (1) year periods following the periodic follow-up audit performed at the authorized fabricator's facilities by NESTS, and payment in full for this yearly audit.

2. The Authorized Fabricator agrees to: Maintain in good condition all equipment used and as listed on the Certification of Authorized Fabricator Form for the fabrication of compliant details as tested on the date listed on the individual Certificate of Compliance form(s).

Pay a non-refundable \$2500.00 fee for each tested detail, material composition and size, for test services rendered on behalf of the Authorized Fabricator. The Authorized Fabricator must furnish NESTS with full scale, complete representations of each detail to be tested, in the exact condition said details would be supplied for installation to Authorized Fabricator's customer(s). The cost of supplying these details and the associated freight charges are the full responsibility of the Authorized Fabricator. A 50% down payment must be received prior to the commencement of all testing. Final payment must be received In-Full prior to the issuance of the Certificate of Compliance(s) to the Authorized Fabricator. Furthermore, the Authorized Fabricator agrees to pay an annual Authorized Fabricator Fee of \$750.00 plus the actual travel costs (+ 15%) for issuance of an additional one (1) year Certificate of Compliance for all details as tested on the date of the original issuance.

Maintain an accurate record of all edge metal flashings, fascias and coping system configurations fabricated by the Authorized Fabricator for which certification applies. This record shall include the project name, building owner(s) names, addresses and phone number(s), location and date of substantial completion, the installing contractor(s) name, address and phone number(s), specific configurations installed, metal type and the total lineal footage fabricated of all components to the certified details. A copy of this record shall be made available to NESTS upon NESTS's request.

Hold NESTS harmless and to defend and indemnify NESTS against any and all liability, loss, expense or damage from claims, demands, court costs (including legal fees), or for judgments arising out of any negligent or intentional acts of the Authorized Fabricator or third parties relating to the use of the listed products on the Certificate of Compliance, or arising from the use of this Certificate of Compliance.

NESTS will not, under any circumstances, be held liable to the Authorized Fabricator for any damages, including indirect, special, punitive or consequential damages, or any third party claims which may arise as a result of NESTS allowing the Authorized Fabricator to use the Certificate(s) of Compliance as provided for in this authorized fabricator agreement. The maximum aggregate liability of NESTS for



damages in connection with the use of this listing and this authorized fabricator agreement shall not exceed the annual listing fee of \$750.00 paid to NESTS by the Authorized Fabricator.

3. Any other charges and fees associated with the Certificate of Compliance issued by NESTS that may come up now or in the future to remain compliant with the current ANSI/SPRI ES-1 document, will be the sole responsibility of the Authorized Fabricator, and paid prior to any continuation or issuance further certifications.
4. In the event NESTS detects or is made aware (by any means) of any deviation or variance from this authorized fabricator agreement, or improper or unauthorized use of the NESTS Certificate of Compliance, and upon written notice to the Authorized Fabricator, NESTS reserves the right to terminate this authorized fabricator agreement.
5. If NESTS is served with a subpoena, court order or other similar document requesting disclosure of information relating to the Certificate of Compliance or this authorized fabricator agreement, NESTS will promptly notify the Authorized Fabricator. In the event the Authorized Fabricator chooses to contest the request, NESTS will attempt to cooperate with the Authorized Fabricator. The responsibility for contesting the request including all court costs, attorneys' fees, travel costs or any and all related costs shall rest solely with the Authorized Fabricator. Any costs incurred by NESTS in responding to a request will be invoiced by NESTS to the Authorized Fabricator and shall be deemed due upon receipt.
6. The rights extended to the Authorized Fabricator under this authorized fabricator agreement may not be subcontracted to, transferred to, assigned to or acquired by any other person or entity without NESTS's prior written authorization.
7. This authorized fabricator agreement can be terminated by either NESTS or the Authorized Fabricator upon not less than thirty (30) days written notice to the other party. Such notice shall designate a termination date and the notice period shall be deemed to commence upon the date of mailing of the notice to the other party by registered or certified mail, return receipt requested.
8. The authorized fabricator agreement shall continue to be in effect for a period of one (1) year from the date first written above. It shall be subject to automatic renewal thereafter for a period of one year, and the subsequent year renewal fee in-full becomes due thirty (30) days prior to the renewal date, or is subject to immediate cancellation. Automatic renewal will occur unless terminated by NESTS or the Authorized Fabricator.

This agreement is accepted by:

National ES Testing Service, Inc.  
Tim Tunney  
President

Date

SAMPLE

Company Name:

---

---

---

Signature of Officer of Authorized Fabricator

Date

---

# NATIONAL ES Testing Service, Inc.

*“The Right Choice for Your Roof”*

## Certificate of ANSI/SPRI ES-1 Compliance

National ES Testing Service, Inc. hereby certifies that the Product(s) listed below have been tested in accordance with the protocols of the ANSI/SPRI ES-1 Roof Edge Standard, and when installed as required will withstand the Design Pressures as calculated using ES-1 for the below listed project, and as prescribed by Section 1504.5 of the 2003 and 2006 International Building Code.

Product(s) Certified:  
Building Location:  
Architect:  
Building Owner:  
Completion Date:  
Installing Contractor:  
Material Tested:  
Certificate Number:

Building Height:  
Building Exposure:  
Importance Classification:  
Design Wind Speed:  
Horizontal Design Pressure (psf):  
Vertical Design Pressure (psf):  
Product Size:

# Saam

Dated: \_\_\_\_\_

Authorized Signature for National ES Testing Service, Inc. \_\_\_\_\_

**Disclaimer**

All basic wind speed velocities and velocity pressure calculations are based on the maps and formulas provided in the document ANSI/SPRI ES-1 2003 "Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems" and the SEI/ACSE 7-02 standard. Although every care has been taken to ensure that the information based on state and county is accurate according to the standards, official wind speed requirements can vary based on local and county jurisdiction. It is highly recommended that any information regarding wind speed velocity provided be verified with local and county officials before any action is taken. No liability is accepted or implied by National ES Testing Service, Inc. for such information and advice.

National ES Testing Service, Inc. • PO Box 485 • Dacula, GA 30019  
O# 404-234-3905 • Fax: 866-648-0692 • [www.nationalestesting.com](http://www.nationalestesting.com)

---



January 31, 2008

National ES Testing Service, Inc.  
Mr. Tim Tunney  
PO Box 485  
312 Penwood Trail  
Dacula, Ga. 30019

Subject: ANSI/SPRI ES-1 Test Equipment

This is to confirm that Underwriters Laboratories, Inc. has witnessed and completed an ANSI/SPRI ES-1 Test series utilizing the equipment designed and provided by National ES Testing Services, Inc.

The observed test equipment was controlled by a proprietary software program and fully programmable Windows based computer of which controls pneumatically driven loading rams both horizontally and vertically to apply uniform loading spaced 12-in OC across the centerline of the particular perimeter edge flashing system under review. For copings products, the equipment provides simultaneous loading spaced 12-in OC across the centerline of both the top of the coping and to one of the faces of the test specimen. The testing was then repeated with the opposite face of the coping. Independent "scales", separate from the operating program of the test machine, were utilized to verify and record the specific pound per square foot (psf) applied at each incremental load scheduled during the applicable ES-1 test being performed either horizontally, vertically, or simultaneously horizontally and vertically.

Based on Underwriter Laboratories observations, it was determined that the loading capability of the National ES Testing Service, Inc. machine complied with the loading applications stated, and as required in the 2003 ANSI/SPRI ES-1 Standard. The loading equipment was also capable of the loading applications included in the proposed 2007 revisions to the ANSI/SPRI ES-1 Standard that are still under the American National Standards Institute review process.

UL offers Data Acceptance Programs whereby test work conducted by third-party test facilities is used to facilitate the conduct of investigations of products. When data is to be used for this purpose, under our Witness Test Data Program (WTDP), the facilities must be found to be in accordance with national and international accreditation criteria. For additional information on UL's Data Acceptance Programs, please access [www.UL.com/dap](http://www.UL.com/dap).

If you should have additional questions, please feel free to contact us.

Very truly yours

Reviewed by

Kenneth Rhodes  
Senior Staff Engineer  
Fire Protection Div.

Dwayne Sloan  
Primary Designated Engineer  
Fire Protection Div.

Underwriters Laboratories Inc.  
333 Pfingsten Road, Northbrook, IL 60062-2096 USA  
T: 847.272.8800 / F: 847.272.8129 / W: ul.com

**END OF SECTION 07 6210 ES**

## SECTION 07 7200 - ROOF ACCESSORIES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes:
  - 1. Roof curbs.
  - 2. Equipment supports.
  - 3. Access Ladder.
  - 4. Mounting Clamps
  - 5. Pipe Supports/Hangers
  - 6. Other Roof Accessories
  
- B. Related Sections:
  - 1. Division 06 Section "Roofing Carpentry" for wood cants, and wood nailers.
  - 2. Division 07 low-slope roofing Sections for roofing accessories.
  - 3. Division 07 Section "Sheet Metal Flashing and Trim" for shop- and field-fabricated metal flashing and counterflashing, roof expansion-joint covers, and miscellaneous sheet metal trim and accessories.
  - 4. Division 22 Section "Common Work Results for Plumbing" for requirements for modifying, repairing, or replacing roof mounted plumbing and piping.
  - 5. Division 23 Section "Common Work Results for HVAC" for procedures for modifying mechanical equipment.
  - 6. Division 26 Section "Common Work Results for Electrical" for requirements for modifying, repairing, or replacing roof mounted electrical conduit, fixtures, and equipment.

#### 1.3 REFERENCES

- A. Aluminum Association (AA): Specifications for Aluminum Structures.
- B. American Society for Testing and Materials (ASTM):
  - 1. A 36: Carbon Structural Steel.
  - 2. A 53: Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
  - 3. A 123: Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
  - 4. A 240: Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and .Strip for Pressure Vessels and for General Applications.
  - 5. A 500: Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
  - 6. A 653: Steel Sheet, Zinc Coated, (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip process, Structural (Physical) Quality Property.
  - 7. A 666: Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
  - 8. A 780: Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
  - 9. A 792: Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process
  - 10. C 920: Elastomeric Joint Sealants.

11. C 1289: Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
  12. C 1311: Solvent Release Sealants.
  13. D 226: Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
  14. D 4397: Polyethylene Sheeting for Construction, Industrial and Agricultural Applications.
  15. D 4586: Asphalt Roof Cement, Asbestos-Free.
- C. Manufacturer's Standardization Society of the Valve and Fittings Industry, Inc. (MSS):
1. SP-58 Pipe Hangers and Supports, Materials, Design and Manufacture.
  2. SP-59 Pipe Hangers and Supports, Selection and Application.
- D. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.
- E. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA): Architectural Sheet Metal Manual.
- F. Underwriters' Laboratories (UL): Fire Hazard Classifications.

#### 1.4 SYSTEM DESCRIPTION

- A. Manufactured Curbs: Engineered, prefabricated structural box curb assembly designed for installation onto roof deck or structural framing, capable of supporting weight of roof-mounted equipment without deformation. Include integral base plate, treated wood nailer and insulation.
- B. Pipe Supports: Support all roof mounted piping with engineered, prefabricated, portable system designed for installation on roof without roof penetrations, flashings, or damage to roofing materials. Include bases, structural steel frames, and adjustable height pipe hangers or supports suitable for existing and proposed piping and conduits.

#### 1.5 DESIGN REQUIREMENTS

- A. Fabricate and install Roof Accessories to comply with NRCA recommendation that top of curb to top of roofing membrane be a minimum of 8-inches.

#### 1.6 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.
- B. Product Data: For each type of roof accessory indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- C. Shop Drawings: Show fabrication and installation details for roof accessories. Show layouts of roof accessories including plans and elevations. Indicate dimensions, weights, loadings, required clearances, method of field assembly, and components. Include plans, elevations, sections, details, and attachments to other work.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Samples: For each type of exposed factory-applied finish required and for each type of roof accessory indicated, prepared on Samples of size to adequately show color.
- B. Manufacturer's Installation Instructions: Include installation sequence, special instructions and precautions, and Material Safety Data Sheets (MSDS).
- C. Certification: Provide current letter(s) on Company's letterhead, signed by an authorized employee or corporate officer attesting to all following items:
1. Qualifications: Certify and document items in Article on Qualifications, and;
  2. Products: Certify that selected products meet or exceed specified requirements:

- a. Quality Assurance/Control Data: Provide Design Data, Test Reports, Certificates, Manufacturer's Installation Instructions, and Manufacturer's Field Reports.
- b. Manufacturer's Certification: Each product meets or exceeds specified requirements.

#### 1.8 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Accurately record exact location of roof penetrations and any items installed but not visible after installation of roofing system or other Products.
- B. Operation and Maintenance Data:
  - 1. Include complete instructions for normal maintenance and local contacts for service and spare parts.
  - 2. Include cleaning and stain removal methods and recommended cleaning materials, polishes, and waxes.
- C. Warranty: Special warranty specified in this Section.

#### 1.9 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in the manufacturer of products specified in this Section with minimum five years documented experience.
- B. Applicator: Company specializing in installing the work of this Section with minimum three years documented experience and approved by the manufacturer.
- C. Supervisor/Foreman: Individual that is a direct employee of Applicator Company experienced in using selected manufacturer's Products.
- D. Sheet Metal Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.
- E. Perform work in accordance with MSS SP-59.
- F. Maintain one copy of each document accessible to site.
- G. Pre-Installation Conference:
  - 1. Convene prior to commencing work of this Section, under provisions of Division 01 Section "Administrative Requirements."
  - 2. Require attendance of parties directly affecting work of this Section.
  - 3. Review conditions of installation, installation procedures, and coordination with related work.

#### 1.10 DELIVERY, STORAGE, AND HANDLING

- A. Pack, handle, and ship roof accessories properly labeled in heavy-duty packaging to prevent damage.
- B. Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
  - 1. Protect from damage from sunlight, weather, excessive temperatures and construction operations.

#### 1.11 PROJECT CONDITIONS

- A. Field Measurements: Verify required openings for each type of roof accessory by field measurements before fabrication and indicate measurements on Shop Drawings.

- B. Regulatory Requirements:
  1. Conform to applicable code for fire and wind loading requirements.
- C. Environmental Requirements:
  1. Do not install Roof Accessories when chances for inclement weather exist, or might occur before installation can be completed and accessories made weatherproof.
  2. Maintain waterproof integrity of building during and after installation of Roof Accessories.
- D. Existing Conditions: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings.
  1. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.
  2. Allow for field tolerances if taking field measurements before fabrication is not possible.

#### 1.12 COORDINATION

- A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing and interfacing and adjoining construction to provide a leakproof, weathertight, secure, and noncorrosive installation.
  1. With Architect's approval, adjust location of roof accessories that would interrupt roof drainage routes or roof expansion joints.
- B. Sequence work to allow installation of Roof Accessories that are mounted directly on roof deck during installation of new roofing system. Do not cut into new roofing system to retrofit Roofing Accessories unless specifically permitted by Owner's Representative.
- C. Coordinate with installation of mechanical and electrical equipment, hardware, and assemblies to ensure Roof Accessories are properly located and in place to receive equipment installed by others.

#### 1.13 WARRANTY

- A. Warranty: Cover damage to Roof Accessories and substrates resulting from failure of Roof Accessories to perform as intended, including resist penetration of water. Include replacement of defective materials and labor.
  1. Manufactured Curbs and Equipment Supports: Provide warranty on curbs against structural failure.
  2. Pipe Support System: Provide warranty covering pipe bases against deterioration for same time period as roofing warranty.
  3. Warranty Period:
    - a. Pipe Support System: Same duration as Roofing System Warranty.
    - b. Other Items: 5 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers listed in other Part 2 articles.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers listed in other Part 2 articles.



## 2.2 METAL MATERIALS

- A. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755.
  - 1. Galvanized Steel Sheet: ASTM A 653, G90 coated.
  - 2. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792, AZ50 coated.
- B. Stainless-Steel Shapes or Sheet: ASTM A 240 or ASTM A 666, Type 304 or Type 316, No. 2D finish.
- C. Steel Shapes: ASTM A 36, hot-dip galvanized to comply with ASTM A 123, unless otherwise indicated.
- D. Steel Tube: ASTM A 500, round tube, baked-enamel finished.
- E. Galvanized Steel Tube: ASTM A 500, round tube, hot-dip galvanized to comply with ASTM A 123.
- F. Galvanized Steel Pipe: ASTM A 53.

## 2.3 MISCELLANEOUS MATERIALS

- A. Polyisocyanurate Board Insulation: ASTM C 1289, 1 inch thick.
- B. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for aboveground use, complying with AWPA C2; not less than 1-1/2 inches thick.
- C. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
- D. Polyethylene Sheet: 6-mil- thick, polyethylene sheet complying with ASTM D 4397.
- E. Felt: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, nonperforated.
- F. Fasteners: Same metal as metals being fastened, or nonmagnetic stainless steel or other noncorrosive metal as recommended by roof accessory manufacturer. Match finish of exposed fasteners with finish of material being fastened. Provide nonremovable fastener heads to exterior exposed fasteners.
- G. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, or PVC; or flat design of foam rubber, sponge neoprene, or cork.
- H. Elastomeric Sealant: ASTM C 920, polyurethane sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- I. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant, polyisobutylene plasticized, and heavy bodied for hooked-type expansion joints with limited movement.
- J. Roofing Cement: ASTM D 4586, nonasbestos, fibrated asphalt cement designed for trowel application or other adhesive compatible with roofing system.

## 2.4 ROOF CURBS

- A. Roof Curbs: Provide 2-piece metal roof curbs, fabricated to be integral with the specified Roof panel and provide for thermal movement of the Metal Roofing system. Curbs shall be internally reinforced and capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported on roof curbs. Fabricate with welded corner joints, with and integral formed mounting flange at

perimeter bottom. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.

1. Manufacturers:
  - a. LM Curbs.
2. Load Requirements: As required to support Skylights and existing equipment.
3. Material: Aluminum
4. Factory insulate curbs.
5. Sloping Roofs: Fabricate curb units with water diverter or cricket. At Mechanical Equipment, fabricate with height tapered to match slope to level tops of units. At Skylights, fabricate with height to match info on drawings.

## 2.5 EQUIPMENT SUPPORTS

- A. Equipment Supports: Provide metal equipment supports, internally reinforced and capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported. Fabricate with welded or sealed mechanical corner joints, with and integral formed mounting flange at perimeter bottom. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.
1. Manufacturers:
    - a. Custom Curb, Inc.
    - b. LM Curbs.
    - c. Pate Company (The).
    - d. Thaler Metal Industries Ltd.
    - e. ThyCurb; Div. of Thybar Corporation.
  2. Load Requirements: As required to support equipment weight.
  3. Material: Metallic-coated steel sheet, 0.052 inch thick.
  4. Factory-install continuous wood nailers 3-1/2 inches wide at tops of equipment supports.
  5. Metal Counterflashing: Manufacturer's standard removable counterflashing, fabricated of same metal and finish as equipment support.
  6. Fabricate units to minimum height of 12 inches, unless otherwise indicated.
  7. Sloping Roofs: Where slope of roof deck exceeds 1:48, fabricate curb units with water diverter or cricket and with height tapered to match slope to level tops of units.

## 2.6 ROOF MOUNTED PIPE / EQUIPMENT SUPPORTS

- A. Pipe Support System and Hangers: Adjustable height, with bases, traffic pads, and manufacturer's recommended hardware for mounting on roof membrane, suitable for quantity of pipe runs and sizes, with EPDM end caps.
1. Hot-dip galvanize completed assemblies.
  2. Fabricate to MSS SP-58 and MSS SP-69.
  3. Pipe Size 2-1/2-inch and Smaller: Single roller supports for piping subject to expansion and contraction; with 3-sided channels and pipe clamps.
  4. Pipe Size 3-inch and Larger: Rollers, clevis hangers or band hangers, to allow for expansion and contraction without movement of the bases
  5. Manufacturers:
    - a. Advanced Support Products, Inc.
    - b. Mapa Products
    - c. Miro Industries, Inc.
    - d. Portable Pipe Hangers, Inc.
  6. Steel Framing: 12 gage minimum cold-rolled, hot dipped galvanized steel perforated channel sections equal to Uni-strut, Portable Pipe Hangers, or prior approved alternate.

7. Bases: Black, injection molded, moisture resistant, chemical resistant, non-flammable high density polypropylene plastic, or manufacturer's standard approved.
8. Accessory Hardware: Hot dipped galvanized, clamps, bolts nuts and washers as required for a complete system.
9. Base Pedestal: 3000 PSI reinforced, pre-cast concrete pavers not less than four inches larger than pedestal base size.
10. Traffic Pad: Recycled elastomers vulcanized into pads, 3/8-inches thick; TufPad® manufactured by Rubber Products, Inc. or roof membrane traffic pads as specified in Division 7 Section "Modified Asphalt Bituminous Roofing."
  - a. Size: Not less than four (4") inches larger in both directions pedestal base.
11. Support Height: As indicated or required for existing items to be supported.

## 2.7 ACCESS LADDERS

- A. Access Ladders: All welded construction with feet fabricated to accept lag bolting to roof surface. Refer to Plans for sizes and locations.
  1. Available Manufacturers:
    - a. P. W. Platforms, Inc.  
2906 Holmes Road  
Houston, TX 77051  
1.800.231.9936  
[www.pwplatforms.com](http://www.pwplatforms.com)
    - b. O'Keefe's Inc. Architectural Building Products  
[www.okeeffes.com](http://www.okeeffes.com)
  2. Loads: 500 lb. capacity
  3. Size: 24" wide "Max-Trax" stair treads and platform. Platform size (Refer to Drawings). Refer to Plans for sizes and locations. Field measurements and Shop drawings required for Architect Approval.
  4. Frame Material: aluminum
    - a. Finish: Mill finish
  5. Standards: Meet or exceed all applicable OSHA, ANSI and IBC Standards.

## 2.8 Mounting Clamps

- A. Mounting Clips: To be used for the attachment of rooftop equipment and ladders. Refer to Drawings for locations.
  1. Available Manufacturers:

**S-5! Attachment Solutions**  
**Metal Roof Innovations, LTD.**  
8655 Table Butte Road  
Colorado Springs, CO 80908  
(888) 825-3432  
(719) 495-0045 (fax)  
[www.s-5.com](http://www.s-5.com)

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of work.
  - 1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored and is ready to receive roof accessories.
  - 2. Verify dimensions of roof openings for roof accessories.
  - 3. Proceed with installation only after unsatisfactory conditions have been corrected.

### **3.2 PREPARATION**

- A. Protect adjacent surfaces, including roofing system from damage during installation of Roofing Accessories.
- B. Clean surfaces of roof to receive pipe support bases. Remove loose gravel, dirt, dust, oils, and other foreign materials from all roofs. Prime existing substrate or membrane with primer that is compatible with and acceptable roofing membrane manufacturer.

### **3.3 INSTALLATION**

- A. General: Install roof accessories according to manufacturer's written instructions. Anchor roof accessories securely in place and capable of resisting forces specified. Use fasteners, separators, sealants, and other miscellaneous items as required for completing roof accessory installation. Install roof accessories to resist exposure to weather without failing, rattling, leaking, and fastener disengagement.
- B. Coordinate installation with adjacent Work such as roofing, sheet metal and other work to ensure creation of a complete weatherproof assembly. Anchor work securely to supporting structure, but allow for differential and thermal movement.
- C. Install roof accessories to fit substrates and to result in watertight performance.
- D. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
  - 1. Coat concealed side of stainless-steel roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
  - 2. Underlayment: Where installing exposed-to-view components of roof accessories directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet, or install a course of polyethylene underlayment.
  - 3. Bed flanges in thick coat of asphalt roofing cement where required by roof accessory manufacturers for waterproof performance.
- E. Install roof accessories level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.
- F. Roof Curb Installation:
  - 1. Locate curbs and support framing where indicated or instructed by Owner's Representative.
  - 2. Set roof curb so top surface of roof curb is level.
- G. Equipment Support Installation:
  - 1. Locate curbs and support framing where indicated or instructed by Owner's Representative.
  - 2. Set equipment support so top surface of equipment support is level.

- H. Seal joints with elastomeric sealant as required by manufacturer of roof accessories.

### 3.4 FIELD QUALITY CONTROL

- A. Site inspection will be performed under provisions of Division 01 Section "Quality Requirements".
- B. Provide manufacturer's field services under provisions of Division 01 Section "Quality Requirements".
- C. Request site attendance of Roof Accessory manufacturers during installation of the work if required to confirm compliance with instructions or for special or unusual conditions.

### 3.5 TOUCH UP

- A. Touch up factory-primed surfaces with compatible primer ready for field painting and acceptable to Product manufacturer.
- B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

### 3.6 CLEANING

- A. Clean exposed surfaces according to manufacturer's written instructions.
  1. Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products.
  2. Clean metal and glazing using non-abrasive materials and methods. Remove and replace work that cannot be successfully cleaned.
  3. Remove adhesive from supports, pipes and bases, and leave work in clean condition.
- B. Remove all construction debris, packaging, unused fasteners, adhesives, and other installation materials from project site and dispose of legally.
- C. Reclean as necessary to prevent damage. Protect completed work from damage and deterioration and inspect immediately before final acceptance of project.

### 3.7 PROTECTION

- A. Protect finished installation under provisions of Division 01 Section "Temporary Facilities and Controls".
- B. Do not permit traffic over unprotected roof surfaces.

**END OF SECTION 07 7200**

## SECTION 07 9200 - JOINT SEALANTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes joint sealants for applications indicated in the Joint-Sealant Schedule at the end of Part 3.
  - 1. Clean and prepare joint surfaces.
  - 2. Joint sealants and backer materials for all applications, including those specified by reference to this Section:
- B. Related Sections include the following:
  - 1. Division 7 Section "Thermoplastic Membrane Roofing" for application and locations for sealants used in conjunction with roofing.
  - 2. Division 7 Section "Sheet Metal Flashing and Trim" for sealants used in conjunction with metal flashing for roofing.

#### 1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):
  - B. 920 - Elastomeric Joint Sealants
  - C. Flexible Cellular Materials - Sponge or Expanded Rubber.

#### 1.4 PERFORMANCE REQUIREMENTS

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

#### 1.5 SUBMITTALS

- A. Submit under provisions of Division 1 Section "Administrative Requirements".
- B. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.
- C. Product Data: Provide data for each selected product indicating sealant chemical characteristics, performance criteria, preparation, limitations, colors available, and Material Safety Data Sheets (MSDS).
- D. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- E. Manufacturer's Installation Instructions: Include substrate preparation requirements, special precautions and installation temperature range.
- F. Warranties: Special warranties specified in this Section.

## 1.6 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- B. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

## 1.7 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
  - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer.
  - 2. When joint substrates are wet.
  - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  - 4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

## 1.8 WARRANTY

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

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

### 2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

## 2.3 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- B. Single-Component Nonsag Urethane Sealant ES-1:
  - 1. Products:
    - a. Sika Corporation, Inc.; Sikaflex - 1a.
    - b. Sonneborn, Division of ChemRex Inc.; Ultra.
    - c. Tremco; Vulkem 116.
  - 2. Type and Grade: S (single component) and NS (nonsag).
  - 3. Class: 25.
  - 4. Uses Related to Exposure: T (traffic) and NT (nontraffic).
  - 5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
  - 6. Use O Joint Substrates: Galvanized steel, brick, wood, and roofing membrane.
- C. Single-Component Pourable Urethane Sealant ES-2:
  - 1. Products:
    - a. Sika Corporation, Inc.; Sikaflex - 1CSL.
    - b. Sonneborn, Division of ChemRex Inc.; SL 1.
  - 2. Type and Grade: S (single component) and P (pourable).
  - 3. Class: 25.
  - 4. Uses Related to Exposure: T (traffic) and NT (nontraffic).
  - 5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
  - 6. Use O Joint Substrates: Galvanized steel, wood, and roofing membrane.

## 2.4 JOINT-SEALANT BACKING

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

## 2.5 MISCELLANEOUS MATERIALS

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



- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Identify and protect all existing open wall conditions on exterior finish before power washing to prevent additional water infiltration.
- B. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### **3.2 PREPARATION**

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

### **3.3 INSTALLATION OF JOINT SEALANTS**

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

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

### 3.4 CLEANING

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

### 3.5 PROTECTION

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

### 3.6 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application JS-1: Joints in flashing and sheet metal components.
  - 1. Joint Sealant: Single-component nonsag urethane sealant ES-1.
  - 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range to match sheetmetal color.
- B. Joint-Sealant Application JS-2: Pitch Pan Filler.
  - 1. Joint Sealant: Single-component nonsag urethane sealant ES-2.
  - 2. Joint-Sealant Color: Black.
- C. Joint-sealant Application JS-3: Wall Control and expansion joints.

1. Joint Sealant: Single-component nonsag urethane sealant ES-1.
2. Joint-Sealant Color: As selected by Architect from manufacturer's full range to match wall color.

**END OF SECTION 07 9200**

# SECTION 09 2423 – CEMENT STUCCO REPAIRS

## PART 1 - GENERAL

### 1.1 SCOPE OF WORK

- A. Work included under this section is for repair of existing Portland Cement Stucco. The contractor shall provide all labor, materials and equipment necessary to complete patching as shown on the drawings and/or described herein.

### 1.2 GENERAL REQUIREMENTS

- A. Compliance with standards and industry specifications: Northwest Wall & Ceiling Bureau (NWCB) standards (206) 524-4243 The Northwest Wall and Ceiling Bureau Stucco Resource Guide ASTM: C1063 - Installation of Lathing and Furring for Portland Cement Plaster ASTM C926 - Application of Portland Cement Plaster. Products shall be installed in accordance with local building codes and manufacturers recommendations.

- 1.3 Contractor Qualifications: Applicator/contractor must be qualified in the workmanship of lathing and plastering.

### 1.4 SUBMITTALS

- A. Product Data and MSDS Sheets required.

### 1.5 QUALITY CONTROL

- A. Attend a pre-Installation meeting.

### 1.6 Environmental Conditions

- A. Reference NWCB Stucco Resource Guide. Acrylic and cement finishes have varying requirements for environmental conditions. Protect all material from freezing. Do not apply materials to frozen surfaces. Moist cure cement if required to insure a proper cure. Do not attempt work in unsatisfactory environmental conditions.

## PART 2 - MATERIALS

### 2.1 Weather-Resistive Membrane

- A. Self-Adhering Underlayment. Nominal 40 mil. Thickness. Grace Ice and Water Shield or equivalent. Use manufacturer recommended primer as needed.

### 2.2 Lath: Galvanized (self-furring)

- A. Expanded metal lath (2.5 lb/yd or 3.4 lb/yd)
- B. Accessories: casing beads, control joints and expansion joints to match existing in size, style and ground thickness – Material to be zinc. Galvanized Steel not acceptable. Asphalt Emulsion (if required)

### 2.3 Plaster (Stucco):

- A. Portland cement: ASTM C150 Type I/II
- B. Portland cement ASTM C618 Type IP

- C. Masonry cement ASTM C 91
  - D. Lime ASTM C206 Type S
  - E. Sand: ASTM C144 or C897 "washed" plaster or masonry sand
  - F. Fibers ASTM C 1116: glass, nylon or polypropylene -1/2 inch long
  - G. Bonding agent: ASTM C932
  - H. Mix Proportions: Per the NWCBS Stucco Resource Guide or approved by architect
  - I. Cement Finish: Portland cement finish stucco pre-blended at factory
  - J. Skim coat: proprietary polymer enriched cement designed for use as an EIFS base-coat/adhesive. Follow manufacturers instruction for mixing.
  - K. Fiberglass mesh: 4-6 oz per square yard
- 2.4 Textured Finish: Match existing (by Dryvit)

### **PART 3 - EXECUTION**

- 3.1 Examination: Prior to starting lath and plasterwork, carefully inspect installed work of other trades. Notify architect or proper authorities in writing of any detrimental conditions before proceeding with work, including all flashings, framing, sheathing or unsatisfactory conditions in existing stucco finish. Owners shall be notified of any plants, trees, furniture, landscaping or other items that may need to be moved or protected.
- 3.2 Weather-resistive barrier: Apply weather resistive barrier from bottom to top. Lap weather resistive barrier in shingle fashion with all flashings. Lap weather resistive barrier with existing weather resistive barrier. Seal any holes or damage to weather resistive barrier with a brushed on asphalt solution.
- 3.3 Trim Accessories: Properly install, miter and align trim accessories with existing trim accessories. Fasten all trim accessories to framing members 8 to 12 inches on center.
- 3.4 All intersections, miters, splices and terminations of control joints and channel reveals shall be set in a bed of sealant or back-sealed in a manner approved by architect.
- 3.5 Metal Plaster Base: Cut and fit lath neatly into patch area. An overlap with the existing lath is optimal if possible. The lath shall overlap the nailing flange of all casing beads, channel reveals or expansion joints. Control joints may be placed over the lath. Fasteners should be placed six inches on center along framing members. Fasteners should only be through the sheathing over solid framing members and not into sheathing between studs.
  - A. Plastering Protect all areas not to be plastered from damage.
  - B. Apply a bonder to edge of existing cement plaster to insure a good bond for new patchwork. Allow to get tacky before plastering.
  - C. All plaster work to be applied with hand tools.
  - D. Apply a scratch coat of Portland cement plaster approximately 3/8 inch thick. Scarify or score to provide keys for the brown coat. Brown coat may be applied as soon as the

scratch coat has attained sufficient rigidity to receive brown coat. The brown coat shall be rodded off to produce a flat even surface with existing plaster. After the surface moisture has left the brown coat, the brown coat shall be hard floated to densify the plaster membrane. A hard neoprene, cork or shingle float shall be used. Moist cure brown coat for 3 days if relative humidity is below 70% and temperature is above 75 degrees F or windy conditions exist.

- E. Use the following finish procedure:  
Clean existing finish coat of dirt, grease, mold, algae or any substance that will prevent a proper bond of the new finish coat (use a bonding agent if needed). Finish coat shall be applied no sooner than 7 full days after brown coat has been applied. Apply finish coat over patch area and existing stucco. Work to architectural breaks and maintain a wet edge with finish. Match existing texture.
- F. Allow acrylic finish coat to "fully" set before removing protective cover from the elements.

3.6 CLEAN UP All excess materials shall be removed from job site. Surrounding areas shall be clean and free of debris.

**END OF SECTION 09 2423**

## SECTION 09 5112 - ACOUSTICAL TILE CEILINGS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Steel joists (Spacing)
- C. Mechanical (air devices)
- D. Electrical (lighting)

#### 1.2 SUMMARY

- A. This Section includes acoustical panels and exposed suspension systems for ceilings.
- B. Replace approximately 1,000 square feet of water-damaged and deficient ceiling tiles and cleaning any rusted suspension materials behind replaced tiles.

#### 1.3 DEFINITIONS

- A. AC: Articulation Class.
- B. CAC: Ceiling Attenuation Class.
- C. LR: Light Reflectance coefficient.
- D. NRC: Noise Reduction Coefficient.

#### 1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:
  - 1. Ceiling suspension system members.
  - 2. Method of attaching hangers to building structure.
    - a. Furnish layouts for cast-in-place anchors, clips, and other ceiling attachment devices whose installation is specified in other Sections.
  - 3. Ceiling-mounted items including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings.
  - 4. Minimum Drawing Scale: 1/8 inch = 1 foot (1:96).
- C. Samples for Initial Selection: For components with factory-applied color finishes.
- D. Maintenance Data: For finishes to include in maintenance manuals.

#### 1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of acoustical ceiling panel and supporting suspension system through one source from a single manufacturer.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical panels, suspension system components, and accessories to Project site in original, unopened packages and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical panels, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical panels carefully to avoid chipping edges or damaging units in any way.

## 1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
  - 1. Pressurized Plenums: Operate ventilation system for not less than 48 hours before beginning acoustical panel ceiling installation.

## 1.8 COORDINATION

- A. Coordinate layout and installation of acoustical panels and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

## 1.9 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Acoustical Ceiling Panels: Full-size panels equal to 2.0 percent of quantity installed.
  - 2. Suspension System Components: Quantity of each exposed component equal to 2.0 percent of quantity installed.

## PART 2 - PRODUCTS

### 2.1 ACOUSTICAL PANELS, GENERAL

- A. Type "N": 24" x 48" x 5/8" white "Cortega" No. 769 square-edged as manufactured by Armstrong or equivalent (color, pattern, texture) by specified manufacturer. Non-rated system.
  - 1. Contractor is responsible for field verification of tiles to be replaced.
- B. Type "ACT-1": 24" x 24" x 5/8" white "Cortega" No. 824 square-edged as manufactured by Armstrong or equivalent (color, pattern, texture) by specified manufacturer. Non-rated system.
  - 1. Contractor is responsible for field verification of tiles to be replaced.

### 2.2 TYPE 1 - ACOUSTICAL PANEL CEILING TYPICAL

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



1. Armstrong World Industries, Inc.
2. Chicago Metallic Corporation.
3. USG Interiors, Inc.

B. Classification: Provide panels complying with ASTM E 1264 for type, form, and pattern as follows:

1. To match existing predominant panels.

C. Antimicrobial Treatment: Broad-spectrum fungicide and bactericide coating based.

## 2.3 METAL SUSPENSION SYSTEMS, GENERAL

A. Metal Suspension System Standard: Provide manufacturer's standard direct-hung metal suspension systems of types, structural classifications, and finishes indicated that comply with applicable requirements in ASTM C 635.

B. Finishes and Colors, General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Provide manufacturer's standard factory-applied finish for type of system indicated.

1. High-Humidity Finish: Comply with ASTM C 635 requirements for "Coating Classification for Severe Environment Performance" where high-humidity finishes are indicated.

C. Attachment Devices: Size for five times the design load indicated in ASTM C 635, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.

D. Wire Hangers, Braces, and Ties: Provide wires complying with the following requirements:

1. Zinc-Coated, Carbon-Steel Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
2. Size: Select wire diameter so its stress at 3 times hanger design load (ASTM C 635, Table 1, "Direct Hung") will be less than yield stress of wire, but provide not less than 0.135-inch- (3.5-mm-) diameter wire.

## 2.4 METAL SUSPENSION SYSTEM FOR ACOUSTICAL PANEL CEILING

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

1. Armstrong World Industries, Inc.
2. Chicago Metallic Corporation.
3. USG Interiors, Inc.

B. Wide-Face, Single-Web, Extruded-Aluminum Suspension System: Main and cross runners formed from aluminum to produce structural members with 15/16-inch- (23.8-mm-) wide faces.

1. Structural Classification: Intermediate-duty system.
2. Face Design: Match Existing
3. Face Finish: Match Existing
4. Reveal Finish: Match Existing

## 2.5 METAL EDGE MOLDINGS AND TRIM

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Armstrong World Industries, Inc.
  - 2. Chicago Metallic Corporation.
  - 3. USG Interiors, Inc.
- B. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that comply with seismic design requirements; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension system runners.
  - 1. Provide manufacturer's standard edge moldings for narrow-faced suspension systems, using manufacturer's standard 1/2" offset reveal edge moldings as indicated on drawings.
- C. Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Acoustical Sealant for Exposed and Concealed Joints:
    - a. Pecora Corporation; AC-20 FTR Acoustical and Installation Sealant.
    - b. USG Corp.; Sheetrock Acoustical Sealant.
- D. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant, with a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24), complying with ASTM C 834 and effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine substrates, areas, and conditions, including structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical panel ceilings.
  - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

#### **3.2 PREPARATION**

- A. Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders, unless called for on reflected ceiling plans.

#### **3.3 INSTALLATION**

- A. General: Install acoustical panel ceilings to comply with ASTM C 636 and seismic design requirements indicated, per manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."
- B. Suspend ceiling hangers from building's structural members and as follows:

1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
  2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
  3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices.
  4. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
  5. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, postinstalled mechanical or adhesive anchors, or power-actuated fasteners that extend through forms into concrete.
  6. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or other supplemental support for attachment of hanger wires.
  7. Do not attach hangers to steel roof deck. Attach hangers to structural members.
  8. Space hangers not more than 48 inches (1200 mm) o.c. along each member supported directly from hangers, unless otherwise indicated; provide hangers not more than 8 inches (200 mm) from ends of each member.
  9. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.
- C. Secure bracing wires to ceiling suspension members and to supports with a minimum of four tight turns. Suspend bracing from building's structural members as required for hangers, without attaching to permanent metal forms, steel deck, or steel deck tabs. Fasten bracing wires into concrete with cast-in-place or postinstalled anchors.
- D. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.
1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
  2. Screw attach moldings to substrate at intervals not more than 16 inches (400 mm) o.c. and not more than 3 inches (75 mm) from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet (3.2 mm in 3.6 m). Miter corners accurately and connect securely.
  3. Do not use exposed fasteners, including pop rivets, on moldings and trim.
- E. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.
- F. Install acoustical panels with undamaged edges and fit accurately into suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide a neat, precise fit.
1. All acoustical panels are non-directional.
  2. Paint cut edges of panel remaining exposed after installation; match color of exposed panel surfaces using coating recommended in writing for this purpose by acoustical panel manufacturer.

### 3.4 CLEANING

- A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

**END OF SECTION 09 5112**

## SECTION 09 9000 - PAINTS COATINGS (ALTERNATE)

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes surface preparation and the application of coating systems.

- 1. Exterior Substrates:
  - a. Concrete masonry units (CMU).
  - b. EIFS
  - c. Stucco
  - d. Steel.
  - e. Galvanized metal.
  - f. Interior Gypsum Board

- 2. Interior Substrates:

- a. Gypsum Board

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include preparation requirements and application instructions.

- B. Submittals:

- 1. Product Data for paints and coatings.
- 2. Laboratory Test Reports for paints and coatings.

- C. Samples for Initial Selection: For each type of topcoat product indicated.

- D. Samples for Verification: For each type of coating system and in each color and gloss of topcoat indicated.

- 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
- 2. Label each coat of each Sample.
- 3. Label each Sample for location and application area.

- E. Product List: For each product indicated, include the following:

- 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Coating Maintenance Manual: Provide coating maintenance manual including area summary with finish schedule, area detail designating location where each product/color/finish was used, product data pages, material safety data sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

#### 1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Paint: 1 gal. (3.8 L) of each material and color applied.

#### 1.6 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each coating system indicated to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Final approval of color selections will be based on mockups.
    - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Handling: Deliver products to Project site in an undamaged condition in manufacturer's original sealed containers, complete with labels and instructions for handling, storing, unpacking, protecting, and installing. Packaging shall bear the manufacturer's label with the following information:
  - 1. Product name and type (description).
  - 2. Batch date.
  - 3. Color number.
  - 4. VOC content.
  - 5. Environmental handling requirements.
  - 6. Surface preparation requirements.
  - 7. Application instructions.
- B. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
  - 1. Maintain containers in clean condition, free of foreign materials and residue.

2. Remove rags and waste from storage areas daily.

## 1.8 FIELD CONDITIONS

- A. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply coatings when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.
- C. Do not apply exterior coatings in snow, rain, fog, or mist.
- D. Hazardous Materials:
  1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner.
- E. Hazardous Materials: Hazardous materials including lead paint may be present in buildings and structures to be painted. A report on the presence of known hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
  1. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified.
  2. Perform preparation for painting of substrates known to include lead paint in accordance with EPA Renovation, Repair and Painting Rule and additional requirements of authorities having jurisdiction.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, from one of the following:
  1. Sherwin Williams Paint Co.
  2. PPG Paint Co.
  3. Pre-Approve equal
- B. Comparable Products: Comparable products of approved manufacturers will be considered in accordance with Section 016000 "Product Requirements," and the following:
  1. Products are approved by manufacturer in writing for application specified.
  2. Products meet performance and physical characteristics of basis of design product including published ratio of solids by volume, plus or minus two percent.

- C. Source Limitations: Obtain paint materials from single source from single listed manufacturer.

## 2.2 COATINGS, GENERAL

- A. Material Compatibility:
  - 1. For each coat in a coating system, provide products recommended in writing by manufacturers of topcoat for use in coating system and on substrate indicated.
- B. VOC Content: For field applications that are inside the weatherproofing system, paints and coatings shall comply with VOC content limits of authorities having jurisdiction.
- C. Colors: As selected by Architect from manufacturer's full range

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers. Where acceptability of substrate conditions is in question, apply samples and perform in-situ testing to verify compatibility, adhesion, and film integrity of new paint application.
  - 1. Report in writing conditions that may affect application, appearance, or performance of paint.
- B. Substrate Conditions:
- C. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected; application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.



- C. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
  - 1. Clean surfaces with pressurized water
- D. Masonry Substrates: Remove efflorescence and chalk. Do not coat surfaces if moisture content, or alkalinity of surfaces or if alkalinity of mortar joints exceeds that permitted in manufacturer's written instructions.
  - 1. Clean surfaces with pressurized water.
- E. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer.
- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied coatings.
- G. Aluminum Substrates: Remove loose surface oxidation.

### 3.3 APPLICATION

- A. Apply coatings according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."
  - 1. Use applicators and techniques suited for coating and substrate indicated.
  - 2. Coat surfaces behind movable equipment and furniture same as similar exposed surfaces.
  - 3. Do not apply coatings over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- B. Tint undercoats to match color of finish coat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.
- D. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

### 3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test coatings for dry film thickness.
  - 1. Contractor shall touch up and restore coated surfaces damaged by testing.
  - 2. If test results show that dry film thickness of applied coating does not comply with coating manufacturer's written recommendations, Contractor shall pay for testing

and apply additional coats as needed to provide dry film thickness that complies with coating manufacturer's written recommendations.

### 3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

### 3.6 WARRANTIES

- A. **Applicator Warranty:** Guarantee all Work performed under this Contract for a period of one (1) years from the date of Substantial Completion against all defects in materials and workmanship. Defective Work includes cracking, peeling, scaling of paint, water absorption or Efflorescence.

### 3.7 PAINT COATING SCHEDULE:

#### A. EXTERIOR PAINTING SCHEDULE

##### 1. Exterior Insulation Finish Systems (EIFS):

###### a. Latex System:

- 1. First Coat: Latex, exterior, matching topcoat.
- 2. Topcoat: Latex, exterior flat.

a. S-W A-100 Exterior Latex Flat, A6 Series, at 4.0 mils (0.102 mm) wet, 1.2 mils (0.030 mm) dry, per coat.

##### 2. Concrete, Portland Cement Plaster (Stucco):

###### a. Latex System:

- 1. First Coat: Latex, exterior, matching topcoat.
- 2. Topcoat: Latex, exterior, flat.

a. S-W A-100 Exterior Latex Flat, A6 Series, at 4.0 mils (0.102 mm) wet, 1.2 mils (0.030 mm) dry, per coat.

##### 3. CMU Substrates:

###### a. Latex System:

- 1. First Coat: Latex, exterior, matching topcoat.

2. Topcoat: Latex, exterior, flat.
  - a. S-W A-100 Exterior Latex Flat, A6 Series, at 4.0 mils (0.102 mm) wet, 1.2 mils (0.030 mm) dry, per coat.
  
4. Ferrous Metal, Galvanized-Metal, and Aluminum Substrates:
  - a. Water-Based Light Industrial Coating System:
    1. Prime Coat: Primer, water based.
      - a. S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series, 5.0 to 10.0 mils (0.127 to 0.254 mm) wet, 2.0 to 4.0 mils (0.051 to 0.102 mm) dry.
    2. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
    3. Topcoat: Light industrial coating, exterior, water based eggshell.
      - a. S-W Pro Industrial Eg-Shel Acrylic B66-660 Series, at 2.5 to 4.0 mils (0.064 to 0.102 mm) dry, per coat.
  
5. Metal Structure,
  - a. AckyD Resin Primer
    1. First Coat: Primer Coat Matching Top Coat
    2. Top Coat: Primer Coat
      - a. Sherwin Williams KEM KROMIK Universal Metal Primer B50NZ0006 Brown

**B. INTERIOR PAINTING SCHEDULE**

1. Gypsum Board, Plaster:
  - a. Latex System: Prime Coat: Primer, latex, interior:
    1. S-W ProMar 200 Zero VOC Latex Primer, B28W2600, at 4.0 mils (0.102 mm) wet, 1.0 mils (0.025 mm) dry.
  - b. Intermediate Coat: Latex, interior, matching topcoat.
  - c. Topcoat: Latex, interior, flat:
    1. S-W ProMar 200 Zero VOC Latex Flat, B30-2600 Series, at 4.0 mils (0.102 mm) wet, 1.6 mils (0.041 mm) dry, per coat.

**END OF SECTION 09 9000**

## SECTION 09 9113 – PAINTING (ROOF)

### PART 1 - GENERAL

#### 1.01 WORK INCLUDED

- A. Surface preparation, priming and painting of the following elements of Work:
  - 1. New and existing gas piping and appurtenances.
  - 2. Surface preparation and priming of existing metal decking per Division 07 Section "Roof Replacement and Deck Repair". This Work shall occur as part of Unit Pricing.
  - 3. New Galvanized Steel Fabrications (Where Noted)
  - 4. Existing Galvanized Sheet Steel Fabrications (Where Noted)
- B. Field painting: Not required on items specified completely finished at the factory, or on aluminum, pre-finished sheet metal, copper, brass, bronze, stainless steel or other non-ferrous metal. Do not paint over UL or FM labels.
- C. Prime coats specified herein will not be required on items delivered with primer or shop coats already applied; however, touch-up shall be required prior to final coats.
- D. Extra Materials: Deliver to Owner a 1-gal. (3.8-L) container, properly labeled and sealed, of each color and type of primer and finish coat paint used on Project.

#### 1.02 RELATED REQUIREMENTS

General Conditions, Supplementary General Conditions, Forms, Specification Sections found in Division 01 through Division 26, and all Drawings apply to Work specified in this section.

#### 1.03 RELATED SECTIONS

Division 07 Section - Roof Removal and Deck Repair  
Division 23 Section - Roof-Related Mechanical Provisions

#### 1.04 SUBMITTALS

- A. Submit manufacturer's literature and letters attesting that the products used meet or exceed these Specifications. Submittals shall indicate Flame Spread Rating of all paint products proposed for use in accordance with ASTM E-84.

#### 1.05 QUALITY ASSURANCE

- A. Supplier and Contractor: Firms of long term operation, technically proficient and experienced in this trade.
- B. Primers and undercoats: From same manufacturer as finished coats.
- C. All paint shall be of the kind and brands hereinafter specified, or of a prior approved equal. All painting materials shall be of the highest quality and have identifying labels on the containers.

## **1.06 PRODUCT HANDLING, STORAGE AND DELIVERY**

- A. Deliver paint to the site in manufacturer's sealed containers. Minimum contents of each manufacturer's label on each container: Manufacturer's name, type of paint, color of paint, and instructions for reducing. Thinning may be done only in accordance with directions given on the container. Job mixing or job tinting may be done only when approved by the Architect. Mixing or thinning operations will not be conducted in the interior or on the roof of any existing building on the site.
- B. Store paint and other combustible materials to protect from the possibility of fire. Store paint in areas where spillage can be reduced and confined and not damage Work already in place. Do not store paint or other combustible material in the interior of any existing building on the site.

## **1.07 JOB CONDITIONS**

- A. Full coverage will be required for the application specified. Apply additional coats if required to produce full coverage.
- B. Make each coat slightly darker than the preceding coat, unless otherwise directed.
- C. Where new Work adjoins existing painted surfaces, match existing color and carry new painting to an appropriate stopping point along the existing painted surface. The stopping point will be approved by the Architect.

## **1.08 WARRANTY**

- A. Provide one-year Warranty for workmanship and materials utilized in performance of work by contractor and subcontractor.

# **PART 2 - PRODUCTS**

## **2.01 SCHEDULE OF PAINTING**

- A. Unless otherwise noted, all paints specified are either products of Sherwin-Williams, or approved equal; no other manufacturers are permitted, unless the specified paint becomes unavailable. The kinds of paint and number of coats required on the various surfaces shall be as follows:
  - A.B. Exterior Gas Piping
    - 1. Existing Exterior Gas Piping
      - a. Surface Preparation: SSPC-SP2 (for Iron & Steel). Spot Treat Areas that are rusted with Rust Inhibiting Primer.
      - b. 1<sup>st</sup> Coat: Kem Bond HS Primer (3.5 mils dft)
      - c. 2<sup>nd</sup> Coat: Pro Industrial Acrylic – Semi-Gloss (3.3 mils dft)

d. 3<sup>rd</sup> Coat: Pro Industrial Acrylic – Semi-Gloss (3.3 mils dft)

B.C. Existing Metal Decking – (With Surface Corrosion)

1. Existing Metal Decking (With Surface Corrosion) as per unit pricing.
  - a. Surface Preparation: Remove all oil, grease, salt or water soluble chemicals with suitable cleaner and remove cleaner residue with a damp, clean cloth. Remove Blistered and loose paint, loose rust scale and heavy rust buildup. (Note: Do not remove all rust. Best results are achieved when all rusted areas are exposed and a thin layer of rust is left on the surface.)
  - b. 1<sup>st</sup> Coat: “1 Step Rust Converter” by Interstate Products, Inc., 3921 Sawyer Rd., Sarasota FL 34233, (800) 474-7294, Fax: (800) 448-6329, [http://store.interstateproducts.com/products/Rust\\_Converter](http://store.interstateproducts.com/products/Rust_Converter). Apply as per manufacturer’s written recommendations.

C. D. New Galvanized Steel Fabrications

1. New Galvanized Steel Fabrications
  - a. Surface Preparation: SSPC-SP1 (for Galvanizing)
  - b. 1<sup>st</sup> Coat: Pro Industrial Acrylic – Semi-Gloss (3.3 mils dft)
  - c. 2<sup>nd</sup> Coat: Pro Industrial Acrylic – Semi-Gloss (3.3 mils dft)

D. D. Exterior Metal

1. Existing Galvanized Sheet Steel Fabrications (Vent Housings)
  - a. Surface Preparation: SSPC-SP2 (for Iron & Steel). Spot Treat Areas that are rusted with Rust Inhibiting Primer.
  - b. 1<sup>st</sup> Coat: Kem Bond HS Primer (3.5 mils dft)
  - c. 2<sup>nd</sup> Coat: Pro Industrial Acrylic – Semi-Gloss (3.3 mils dft)
  - d. 3<sup>rd</sup> Coat: Pro Industrial Acrylic – Semi-Gloss (3.3 mils dft)

## PART 3 - EXECUTION

### 3.01 INSPECTION

- A. Review the surfaces to be painted and coordinate with the responsible subcontractor to assure correctness of the surfaces. Report painting-related problems to Architect.
- B. Proceeding with the installation of painting shall be construed as evidence of acceptance of the conditions under which painting Work will be accomplished.

### 3.02 PREPARATION

- A. Protect by drop cloth or other measures all interior floor and wall surfaces as well as exterior roof and wall surfaces against overspray and paint drippage. Immediately clean any spillage or overspray.
- B. Remove oils, grease, rust, scale and dust and touch-up any pitted or abraded places on items that have been shop coated. Where steel and iron have a heavy coating of scale or are coated with asphalt or other bituminous materials, removed such materials by wire-brushing or sandblasting if necessary to produce a satisfactory surface for painting.
- C. Before painting, remove hardware, accessories, plates, light fixtures, and similar items, or provide ample protection of such items. Upon completion of each area, re-

place above items in Working order. When necessary disconnect convector covers to permit painting of surfaces behind them; replace and re-connect upon completion. Use only skilled mechanics for removal and connection items.

### **3.03 PAINTING APPLICATION**

- A. Do not apply exterior paint or coatings in damp, rainy weather, or until the surface has thoroughly dried from the effects of such weather. Do not paint when the temperature is below 50 degrees Fahrenheit.
- B. Ensure surfaces to be painted are clean, dry, smooth, and protected from dampness.
- C. Ensure each coat of paint is well-brushed on, worked out evenly and allowed to dry at required in accordance with the Manufacturer's Written recommendations before subsequent coats are applied.
- D. Provide finish Work that is uniform, of approved color, smooth and free from runs, sags, defective brushing, clogging or excessive flooding. Make edges of paint adjoining other materials or colors sharp and clean by overlapping.

### **3.04 WARRANTY**

Guarantee all Work performed under this Contract for a period of one (1) year from the date of Substantial Completion against all defects in materials and workmanship. Defective Work includes cracking, peeling, scaling of paint, water absorption or rusting.

**END OF SECTION 09 9133**

## SECTION 09 9600 - HIGH-PERFORMANCE COATINGS (BASE BID)

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes surface preparation and the application of high-performance coating systems.
  - 1. Exterior Substrates:
    - a. Concrete masonry units (CMU).
    - b. EIFS
    - c. Stucco
    - d. Steel.
    - e. Galvanized metal.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include preparation requirements and application instructions.
- B. Submittals:
  - 1. Product Data for paints and coatings.
  - 2. Submit under provisions of Section 01 3300.
  - 3. Laboratory Test Reports for paints and coatings.
- C. Samples for Initial Selection: For each type of topcoat product indicated.
- D. Samples for Verification: For each type of coating system and in each color and gloss of topcoat indicated.
  - 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
  - 2. Label each coat of each Sample.
  - 3. Label each Sample for location and application area.
- E. Product List: For each product indicated, include the following:
  - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Coating Maintenance Manual: Provide coating maintenance manual including area summary with finish schedule, area detail designating location where each



product/color/finish was used, product data pages, material safety data sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

#### 1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Paint: 1 gal. (3.8 L) of each material and color applied.

#### 1.6 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each coating system indicated to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Final approval of color selections will be based on mockups.
    - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Handling: Deliver products to Project site in an undamaged condition in manufacturer's original sealed containers, complete with labels and instructions for handling, storing, unpacking, protecting, and installing. Packaging shall bear the manufacturer's label with the following information:
  - 1. Product name and type (description).
  - 2. Batch date.
  - 3. Color number.
  - 4. VOC content.
  - 5. Environmental handling requirements.
  - 6. Surface preparation requirements.
  - 7. Application instructions.
- B. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
  - 1. Maintain containers in clean condition, free of foreign materials and residue.
  - 2. Remove rags and waste from storage areas daily.

## 1.8 FIELD CONDITIONS

- A. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply coatings when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.
- C. Do not apply exterior coatings in snow, rain, fog, or mist.
- D. Hazardous Materials:
  - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner.
- E. Hazardous Materials: Hazardous materials including lead paint may be present in buildings and structures to be painted. A report on the presence of known hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
  - 1. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified.
  - 2. Perform preparation for painting of substrates known to include lead paint in accordance with EPA Renovation, Repair and Painting Rule and additional requirements of authorities having jurisdiction.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, from one of the following:
  - 1. Sherwin Williams Paint Co.
  - 2. PPG Paint Co.
  - 3. Pre-Approve equal
- B. Comparable Products: Comparable products of approved manufacturers will be considered in accordance with Section 016000 "Product Requirements," and the following:
  - 1. Products are approved by manufacturer in writing for application specified.
  - 2. Products meet performance and physical characteristics of basis of design product including published ratio of solids by volume, plus or minus two percent.
- C. Source Limitations: Obtain paint materials from single source from single listed manufacturer.

## 2.2 HIGH-PERFORMANCE COATINGS, GENERAL

- A. Material Compatibility:
  - 1. For each coat in a coating system, provide products recommended in writing by manufacturers of topcoat for use in coating system and on substrate indicated.
- B. VOC Content: For field applications that are inside the weatherproofing system, paints and coatings shall comply with VOC content limits of authorities having jurisdiction.
- C. Colors: As selected by Architect from manufacturer's full range

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers. Where acceptability of substrate conditions is in question, apply samples and perform in-situ testing to verify compatibility, adhesion, and film integrity of new paint application.
  - 1. Report in writing conditions that may affect application, appearance, or performance of paint. Identify and protect all existing open wall conditions on exterior finish before power washing to prevent additional water infiltration.
- B. Substrate Conditions:
- C. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected; application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.
- C. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
  - 1. Clean surfaces with pressurized water

- D. Masonry Substrates: Remove efflorescence and chalk. Do not coat surfaces if moisture content, or alkalinity of surfaces or if alkalinity of mortar joints exceeds that permitted in manufacturer's written instructions.
  - 1. Clean surfaces with pressurized water.
- E. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer.
- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied coatings.
- G. Aluminum Substrates: Remove loose surface oxidation.

### 3.3 APPLICATION

- A. Apply high-performance coatings according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."
  - 1. Use applicators and techniques suited for coating and substrate indicated.
  - 2. Coat surfaces behind movable equipment and furniture same as similar exposed surfaces.
  - 3. Do not apply coatings over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- B. Tint undercoats to match color of finish coat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.
- D. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

### 3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test coatings for dry film thickness.
  - 1. Contractor shall touch up and restore coated surfaces damaged by testing.
  - 2. If test results show that dry film thickness of applied coating does not comply with coating manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with coating manufacturer's written recommendations.

### 3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

- B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

### 3.6 WARRANTIES

- A. Applicator Warranty: Guarantee all Work performed under this Contract for a period of Two (2) years from the date of Substantial Completion against all defects in materials and workmanship. Defective Work includes cracking, peeling, scaling of paint, water absorption or Efflorescence.
- B. 10 Year Limited Materials Warranty: Provide Manufacturers Limited Materials Warranty that warrants the paint materials will not delaminate and will be fade resistant, (except for specially produced colors, for a period of at least 10 years from the date of application.

### 3.7 EXTERIOR HIGH-PERFORMANCE COATING SCHEDULE

- A. Exterior Insulation Finish Systems (EIFS):
  - 1. HIGH-PERFORMANCE:
    - a. First Coat: Conditioner
      - 1) S/W Loxon Conditioner A24V01100
    - b. Intermediate Coat: Same as topcoat.
    - c. Topcoat: Elastomeric Acrylic Coating.
      - 1) S-W ConFlex LX, CF11W0053, at 6.0 mils (0.152 mm) dry, per coat.
- B. Concrete, Portland Cement Plaster (Stucco):
  - 1. HIGH-PERFORMANCE:
    - a. First Coat: Conditioner
      - 1. S/W Loxon Conditioner A24V01100
    - b. Intermediate Coat: Same as topcoat.
    - c. Topcoat: Elastomeric Acrylic Coating
      - 1. S-W ConFlex LX, CF11W0053, at 6.0 mils (0.152 mm) dry, per coat.
- C. CMU Substrates:
  - 1. HIGH-PERFORMANCE:
    - a. First Coat: Conditioner
      - 1. S/W Loxon Conditioner A24V01100
    - b. Intermediate Coat: Same as topcoat.
    - c. Topcoat: Elastomeric Acrylic Coating

1. S-W ConFlex LX, CF11W0053, at 6.0 mils (0.152 mm) dry, per coat.
- D. Ferrous Metal, Galvanized-Metal, and Aluminum Substrates:
1. Water-Based Light Industrial Coating System:
    - a. Prime Coat: Primer, water based.
      1. S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series, 5.0 to 10.0 mils (0.127 to 0.254 mm) wet, 2.0 to 4.0 mils (0.051 to 0.102 mm) dry.
    - b. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
    - c. Topcoat: Light industrial coating, exterior, water based eggshell.
      1. S-W Pro Industrial Eg-Shel Acrylic B66-660 Series, at 2.5 to 4.0 mils (0.064 to 0.102 mm) dry, per coat.
- E. Metal Structure:
1. AckyD Resin Primer
    - a. First Coat: Primer Coat Matching Top Coat
    - b. Top Coat: Primer Coat
      1. Sherwin Williams KEM KROMIK Universal Metal Primer B50NZ0006 Brown

**END OF SECTION 09 9600**

## SECTION 22 0500 – COMMON WORK RESULTS FOR PLUMBING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Common Work Results for Plumbing specifically applicable to Division 22 Work, in addition to Division 01 - General Requirements.
  - 2. Lifting, moving, re-installation, and minor modifications to existing plumbing and piping for roof drains, soil pipes, and vents; and equipment piping, drain lines, service lines, and connections.
  - 3. Anchors, brackets, fasteners, hardware, and accessories for related Work.
- B. Related Sections:
  - 1. Section 07 5200 MODIFIED BITUMINOUS SHEET ROOFING for installation of roof penetration flashings.
  - 2. Section 07 7200 "Roof Accessories" for equipment support curbs and pipe support devices.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. General Performance: Existing, modified, or replaced plumbing, piping, connections, and equipment shall withstand required pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, modification, or other defects in construction. Plumbing and piping shall remain watertight.

#### 1.4 ALLOWANCES

- A. Cash Allowance: Refer to Division 01 Section "Allowances" for allowance sum applicable to Work.

#### 1.5 UNIT PRICES

- A. Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.
- B. Installation of Roof Drain and Associated Piping:
  - 1. Basis of Measurement: By each drain.
  - 2. Basis of Payment: Includes roof drain assembly and linear feet of drain piping listed in Section 00 0410 Document "Proposal, Alternates & Unit Prices Form" with insulation and covering, including all necessary hangers, supports, and hardware; and testing of piping prior to installation of insulation and protective covering.

#### 1.6 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.
- B. Product Data: For each type of product required.

- C. Shop Drawings: For required modifications. Include plans, elevations, sections, details, and attachments to other work.
- D. Provide layout of affected piping, including:
  - 1. Riser diagrams.
  - 2. Hanger diagrams indicating proposed attachment and locations.
  - 3. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Schedule: List each area of work and all systems or equipment affected. Indicate proposed time of disconnection, re-connection, and duration for shutdowns.
- B. Qualification Data: For qualified Installer.

#### 1.8 CLOSEOUT SUBMITTALS

- A. Welding certificates.
- B. Maintenance Data: For proposed products or materials to include in maintenance manuals.
- C. Operation and Maintenance Data: For proposed systems, subsystems, or equipment to include in operation and maintenance manuals.

#### 1.9 QUALIFICATIONS

- A. Installer: Company specializing in installing the work of this Division with a minimum of five (5) years documented experience working with the systems and Products in place and proposed or required. Licensed by jurisdictions having authority to perform the required work.
- B. Installer Qualifications: An employer of workers trained and approved to perform required Work.
- C. Plumbing: Conform to applicable Mechanical Code.
- D. Obtain permits, and request inspections from authority having jurisdiction.
- E. Preinstallation Conference: Conduct conference at Project site.

#### 1.10 PROJECT CONDITIONS

- A. Install Work in existing locations and as required or as directed unless prevented by Project conditions.
- B. Prepare drawings showing proposed re-arrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect before processing.
- C. Do not install products or materials that are wet, moisture damaged, or mold damaged.
- D. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit work to be performed according to manufacturer's written instructions and warranty requirements.



- E. Field Measurements: Verify actual dimensions of contiguous construction by field measurements before fabrication.

#### 1.11 COORDINATION

- A. Construct Work in sequence under provisions of Division 01 Section "Project Management and Coordination."
- B. Coordinate disconnections to minimize disruptions to Owner's occupancy.
- C. Ensure sufficient materials and workforces are on hand for all operations. Do not take equipment or systems out of operation longer than one day, unless specifically authorized in writing by Owner's Representative.

#### 1.12 PROJECT RECORD DOCUMENTS

- A. Submit in accordance with Division 01 Sections "Submittals" and "Closeout Procedures".
- B. Accurately record locations of utilities remaining, rerouted utilities, and new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

### **PART 2 - PRODUCTS**

#### 2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Existing, modified, or replaced plumbing, piping, connections, and equipment shall withstand required pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, modification, or other defects in construction. Plumbing and piping shall remain watertight.
  - 1. Comply with performance requirements specified, as determined by testing assemblies representing those indicated for this Project.

#### 2.2 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Piping Materials:
  - 1. Cast-Iron Soil Pipe and Fittings: ASTM A 74, Class SV.
  - 2. Push-on Gaskets for Cast Iron Soil Pipe: ASTM C 564.
  - 3. Caulked Joints for CI Soil Pipe: FS HH- P-117, Type II.
  - 4. No Hub Joints: ASTM D 3183.
  - 5. Copper Tubing: ASTM B 75.
  - 6. Wrought Copper Solder Fittings: ANSI B 16.22.
  - 7. Steel Pipe: ASTM A 53B.
  - 8. Malleable Iron Threaded Fittings: ANSI B 16.3.
  - 9. Cast-Iron Threaded Fittings: FS WW-P-501E.
  - 10. Flange Bolt, Sets: ASME Pressure Piping.
  - 11. PVC Piping and Fittings: Schedule 40.
  - 12. Unions in Copper or Brass Lines: 125 pound all brass, screwed pattern, ground joint, equal to Chase, Crane or Mueller.
  - 13. Mechanical Couplings: Victaulic Style 77.
  - 14. Piping Insulation and Cover: Closed cell insulation, minimum 2-inches thick.
    - a. Exterior Exposure: Minimum 26 gage aluminum jacket protective cover, with lock bands.
    - b. Interior: Match existing.

- C. Roof Drain – Retrofit Type: (Replacement Drains) Zurn RD2150-E2 with Top-Set® Deck Plate or approved equal. Cast-iron body and Strainer; Sized to properly install in existing drains.
- D. Roof Top Condensate Receptor Drain: (Replacement Drain) Zurn Z127-DP with Top-Set® Deck Plate and retrofit Tail Piece, or approved equal. Cast-iron body and Strainer; Sized to properly install in existing drains.
- E. Product Substitution: For any proposed change in materials or for any new materials, submit request for substitution under provisions of Division 01 Section “Product Requirements”.

## 2.3 TESTS

- A. Provide testing of all relocated or modified systems and equipment under provisions of Division 01 Section “Quality Requirements.”
- B. Test in accordance with recognized standards and as recommended by equipment manufacturers.
- C. Notify Owner’s Representative 24 hours prior to all testing.
- D. Record all test results and corrective measures taken. Provide results to Owner with Project Record Documents under provisions of Section 01 7700 “Closeout Procedures.”

## **PART 3 - EXECUTION**

### 3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during Work.
- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Confirm operational condition of equipment and systems. Notify Owner in writing of any deficiencies prior to Work
- D. Beginning Work means acceptance of existing conditions and responsibility to return system or equipment to operating condition upon completion of Work.

### 3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of Project from damage, debris, or contamination.
- C. Provide protection from elements for areas that may be exposed by uncovering work.
- D. Provide temporary connections and maintain operational capacity of systems or equipment that will be displaced more than one day, unless instructed otherwise.

### 3.3 DRAIN PIPING INSTALLATION

- A. General: Coordinate with Owner and verify acceptable materials and installation methods prior to beginning work.
- B. Install piping in general location indicated. Route to avoid existing equipment and utilities.
- C. Provide hangers and bracing to adequately support and restrain piping when filled with water.

- D. Slope piping approximately 1/8 inch per foot from overflow connection to exterior wall for discharge.
- E. Test all joints and fittings to ensure pipes are water tight.
- F. Provide downspout nozzle at pipe discharge and seal to exterior face of wall.

#### 3.4 PERFORMANCE

- A. Execute work by methods that will avoid damage to other Work, and provide proper surfaces to accommodate reinstallation and reconnection.
- B. Employ skilled and experienced installer to perform all operations.
- C. Employ original installer to perform operations on systems or equipment under warranty.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic impact tools not allowed without prior approval.
- E. Restore Work with new Products, as required for original installation, and in accordance with requirements of Contract Documents.
- F. Fit Work air and water tight to adjacent elements and around penetrating elements.

#### 3.5 TESTING AND ADJUSTING

- A. Test all modified and relocated systems and equipment.
  - 1. Pressure test refrigerant piping prior to covering and recharging.
  - 2. Test gas lines in areas of Work in accordance with applicable codes and Utility Company recommendations.
- B. Correct all deficiencies identified, including replacement of parts and components when required.
- C. Adjust all Products and equipment to ensure proper operation and function.

#### 3.6 CLEANING

- A. Clean work under provisions of Division 01 Section "Execution."
- B. Clean Owner occupied areas when soiled by Work or operations of this Division.

**END OF SECTION 22 0500**

## SECTION 23 0500 – COMMON WORK RESULTS FOR HVAC

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Common Work Results for HVAC specifically applicable to Division 23 Work, in addition to Division 01 - General Requirements.
  - 2. Lifting, moving, re-installation, and minor modifications to existing equipment, curbs, and service lines and connections.
  - 3. Anchors, brackets, fasteners, hardware, and accessories for related Work.
- B. Related Sections:
  - 1. Division 07 Section “Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing” for installation roof penetration flashings.
  - 2. Division 07 Section “Roof Accessories” for equipment support curbs and pipe support devices.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. General Performance: Existing, modified, or replaced HVAC equipment shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, modification, or other defects in construction. Ductwork shall remain watertight and airtight.

#### 1.4 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.
- B. Product Data: For each type of product required.
- C. Shop Drawings: For required modifications. Include plans, elevations, sections, details, and attachments to other work.
  - 1. Provide layout of affected ductwork and piping, including:
    - a. Riser diagrams.
    - b. Hanger diagrams indicating proposed attachment and locations.
    - c. Ductwork jointing and all special sheetmetal and insulating conditions.
  - 2. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
  - 3. Wiring Diagrams: For power, signal, and control wiring.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Schedule: List each area of work and all systems or equipment affected. Indicate proposed time of disconnection, re-connection, and duration for shutdowns.

- B. Qualification Data: For qualified Installer.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Welding certificates.
- B. Maintenance Data: For proposed products or materials to include in maintenance manuals.
- C. Operation and Maintenance Data: For proposed systems, subsystems, or equipment to include in operation and maintenance manuals.

#### 1.7 QUALIFICATIONS

- A. Installer: Company specializing in installing the work of this Division with a minimum of five (5) years documented experience working with the systems and Products in place and proposed or required. Licensed by jurisdictions having authority to perform the required work.
- B. Installer Qualifications: An employer of workers trained and approved to perform required Work.
- C. Conform to applicable Mechanical Code and other applicable regulations for all work performed under this Division.
- D. Obtain permits, and request inspections from authority having jurisdiction.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- F. Preinstallation Conference: Conduct conference at Project site.

#### 1.8 PROJECT CONDITIONS

- A. Install Work in existing locations and as required or as directed unless prevented by Project conditions.
- B. Prepare drawings showing proposed re-arrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect before processing.
- C. Do not install products or materials that are wet, moisture damaged, or mold damaged.
- D. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation to be performed according to manufacturer's written instructions and warranty requirements.
- E. Field Measurements: Verify actual dimensions of contiguous construction by field measurements before fabrication.

#### 1.9 COORDINATION

- A. Construct Work in sequence under provisions of Division 01 Section "Project Management and Coordination."
- B. Coordinate disconnections to minimize disruptions to Owner's occupancy.

- C. Ensure sufficient materials and workforces are on hand for all operations. Do not take equipment or systems out of operation longer than one day, unless specifically authorized in writing by Owner's Representative.

#### 1.10 PROJECT RECORD DOCUMENTS

- A. Submit in accordance with Division 01 Sections "Submittals" and "Closeout Procedures".
- B. Accurately record locations of utilities remaining, rerouted utilities, and new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Ductwork Materials:
  - 1. Galvanized Steel: ASTM A 446, Grade A, G90, 24-gage minimum core steel, or as required for conditions.
  - 2. Duct Lining: Mat faced duct liner; neoprene coated one side; minimum 1-inch thick; Linacoustic manufacturer by Manville.
    - a. Average Thermal Conductivity: Maximum 0.26 BTU in/sq ft/degree F at mean temperature of 75 F.
  - 3. Interior and Exterior Duct Joints Sealer: Kingco Seal-Rite 18-120, Blue Glue, and Hardcast.
- C. Product Substitution: For any proposed change in materials or for any new materials, submit request for substitution under provisions of Division 15 Section "Product Requirements".

#### 2.2 FABRICATION

- A. Provide ductwork extensions or modifications where required due to movement or raising of mechanical equipment, in accordance with recognized industry standards and the following:
  - 1. Low Pressure Ducts: SMACNA HVAC Duct Construction Standards, Latest Edition.
  - 2. Pressure Class: 1-inch w.g., unless otherwise indicated.
  - 3. Elbows: Match existing or square, with factory-fabricated turning vanes.
  - 4. Changes in Direction: Rounded elbows with centerline radius equal to 1-1/2 times duct width, in plane of bend.
  - 5. Transitions in Size or Shape: Gradual slopes on all sides.
    - a. Increases in Dimensions in the Direction of Air Flow: Maximum slope of 1:7 on any side.
    - b. Decreases in Dimensions in the Direction of Air Flow: Maximum slope of 1:4.
  - 6. Ducts in Excess of 36-inches: Use SMACNA "J" and "F" connections.
- B. Install duct liner in accordance with manufacturer's instructions using weld pins or Tuffbond adhesive and adhesive type metal clips.
  - 1. Do not reduce airflow area of existing ductwork.
- C. Seal all joints water and air tight.

#### 2.3 TESTS

- A. Provide testing of all relocated or modified systems and equipment under provisions of Division 01 Section "Quality Requirements."

- B. Test in accordance with recognized standards and as recommended by equipment manufacturers.
- C. Notify Owner's Representative 24 hours prior to all testing.
- D. Record all test results and corrective measures taken. Provide results to Owner with Project Record Documents under provisions of Division 01 Section "Closeout Procedures."

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during Work.
- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Confirm operational condition of equipment and systems. Notify Owner in writing of any deficiencies prior to Work
- D. Beginning Work means acceptance of existing conditions and responsibility to return system or equipment to operating condition upon completion of Work.

#### **3.2 PREPARATION**

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of Project from damage, debris, or contamination.
- C. Provide protection from elements for areas that may be exposed by uncovering work.
- D. Provide temporary connections and maintain operational capacity of systems or equipment that will be displaced more than one day, unless instructed otherwise.

#### **3.3 PERFORMANCE**

- A. Execute work by methods that will avoid damage to other Work, and provide proper surfaces to accommodate reinstallation and reconnection.
- B. Employ skilled and experienced installer to perform all operations.
- C. Employ original installer to perform operations on systems or equipment under warranty.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic impact tools not allowed without prior approval.
- E. Restore Work with new Products, as required for original installation, and in accordance with requirements of Contract Documents.
- F. Fit Work air and water tight to adjacent elements and around penetrating elements.

#### **3.4 TESTING AND ADJUSTING**

- A. Test all modified and relocated systems and equipment.
  - 1. Pressure test refrigerant piping prior to covering and recharging.
  - 2. Test gas lines in areas of Work in accordance with applicable codes and Utility Company recommendations.

- B. Correct all deficiencies identified, including replacement of parts and components when required.
- C. Adjust all Products and equipment to ensure proper operation and function.

3.5 CLEANING

- A. Clean work under provisions of Division 01 Section "Execution."
- B. Clean Owner-occupied areas when soiled by Work or operations of this Division.

**END OF SECTION 23 0500**



## SECTION 26 0500 – COMMON WORK RESULTS FOR ELECTRICAL

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  1. Common Work Results for Electrical specifically applicable to Division 26 Work, in addition to Division 01 - General Requirements.
  2. Lifting, moving, re-installation, repairs, and minor modifications to existing equipment, and service lines and connections.
  3. Removal of existing conductors, and installation of new conductors, as required by code, to accommodate all conduits that must be raised, relocated or otherwise modified to accommodate reroofing operations.
  4. Anchors, brackets, fasteners, hardware, and accessories for related Work.
- B. Related Sections:
  1. Division 07 Section "Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing" for installation roof penetration flashings.
  2. Division 07 Section "Roof Accessories" for equipment support curbs and pipe support devices.

#### 1.3 UNIT PRICES

- A. Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.
- B. Replacement of Damaged or Deteriorated Roof Mounted Electrical Systems (not specifically noted in the Construction Documents) as required to execute Roof Replacement Work :
  1. Basis of Measurement: By ten (10) linear feet by each conduit size listed in Section 00 Document "Bid Form".
  2. Basis of Payment: Includes removal of damaged conduit, wiring, and associated materials and hardware; installation of new conduit, wiring, and all necessary hangers, supports, and hardware; and testing of repaired system prior to installation work covering repairs.

#### 1.4 PERFORMANCE REQUIREMENTS

- A. General Performance: Existing, modified, or replaced electrical equipment and appliances shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, modification, or other defects in construction. Electrical components shall remain watertight.

#### 1.5 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

#### 1.6 ACTION SUBMITTALS

- A. Product List: Submit list of proposed Products and manufacturers, including all items specified in Part 2 – Products or otherwise required by the Work.

- B. Product Data: For each type of product required.
- C. Shop Drawings: For required modifications. Include plans, elevations, sections, details, and attachments to other work.
  - 1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
  - 2. Wiring Diagrams: For power, signal, and control wiring.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Schedule: List each area of work and all systems or equipment affected. Indicate proposed time of disconnection, re-connection, and durations for shutdowns.
- B. Qualification Data: For qualified Installer.

#### 1.8 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For proposed products or materials to include in maintenance manuals.
- B. Operation and Maintenance Data: For proposed systems, subsystems, or equipment to include in operation and maintenance manuals.
- C. Closeout Submittals: Submit under provisions of Division 01 Section "Execution."
  - 1. Project Record Documents: Accurately record exact location of roof penetrations and any items installed but not visible after installation of roofing system or other Products.

#### 1.9 QUALIFICATIONS

- A. Installer: Company specializing in installing the work of this Division with a minimum of five (5) years documented experience working with the systems and Products in place and proposed or required. Licensed by jurisdictions having authority to perform the required work.
- B. Installer Qualifications: An employer of workers trained and approved to perform required Work.
- C. Conform to NFPA 70 and applicable Building Code for all electrical work.
- D. Obtain permits, and request inspections from authority having jurisdiction.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- F. Preinstallation Conference: Conduct conference at Project site.

#### 1.10 PROJECT CONDITIONS

- A. Repair electrical conduit and devices as required by roofing replacement Work in existing locations and as directed or as required unless prevented by Project conditions.
- B. Install Work in existing locations and as required or as directed unless prevented by Project conditions.
- C. Prepare drawings showing proposed re-arrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect before proceeding.

- D. Do not install products or materials that are wet, moisture damaged, or mold damaged.
- E. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit required work to be performed according to manufacturer's written instructions and warranty requirements.
- F. Field Measurements: Verify actual dimensions of contiguous construction by field measurements before fabrication.

#### 1.11 COORDINATION

- A. Construct Work in sequence under provisions of Division 01 Section "Project Management and Coordination."
- B. Coordinate disconnections to minimize disruptions to Owner's occupancy.
- C. Coordinate with other Trades and Owner to ensure electrical installation does not inhibit other Work.
- D. Ensure sufficient materials and workforces are on hand for all operations. Do not take equipment or systems out of operation longer than one day, unless specifically authorized in writing by Owner's Representative.

#### 1.12 PROJECT RECORD DOCUMENTS

- A. Accurately record locations of electrical equipment, appliances, and conduits remaining, rerouted conduits, and new electrical equipment and wiring by horizontal dimensions and elevations.

### **PART 2 - PRODUCTS**

#### 2.1 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Product Substitution: For any proposed change in materials or for any new materials, submit request for substitution under provisions of Division 1 Section "Product Requirements."

### **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during Work.
- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Confirm operational condition of equipment and systems. Notify Owner in writing of any deficiencies prior to Work
- D. Beginning Work means acceptance of existing conditions and responsibility to return system or equipment to operating condition upon completion of Work.

#### 3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.

- B. Provide devices and methods to protect other portions of Project from damage, debris, or contamination.
- C. Provide protection from elements for areas that may be exposed by uncovering work.
- D. Provide temporary connections and maintain operational capacity of systems or equipment that will be displaced more than one day, unless instructed otherwise.

### 3.3 PERFORMANCE

- A. Execute work by methods that will avoid damage to other Work, and provide proper terminations to accommodate reinstallation and reconnection.
- B. Employ skilled and experienced installer to perform all operations.
- C. Employ original installer to perform operations on systems or equipment under warranty.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic impact tools not allowed without prior approval.
- E. Restore Work with new Products, as required for original installation, and in accordance with requirements of Contract Documents.
- F. Fit Work water tight to adjacent elements and around penetrating elements.

### 3.4 ELECTRICAL WIRING AND SYSTEMS REPAIRS

- A. Verify need and extent of all repairs with Owner's Representative. Coordinate shut down and start-up requirements for each systems and each occurrence.
- B. Remove conduit and associated materials from point of damaged to nearest pull box or other connection point in both directions, unless instructed otherwise by Owner's Representative.
- C. Replace with new conduit and wiring of same diameter and gage as original.
- D. Use screwed or welded connections to match existing conditions.
- E. After repairs are completed, but prior to covering or concealing repaired elements, test repairs at full load or power, under observation by Owner's Representative.
- F. Seal all connections watertight, including those between new and existing materials.

### 3.5 TESTING AND ADJUSTING

- A. Test all modified and relocated systems and equipment.
- B. Correct all deficiencies identified, including replacement of parts and components when required.
- C. Adjust all Products and equipment to ensure proper operation and function.

### 3.6 CLEANING

- A. Clean work under provisions of Division 01 Section "Execution."
- B. Clean Owner occupied areas when soiled by Work or operations of this Division.

**END OF SECTION 26 0500**



# CONSTRUCTION PLANS FOR CITY OF EDINBURG

## ROOF REPLACEMENT AND STRUCTURAL REPAIRS AT DUSTIN SEKULA MEMORIAL LIBRARY

CITY COUNCIL

**GILBERT ENRIQUEZ  
HOMER JASSO JR.  
JORGE SALINAS  
DAVID TORRES**

**RICHARD MOLINA**

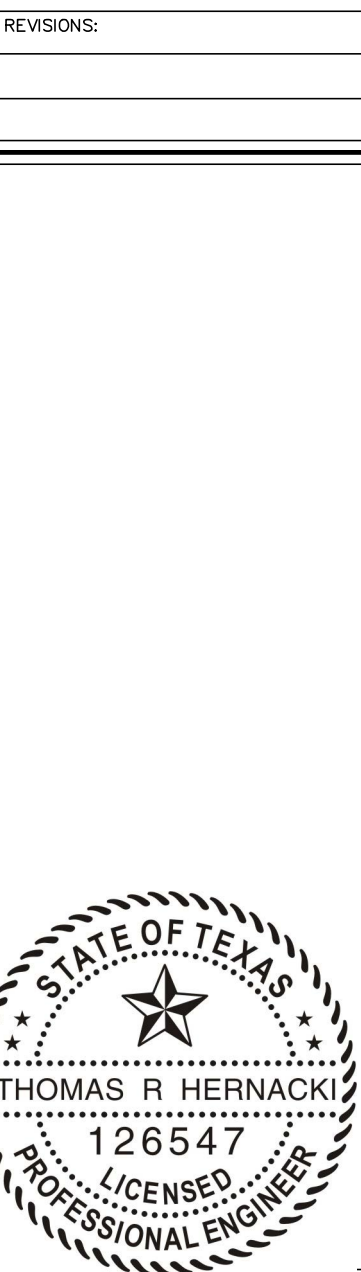
**COUNCIL MEMBER  
COUNCIL MEMBER  
COUNCIL MEMBER  
MAYOR PRO-TEM**

**MAYOR**

CITY OF EDINBURG  
415 W. University Drive, Edinburg, TX, 78541  
Phone: 956-686-8212

PREPARED BY:

**Amtech Solutions, Inc.**



7/17/2019

CITY OF EDINBURG  
DUSTIN SEKULA MEMORIAL LIBRARY  
STRUCTURAL REPAIRS & ROOF REPLACEMENT  
2018

**AMTECH SOLUTIONS**  
1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577  
956.686.3095 956.686.2233

**CODE COMPLIANCE**

**International Building Code Review Information**  
**(CONTRACTOR MUST FIELD VERIFY ALL ROOF, WALL, FLOOR, AND CEILING AREAS FOR BIDDING AND CONSTRUCTION)**

Edition: IBC 2012 for roof repair and replacements, and for other architectural scope of work. IBC 2003 for structural analysis and design because this original design code is more restrictive.

Address: 1906 S. Closter Blvd. Edinburg, TX 78539

Existing Gross Area: 35,006 SF  
Total Square Feet (incl. outside): 36,433 SF  
Occupancy (Chapter 3): A-3  
Type of Construction (Table 601): Type - IIIB Unprotected, Sprinklered (Original building design allowed for with area increase to 42,940 SF due to automatic sprinklers)

Roof Area "A"	12,691 SF	Roof Area "D"	2,062 SF
Roof Area "B"	5,344 SF	Roof Area "E"	1,026 SF
Roof Area "C"	9,096 SF	Roof Area "F"	238 SF
<b>GROSS ROOF AREA</b>		<b>30,457 SF</b>	

**INTERIOR FINISHES (CHAPTER 8):**  
**INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY (FROM TABLE 803.9):**  
Interior wall and ceiling finish flame spread index type material classification:  
Class D: Interior exit stairways, interior exit ramps and exit passageways. Corridors and enclosure for exit access stairways and exit access ramps.  
Class C: Rooms and enclosed spaces.

**EXTERIOR WALLS (CHAPTER 14):**  
**1403.2 WEATHER PROTECTION:**  
Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing, as described in Section 1405.4. The exterior wall envelope shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in Section 1404.2, and a means for draining water that enters the assembly to the exterior. Protection against condensation in the exterior wall assembly shall be provided in accordance with Section 1405.3. See exceptions listed in same section.  
**1404.2 WATER-RESISTIVE BARRIER:**  
A minimum of one layer of No. 15 asphalt felt, complying with ASTM D 226 for Type 1 felt or other approved materials, shall be attached to the studs or sheathing, with flashing as described in Section 1405.4, in such a manner as to provide a continuous water-resistive barrier behind the exterior wall veneer.  
**1408.4 EIFS WEATHER RESISTANCE:**  
EIFS shall comply with Section 1403 and shall be designed and constructed to resist wind and rain in accordance with this section and the manufacturer's application instructions.

**CONCRETE (CHAPTER 19):**  
**MINIMUM SPECIFIED COMPRESSIVE STRENGTH (TABLE 1904.2):**  
2500 PSI: Basement slabs and interior slabs on grade, except garage floor slabs in Negligible Exposure Zone.

**ROOF ASSEMBLIES AND ROOFTOP STRUCTURES (CHAPTER 15):**  
**PERFORMANCE REQUIREMENTS (SECTION 1504):**  
**Wind Resistance of Nonballasted Roofs (Section 1504.3):** Roof coverings installed on roofs in accordance with Section 1507 that are mechanically attached or adhered to the roof deck shall be designed to resist the design wind load pressures for components and cladding in accordance with Section 1609.  
**Edge Securement for Low-Slope Roofs (Section 1504.5):** Low-slope built-up, modified bitumen and single-ply roof system metal edge securement, except gutters, shall be designed and installed for wind loads in accordance with Chapter 16 and tested for resistance in accordance with Test Methods RE-1, RE-2 and RE-3 of ANSI/SPRI ES-1, except Vult wind speed shall be determined from Figure 1609A, 1609B or 1609C as applicable.

**Aggregate (Section 1504.8):** Not Permitted - 1609.2 Hurricane Prone Region

**FIRE CLASSIFICATION (SECTION 1505):**  
**Minimum Roof Covering Classification (Table 1505.1):** B  
**REQUIREMENTS FOR ROOF COVERINGS (SECTION 1507):**  
**Thermost Single-Ply Roofing (Section 1507.12):** Thermost single-ply membrane roofs shall have a design slope of minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage.  
**Material standards (1507.12.2):** Thermost single-ply roof coverings shall comply with ASTM D 4637, ADTM D5019 or CGB 27-GP-52M.

**Vegetative Roofs, Roof Gardens, and Landscaped Roofs (Section 1507.16):** N/A

**ROOF INSULATION (SECTION 1508):**  
**Material standards (Table 1508.2):** Expanded Polystyrene - ASTM C578  
Polysocyanurate board  
ASTM C1288, Type I or II

**STRUCTURAL DESIGN (CHAPTER 16 IBC 2003):**

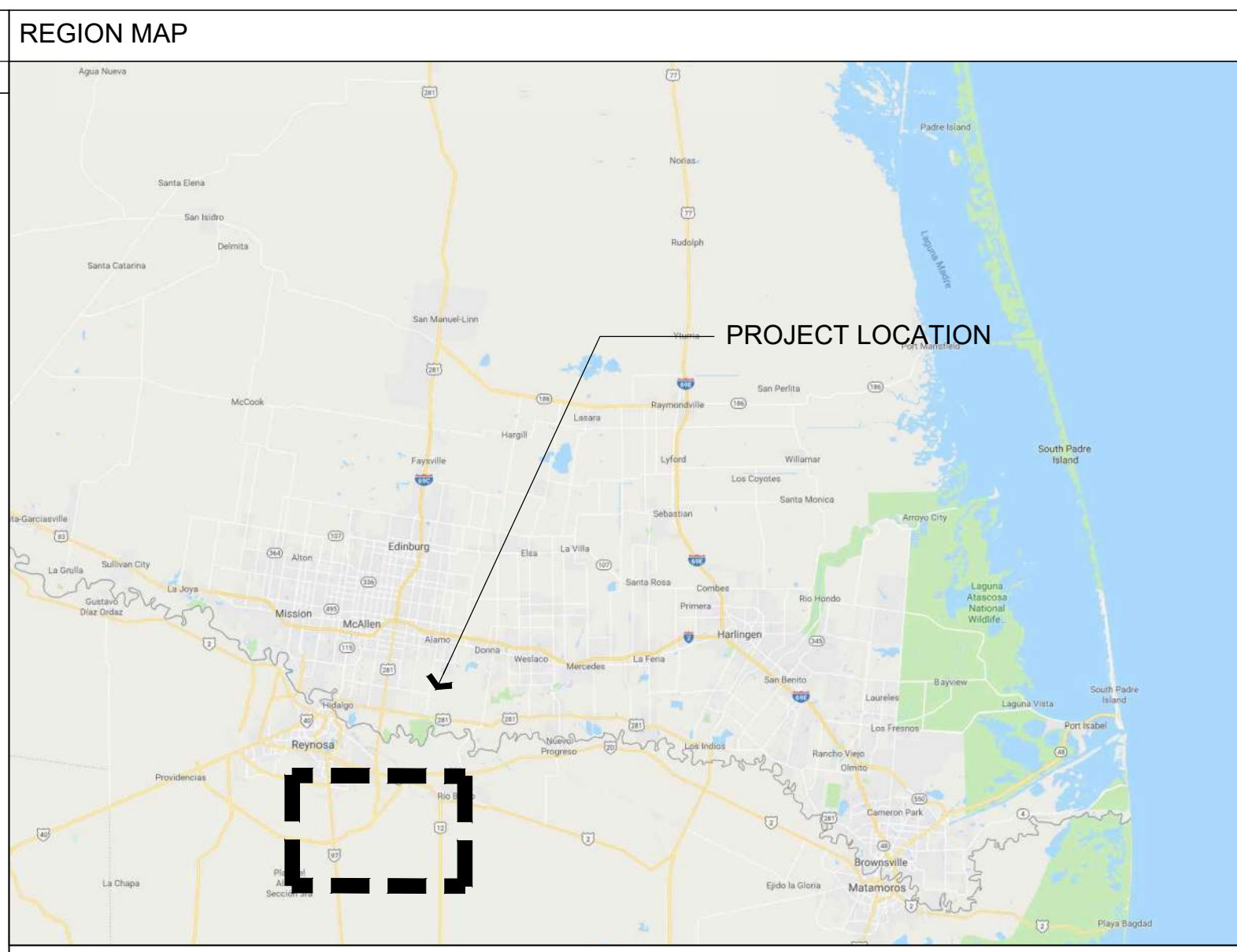
**TOTAL BUILDING PERFORMANCE (SECTION 506):** ROOF ONLY - Alterations. No alterations to existing exterior walls except cosmetic elements

**SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS (Table 506.5.1(1)):**

ROOF - Reference	ROOF - Proposed
	Insulation Entirely Above Deck
	35,006 SF
U-Factor (from Table C502.1(2)):	U-0.048 Exempt*
30% Absorbance:	0.75 Exempt*
Gross Area:	0.90 Exempt*

Emittance: \*

1) All joints, seams and penetrations  
2) Six-bull windows, doors and skylights  
3) Openings between window and door assemblies and their respective jambs and framing.  
4) Utility penetrations.  
5) Dropped ceilings or chases adjacent to the thermal envelope.  
6) Knee Walls  
7) Walls and ceilings separating a garage from conditioned spaces.  
8) Behind tubs and showers on exterior walls.  
9) Common walls between dwelling units.  
10) Attic access openings.  
11) Rim joint junction  
12) Other sources of infiltration



**INTERNATIONAL ENERGY CONSERVATION CODE REVIEW INFORMATION**

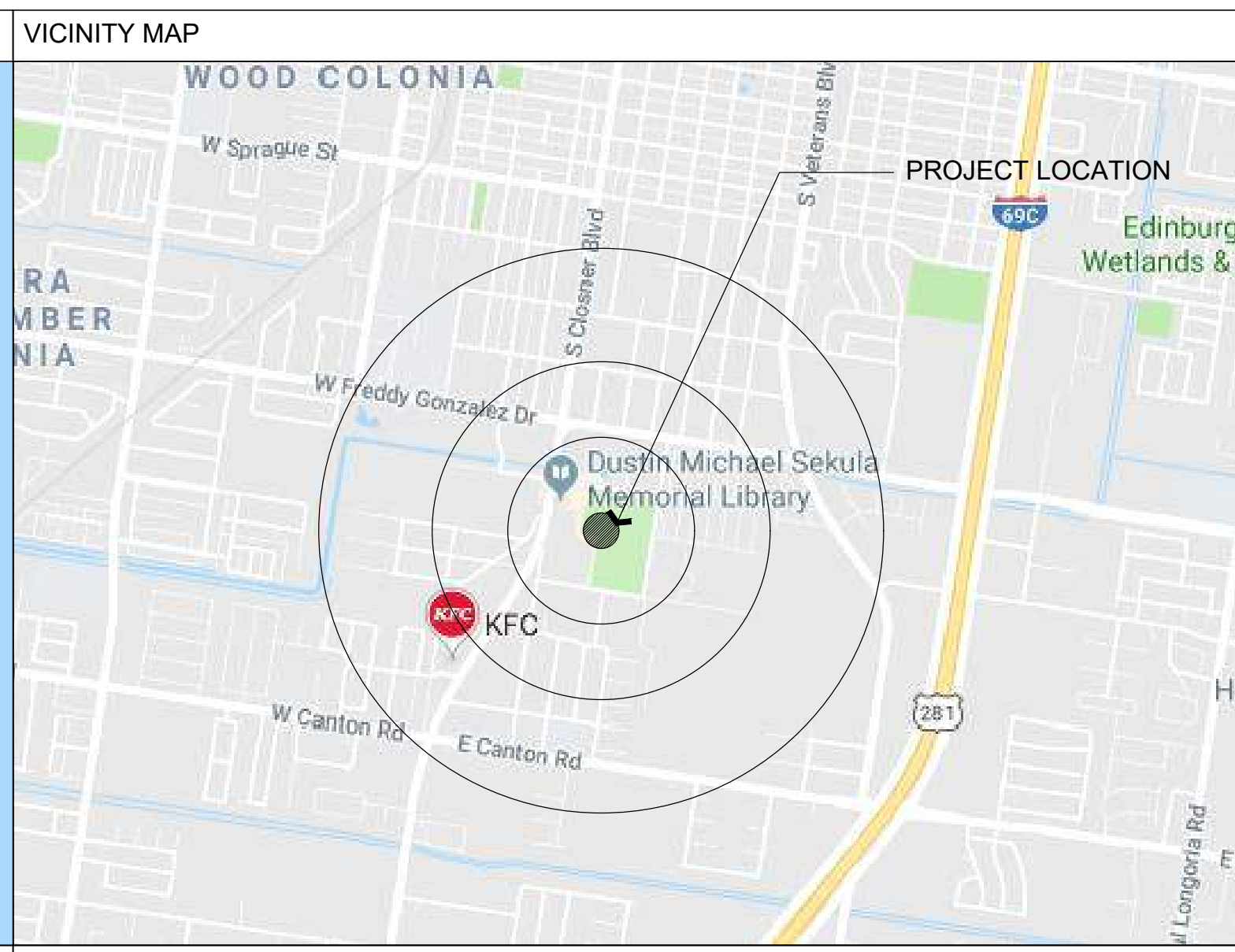
Edition: IECC 2009  
Gross Area: 35,006 SF  
CLIMATE ZONE (Figure 301.1 or Table 301.1): Hidalgo 2A(\*)  
Asterisk (\*) Indicates a warm-Humid Climate

**BUILDING ENVELOPE REQUIREMENTS (SECTION C402):**  
**OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS (Table C502.2(1)):**  
ROOF: Insulation Entirely Above Roof Deck, R-20ci  
WALLS, ABOVE GRADE: N/A  
WALLS, BELOW GRADE: N/A  
FLOORS: N/A  
SLAB-ON-GRADE: N/A  
FLOORS: OPAQUE DOORS: N/A

**OPAQUE THERMAL ENVELOPE ASSEMBLY MAXIMUM REQUIREMENTS, U-FACTOR METHOD (Table C502.1(2)):**  
ROOF: Insulation Entirely Above Roof Deck, U-0.048  
WALLS, ABOVE GRADE: N/A  
WALLS, BELOW GRADE: N/A  
FLOORS: N/A  
SLAB-ON-GRADE: N/A  
FLOORS: OPAQUE DOORS: N/A

**ROOF STANDARD REFERENCE DESIGN (TABLE 506.5.1(1)):** U-factor: from Table 502.1.2  
Solar absorptance: .75  
Emittance: .90

**AIR LEAKAGE (Section 402.4):** Building thermal envelope: The building thermal envelope shall be durably sealed to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. The following shall be caulked, gasketed, weatherstripped or otherwise sealed with an air barrier material, suitable film or solid material:  
1) Walls and ceilings separating a garage from conditioned spaces.  
2) Behind tubs and showers on exterior walls.  
3) Common walls between dwelling units.  
4) Attic access openings.  
5) Dropped ceilings or chases adjacent to the thermal envelope.  
6) Knee Walls  
7) Walls and ceilings separating a garage from conditioned spaces.  
8) Behind tubs and showers on exterior walls.  
9) Common walls between dwelling units.  
10) Attic access openings.  
11) Rim joint junction  
12) Other sources of infiltration



**WIND PRESSURE CALCULATIONS**

ENCLOSED RISK CATEGORY: III EXPOSURE CATEGORY: B

ROOF AREA	L	W	H	"a"
A	105	135	28	11
B	54	97	16	6
C	93	97	16	7
D	30	72	16	3
E	52	21	19	3
F	25	15	25	3

WIND AREA: ≤ 10 SF  
ALL ROOFS UNDER 30' IN HEIGHT

ZONE	PRESSURES					
	A	B	C	D	E	F
1) field zone	-34.2	-34.2	-34.2	-34.2	-34.2	-29.0
2) edge zone	-57.4	-57.4	-57.4	-57.4	-57.4	-52.2
3) corner zone	-86.4	-86.4	-86.4	-86.4	-86.4	-81.2
						OPEN

NOTE: THESE DIMENSIONS AND HEIGHTS HAVE BEEN PROVIDED FOR BIDDING ONLY. FINAL DESIGN PRESSURES WILL VARY FOR EACH ROOF AREA

**GENERAL NOTES**

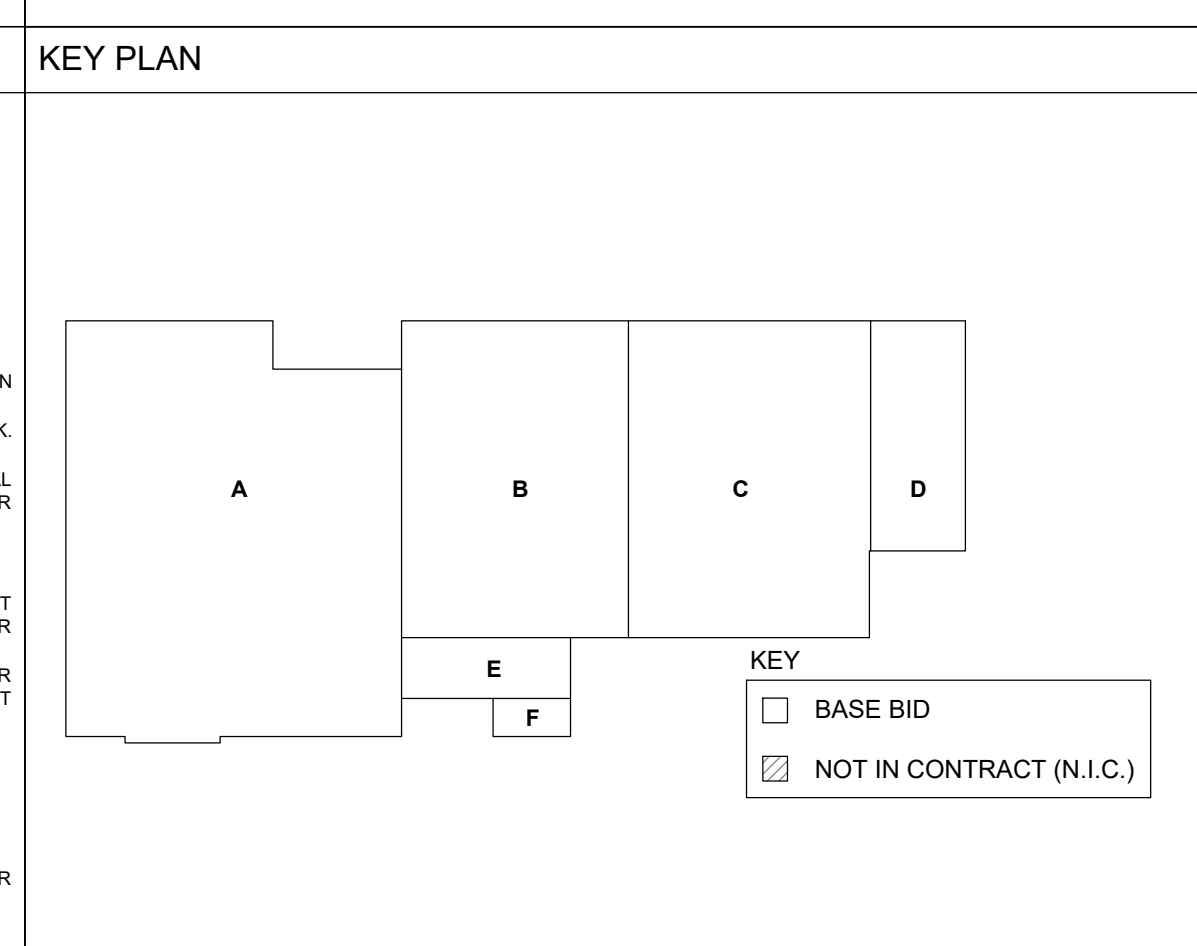
- ALL CONSTRUCTION, INCLUDING MATERIAL AND WORKMANSHIP, SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
  - a. 2012 INTERNATIONAL BUILDING CODE (IBC)
  - a.a. ASCE 7 - 02 MINIMUM DESIGN LOAD FOR BUILDINGS (MDFRS)
  - a.a.a. EXISTING STRUCTURE AND BASIS OF DESIGN FOR REINFORCEMENT
  - a.b. ASCE 7-10 MINIMUM DESIGN LOAD FOR BUILDINGS (C&C) - ROOF SYSTEM
  - a.c. NFPA 70 - 14 NATIONAL ELECTRIC CODE
  - a.d. AISC 360 - 10 SPECIFICATION FOR STRUCTURAL STEEL
  - a.e. AISI COLD FORM STEEL STANDARDS AND SPECIFICATIONS
  - b. 2012 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
  - c. 2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- ALL ASTM STANDARDS LISTED HERE WITHIN, SHALL BE AS REFERENCED IN THE LATEST ISSUE OF THE ANNUAL BOOK OF STANDARDS OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, AS-CONSTRUCTED CONDITIONS, AND SITE CONDITIONS BEFORE BEGINNING THE WORK. THE ARCHITECT AND ENGINEER SHALL IMMEDIATELY BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL CAREFULLY STUDY AND COORDINATE THE PLUMBING, MECHANICAL, FUEL, AND ELECTRICAL SYSTEMS WITH THE PROJECT MANUAL (DRAWINGS AND SPECIFICATIONS) PRIOR TO INSTALLATION AND SHALL NOTIFY THE ARCHITECT AND ENGINEER IN WRITING OF ALL INCONSISTENCIES FOR CLARIFICATION.
- CONTRACTOR TO PROTECT AND MAINTAIN ALL EXISTING CONSTRUCTION AND EQUIPMENT IMPACTED BY THE WORK.
- "IN WRITING" IS CLASSIFIED AS WRITTEN INFORMATION BEING EITHER E-MAIL, FACSIMILE, U.S. MAIL, OR LIKE. TEXTING IS NOT CLASSIFIED AS "IN WRITING".
- OMISSIONS AND/OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE WORK AND PROJECT MANUAL (DRAWINGS AND SPECIFICATIONS) SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER. THE WORK SHOULD NOT PROCEED UNTIL A SOLUTION IS GIVEN BY THE ARCHITECT AND/OR ENGINEER.
- IN CASE OF CONFLICTS BETWEEN THE GENERAL NOTES, DETAIL NOTES, AND DRAWING DETAILS AND SECTIONS, THE DETAILS SHALL TAKE PRECEDENCE OVER THE GENERAL NOTES AND SECTIONS. TYPICAL DETAILS SHALL BE USED WHENEVER APPLICABLE. REFER TO SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE NOTES AND/OR DRAWINGS
- IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION, SHALL BE THE SAME AS FOR SIMILAR WORK.
- COORDINATION IS REQUIRED BETWEEN ALL ELEMENTS OF THE WORK AND EXISTING CONDITIONS WHICH INCLUDE UTILITIES, PLUMBING, MECHANICAL, FUEL
- ELECTRICAL AND OTHER TRADES AS REQUIRED WITHIN THE BUILDING.
- DIMENSIONS ARE TO FINISH FACE OF WALLS OR STRUCTURE UNLESS NOTED OTHERWISE.
- DO NOT DIMENSION THE DRAWING PACKAGE. ANY DIMENSION CONFLICTS OR QUESTIONS SHOULD BE DIRECTED TO THE ARCHITECT AND/OR ENGINEER.
- ADDITIONAL MISCELLANEOUS STEEL ITEMS NOT SHOWN ON STRUCTURAL DRAWINGS MAY BE REQUIRED. THE GENERAL CONTRACTOR AND FABRICATOR SHALL
- COORDINATE ALL REQUIREMENTS AND SHALL NOTIFY THE ARCHITECT AND ENGINEER IN WRITING OF ALL APPARENT INCONSISTENCIES FOR CLARIFICATIONS.

**ABBREVIATIONS:**

A/C CU	A/C OR CONDENSATION UNIT	PP	PITCH PAN
CD	CONDENSATION DRAIN	RTU	ROOF TOP UNIT
CL	CROSS OVER LADDER	RAL	ROOF ACCESS LADDER
CW	CHILLED WATER	SB	SPLASHBLOCK
DS	DOWN SPOUT	SL	SLOPE
EDS	ELECTRICAL DISCONNECT UNIT	SP	SOIL PIPE
EF	EXHAUST FAN	TG	TORCH GRADE
EJ	BUILDING EXPANSION JOINT	T.O.D.	TOP OF DRAIN
EPB	ELECTRICAL PANEL BOX	T.O.E.	TOP OF EDGE
EXP JT	BUILDING EXPANSION JOINT	T.O.J.	TOP OF JOIST
EXTG	EXISTING	T.O.P.	TOP OF PARAPET
GEJ	GUTTER EXPANSION JOINT	T.O.R.	TOP OF ROOF
MAX	MAXIMUM	T.O.S.	TOP OF STEEL
MIN	MINIMUM	TYP.	TYPICAL
MF	MECHANICALLY FASTENED	V	VENT PIPE
OC	ON CENTER	WMA	WALL-MOUNT ANTENNA
		WMLF	WALL-MOUNT LIGHT FIXTURE

**TABLE OF CONTENTS**

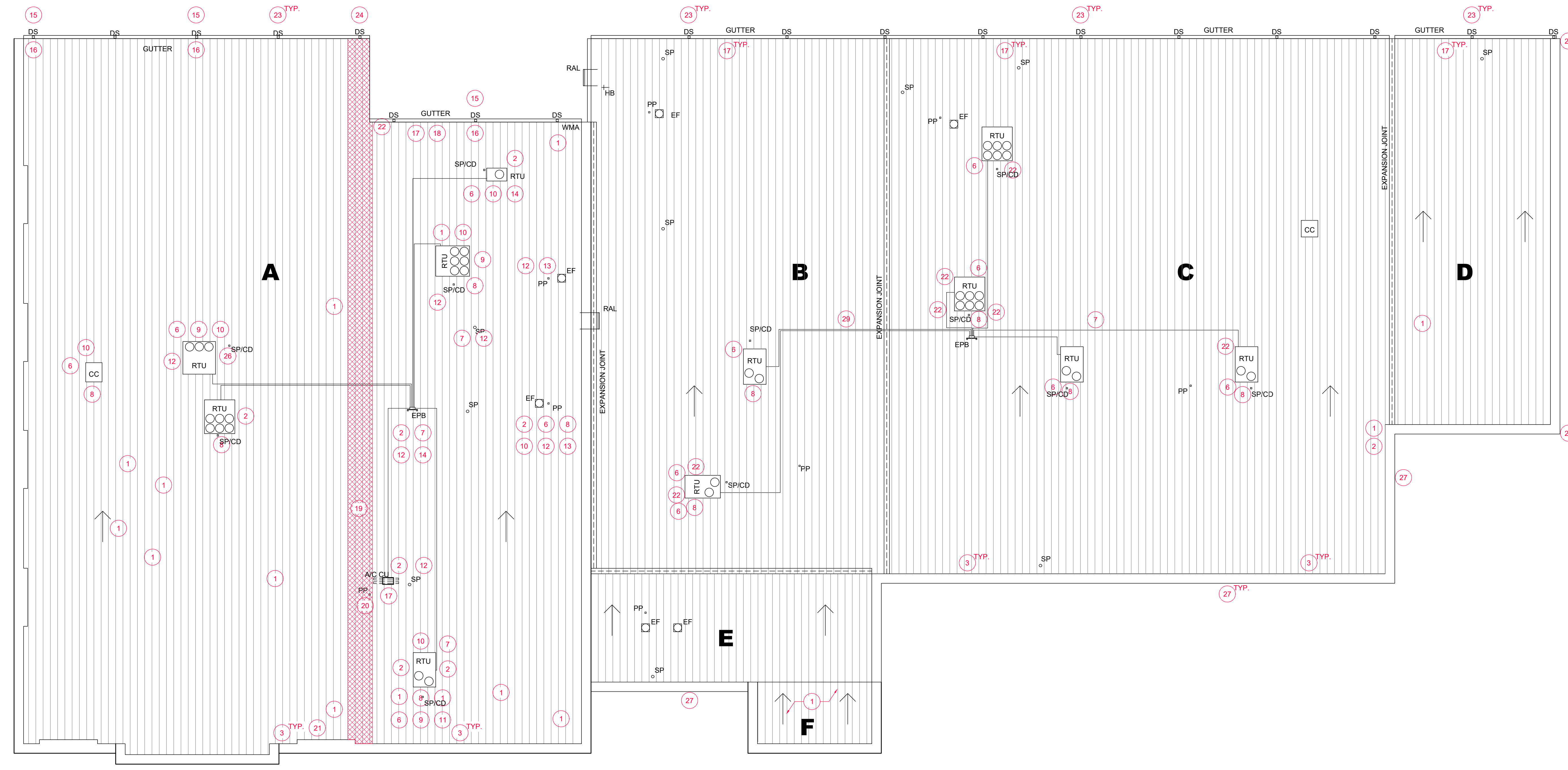
T1	TITLE SHEET (THIS SHEET)
A1.1	DEFICIENCIES (REFERENCE)
A1.2	LEAK MAP (REFERENCE)
A1.3	ROOF PLAN
A1.4	MECHANICAL PLAN
A2.1	RCP - L01
A2.2	RCP - L02
A3.1	ELEVATIONS
D0	DETAILS
D1	GENERAL DETAILS
D2	CURB DETAILS
D3	DETAILS
D4	DETAILS
D5	WALL SECTION
D6	WALL DETAILS
D7	LADDER DETAILS
S0	STRUCTURAL NOTES
S1.0	GENERAL NOTES & KEY WORK PLAN
S2.0	HIGH WALL REINFORCEMENT PLAN
S3.1	SECTIONS A-A & B-B
S3.2	SECTION C-C
S3.3	STRUCTURAL DETAILS



**TITLE SHEET**  
 DRAWN BY: C.G./S.E.  
 CHECKED BY: A.H./T.H.  
 PROJECT NO.: RGV.2018.001027  
 DATE: 7/17/2019  
 SCALE: SEE DRAWING



- LEGEND:**
- 1 IMPROPER SEAM
  - 2 OPEN SEAM
  - 3 IMPROPER CLOSURE
  - 4 OPEN EXPOSED FASTENER
  - 5 PENETRATION / HOLE IN PANEL
  - 6 RUSTED CURB @ MECH
  - 7 PENETRATION NOT ON PROPER SUPPORT
  - 8 IMPROPER CRICKET
  - 9 CURB @ MECH. TOO LOW
  - 10 OPEN CURB FLANGE @ MECH.
  - 11 POWER SHOULD NOT BE ATTACHED TO UNIT
  - 12 IMPROPER PENETRATION SEAL
  - 13 OPEN CONDUIT
  - 14 IMPROPER CURB SUPPORT
  - 15 DOWNSPOUTS ARE NOT CAULKED
  - 16 OVERDRIVEN SCREWS
  - 17 IMPROPER SEAM TERMINATION
  - 18 RUSTED / DETERIORATED PANEL
  - 19 4'-6" x 13'2" PANEL REPAIR
  - 20 PENETRATION ON SEAM
  - 21 CLIPS SPACED @ 6'-0"
  - 22 STANDING WATER
  - 23 GUTTER JOINTS NOT CAULKED
  - 24 MISSING STRAP
  - 25 IMPROPER COPING
  - 26 CONDENSATE PAN FULL
  - 27 PARAPET CAP HOLDING WATER
  - 28 JOINT SEALANT EXPIRED
  - 29 EXPIRED CONDUIT SUPPORT



CITY OF EDINBURG  
**DUSTIN SEKULA MEMORIAL LIBRARY**  
 STRUCTURAL REPAIRS & ROOF REPLACEMENT  
 2018

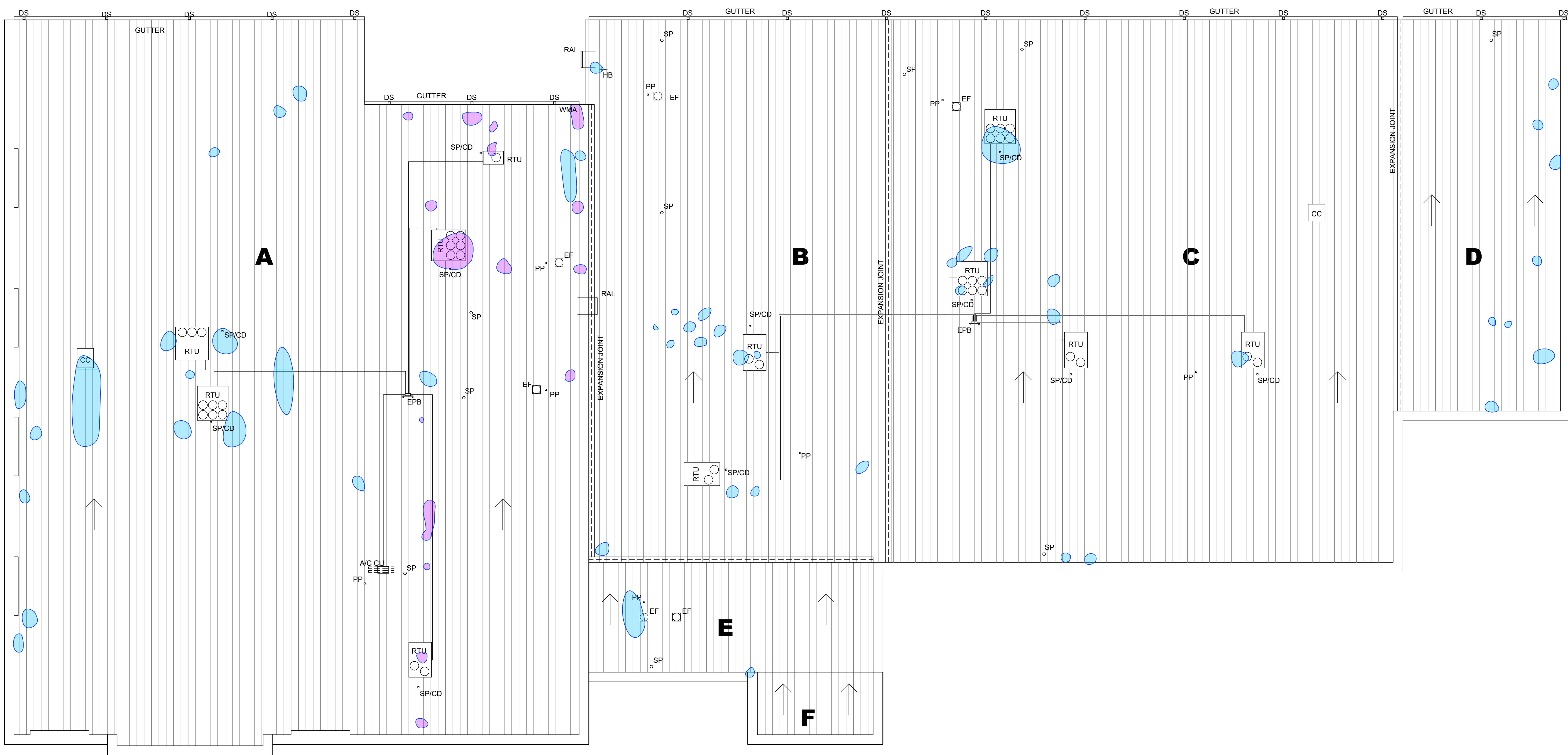
**AMTECH SOLUTIONS**  
 1600 N. JACKSON RD. STE #3  
 PHARR, TEXAS 78577  
 T 956.686.3095 F 956.686.2233

**DUSTIN SEKULA MEMORIAL LIBRARY - DEFICIENCIES (REFERENCE)**  
 SCALE: 1" = 10' - 0"  
 NORTH

DEFICIENCIES	
DRAWN BY:	C.G. / S.E.
CHECKED BY:	A.H. / T.H.
PROJECT NO.:	RGV.2018.001027
DATE:	7/17/2019
SCALE:	SEE DRAWING
<b>2 OF 23</b>	<b>A1.1</b>

**KEY**

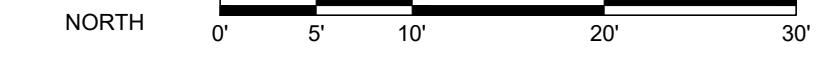
- REPORTED LEAKS ON 1ST FLOOR
- REPORTED LEAKS ON 2ND FLOOR



CITY OF EDINBURG  
**DUSTIN SEKULA MEMORIAL LIBRARY**  
 STRUCTURAL REPAIRS & ROOF REPLACEMENT  
 2018

**AMTECH SOLUTIONS**  
 1600 N. JACKSON RD. STE #3  
 PHARR, TEXAS 78577  
 T 956.686.3095 F 956.686.2233

**DUSTIN SEKULA MEMORIAL LIBRARY - OVERLAYED LEAK MAP (REFERENCE)**  
 SCALE: 1" = 10' - 0"



LEAK MAP	
DRAWN BY:	C.G. / S.E.
CHECKED BY:	A.H. / T.H.
PROJECT NO.:	RGV.2018.001027
DATE:	7/17/2019
SCALE:	SEE DRAWING



**GENERAL NOTES:**

- FIELD VERIFY ALL DIMENSIONS PRIOR TO BIDDING AND CONSTRUCTION.
- INSTALL ALL PRODUCTS AS PER MANUFACTURERS INSTRUCTIONS. CLEAN / PREPARE / PRIME ALL SURFACES AS REQUIRED BY MANUFACTURER PRIOR TO INSTALLING PRODUCTS.
- COLOR SELECTIONS WILL BE MADE FROM MANUFACTURERS STANDARD COLOR CHART. CONTRACTOR TO PROVIDE SUBMITTALS TO BE APPROVED BY ARCHITECT.
- ALL EXISTING GUTTERS AND DOWNSPOUTS SHALL BE REMOVED AND REPLACED WITH NEW ONES. REPLACEMENT DOWNSPOUTS SHALL BE LOCATED IN SAME LOCATION OF THE DOWNSPOUTS THEY REPLACE, UNLESS AN EXISTING CONTROL JOINT IS IN SAME LOCATION. DO NOT INSTALL DOWNSPOUTS OVER CONTROL JOINTS. IF WHEN CONTROL JOINTS ARE EXPOSED CONTRACTOR SHALL SEAL AS SPECIFIED.
- PROVIDE GUTTER EXPANSION JOINTS AT MAXIMUM 50'-0" O.C. WITH MINIMUM OF ONE DOWNSPOUT IN EACH GUTTER SECTION (IF NOT INDICATED ON PLANS). CONNECT DOWNSPOUTS TO DRAIN BOOTS OR STORM DRAIN PIPING OR TERMINATE DOWNSPOUTS WITH A 45-DEGREE DIVERTER TO DIRECT DISCHARGE AWAY FROM BUILDING ONTO PRECAST SPLASHBLOCKS AT GRADE.
- PROVIDE CRICKETS ON THE HIGH SIDE OF ALL CURBS 24" WIDE OR GREATER TO DIVERT ROOF DRAINAGE TOWARDS DISCHARGE AREAS.
- PROVIDE 4" LAP JOINTS FOR ALL SHEET METAL FLASHING RECEIVERS, AS PER DETAIL 12/D1.
- FLASH ALL ROUND ROOF PENETRATIONS AS DETAILED UNLESS OTHERWISE NOTED.
- PROVIDE CURBS FOR ALL VENTILATORS WITH A DECK OPENING OF 12-INCHES OR GREATER.
- RAISE ALL ROOF MOUNTED APPURTENANCES, EQUIPMENT, PIPING, ETC. TO 8-INCH MINIMUM HEIGHT ABOVE TOP OF ROOF MEMBRANE OR AS REQUIRED TO PROVIDE CLEARANCES AS RECOMMENDED BY NRCA STANDARDS.
- PROVIDE TRAFFIC PADS AT ALL LADDERS, CROSS-OVER PLATFORMS, AND AT THE SERVICE SIDES OF ALL ROOF TOP EQUIPMENT.
- INSTALL ROLLER SUPPORTS UNDER ALL ELECTRICAL CONDUIT, GAS, WATER AND DRAINAGE LINES NOT SUSPENDED FROM PIPE HANGERS.
- PROTECT ALL ROOF SURFACES AT ALL AREAS DURING THE WORK. REPAIR ANY AREA DAMAGED DURING THE WORK.
- AT AREAS TO BE RE-ROOFED, FOR ANY GIVEN DAY, REMOVE MATERIALS ONLY IN AREAS THAT WILL BE REPLACED AND COVERED BY DAY'S END.
- HOT-AIR WELD ALL JOINTS OF INSTALLED MATERIAL PRIOR TO TERMINATING WORK ON ANY GIVEN DAY
- VERIFY DRAIN PIPING AND DRAIN COMPONENTS ARE SEALED AND NOT RESTRICTED.
- IF ASBESTOS CONTAINING MATERIALS ARE DETERMINED TO EXIST AT AREAS SCHEDULED FOR WORK, THE REMOVAL, HANDLING AND DISPOSAL OF THE ACM MUST TAKE PLACE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS.
- CONTRACTOR TO DEVISE WORK PLAN AS PART OF THE BID TO BE REVIEWED BY ARCHITECT AND APPROVED BY OWNER, THAT WOULD ALLOW FOR CONTINUATION OF LIBRARY OPERATIONS AND FUNCTIONS

**KEYED NOTES:**

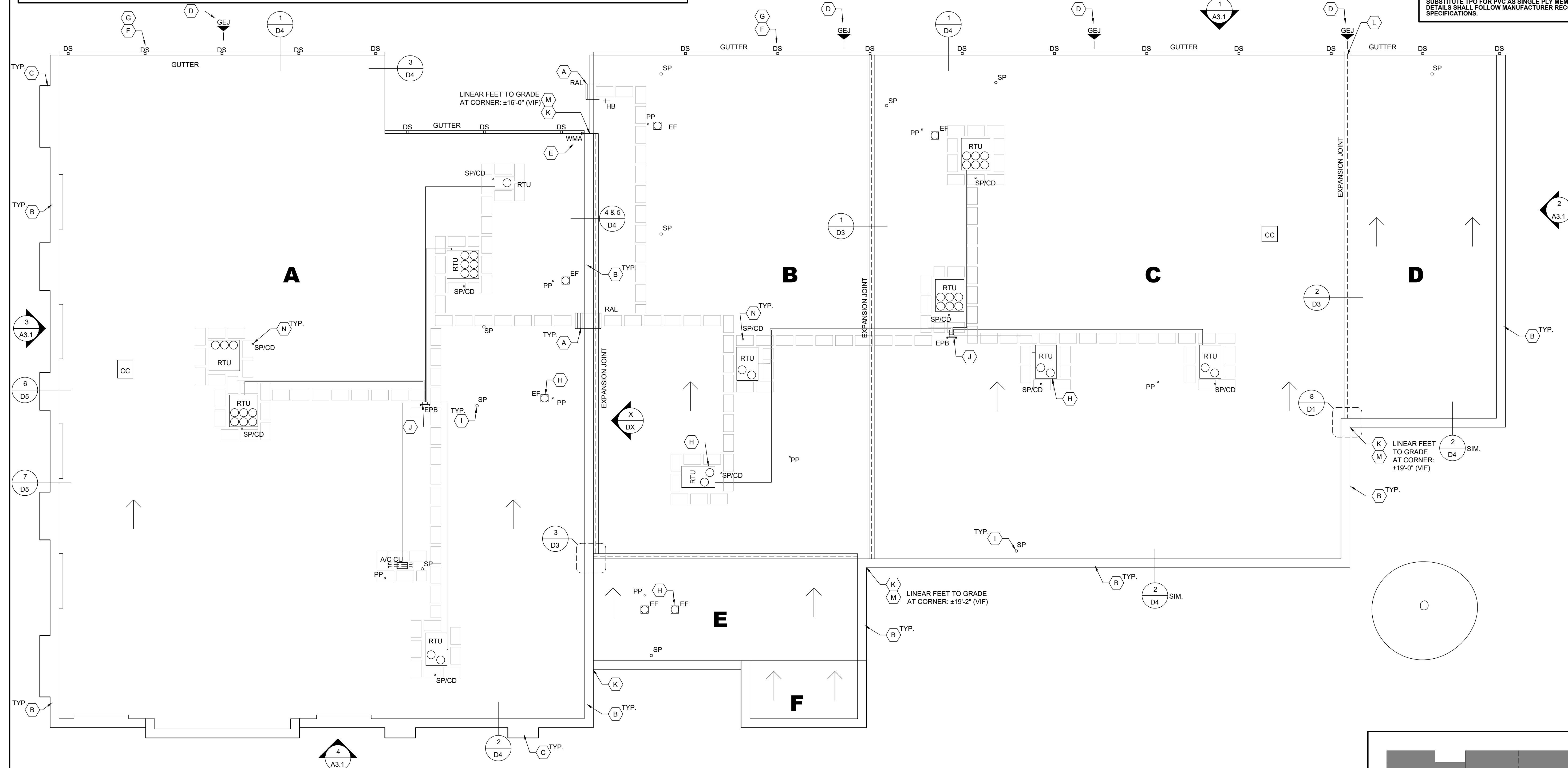
- (A) INSTALL NEW LADDER AS PER SHEET D7
- (B) REMOVE ALL PARAPET COPINGS (TYP.). COVER WITH SINGLE PLY MEMBRANE PER DETAILS AND SPECIFICATIONS
- (C) NEW PLASTER CORNICE MOULDING TO MATCH EXTG. DIMENSIONS. COVER WITH SINGLE PLY MEMBRANE PER DETAILS AND SPECIFICATIONS.
- (D) PROVIDE GUTTER EXPANSION JOINTS AT MAX. 50'-0" O.C. AS PER GENERAL NOTE 5 (RE: GENERAL NOTES SCHEDULE, THIS SHEET) & DETAIL 9/D3.
- (E) PROTECT ALL FASCIA & WALL-MOUNT EQUIPMENT (LIGHT FIXTURES, CAMERAS & IT EQUIPMENT & FIXTURES) DURING CONSTRUCTION. COORDINATE WORKER IF IT BECOMES NECESSARY TO TEMPORARILY REMOVE AND REINSTALL ANY FIXTURE, IN ORDER TO AVOID CONFLICTS W/ SCHEDULED ACTIVITIES.
- (F) INSTALL DOWNSPOUTS W/ HEAVY BOOT DISCHARGES AND SPLASH BLOCKS AS NEEDED AS PER DETAILS 5, 6, & 7/D3
- (G) POWERWASH EXISTING SPLASHBLOCKS
- (H) RAISE EXTG. EXHAUST FAN / MECHANICAL UNITS AS REQUIRED. EXTEND MECHANICAL CURBS AND FLUES TO A MIN. 8-INCH HEIGHT.
- (I) PIPE PENETRATIONS: EXTEND ALL PIPING TO ACCOMMODATE NEW ROOF SYSTEM. FLASH ALL SOIL PIPES W/ BOOT FLASHINGS AS SPECIFIED AND DETAILED (RE: 1, 2, 3 & 5/D1).
- (J) REMOVE EXTG. FLEXIBLE FLASHING BOOTS AND INSTALL NEW PITCH PANS WITH POURABLE SEALANT AS PER DETAIL 3/D1. REPLACE WIRING AS REQUIRED. IF NEEDED, INSTALL DISCONNECT BOX ON SUPPORT CURB AS PER DETAIL 7/D2.
- (K) PATCH AND REPAIR CRACKS AT CORNERS AND PROVIDE SILICONE SEALANT AT EXPOSED JOINTS.
- (L) PATCH AND REPAIR EXTG. VERTICAL EXPANSION JOINT. FILL WITH SEALANT AND BACKER ROD.
- (M) CONTRACTOR TO PROVIDE ALLOWANCE FOR NEW EXPANSION JOINTS FROM FOUNDATION TO T.O. PARAPET AT THESE LOCATIONS. LINEAR FEET NOTED AT EACH LOCATION. NOTIFY ARCHITECT UPON FIELD VERIFYING UNCOVERED CONDITIONS BEFORE INSTALLING.
- (N) INSTALL NEW CONDENSATE DRAIN AS PER DETAIL 5/D1 AND SPECIFICATIONS.

**EXISTING ROOF CONSTRUCTION:**

- ROOF AREA "A", "D", "E", "F"
- 2" STANDING SEAM SHEET METAL ROOF - 16" NOMINAL WIDTH
  - COMPRESSED VINYL BACKED FIBERGLASS BATT INSULATION
  - EXISTING 1 1/2" ROOF PAN DECK
- ROOF AREA "B"
- 2" STANDING SEAM SHEET METAL ROOF - 16" NOMINAL WIDTH
  - COMPRESSED VINYL BACKED FIBERGLASS BATT INSULATION
  - (5/750 X 3/250 X .0625) 16-GAUGE STEEL Z PURLINS
  - SUPPORTED BY (4/250 X 2/6250 X .0625) 16-GAUGE "C-STUD"
  - PLACED IN (4/325 X 2 X .0625) 16-GAUGE "U-TRACK" (SCREW FASTENED)
  - LEGACY - TAR AND GRAVEL BUR (OVER)
  - LEGACY - LIGHTWEIGHT INSULATING CONCRETE (PLACED ON)
  - LEGACY - CORRUGATED METAL ROOF DECK
  - SUPPORTED BY ORIGINAL 28 INCH DEEP STEEL BAR JOIST
- ROOF AREA "C"
- 2" STANDING SEAM SHEET METAL ROOF - 16" NOMINAL WIDTH
  - COMPRESSED VINYL BACKED FIBERGLASS BATT INSULATION
  - (5/750 X 3/250 X .0625) 16-GAUGE STEEL Z PURLINS
  - SUPPORTED BY (4/250 X 2/6250 X .0625) 16-GAUGE "C-STUD"
  - PLACED IN (4/325 X 2 X .0625) 16-GAUGE "U-TRACK" (SCREW FASTENED)
  - LEGACY - TAR AND GRAVEL BUR (OVER)
  - LEGACY - LIGHTWEIGHT INSULATING CONCRETE (PLACED ON)
  - LEGACY - CORRUGATED METAL ROOF DECK
  - SUPPORTED BY ORIGINAL 48 INCH DEEP STEEL BAR JOIST

**SCOPE OF WORK:**

- BASE BID**
- REPLACE, RESIZE, AND/OR RAISE MECHANICAL CURBS AS PER MECHANICAL SCHEDULE. REFER TO SPECIFICATIONS FOR RUSTED DECK CONDITIONS. REMOVE ALL COPINGS. REMOVE EXISTING DESIGNATED ROOFING AND COMPONENTS IN DESIGNATED AREAS DOWN TO DECK AND INSTALL SPECIFIED PRODUCTS AND SYSTEMS:
- ROOF AREA "A", "D", "E" & "F"
- 60 MIL PVC SINGLE PLY ROOF MEMBRANE (FULLY ADHERED)
  - 1/2" COVER BOARD (OVER)
  - 3.5" POLYISOCYANURATE (OVER)
  - EXISTING METAL DECK (OVER)
  - EXISTING PURLINS
  - WRAP SINGLE PLY MEMBRANE UP AND OVER PARAPETS AND COPINGS AS DETAILED FOLLOWING MANUF. RECOMMENDATIONS
- REPLACE, RESIZE, AND/OR RAISE MECHANICAL CURBS AS PER MECHANICAL SCHEDULE. REFER TO SPECIFICATIONS FOR RUSTED DECK CONDITIONS. REMOVE ALL COPINGS. REMOVE EXISTING DESIGNATED ROOFING AND COMPONENTS IN DESIGNATED AREAS DOWN TO ROOF SYSTEM AND INSTALL SPECIFIED PRODUCTS AND SYSTEMS:
- ROOF AREA "B" AND "C"
- 60 MIL PVC SINGLE PLY ROOF MEMBRANE (FULLY ADHERED)
  - 1/2" COVER BOARD (OVER)
  - 3.5" POLYISOCYANURATE (OVER)
  - NEW 22 GA. STEEL DECK (OVER)
  - EXISTING Z PURLINS
  - PROVIDE ADDITIONAL FASTENERS AT C-POST TO U-CHANNEL AND FASTENERS AT C-POST TO NEW DECK AS SPEC'D
  - ADD ADDITIONAL VERTICAL REINFORCEMENT TO BAR JOIST AS SPEC'D
  - WRAP SINGLE PLY MEMBRANE UP AND OVER PARAPETS AND COPINGS AS DETAILED FOLLOWING MANUF. RECOMMENDATIONS
- ALTERNATE BID**
- FOLLOW SAME SPECIFICATIONS AND GUIDELINES ABOVE EXCEPT SUBSTITUTE TPO FOR PVC AS SINGLE PLY MEMBRANE. VARIATIONS IN TPO DETAILS SHALL FOLLOW MANUFACTURER RECOMMENDATIONS AND SPECIFICATIONS.



**LEGEND**

• SP	SOIL PIPE	DETAIL 2/D1	▲ GEJ	GUTTER EXP. JT.	DETAIL 9/D3
□ EF	EXHAUST FAN	DETAIL 8/D2	□	WALK PADS	DETAIL 7/D1
□ A/C CU	AC / CONDENS. UNIT	DETAILS 1-5, 8/D2	—	ELEC. LINE	DETAILS 10 & 11/D1
□ RTU	ROOFTOP UNIT	DETAILS 1-5, 8/D2	■	WMA WALL-MOUNT ANTENNA	KEYED NOTE "E"
□ EPB	ELECTRICAL PANEL BOX	DETAILS 6 & 7/D2	□	RAL ROOF ACCESS LADDER	SHEET D7
• DS	DOWNSPOUT	DETAILS 5 & 6/D3	---	EXPANSION JOINT	DETAILS 1, 2, 3/D3 & 4, 5/D4
• PP	PITCH PAN	DETAILS 1 & 3/D1	---	LOCATION OF STEEL BEAM	
• SP/CD	CONDENS. DRAIN	DETAIL 5/D1	○	TREE	

**DUSTIN SEKULA MEMORIAL LIBRARY - ROOF PLAN**

SCALE: 1" = 10' - 0"

0' 5' 10' 20' 30'

NORTH

**KEY PLAN**

SCALE: N.T.S.

KEY

- BASE BID REPLACEMENT
- BASE BID REPAIRS
- NOT IN CONTRACT (N.I.C.)

REVISIONS:


7/17/2019

CITY OF EDINBURG

**DUSTIN SEKULA MEMORIAL LIBRARY**

**STRUCTURAL REPAIRS & ROOF REPLACEMENT**

2018

**AMTECH SOLUTIONS**

1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577

956.686.3095

**ROOF PLAN**

DRAWN BY: C.G./S.E.

CHECKED BY: A.H./T.H.

PROJECT NO.: **RGV.2018.001027**

DATE: 7/17/2019 SCALE: SEE DRAWING

**4 OF 23 A1.3**

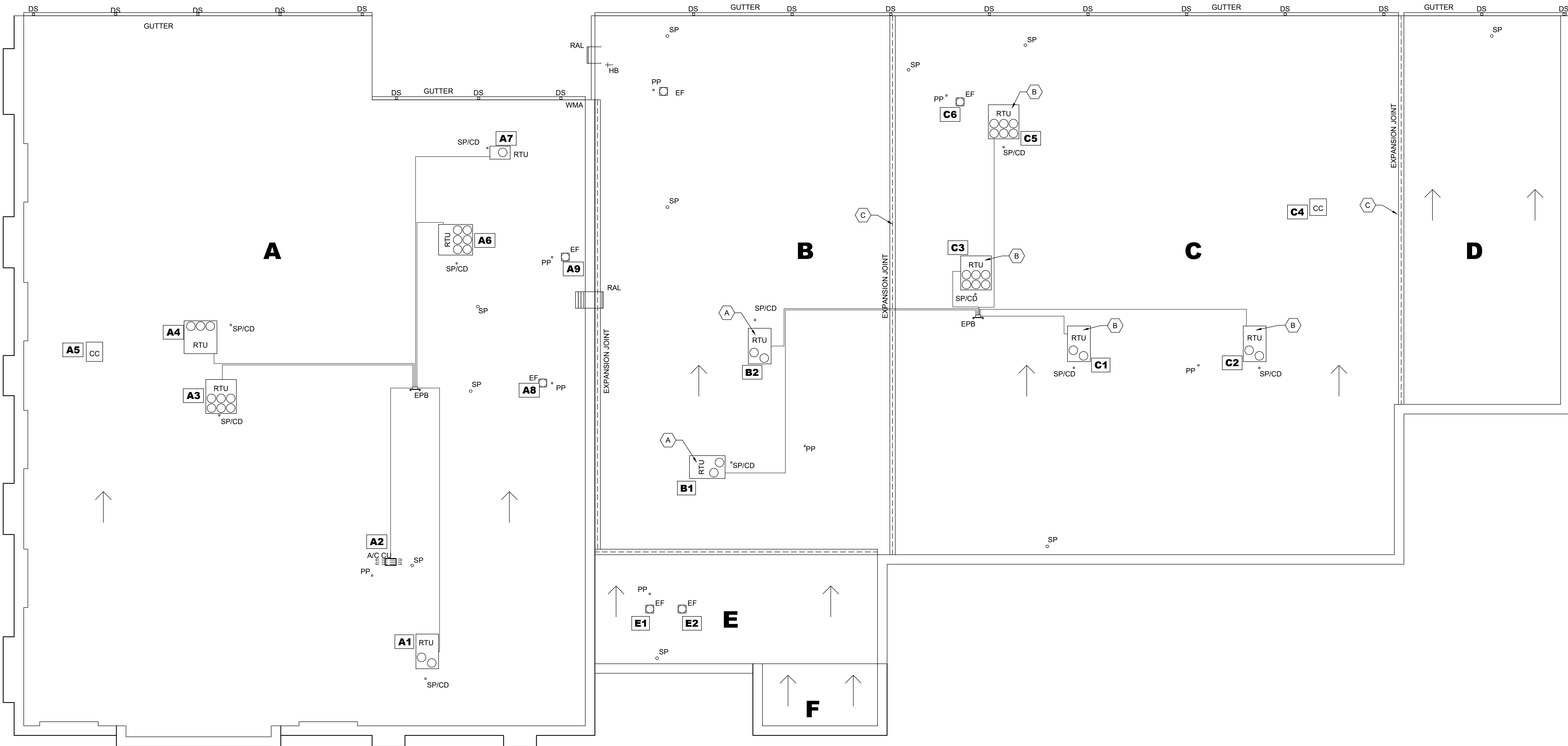


# MECHANICAL CURB SCHEDULE

**KEYED NOTES:**

- (A) NEW RTU CURB SUPPORT STRUCTURE FOR ROOF SECT. "B". SEE DETAILS 1 & 2/S3.3
- (B) NEW RTU CURB SUPPORT STRUCTURE FOR ROOF SECT. "C". SEE DETAILS 4 & 5/S3.3
- (C) NEW 1" WIDE EXPANSION JOINT

ROOF SECT	UNIT ID	COMMENT
A	A1	RAISE EXISTING ROOF CURB 12" MIN.
A	A2	INSTALL NEW RTU STAND
A	A3	REPLACE ROOF CURB TO MATCH UNIT
A	A4	RAISE EXISTING ROOF CURB 12" MIN.
A	A5	RAISE EXISTING ROOF CURB 12" MIN.
A	A6	RAISE EXISTING ROOF CURB 12" MIN.
A	A7	REPLACE ROOF CURB TO MATCH UNIT
A	A8	RAISE EXISTING ROOF CURB 12" MIN.
A	A9	RAISE EXISTING ROOF CURB 12" MIN.
B	B1	RAISE EXISTING ROOF CURB 12" MIN.
B	B2	RAISE EXISTING ROOF CURB 12" MIN.
C	C1	REPLACE ROOF CURB TO MATCH UNIT
C	C2	REPLACE ROOF CURB TO MATCH UNIT
C	C3	RAISE EXISTING ROOF CURB 12" MIN.
C	C4	REPLACE ROOF CURB TO MATCH UNIT
C	C5	REPLACE ROOF CURB TO MATCH UNIT
C	C6	RAISE EXISTING ROOF CURB 12" MIN.
E	E1	RAISE EXISTING ROOF CURB 12" MIN.
E	E2	RAISE EXISTING ROOF CURB 12" MIN.



REVISIONS:


7/17/2019

CITY OF EDINBURG

**DUSTIN SEKULA MEMORIAL LIBRARY**

**STRUCTURAL REPAIRS & ROOF REPLACEMENT**

2018

**AMTECH SOLUTIONS**

1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577

T 956.686.3095 F 956.686.2233

**DUSTIN SEKULA MEMORIAL LIBRARY - MECHANICAL PLAN**

SCALE: 1" = 10' - 0"

MECHANICAL PLAN

DRAWN BY: C.G. / S.E.

CHECKED BY: A.H. / T.H.

PROJECT NO.: RGV.2018.001027

DATE: 7/17/2019 SCALE: SEE DRAWING

**5 OF 23** **A1.4**

**GENERAL NOTES:**

- 01 CONTRACTOR TO FIELD VERIFY ALL OTHER LEAK AND DAMAGED CEILING AREAS (IF NOT NOTED ON PLAN), AND NOTIFY ARCHITECT OF DISCREPANCIES FOR BID.
- 02 FOR CEILING TILE REPLACEMENTS: 2' X 4' GRID AT OFFICES AND WORK ROOMS AND 2' X 2' GRID AT OPEN AREAS.

**SCOPE OF WORK**

**CEILING AND INTERIORS:**

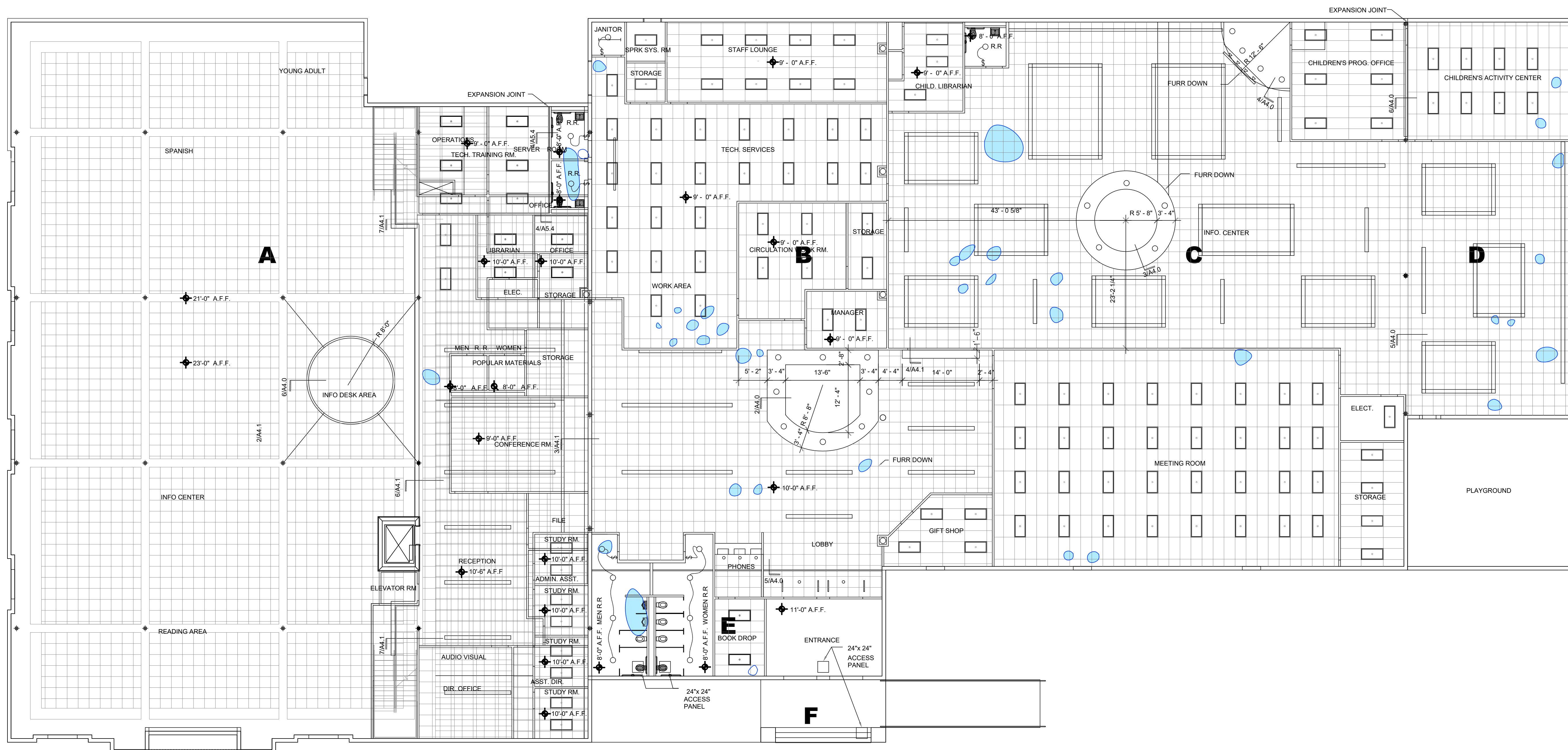
**BASE BID**

• REMOVE AND SCRAP ALL ALL DAMAGED CEILING TILES AND GYPSUM BOARD AS WELL AS WALL GYPSUM BOARD. RE-INSTALL NEW RELATED COMPONENTS AS SPECIFIED. ALL AREAS ("A"- "F")

- REPLACE DAMAGED CEILING TILES TO MATCH THE EXISTING PREDOMINANT FIELD OF CEILING TILES.
- REPLACE DAMAGED CEILING GYPSUM BOARD WALL WITH NEW TYPE "X" GYPSUM BOARD.
- PAINT REPAIRED GYPSUM BOARD AREAS TO MATCH EXISTING.
- CLEAN AND SPOT PAINT TO MATCH CEILING AND WALL COMPONENTS STAINED/FARNISHED.
- CLEAN DAMAGED CARPET TILES TO MATCH EXISTING. CLEAN UNDER THE BOOK STACKS.

**KEY**

- REPORTED LEAKS ON 1ST FLOOR
- REPORTED LEAKS ON 2ND FLOOR



**DUSTIN SEKULA MEMORIAL LIBRARY -L01 REFLECTED CEILING PLAN**

SCALE: 1" = 10' - 0"  
0' 5' 10' 20' 30'

REVISIONS:


7/17/2019

CITY OF EDINBURG

**DUSTIN SEKULA MEMORIAL LIBRARY**

**STRUCTURAL REPAIRS & ROOF REPLACEMENT**

2018

**AMTECH SOLUTIONS**

1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577

T 956.686.3095 F 956.686.2233

RCP-L01

DRAWN BY: C.G. / S.E.

CHECKED BY: A.H. / T.H.

PROJECT NO.: RGV.2018.001027

DATE: 7/17/2019 SCALE: SEE DRAWING

7 OF 23 **A2.1**

**GENERAL NOTES:**

01 CONTRACTOR TO FIELD VERIFY ALL OTHER LEAK AND DAMAGED CEILING AREAS (IF NOT NOTED ON PLAN), AND NOTIFY ARCHITECT OF DISCREPANCIES FOR BID.

02 FOR CEILING TILE REPLACEMENTS: 2' X 4' GRID AT OFFICES AND WORK ROOMS AND 2' X 2' GRID AT OPEN AREAS.

**SCOPE OF WORK**

**CEILING AND INTERIORS:**

**BASE BID**

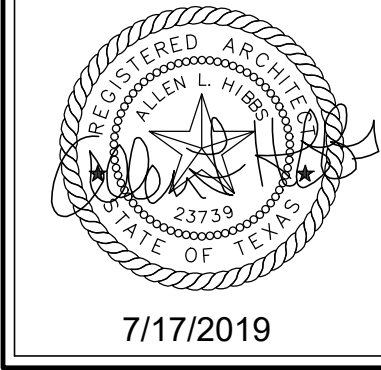
- REMOVE AND SCRAP ALL ALL DAMAGED CEILING TILES AND GYPSUM BOARD AS WELL AS WALL GYPSUM BOARD. RE-INSTALL NEW RELATED COMPONENTS AS SPECIFIED. ALL AREAS ("A"- "F")
- REPLACE DAMAGED CEILING TILES TO MATCH THE EXISTING PREDOMINANT FIELD OF CEILING TILES.
- REPLACE DAMAGED CEILING GYPSUM BOARD WALL WITH NEW TYPE "X" GYPSUM BOARD.
- PAINT REPAIRED GYPSUM BOARD AREAS TO MATCH EXISTING.
- CLEAN AND SPOT PAINT TO MATCH CEILING AND WALL COMPONENTS STAINED/TARNISHED.
- CLEAN DAMAGED CARPET TILES TO MATCH EXISTING. CLEAN UNDER THE BOOK STACKS.

**KEY**

- REPORTED LEAKS ON 1ST FLOOR
- REPORTED LEAKS ON 2ND FLOOR

REVISIONS:

7/17/2019



CITY OF EDINBURG

**DUSTIN SEKULA MEMORIAL LIBRARY**

**STRUCTURAL REPAIRS & ROOF REPLACEMENT**

2018



**DUSTIN SEKULA MEMORIAL LIBRARY - L02 REFLECTED CEILING PLAN**

SCALE: 1" = 10' - 0"

0' 5' 10' 20' 30'

NORTH

**AMTECH SOLUTIONS**

1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577

T 956.686.3095 F 956.686.2233

RCP-L02

DRAWN BY: C.G. / S.E.

CHECKED BY: A.H. / T.H.

PROJECT NO.: RGV.2018.001027

DATE: 7/17/2019 SCALE: SEE DRAWING



**GENERAL NOTES:**

1. FIELD VERIFY LOCATION AND LENGTH OF EXISTING EXPANSION JOINTS, CONTROL JOINTS, AND OTHER JOINTS.
2. DURING CONSTRUCTION INVESTIGATE STRUCTURAL CONNECTIONS BETWEEN LEGACY BUILDING AND ADDITIONS AND NOTIFY ARCHITECT OF UNCOVERED EXISTING CONDITIONS BEFORE INSTALLING EXPANSION JOINT.
3. REFER TO STRUCTURAL PLANS FOR LOCATION AND INSTALLATION DETAILS OF VERTICAL WALL BRACING. NOT ALL PILASTERS WILL CONCEAL VERTICAL BRACING.
4. PATCH, REPAIR, CLEAN WALL SURFACES AS SPECIFIED.
5. PAINT TO MATCH EXISTING. CONTRACTOR SHALL PROVIDE SUBMITTALS FOR APPROVAL BY ARCHITECT AND OWNER.
6. CONTRACTOR SHALL PROVIDE SUBMITTAL OF NEW COLOR ACCENT ON PILASTER FOR APPROVAL BY ARCHITECT AND OWNER.
7. CONTRACTOR SHALL PROVIDE A 4X8 MOCK UP OF PILASTER SHOWING EXISTING COLORS AND MATERIALS WITH NEW ACCENT COLOR OF PILASTER TO BE APPROVED BY ARCHITECT AND OWNER.

**KEYED NOTES:**

- (A) EXISTING CONTROL JOINT, VIF, APPLY SILICONE SEALANT AS SPECIFIED.
- (B) EXISTING EXPANSION JOINT, VIF, APPLY SILICONE SEALANT AS SPECIFIED. SEE PLAN FOR RECOMMENDED EXPANSION JOINTS TO BE ADDED IF CONFIRMED BY FIELD VERIFICATION.
- (C) NEW PLASTER CORNICE MOLDING TO MATCH EXTG. DIMENSIONS.
- (D) SEAL ALL WINDOW AND STOREFRONT AT SILL/JAMB/HEADER AS SPECIFIED.
- (E) EXPOSED STEEL BRACING PAINTED TO MATCH WALL. REFER TO STRUCTURAL.
- (F) GUTTERS TO HAVE EXTENSION TO CLEAR LEDGE AT NON-PLUMB WALL LEDGE.
- (G) FLOOR MOUNTED EQUIPMENT
- (H) WRAP SINGLE PLY UP AND OVER ROOF POP UP AREAS, PARAPET WALLS AND OVER PARAPETS, SEE ROOF PLAN

**EXISTING WALL CONDITIONS:**

- ALL EXISTING EXTERIOR WALLS
- 1" STUCCO WALL
  - (OVER) METAL LATH
  - (OVER) FLUID APPLIED WEATHER BARRIER
  - (OVER) CONCRETE BLOCK WALL
  - 3'-4" HIGH SPLIT FACE BLOCK WAINSCOT WITH 4" TRIM EIFS FOAM TRIM
  - 1'-0" EIFS FOAM TRIM ATTACHED TO WALL AT CORNICE

**SCOPE OF WORK:**

- BASE BID**
- CLEAN AND PREPARE ALL EXTERIOR WALL SURFACES AND COMPONENTS ON EXTERIOR WALLS AS SPECIFIED AND REPAIR, PAINT AND SEAL WITH SPECIFIED PRODUCTS AND SYSTEMS:**
- EXTERIOR WALLS**
- APPLY SILICONE SEALANT, NON LATEX, TO ALL EXPANSION/CONTRACTION JOINTS
  - PROVIDE EXPANSION JOINTS AT DESIGNATED AREAS BASED ON FIELD VERIFICATION
  - REPAIR EXISTING DAMAGED TRIM AND ADD NEW TRIM AT DESIGNATED AREAS
  - SEAL ALL DOOR AND WINDOW FRAMES
  - ADD EIFS/FOAM PLASTERS TO DESIGNATED AREAS AS WELL AS ASSOCIATED SPLIT FACE CMU WAINSCOT AND CONCRETE LEDGE
  - ONE COAT OF HIGH PERFORMANCE ELASTOMERIC COATING AS SPECIFIED TO MATCH EXISTING
- ALTERNATE BID**
- FOLLOW SAME SPECIFICATIONS AND GUIDELINES ABOVE EXCEPT SUBSTITUTE LATEX PAINT FOR HIGH PERFORMANCE COATING**

REVISIONS:

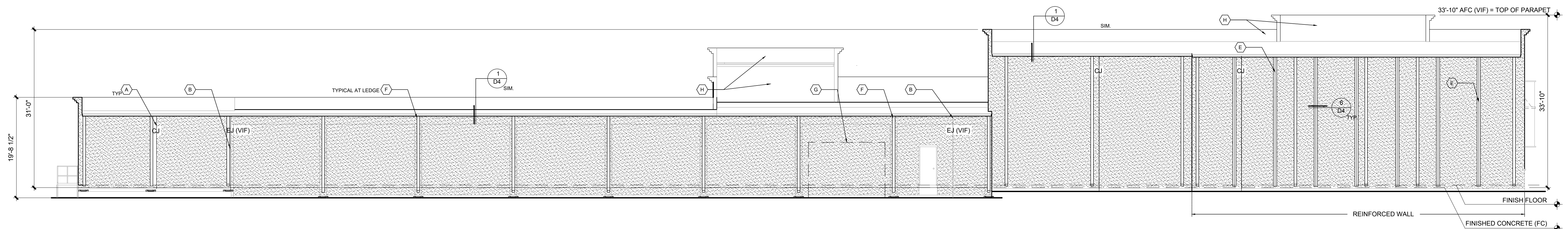


7/17/2019

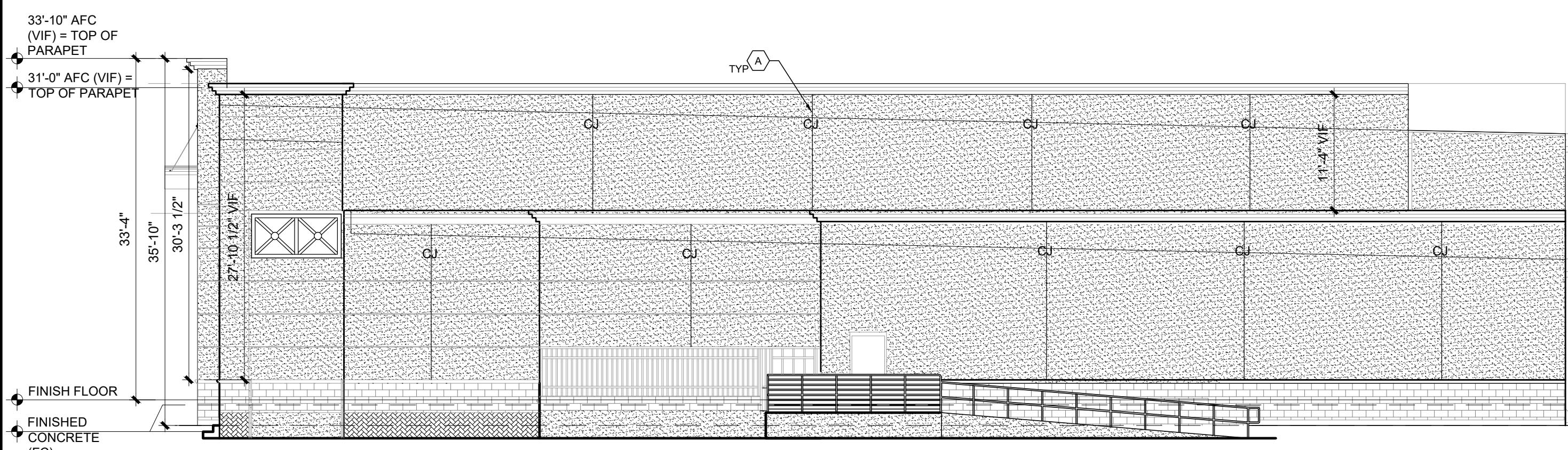
CITY OF EDINBURG  
**DUSTIN SEKULA MEMORIAL LIBRARY**  
 STRUCTURAL REPAIRS & ROOF REPLACEMENT  
 2018

**AMTECH SOLUTIONS**  
 1600 N. JACKSON RD. STE #3  
 PHARR, TEXAS 78577  
 T 956.686.3095 F 956.686.2233

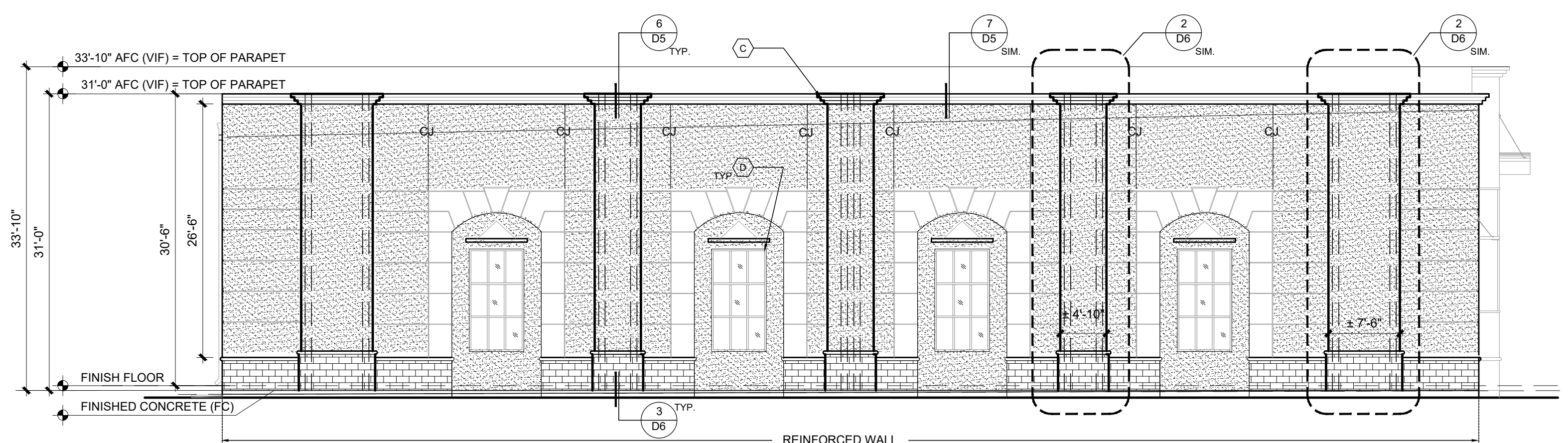
**ELEVATIONS**  
 DRAWN BY: C.G. / S.E.  
 CHECKED BY: A.H. / T.H.  
 PROJECT NO.: RGV.2018.001027  
 DATE: 7/17/2019 SCALE: SEE DRAWING



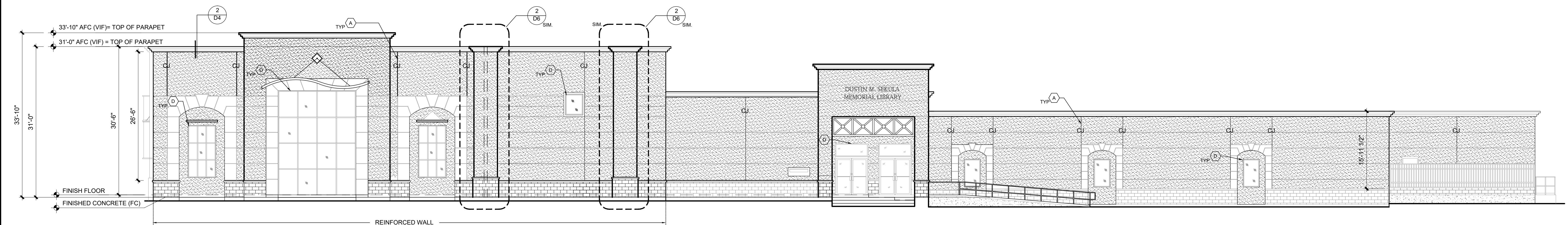
**4 NORTH ELEVATION**  
 1" = 10' - 0"



**3 EAST ELEVATION**  
 1" = 10' - 0"



**2 WEST ELEVATION**  
 1" = 10' - 0"

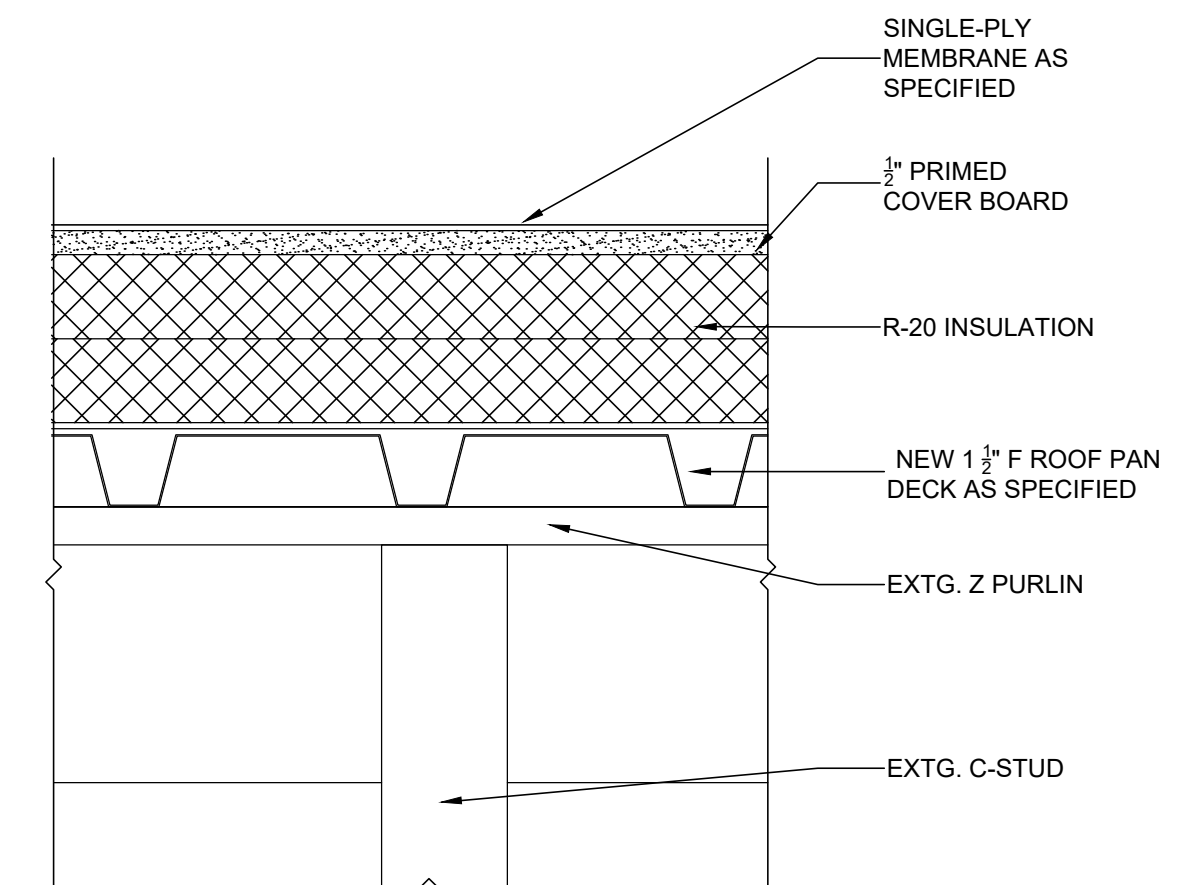
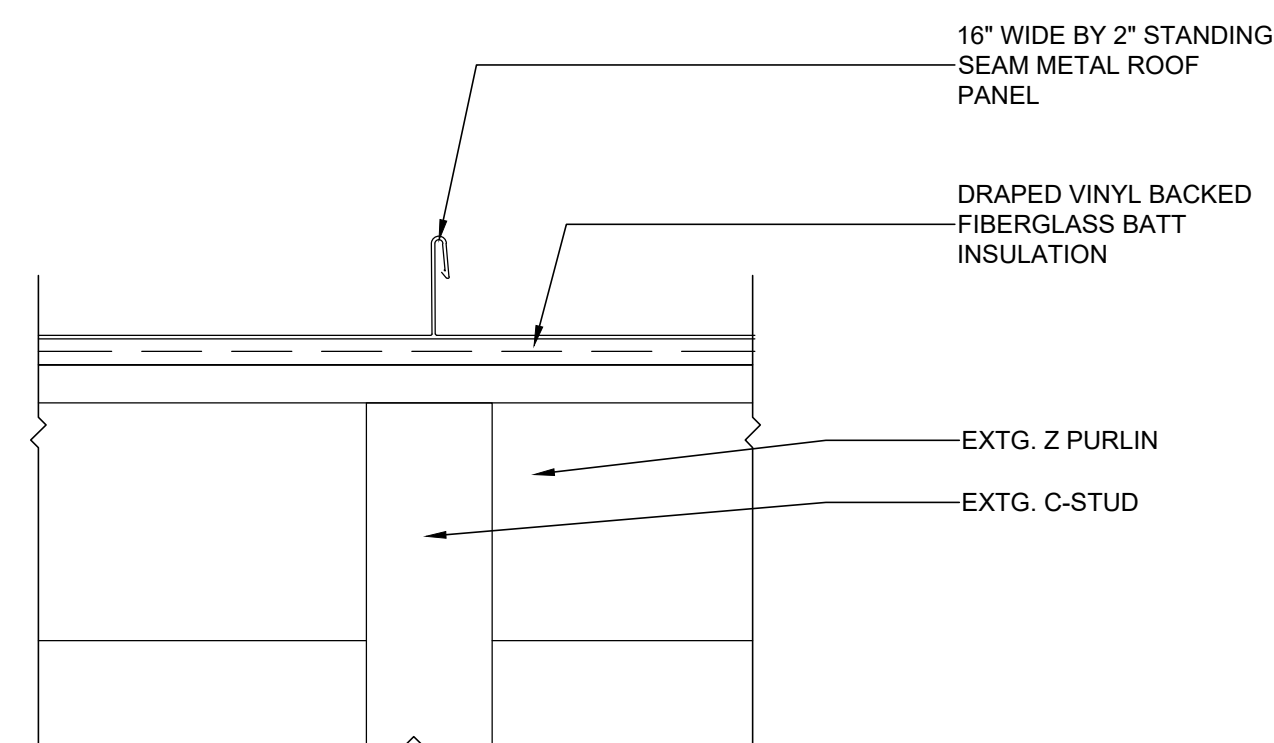
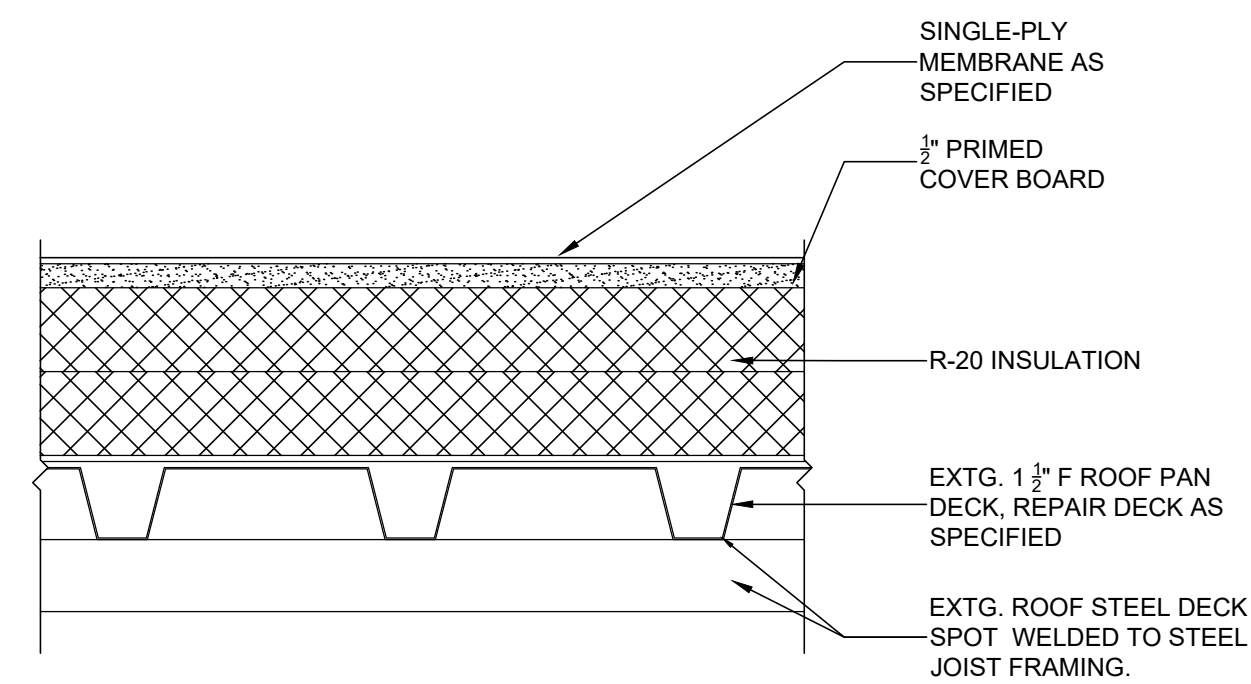
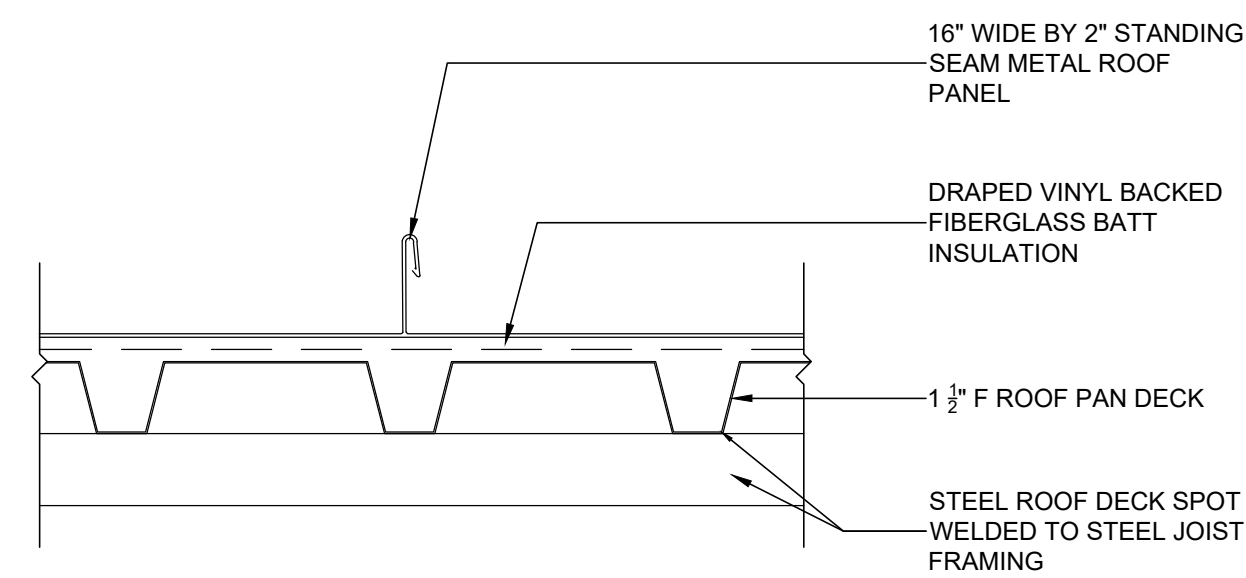


**1 SOUTH ELEVATION**  
 1" = 10' - 0"



BASE BID AT ROOF AREAS "A", "B", "C", "D", "E", "F"

BASE BID AT ROOF AREAS "B", "C"



**1** EXISTING ROOF ASSEMBLY AT ROOF AREAS "A", "D", "E", "F"  
3" = 1'-0"

**2** PROPOSED ROOF ASSEMBLY AT ROOF AREAS "A", "D", "E", "F"  
3" = 1'-0"

**3** EXISTING ROOF ASSEMBLY AT ROOF AREAS "B", "C"  
3" = 1'-0"

**4** PROPOSED ROOF ASSEMBLY AT ROOF AREAS "B", "C"  
3" = 1'-0"

**EXISTING ROOF ASSEMBLY AT ROOF AREA "A", "D", "E", "F" ITEMIZED:**

- 16-INCHES WIDE BY 2-INCHES STANDING SEAM METAL ROOF PANEL (ON TOP OF)
- COMPRESSED VINYL BACKED FIBERGLASS BATT INSULATION (ON TOP OF)
- 1 1/2-INCHES F ROOF PAN DECK (SPOT WELDED TO)
- NEW STEEL BAR JOIST FRAMING

**PROPOSED ROOF ASSEMBLY AT ROOF AREA "A", "D", "E", "F" ITEMIZED: (R-20)**

- FULLY ADHERED 60 MIL SINGLE PLY PVC MEMBRANE
  - HAVING A 3-YEAR SRI ≥ 64 AND REFLECTANCE ≥ .55 (OVER)
- 1/2" DENS DECK PRIME (OVER)
- 2 LAYERS OF 1.75-INCHES POLYISO INSULATION (OVER)
- EXISTING 1 1/2" X 22 GAUGE "F" DECK DIAPHRAGM
  - REPLACE COPING WITH 1/8" PER FOOT SLOPED SINGLE PLY MEMBRANE TO MEET ES1 REQUIREMENTS. STRUCTURALLY SUPPORT EIFS COPING TRIM WITH BLOCKING AND 1/4" PLYWOOD SECURED THROUGH TO CMU PARAPET WALL.
- CORRECT ROOFING CURBS AS IDENTIFIED IN MECHANICAL CURB PLAN AND STRUCTURAL PLANS

**EXISTING ROOF ASSEMBLY AT ROOF AREA "B" (2005 ASSEMBLY OVER LEGACY STRUCTURE AND ROOF) ITEMIZED:**

- 16-INCHES WIDE BY 2-INCHES STANDING SEAM METAL ROOF PANEL (ON TOP OF)
- DRAPED VINYL BACKED FIBERGLASS BATT INSULATION (ON TOP OF)
- NEW (5.750 X 3.250 X .0625) 16-GAUGE STEEL Z PURLINS
  - SUPPORTED BY (4.250 X 2.6250 X .0625) 16 GAUGE "C-STUD"
  - PLACED IN (4.325 X 2 X .0625) 16 GAUGE "U-TRACK" (SCREWED TO)
- ORIGINAL 28-INCHES DEEP STEEL BAR JOIST (THE BAR JOIST ALSO SUPPORTS THE FOLLOWING)
  - LEGACY- TAR AND GRAVEL BUR (OVER)
  - LEGACY- LIGHTWEIGHT INSULATING CONCRETE (PLACED ON)
  - LEGACY-CORRUGATED METAL ROOF DECK (OVER)

**EXISTING ROOF ASSEMBLY AT ROOF AREA "C" (2005 ASSEMBLY OVER LEGACY STRUCTURE AND ROOF) ITEMIZED:**

- 16-INCHES WIDE BY 2-INCHES STANDING SEAM METAL ROOF PANEL (ON TOP OF)
- DRAPED VINYL BACKED FIBERGLASS BATT INSULATION (ON TOP OF)
- NEW (5.750 X 3.250 X .0625) 16-GAUGE STEEL Z PURLINS
  - SUPPORTED BY (4.250 X 2.6250 X .0625) 16 GAUGE "C-STUD"
  - PLACED IN (4.325 X 2 X .0625) 16 GAUGE "U-TRACK" (SCREWED TO)
- ORIGINAL 48-INCHES DEEP STEEL BAR JOIST (THE BAR JOIST ALSO SUPPORTS THE FOLLOWING)
  - LEGACY- TAR AND GRAVEL BUR (OVER)
  - LEGACY- LIGHTWEIGHT INSULATING CONCRETE (PLACED ON)
  - LEGACY-CORRUGATED METAL ROOF DECK (OVER)

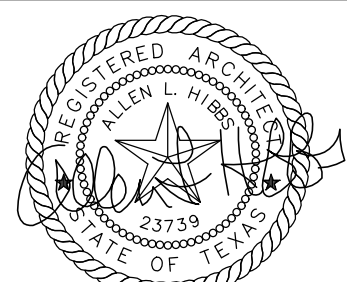
**PROPOSED ROOF ASSEMBLY AT ROOF AREA "B" (2005 ASSEMBLY OVER LEGACY STRUCTURE AND ROOF) ITEMIZED: (R-20)**

- REMOVE AND DISPOSE OF ORIGINAL "TAR AND GRAVEL" FROM ROOF PLENUM. LIGHTWEIGHT INSULATING CONCRETE AND CORRUGATED STEEL DECK CAN REMAIN.
- FULLY ADHERED 60 MIL SINGLE PLY PVC MEMBRANE
  - HAVING A 3-YEAR SRI ≥ 64 AND REFLECTANCE ≥ .55 (OVER)
- 1/2" DENS DECK PRIME (OVER)
- 2 LAYERS OF 1.75-INCHES POLYISO INSULATION (OVER)
- NEW 1 1/2" X 22 GAUGE "F" DECK DIAPHRAGM SCREWED TO EXISTING Z-PURLINS
  - #12 TEK SCREWS AT 36/4 PATTERN TO EXISTING Z-PURLIN.
- NEW ADDED "C-STUD" POST AT EVERY VERTICAL WEB MEMBER OF BAR JOIST BELOW
- NEW ADDED "U-TRACK" FOR "C-STUD" TO CONNECT AT EVERY VERTICAL WEB MEMBER FOR BAR JOIST TO DISTRIBUTE LOAD.
- REPLACE COPING WITH 1/8" PER FOOT SLOPED SINGLE PLY MEMBRANE TO MEET ES1 REQUIREMENTS. STRUCTURALLY SUPPORT EIFS COPING TRIM WITH BLOCKING AND 1/4" PLYWOOD SECURED THROUGH TO CMU PARAPET WALL.
- CORRECT ROOFING CURBS AS IDENTIFIED IN APPENDIX H - FIGURE 7 - ROOF CURB PLAN.

**PROPOSED ROOF ASSEMBLY AT ROOF AREA "C" (2005 ASSEMBLY OVER LEGACY STRUCTURE AND ROOF) ITEMIZED: (R-20)**

- REMOVE AND DISPOSE OF ORIGINAL "TAR AND GRAVEL" FROM ROOF PLENUM. LIGHTWEIGHT INSULATING CONCRETE AND CORRUGATED STEEL DECK CAN REMAIN.
- FULLY ADHERED 60 MIL SINGLE PLY PVC MEMBRANE
  - HAVING A 3-YEAR SRI ≥ 64 AND REFLECTANCE ≥ .55 (OVER)
- 1/2" DENS DECK PRIME (OVER)
- 2 LAYERS OF 1.75-INCHES POLYISO INSULATION (OVER)
- NEW 1 1/2" X 22 GAUGE "F" DECK DIAPHRAGM SCREWED TO EXISTING Z-PURLINS
  - #12 TEK SCREWS AT 36/4 PATTERN TO EXISTING Z-PURLIN.
- NEW ADDED "C-STUD" POST AT EVERY VERTICAL WEB MEMBER OF BAR JOIST BELOW
- NEW ADDED "U-TRACK" FOR "C-STUD" TO CONNECT AT EVERY VERTICAL WEB MEMBER FOR BAR JOIST TO DISTRIBUTE LOAD.
- REPLACE COPING WITH 1/8" PER FOOT SLOPED SINGLE PLY MEMBRANE TO MEET ES1 REQUIREMENTS. STRUCTURALLY SUPPORT EIFS COPING TRIM WITH BLOCKING AND 1/4" PLYWOOD SECURED THROUGH TO CMU PARAPET WALL.
- CORRECT ROOFING CURBS AS IDENTIFIED IN MECHANICAL CURB PLAN AND STRUCTURAL PLANS

REVISIONS:



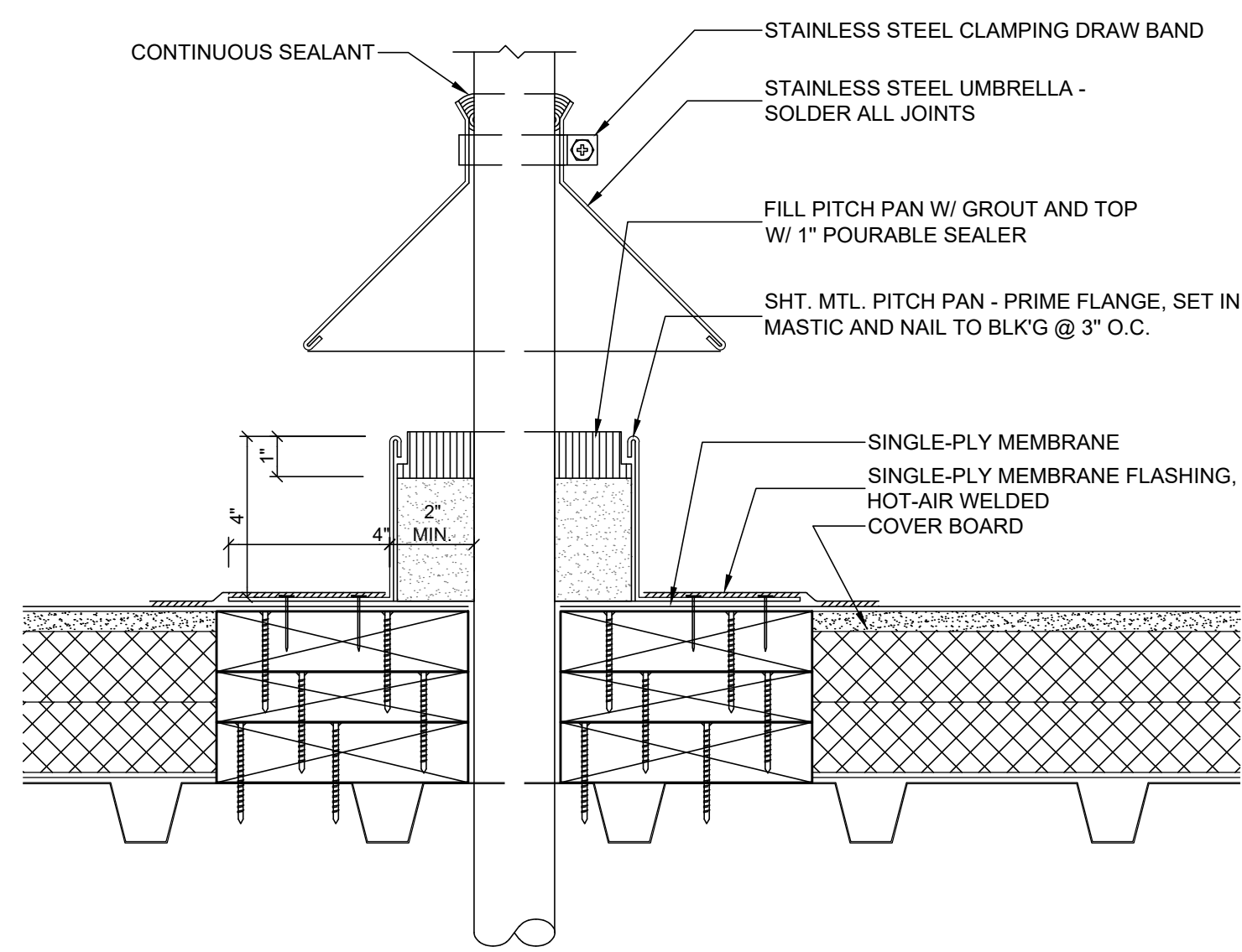
7/17/2019

CITY OF EDINBURG  
DUSTIN SEKULA MEMORIAL LIBRARY  
STRUCTURAL REPAIRS & ROOF REPLACEMENT  
2018

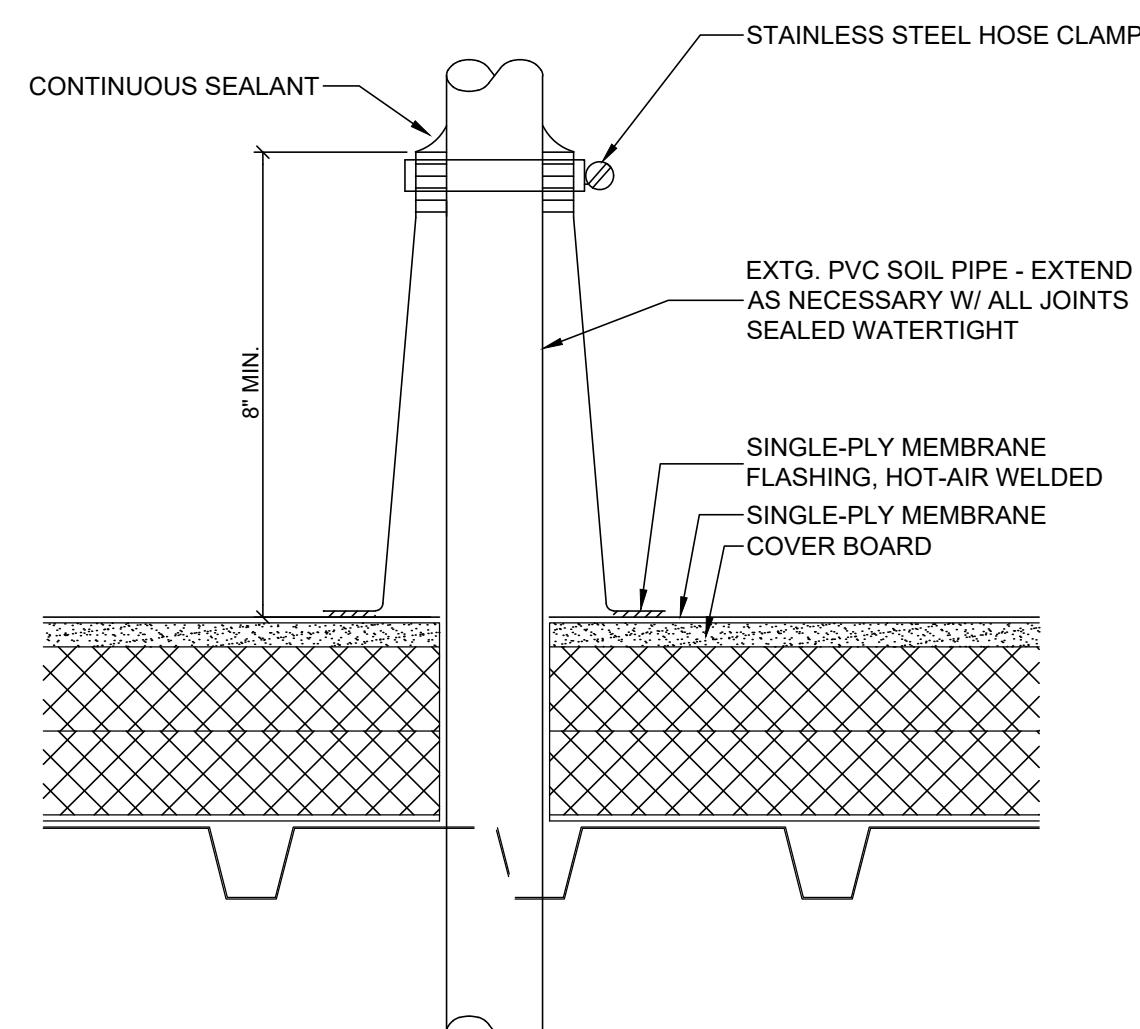
**AMTECH SOLUTIONS**  
1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577  
956.686.3095 F 956.686.2233

**DETAILS**  
DRAWN BY: C.G. / S.E.  
CHECKED BY: A.H. / T.H.  
PROJECT NO.: RGV.2018.001027  
DATE: 7/17/2019 SCALE: SEE DRAWING

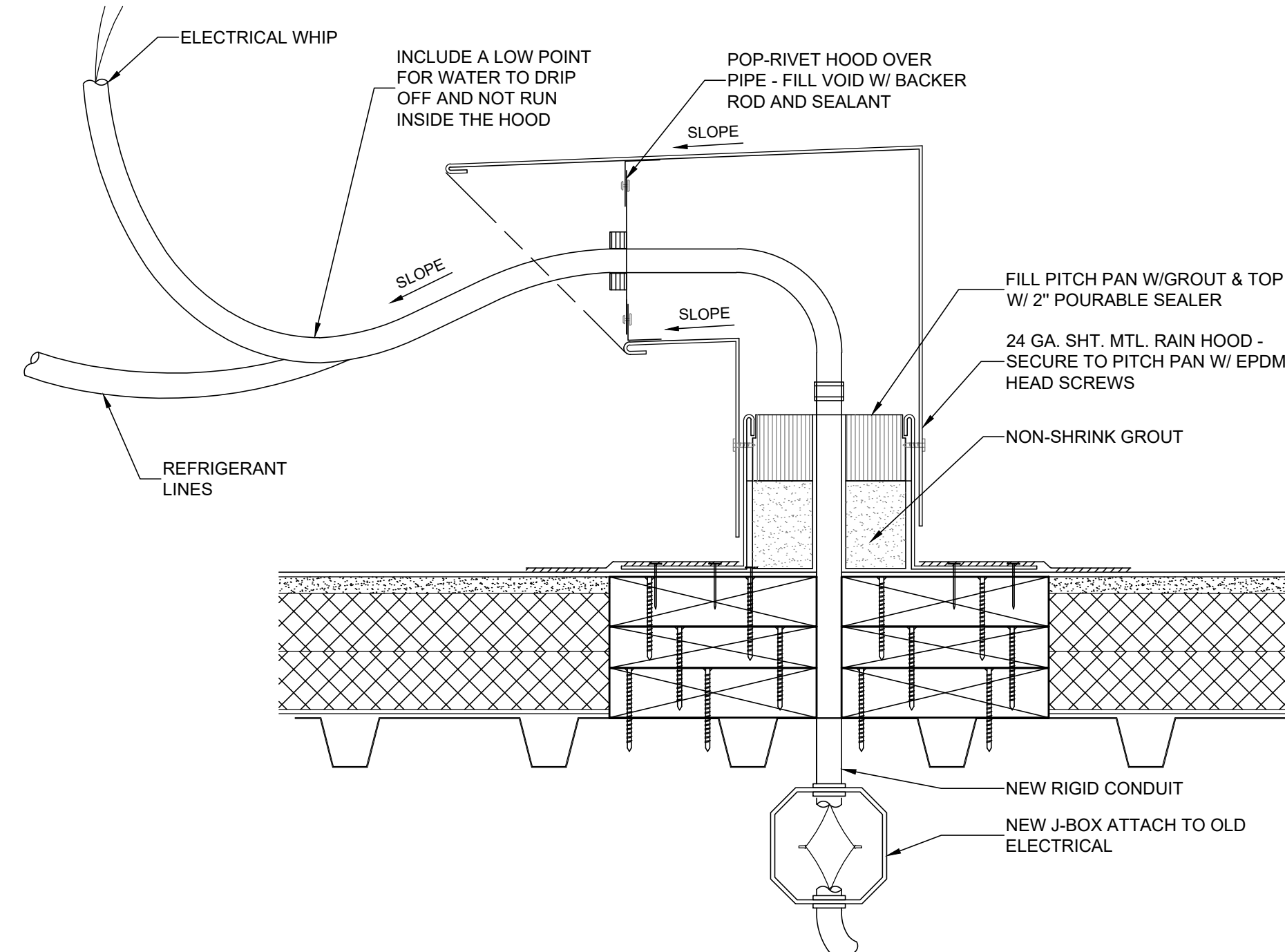




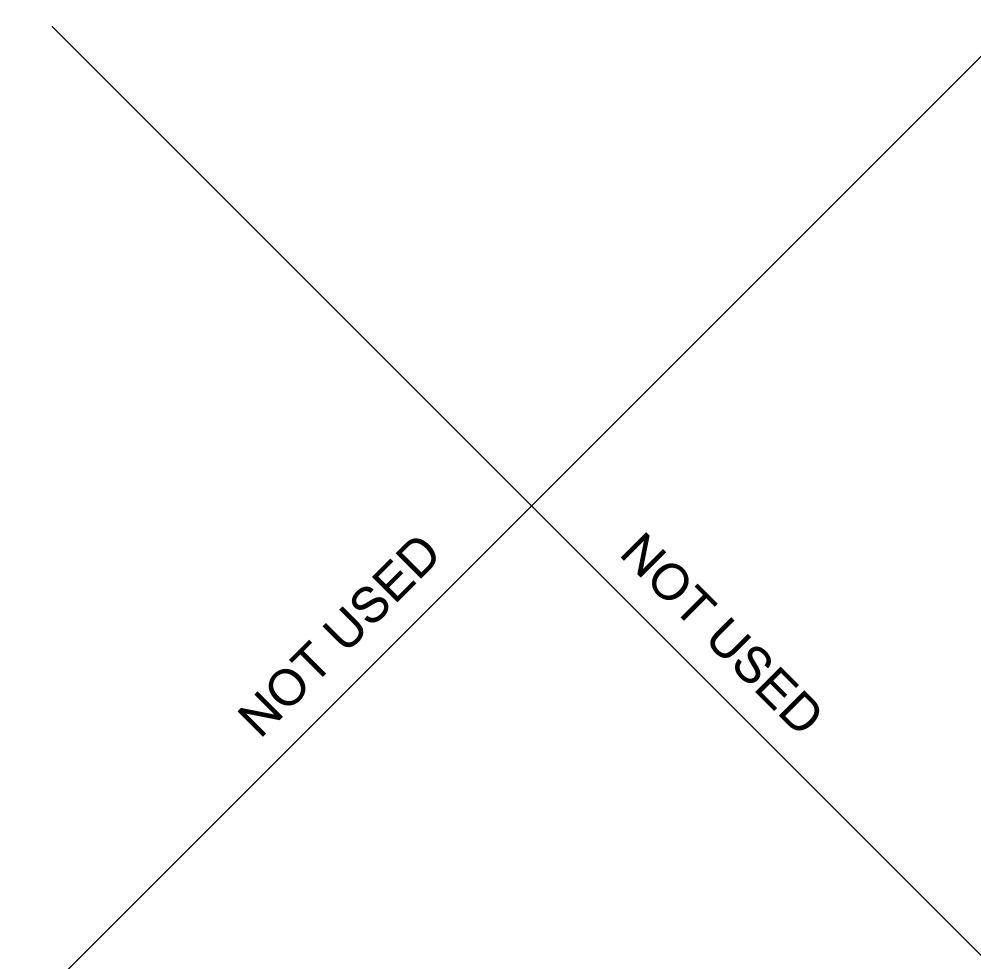
**1** PITCH PAN  
NOT TO SCALE



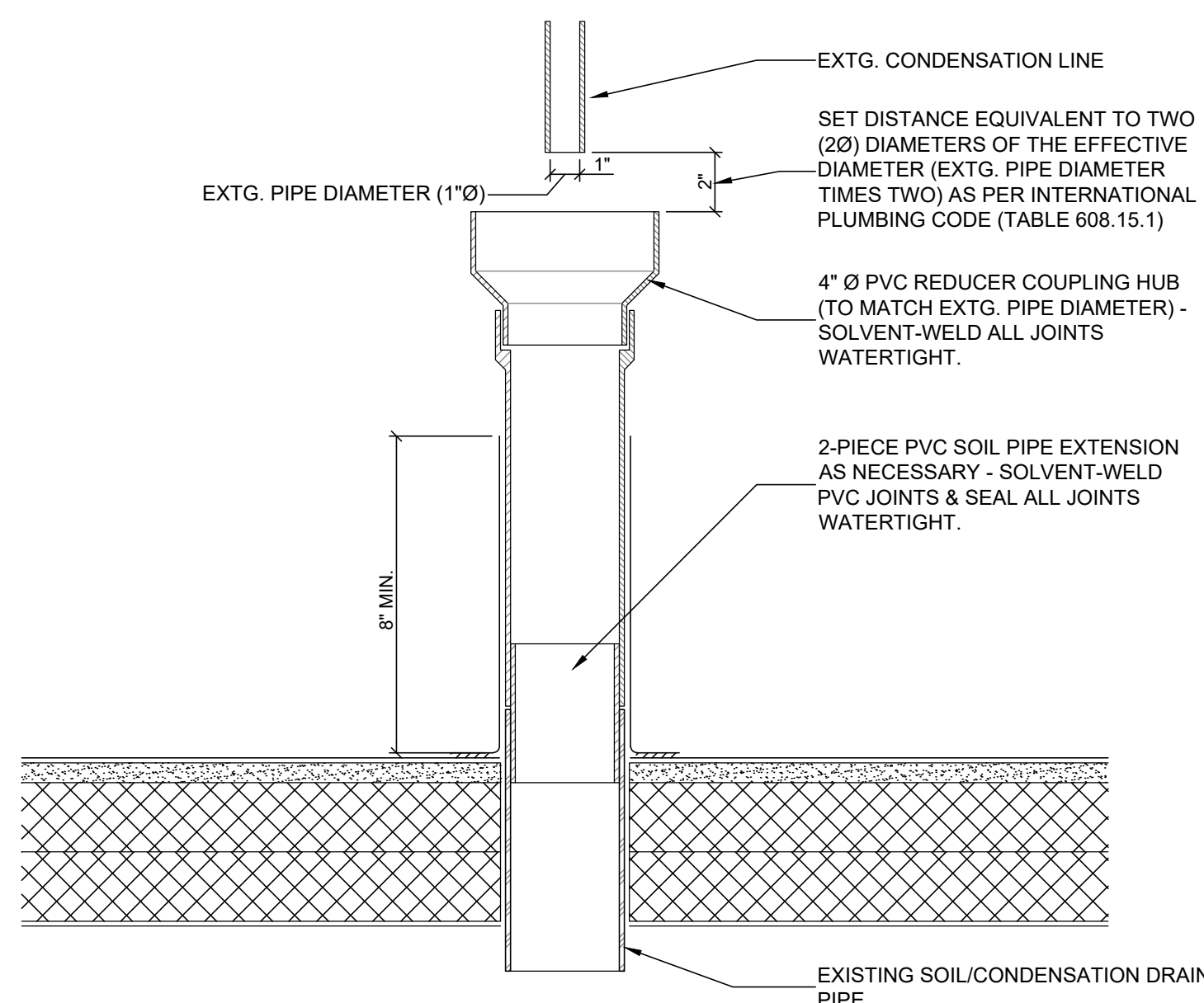
**2** PIPE PENETRATION  
3\"/>



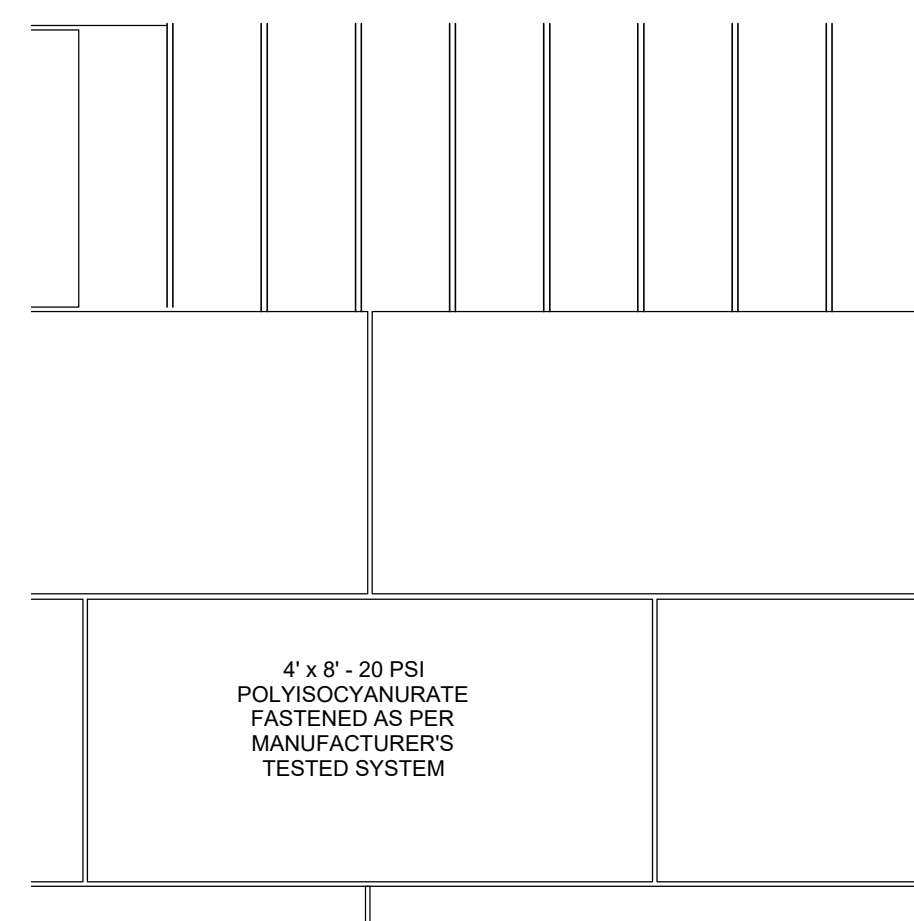
**3** ELECTRICAL / REFRIGERANT PENETRATION  
3\"/>



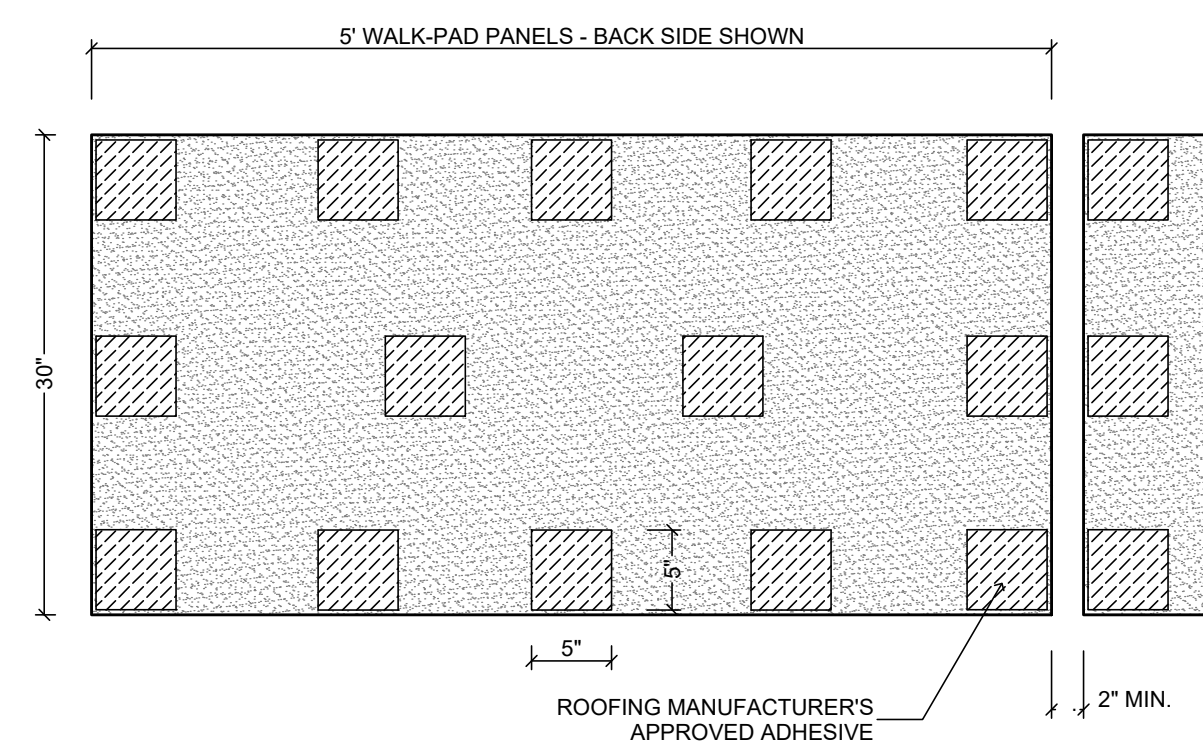
**4** NOT USED



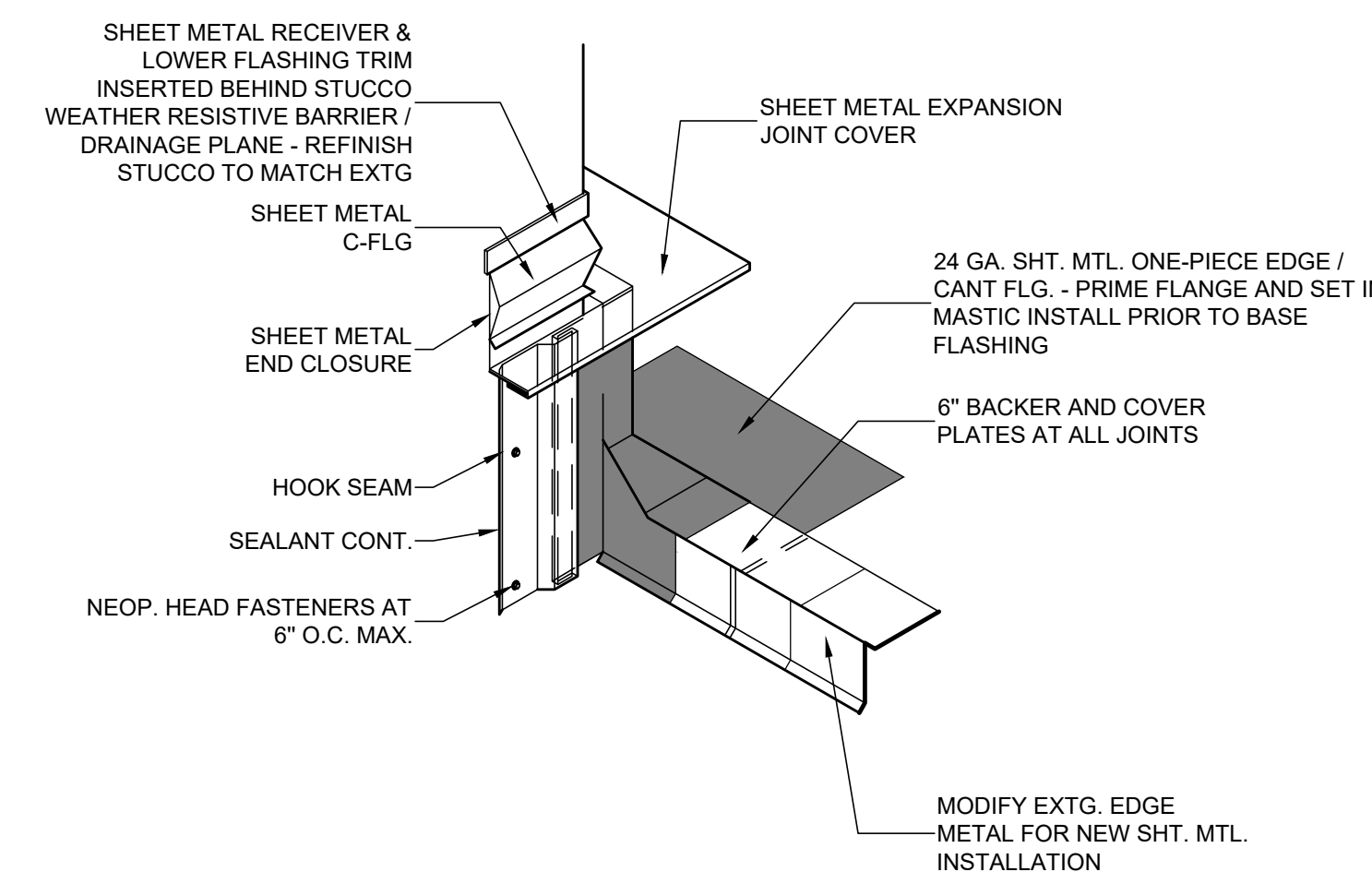
**5** SOIL PIPE CONDENSATE DRAIN  
3\"/>



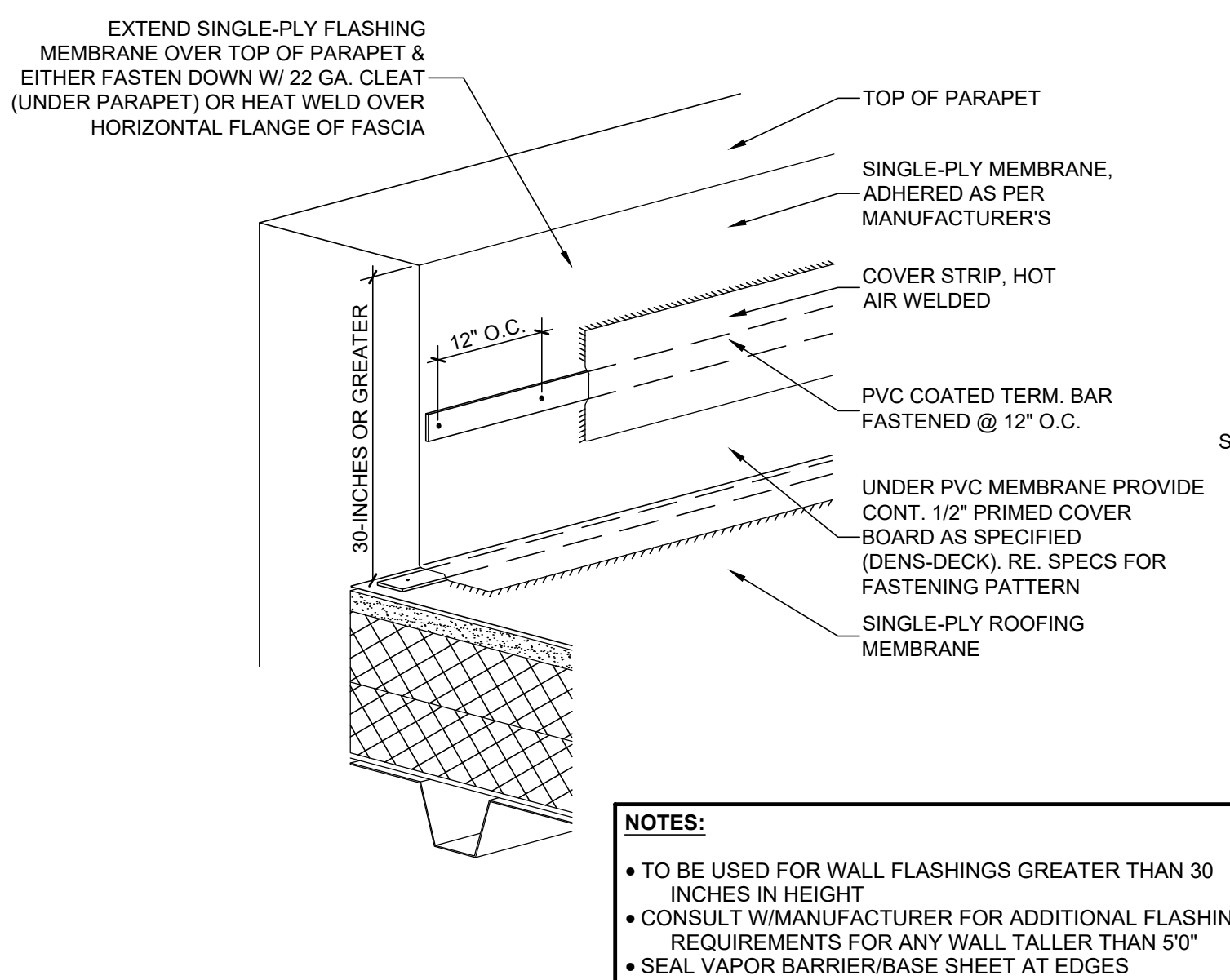
**6** POLYISO BOARD LAYOUT  
NOT TO SCALE



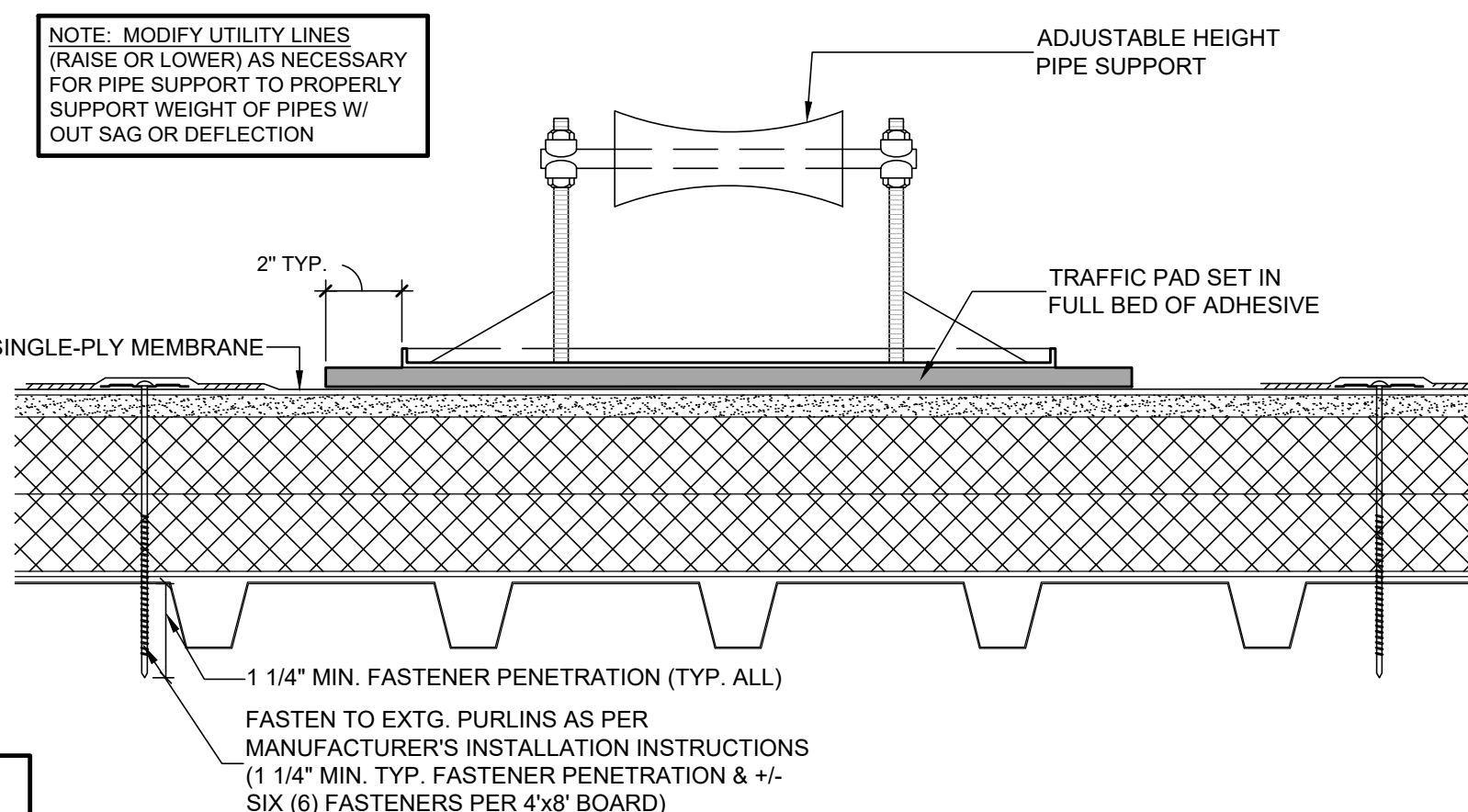
**7** TRAFFIC PAD APPLICATION  
NOT TO SCALE



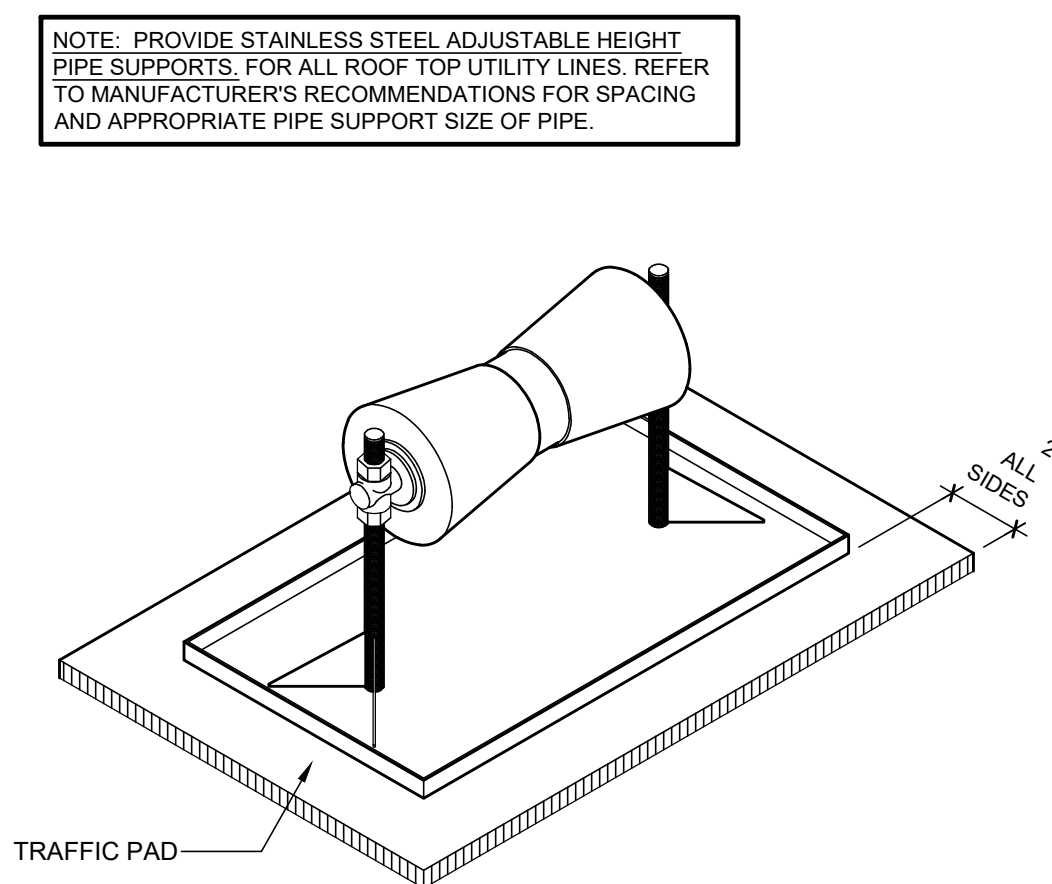
**8** VERTICAL FLASHING TERMINATION TRIM @ EXP. JT.  
NOT TO SCALE



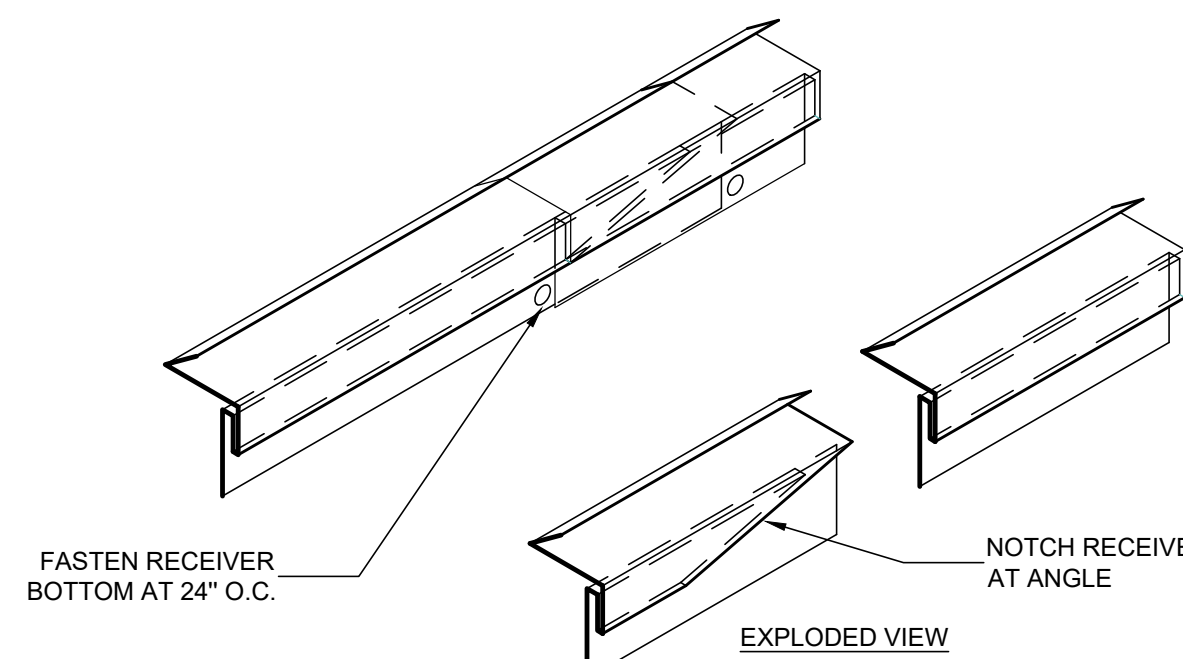
**9** WALL BASE / PARAPET FLASHING SUPPORT  
NOT TO SCALE



**10** ADJUSTABLE PIPE SUPPORT  
NOT TO SCALE



**11** PIPE SUPPORT  
NOT TO SCALE



**12** FLASHING RECEIVER  
NOT TO SCALE

REVISIONS:


7/17/2019

CITY OF EDINBURG

**DUSTIN SEKULA MEMORIAL LIBRARY**

**STRUCTURAL REPAIRS & ROOF REPLACEMENT**

2018

**AMTECH SOLUTIONS**

1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577

T 956.686.3095 F 956.686.2233

GENERAL DETAILS

DRAWN BY: C.G. / S.E.

CHECKED BY: A.H. / T.H.

PROJECT NO.: RGV.2018.001027

DATE: 7/17/2019 SCALE: SEE DRAWING

11 OF 23 **D1**



**INSTALLATION NOTES:**

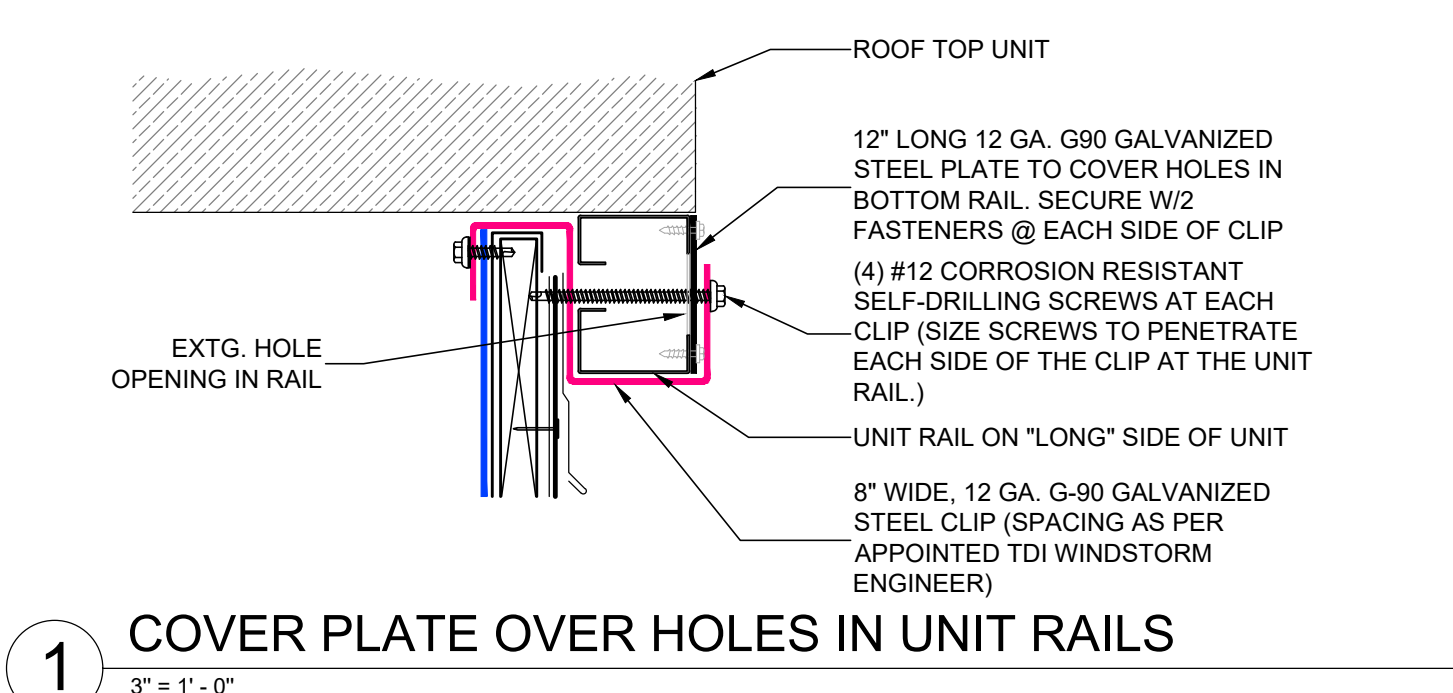
1. BASE ANGLE LOCATIONS ARE TO MATCH THE LOCATIONS OF THE CLIPS AND PLATES THAT SECURE THE AC UNIT / ADAPTER CURB TO THE EQUIPMENT CURBS TO PROVIDE A CONTINUOUS LOAD PATH.
2. CLIPS / PLATES / BASE ANGLES ARE TO BE INSTALLED ONLY ON THE LONG SIDES OF THE UNITS.
3. INSTALL THE EQUIPMENT SUPPORTS PARALLEL TO THE ROOF SLOPE, OR IF NOT POSSIBLE, PROVIDE CRICKETS TO DIRECT WATER AROUND THE SUPPORTS.

**PRODUCT NOTES:**

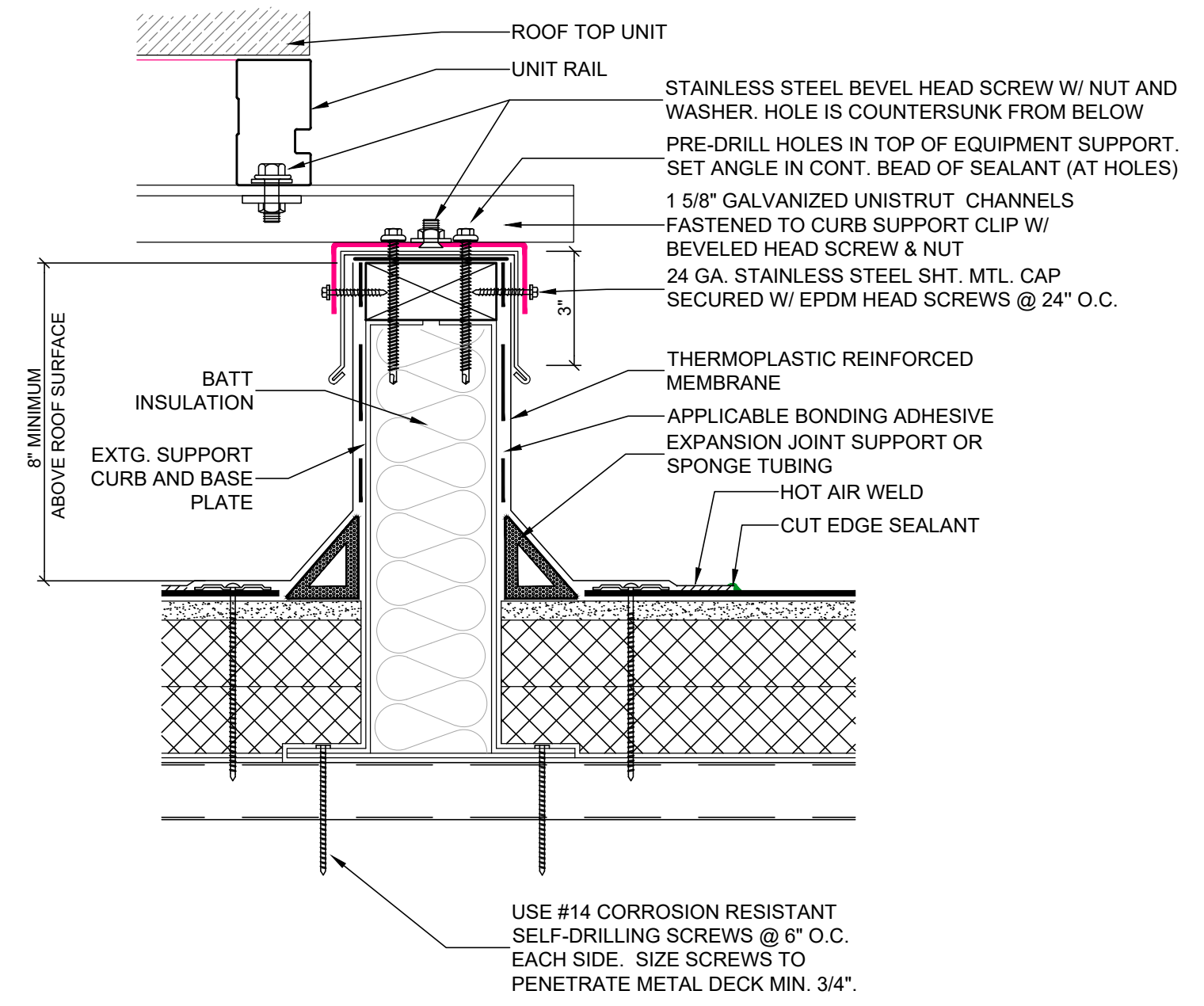
1. CLIP SIZES ARE FOR BIDDING PURPOSES ONLY. ACTUAL SIZES MUST BE COORDINATED WITH THE REPLACEMENT UNITS, THE NEW ADAPTER CURBS, EXISTING ADAPTER CURBS, THE EXISTING CURBS AND THE NEW PARTITIONED CURB EXTENSIONS. SHOP DRAWINGS FOR ALL CLIPS MUST BE SUBMITTED FOR COORDINATION AND APPROVAL PRIOR TO INSTALLATION.
2. CLIP SPACINGS ARE FOR BIDDING PURPOSES ONLY. INSTALLATION SPACINGS WILL BE CALCULATED BASED ON THE SIZE AND WEIGHT OF THE ACTUAL EQUIPMENT USED, THE NEW ADAPTER CURBS, EXISTING ADAPTER CURBS, THE EXISTING CURBS AND THE NEW PARTITIONED CURB EXTENSIONS. BID SPACINGS WILL BE VERIFIED BY STRUCTURAL ENGINEER USING SUBMITTAL INFORMATION AND FINAL SPACINGS WILL BE ISSUED FOR INSTALLATION. OVERAGE OR CREDIT WILL BE CALCULATED BASED ON SHOP DRAWINGS. ADDITIONS OR REDUCTIONS TO THE QUANTITIES BID WILL BE CALCULATED BY UNIT. PRICING INCLUDED IN THE PROPOSAL. THE COST OF ADDITIONAL QUANTITIES WILL BE PAID FOR WITH THE BETTERMENT ALLOWANCE. CREDITS TO THE OWNER FOR A REDUCTION IN QUANTITY WILL BE HANDLED BY CHANGE ORDER.
3. IF MULTIPLE CURBS ADAPTERS ARE USED, PROVIDE ADAPTER CLIPS FOR EACH ADAPTER, SPACED AS SCHEDULED.
4. CLIPS AND PLATES SHALL BE MANUFACTURED FROM 12GA. G-90 GALVANIZED STEEL PLATE, PRE-SHAPED AND PREPUNCHED FOR FASTENER LOCATIONS.

**GENERAL NOTES:**

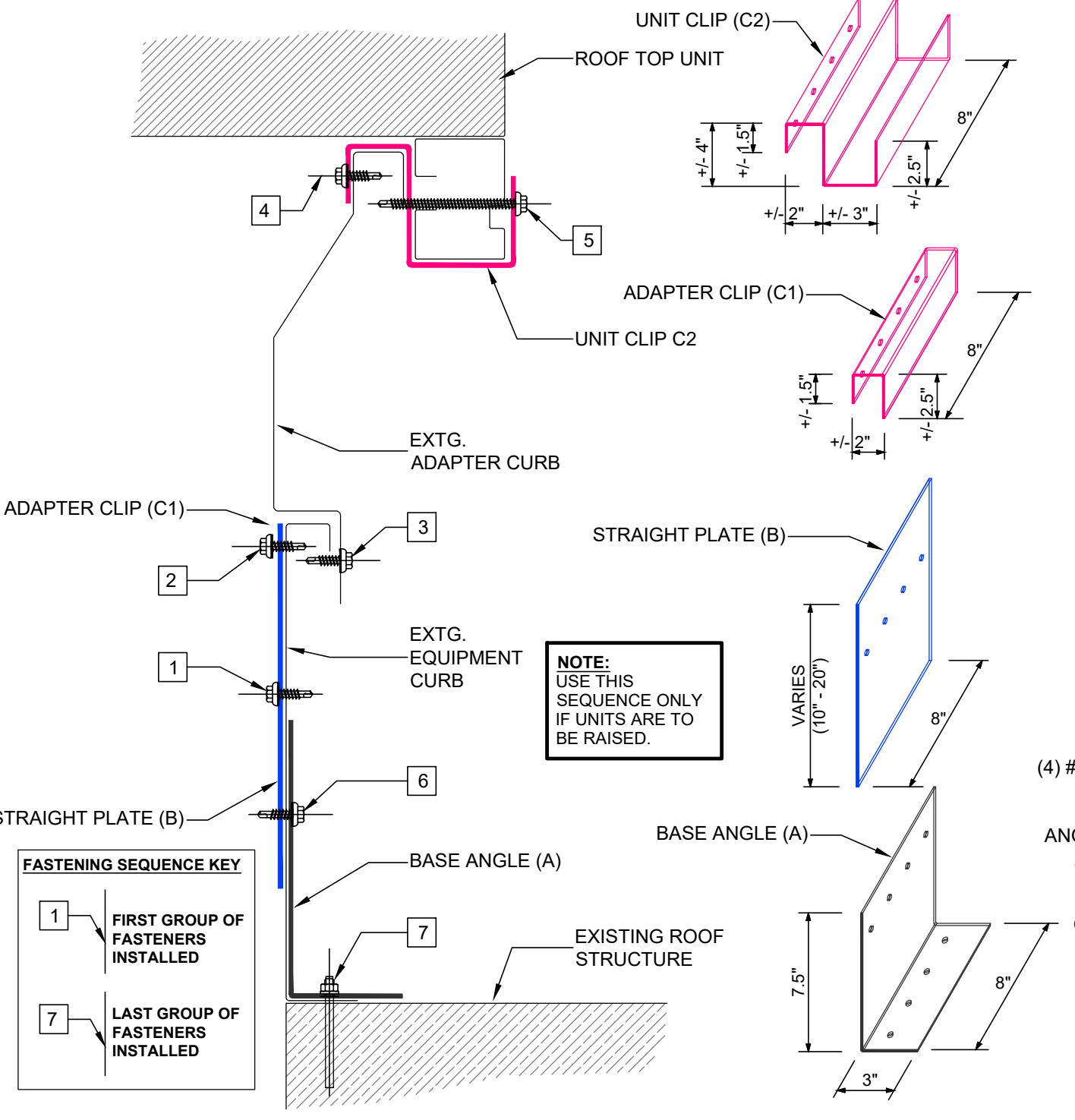
1. CLIP QUANTITIES WILL BE DETERMINED BY DIVIDING THE CURB LENGTH (THE LENGTH OF THE LONGEST SIDE) BY THE MAX ALLOWABLE SPACING OF THE CLIPS (20") AND ROUNDING UP TO THE NEAREST WHOLE NUMBER. ROUNDING IS ALWAYS UP - NEVER DOWN. THIS WILL RESULT IN APPROPRIATE CLIP SPACINGS THAT WILL ALWAYS BE LESS THAN THE MAX ALLOWABLE.
2. EACH UNIT WILL RECEIVE CLIPS ON (2) SIDES - (THE LONGEST SIDES). PLEASE NOTE, IF THERE IS NO EXISTING ADAPTER CURB, THERE WILL BE NO ADAPTER CLIP COUNT. HOWEVER, IF NO ADAPTER IS CURRENTLY PRESENT, BUT WILL BE NEEDED TO PROPERLY ADAPT THE REPLACEMENT UNIT, ADAPTER CLIPS FOR THIS ADAPTER CURB MUST ALSO BE PROVIDED IN THE BASE BID. IF CLIP FASTENERS LAND OVER OPENINGS IN THE BOTTOM RAIL, INSTALL A 12GA CONTINUITY PLATE OVER THE HOLES AS PER DETAIL 1/02 (THIS PAGE, RIGHT OF THIS NOTE).
3. STRAIGHT PLATES ARE INSTALLED TO PROVIDE LOAD PATH CONTINUITY FROM EITHER A UNIT CLIP OR ADAPTER CLIP TO THE BASE ANGLE. THE QUANTITY AND LOCATION OF THE STRAIGHT PLATE IS TO MATCH THE QUANTITY AND LOCATION OF THE CLIPS.
4. EACH UNIT CURB WILL RECEIVE BASE ANGLES ON (2) SIDES - (THE LONGEST SIDES). THE BASE ANGLE LOCATIONS ARE TO MATCH THE LOCATIONS OF THE CLIPS AND PLATES THAT SECURE THE AC UNIT / ADAPTER CURB TO THE EQUIPMENT CURBS.
5. REPAIR, PREP AND COLD GALVANIZE ALL CURB ADAPTER CORROSION. REPLACE ALL ADAPTER MOUNTED JUNCTION BOXES WITH NEW AND ALL CONDUITS TO AND FROM THE JUNCTION BOXES WITH NEW.
6. REROUTE ANY ELECTRICAL LINES, IF THEY ARE CURRENTLY RUNNING THROUGH CURB/CURB ADAPTERS AND RELOCATE THE TO RUN THROUGH ROOF PENETRATION TO FACILITATE INSTALLATION OF CURB REINFORCEMENT AND FLASHING.
7. INSTALL ADJUSTABLE PIPE SUPPORTS ON NEW TRAFFIC PADS, OVER ALL MEP PIPES, CONDUITS, CONDENSATE LINES, ETC.
8. REF. TO STRUCTURAL FOR ATTACHMENT TO EXISTING STRUCTURAL SYSTEM.
9. ALL CURBS MUST HAVE A MIN. FLASHING HEIGHT OF 8". FIELD VERIFY ALL CURBS AND, IF ANY FINAL CURB HEIGHT MAY END UP UNDER 8", EITHER SECURE WRITTEN ACCEPTANCE FROM MEMBRANE MANUFACTURER AS ACCEPTABLE AND WARRANTABLE, OR RAISE IT ACCORDINGLY. NO EXCEPTIONS.



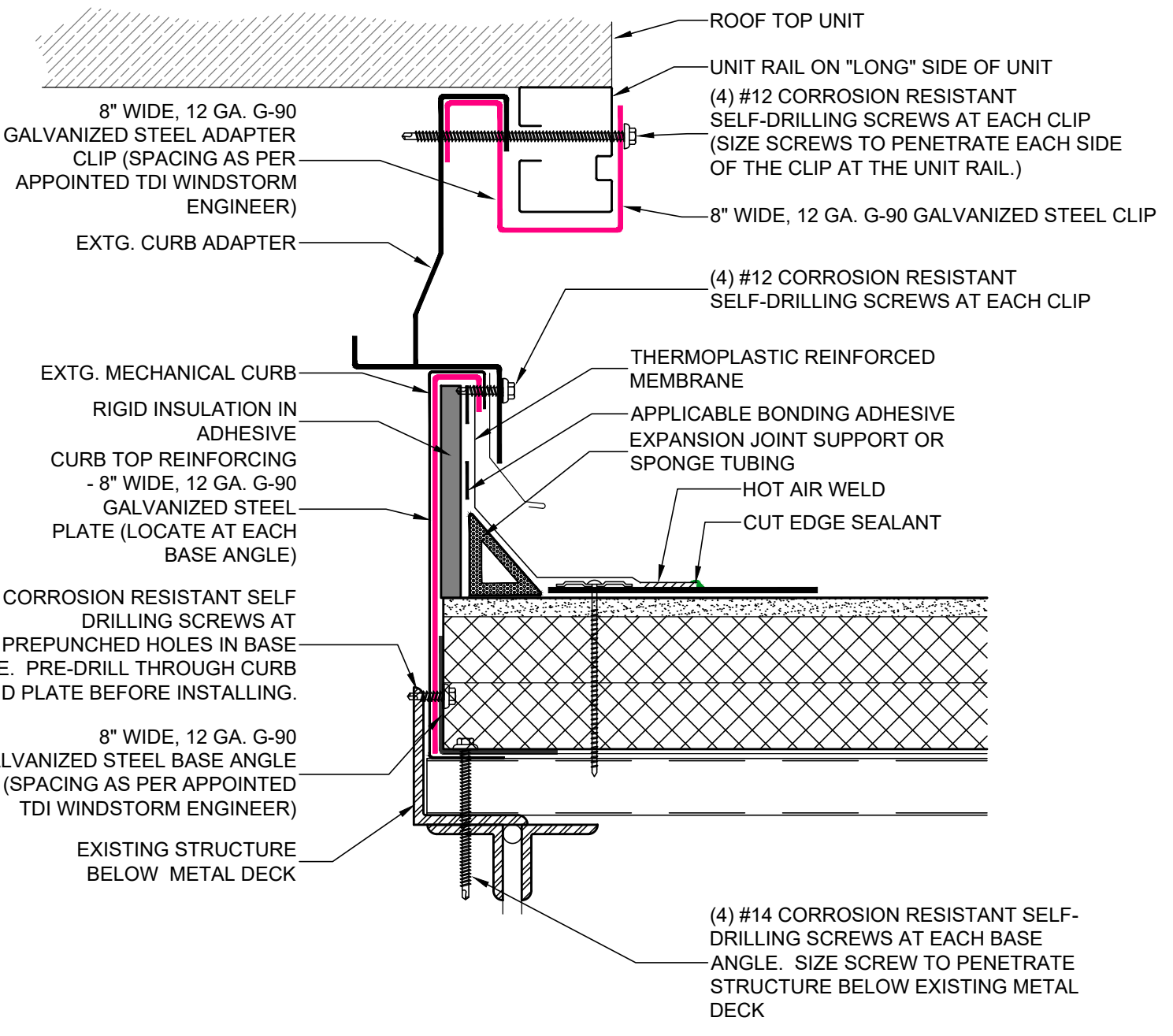
**1 COVER PLATE OVER HOLES IN UNIT RAILS**  
3" = 1'-0"



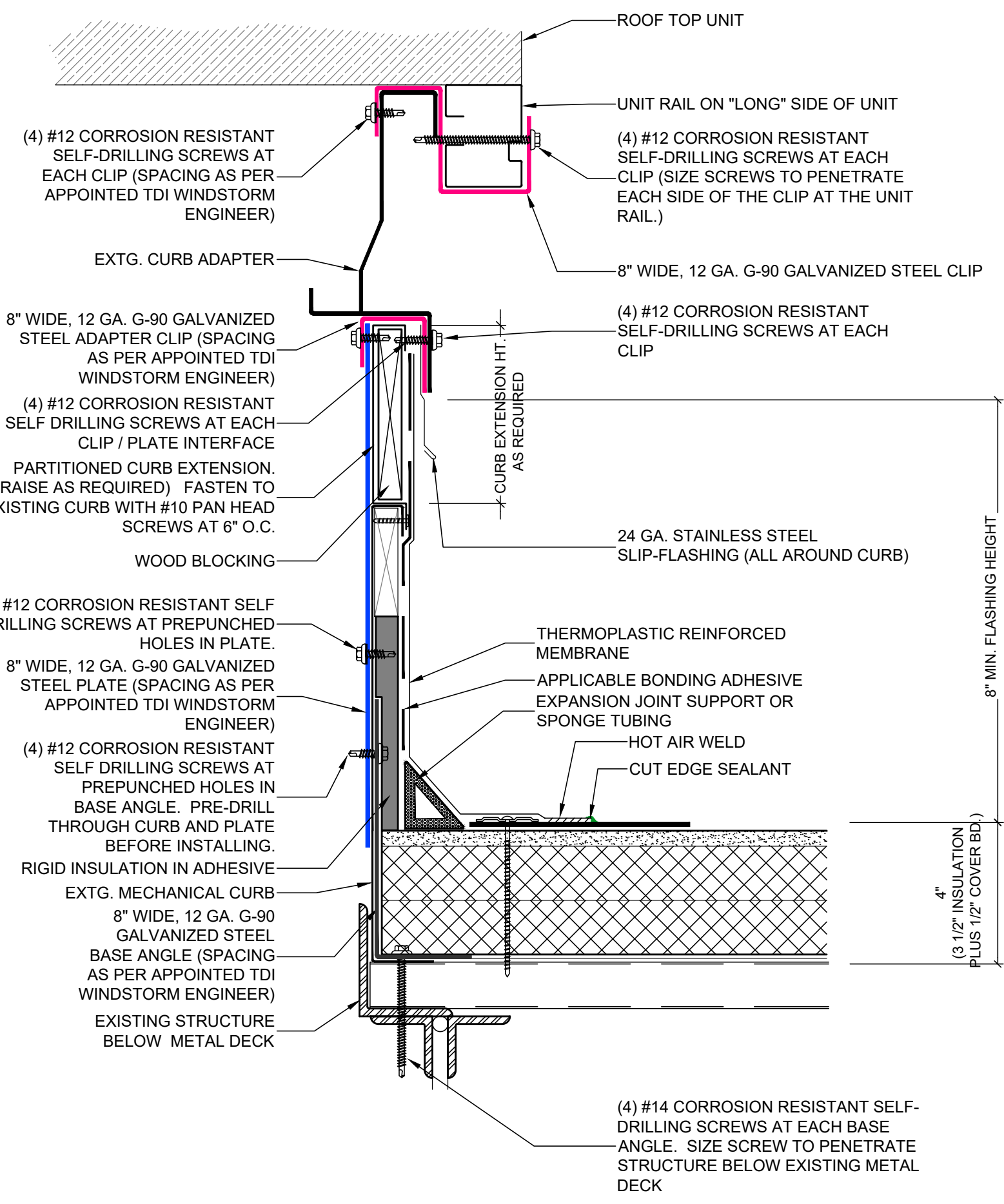
**2 EXISTING EQUIPMENT SUPPORT**  
3" = 1'-0"



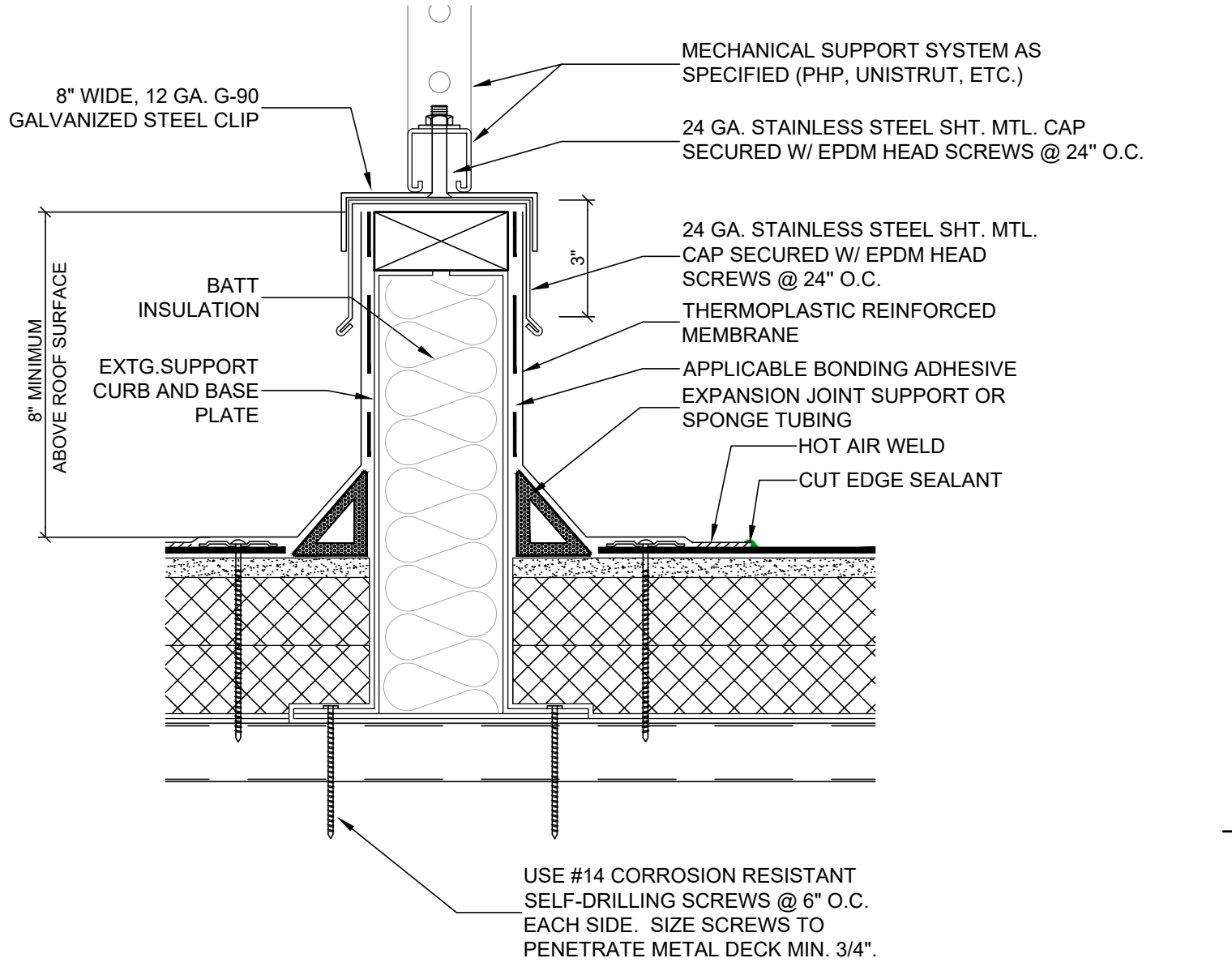
**3 EQUIPMENT ATTACHMENT - UNIT TO ADAPTER CURB**  
3" = 1'-0"



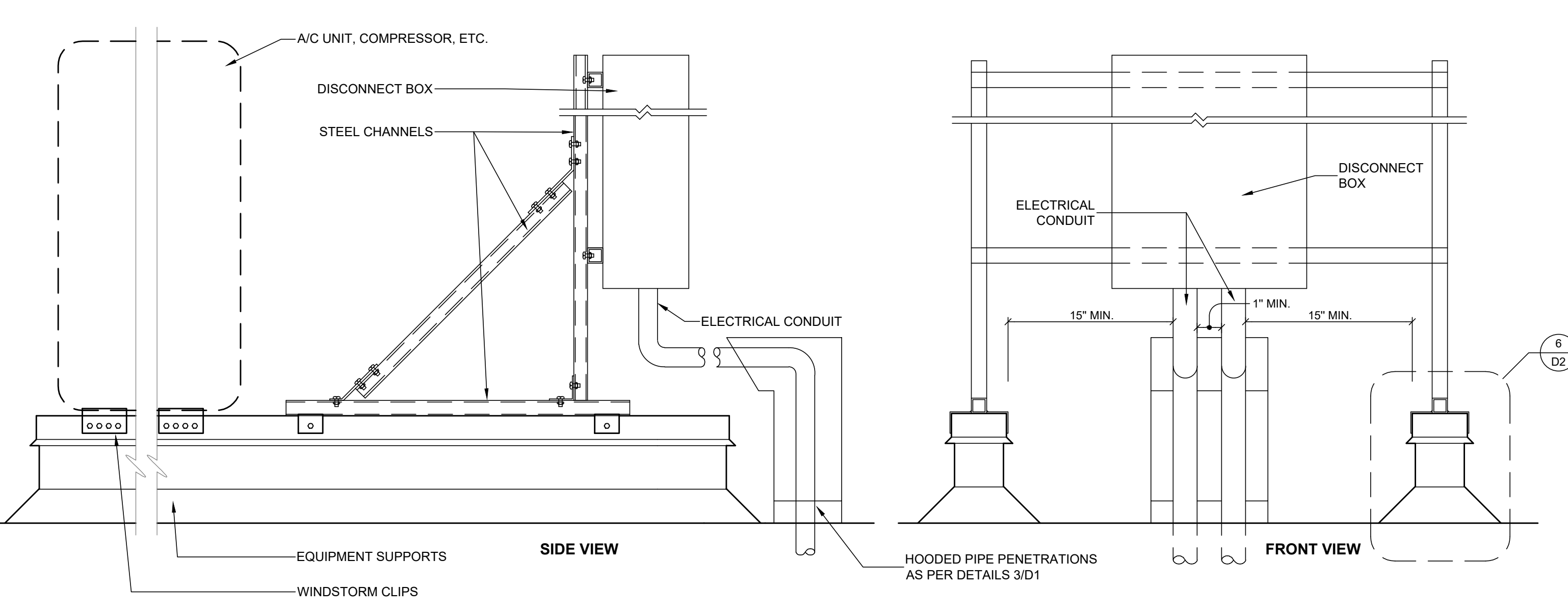
**4 REINFORCED EXTG. CURB w/ADAPTER @ METAL DECK w/LWC**  
3" = 1'-0"



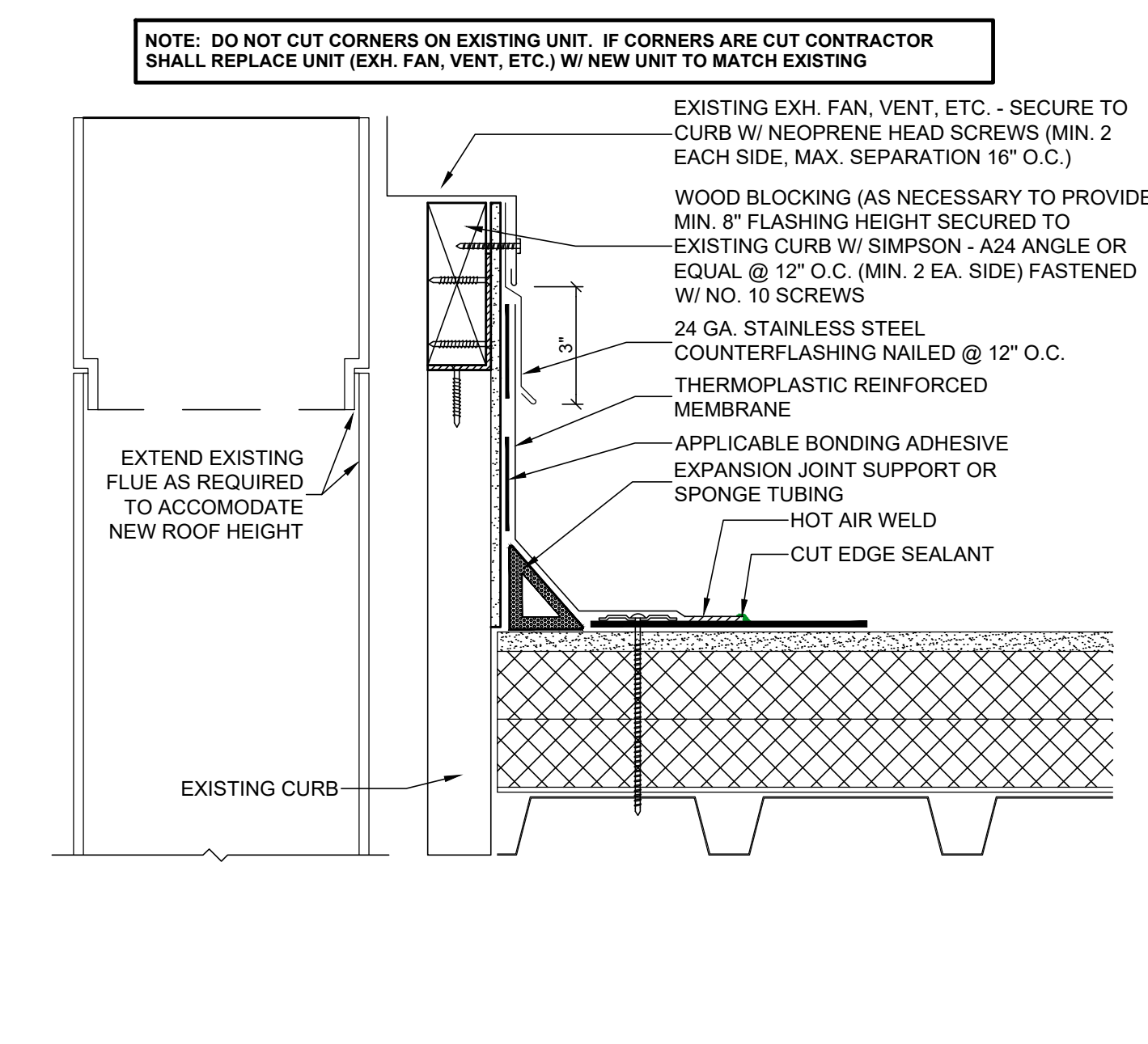
**5 REINFORCED RAISED CURB w/ADAPTER @ METAL DECK w/LWC**  
3" = 1'-0"



**6 EXISTING EQUIPMENT SUPPORT**  
3" = 1'-0"



**7 ELECTRICAL BOX SUPPORT**  
NOT TO SCALE



**8 MECHANICAL CURB**  
3" = 1'-0"

REVISIONS:


7/17/2019

CITY OF EDINBURG

**DUSTIN SEKULA MEMORIAL LIBRARY**

**STRUCTURAL REPAIRS & ROOF REPLACEMENT**

2018

**AMTECH SOLUTIONS**

1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577

956.686.3095

**CURB DETAILS**

DRAWN BY: C.G. / S.E.

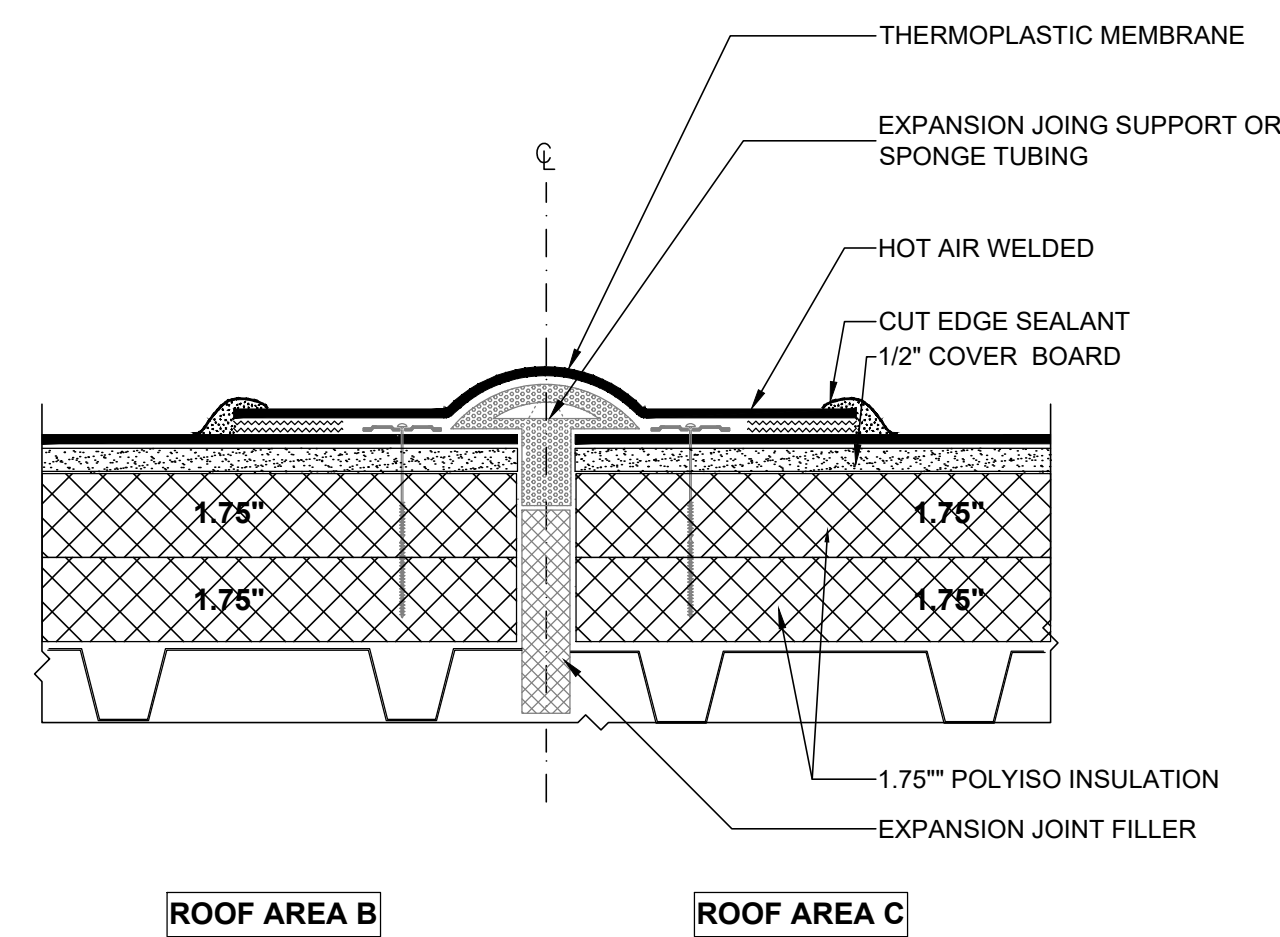
CHECKED BY: A.H. / T.H.

PROJECT NO.: RGV.2018.001027

DATE: 7/17/2019 SCALE: SEE DRAWING

12 OF 23 **D2**

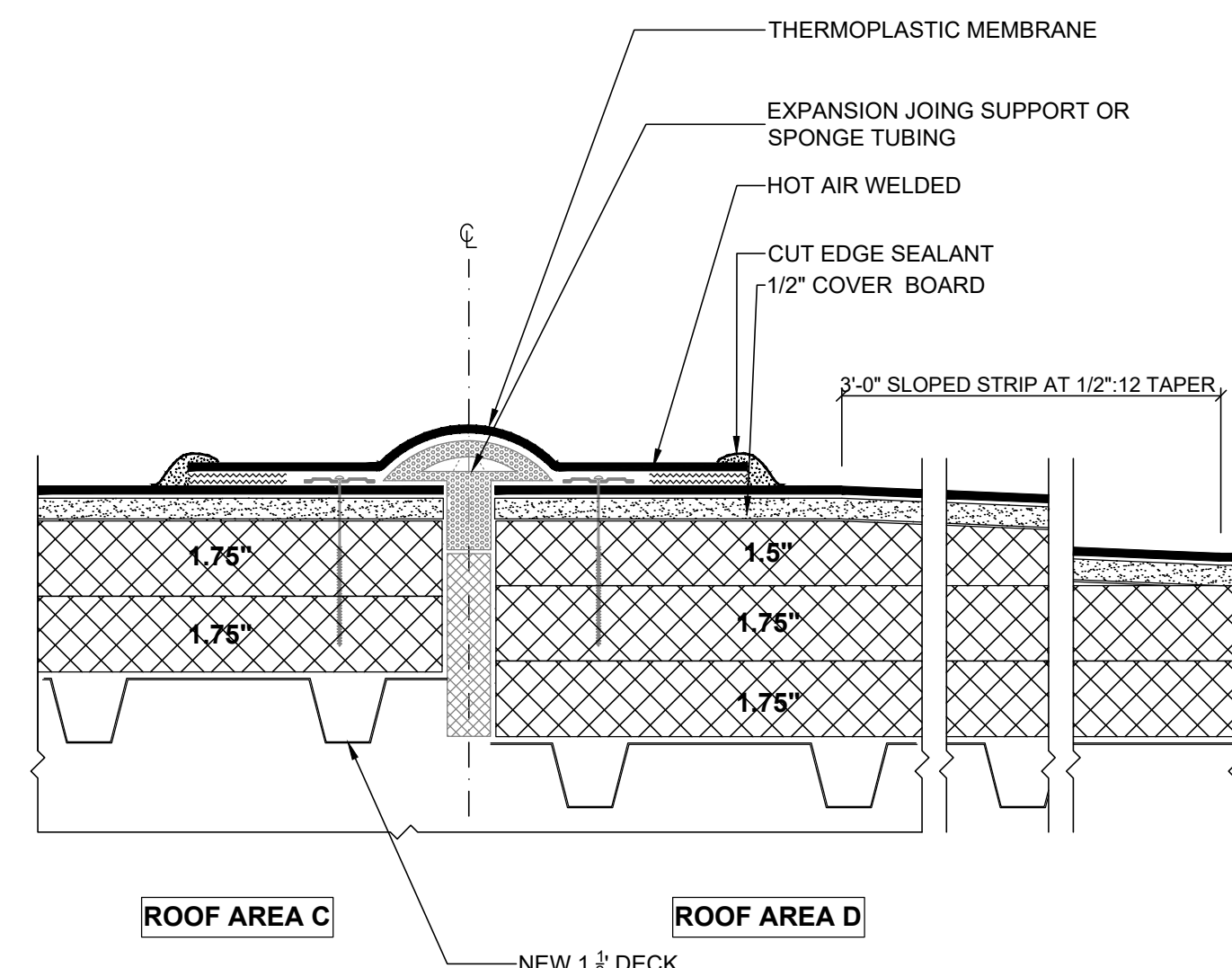




NOTE: FOLLOW MANUFACTURER SPECIFICATIONS AND RECOMMENDATIONS FOR INSTALLATION.

**1 EXPANSION JOINT @ ROOF CHANGE**

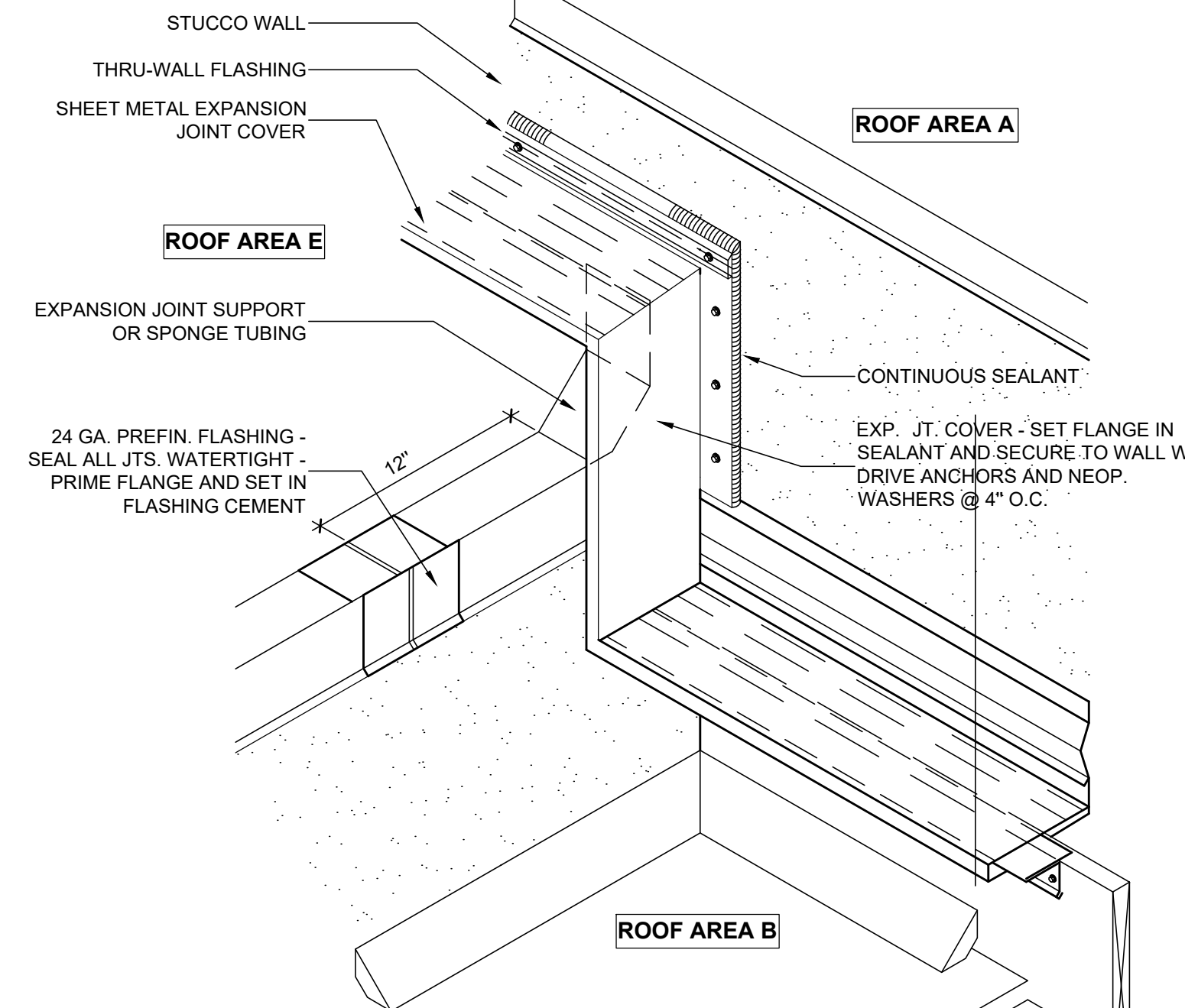
NOT TO SCALE



NOTE: FOLLOW MANUFACTURER SPECIFICATIONS AND RECOMMENDATIONS FOR INSTALLATION.

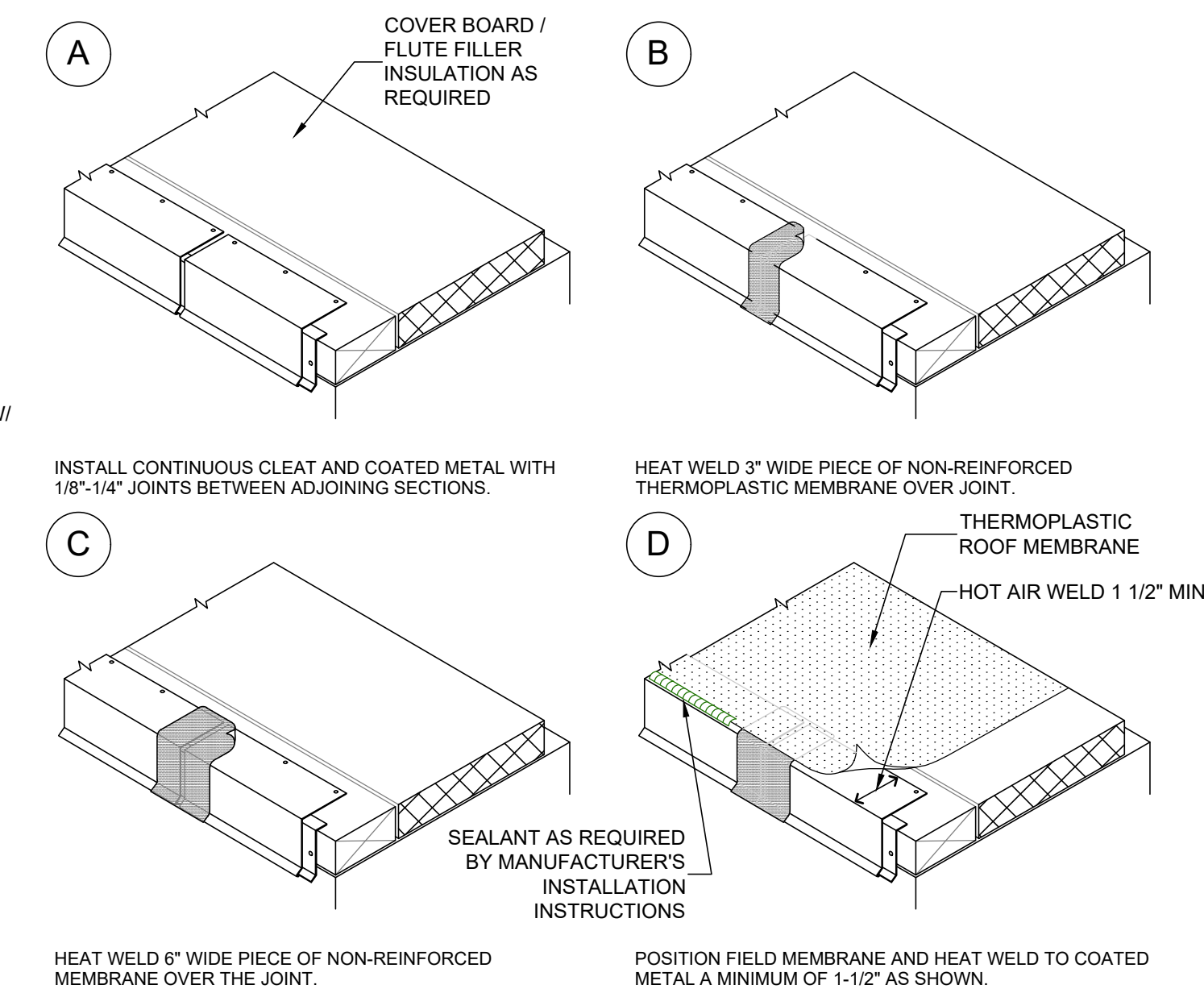
**2 EXPANSION JOINT @ ROOF TO DROP**

NOT TO SCALE



**3 THRU-WALL FLASHING W/EXP. JT. @ "B"/"E"**

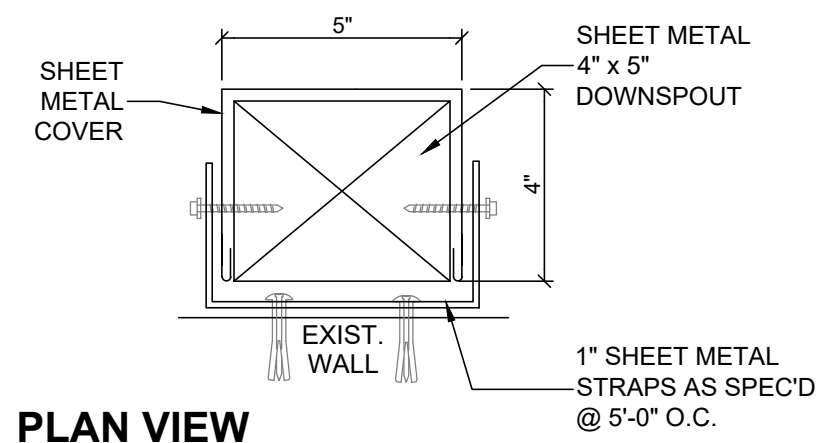
3" = 1'-0"



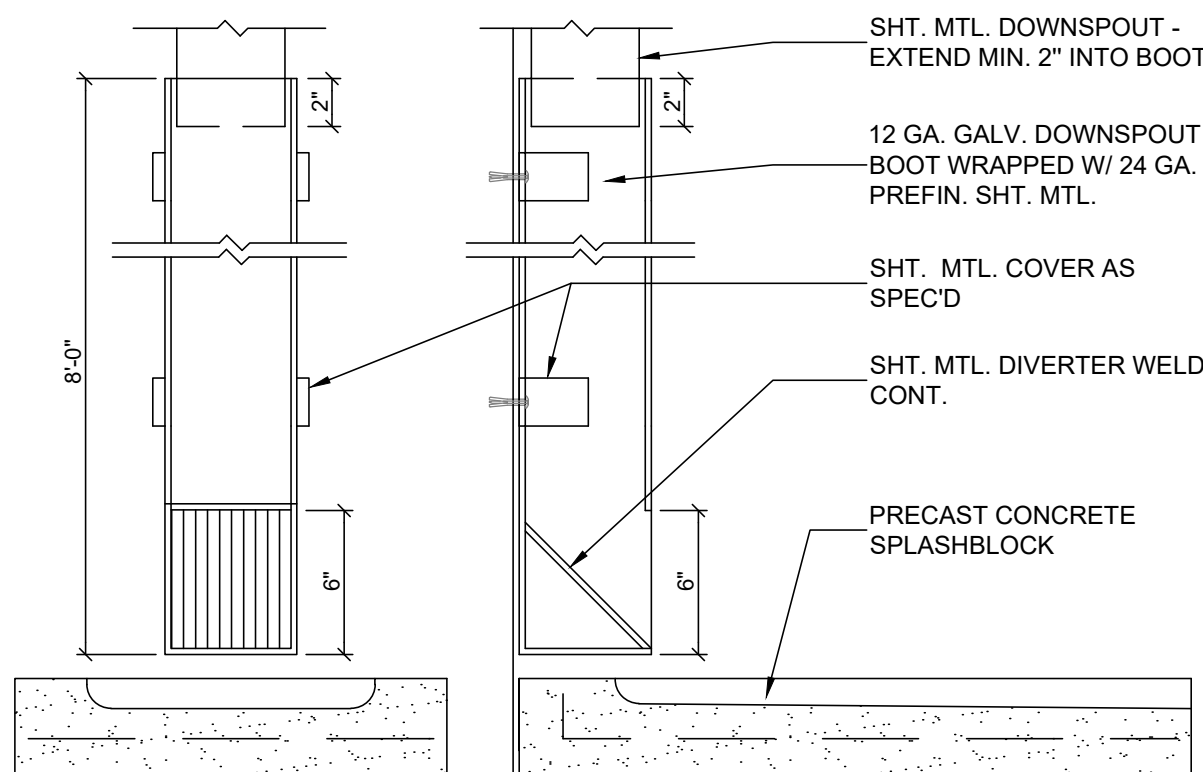
**4 EAVE/RAKE EDGE (COATED METAL FASCIA)**

NOT TO SCALE

**NOTE:** ONLY INSTALL HEAVY DOWNSPOUT BOOTS AT GROUND FLOOR LEVEL. THERE IS NO NEED TO INSTALL CONCRETE SPLASH BLOCKS IF A DOWNSPOUT WILL BE DISCHARGING OVER AN EXISTING CONCRETE SIDEWALK.



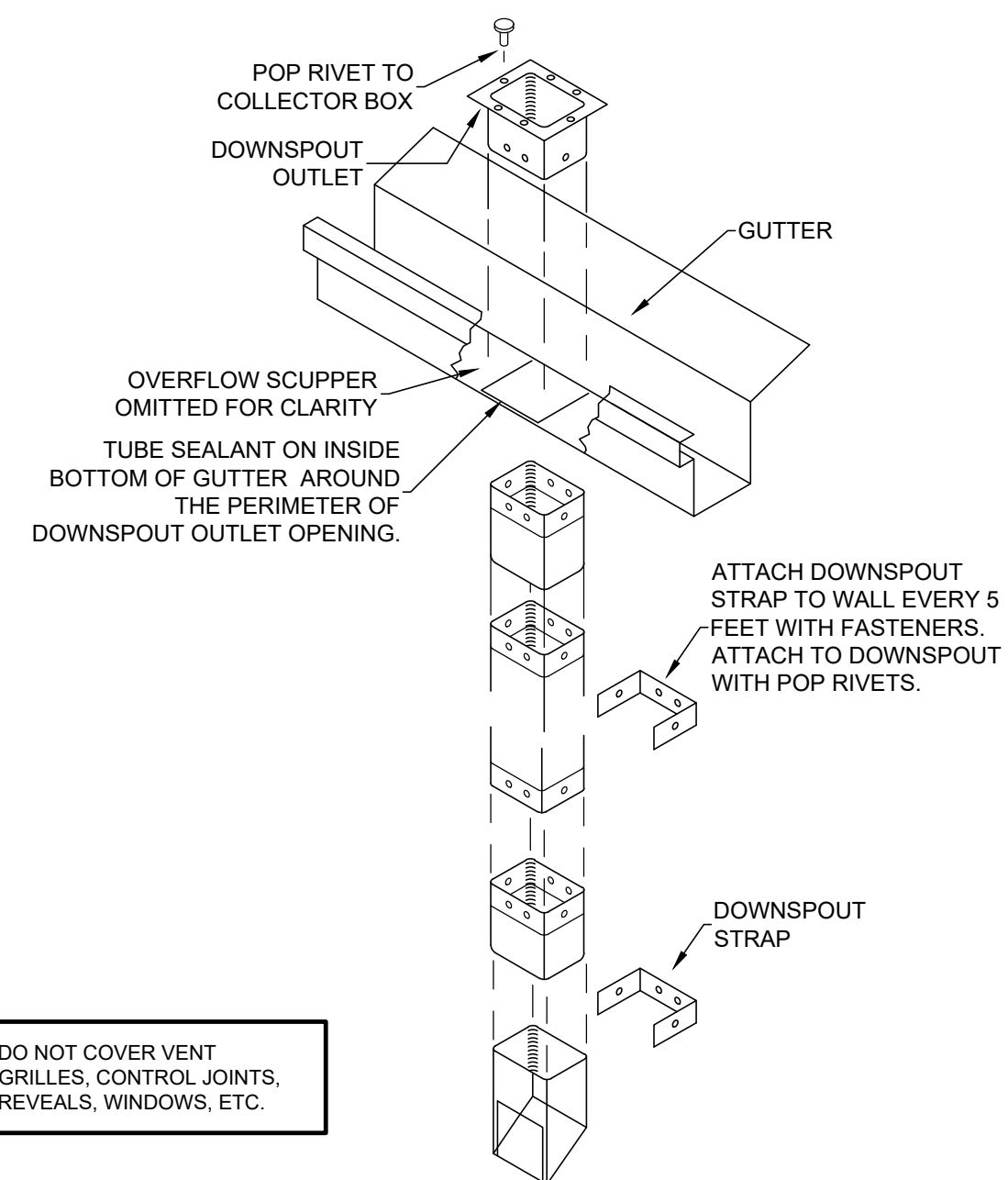
**PLAN VIEW**



**ELEVATION SECTION**

**5 DOWNSPOUT BOOT & CONCRETE SPLASH BLOCK**

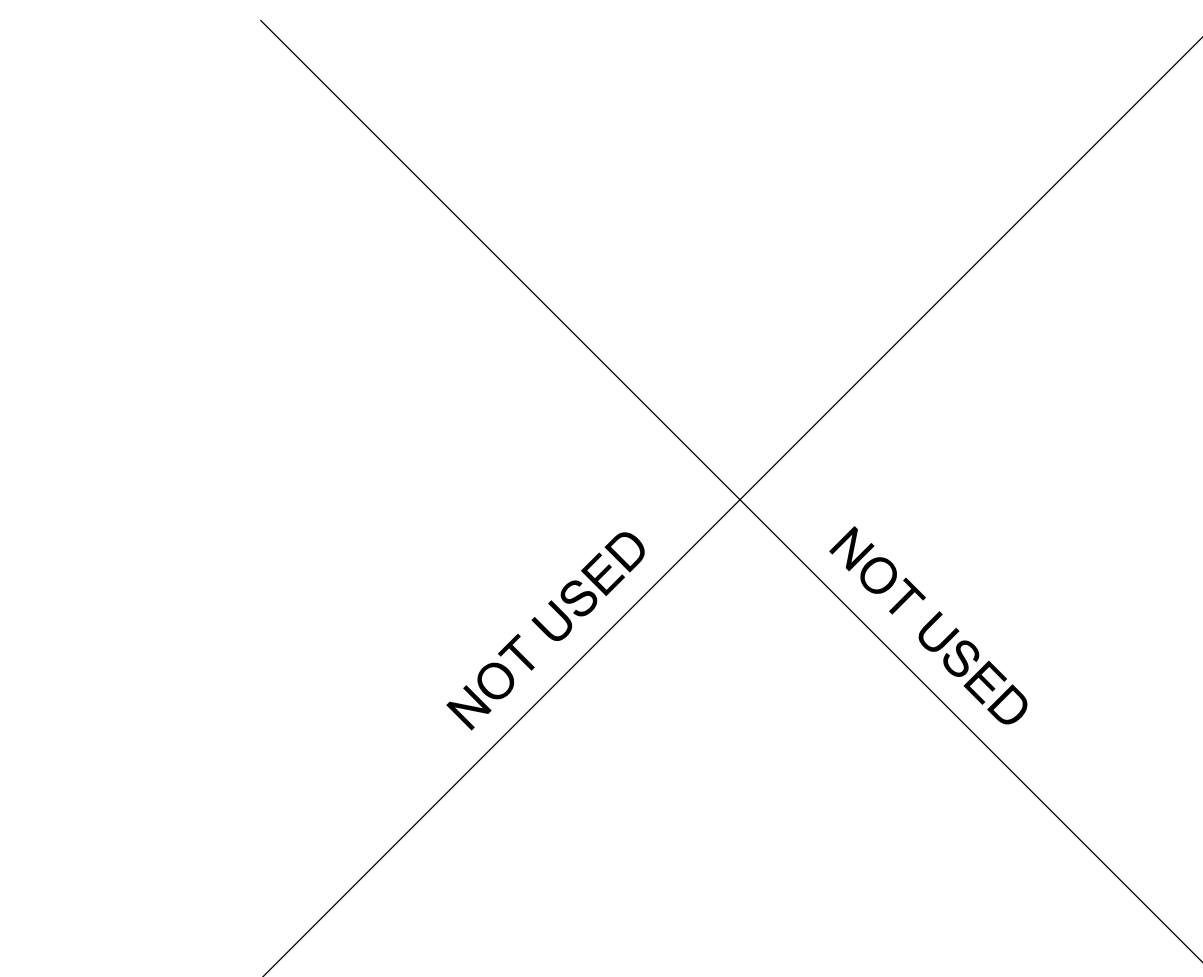
NOT TO SCALE



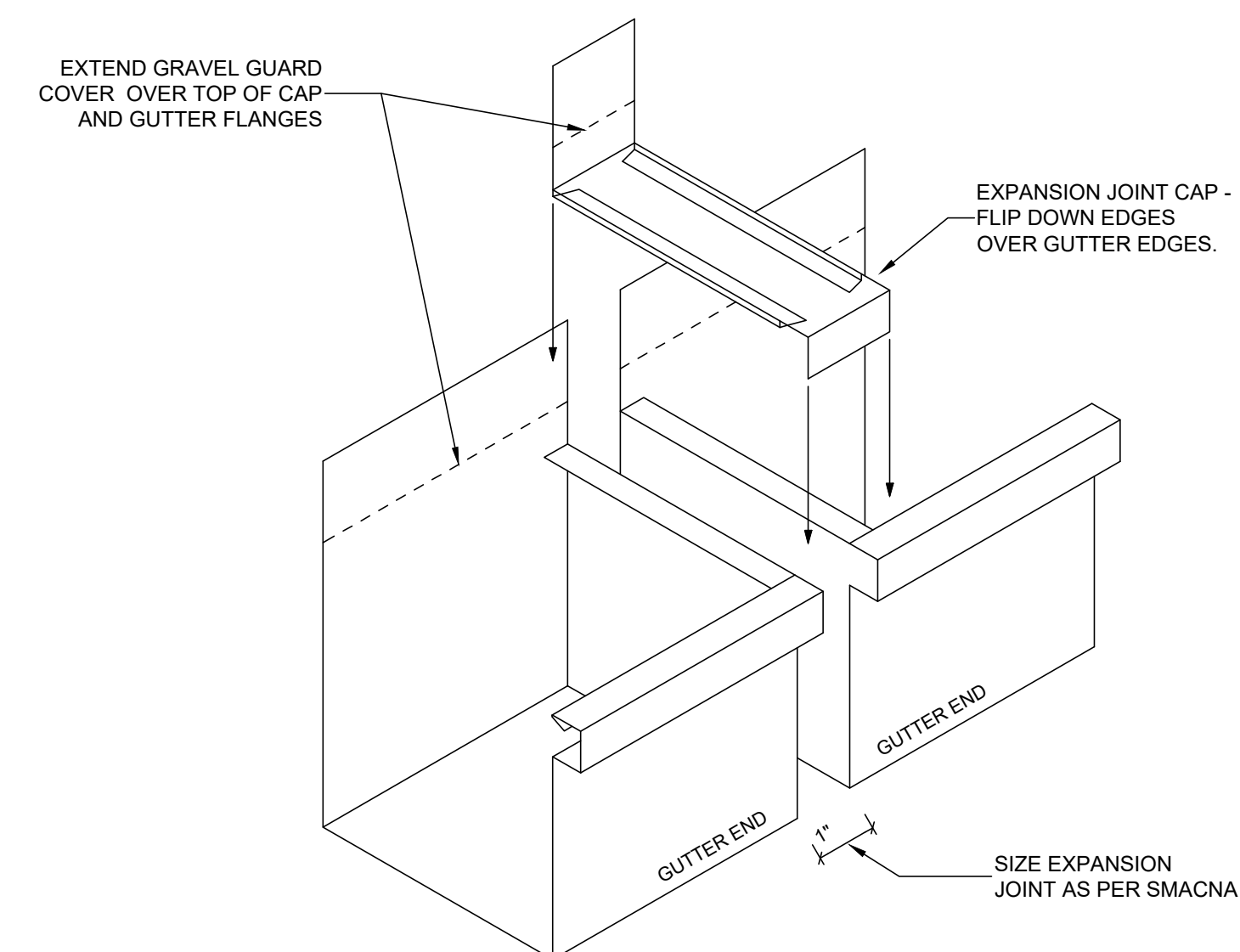
DO NOT COVER VENT GRILLES, CONTROL JOINTS, REVEALS, WINDOWS, ETC.

**6 DOWNSPOUT CONSTRUCTION**

NOT TO SCALE



**8 NOT USED**

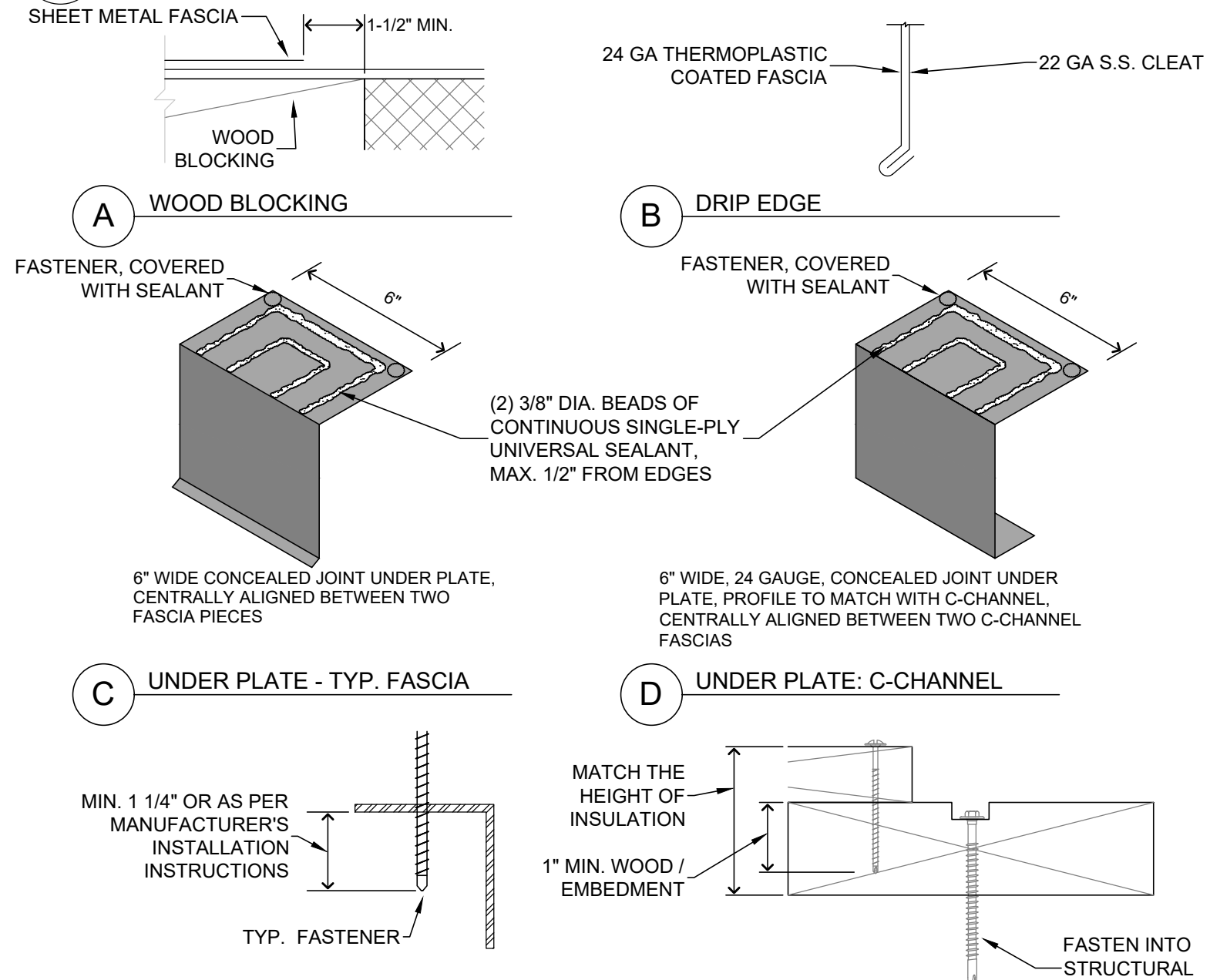


**9 GUTTER EXPANSION JOINT**

NOT TO SCALE

**7 SPLASHBLOCK**

NOT TO SCALE



**10 ENLARGED DETAILS**

NOT TO SCALE

**11 "NOT USED"**

REVISIONS:

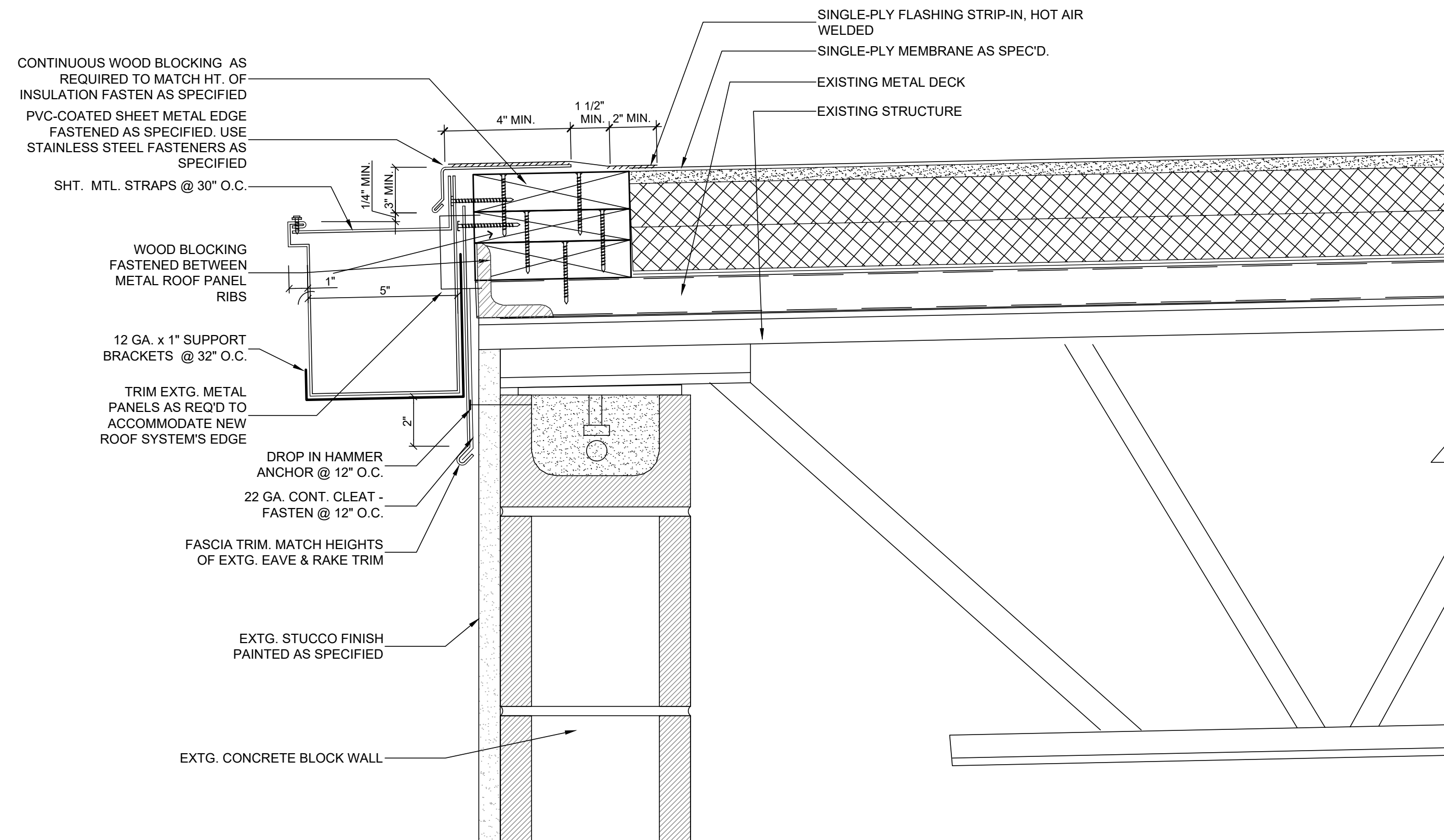

7/17/2019

CITY OF EDINBURG  
**DUSTIN SEKULA MEMORIAL LIBRARY**  
 STRUCTURAL REPAIRS & ROOF REPLACEMENT  
 2018

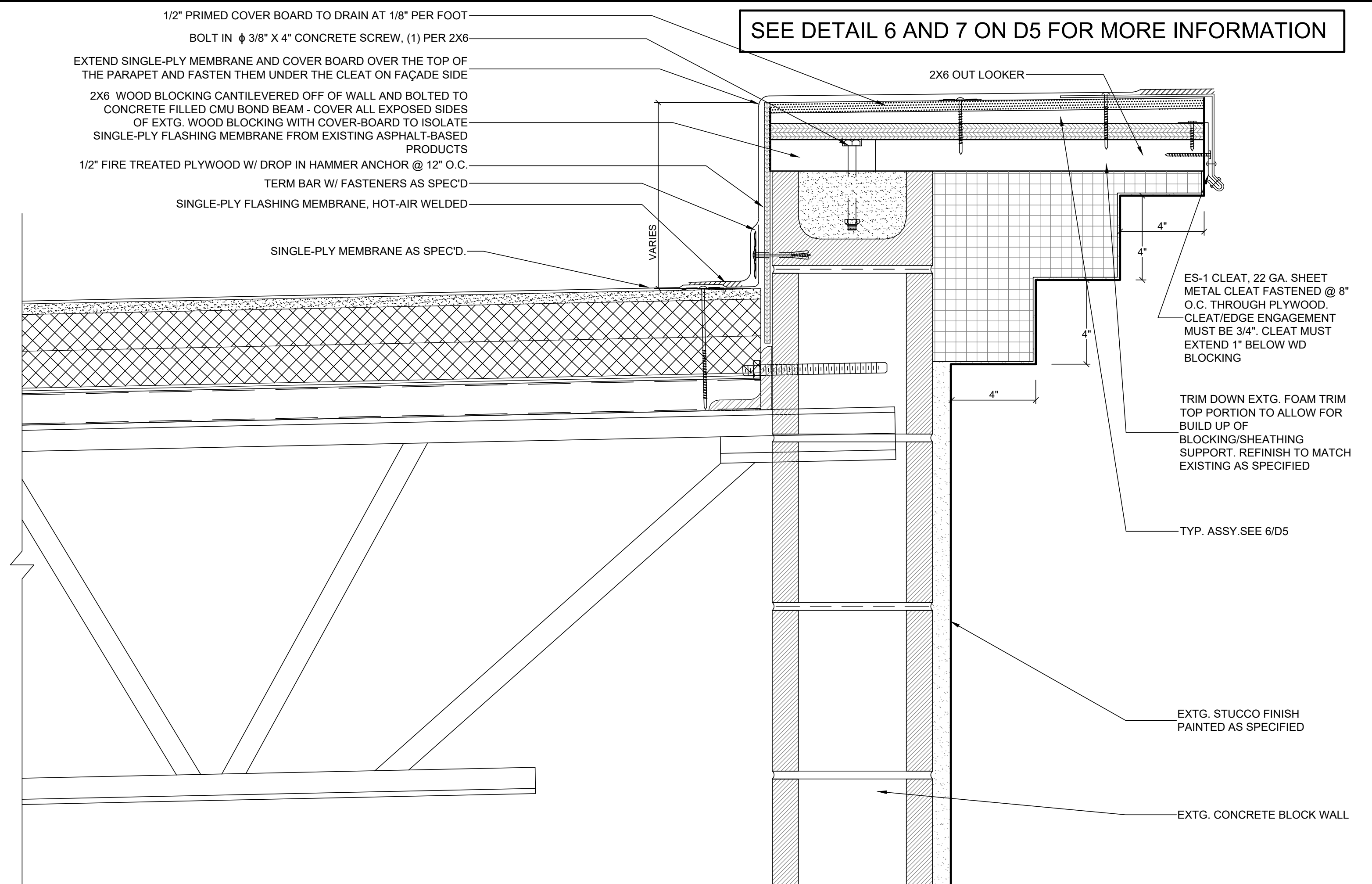
**AMTECH SOLUTIONS**  
 1600 N. JACKSON RD. STE #3  
 PHARR, TEXAS 78577  
 T 956.686.3095 F 956.686.2233

**DETAILS**  
 DRAWN BY: C.G. / S.E.  
 CHECKED BY: A.H. / T.H.  
 PROJECT NO.: RGV.2018.001027  
 DATE: 7/17/2019 SCALE: SEE DRAWING  
 13 OF 23 **D3**

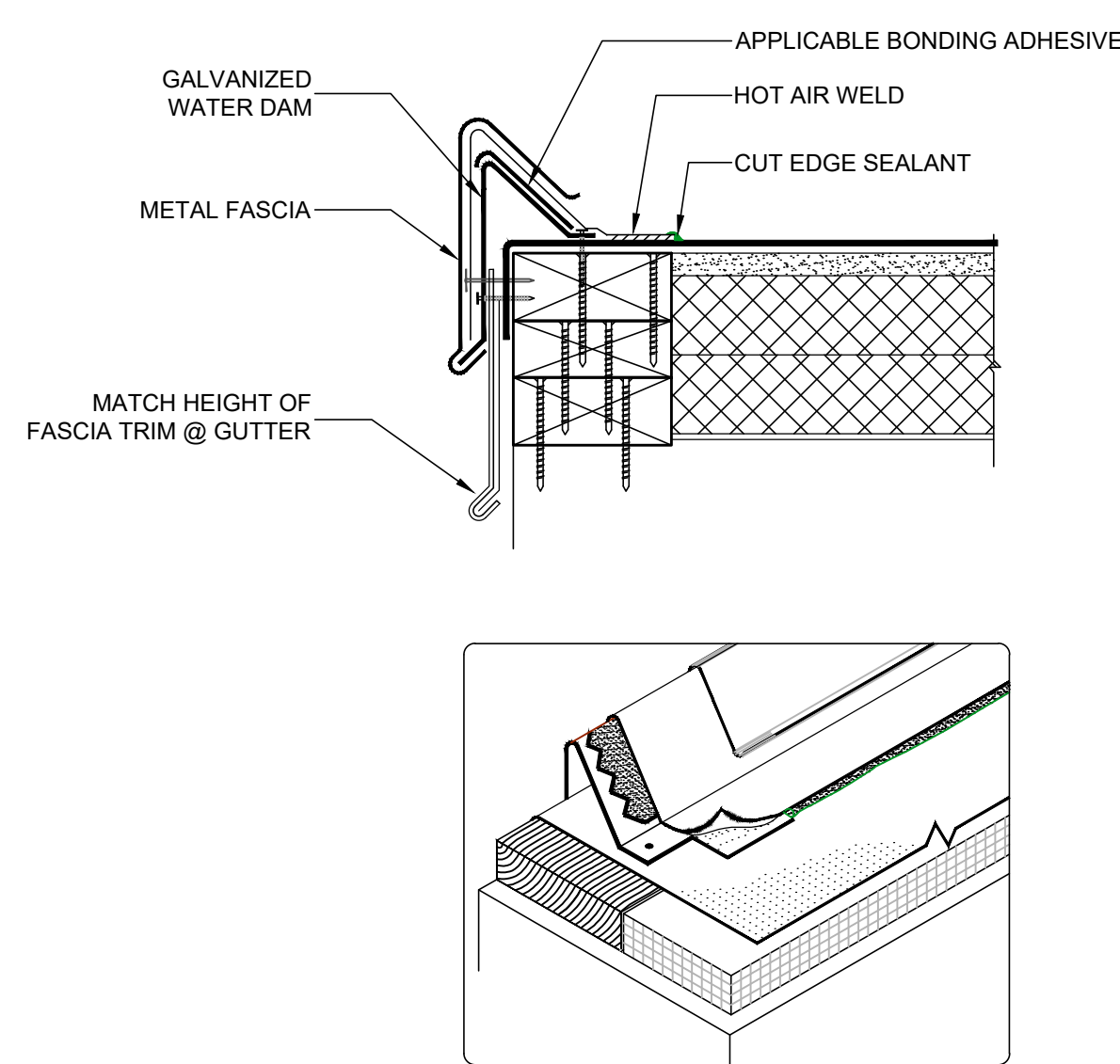




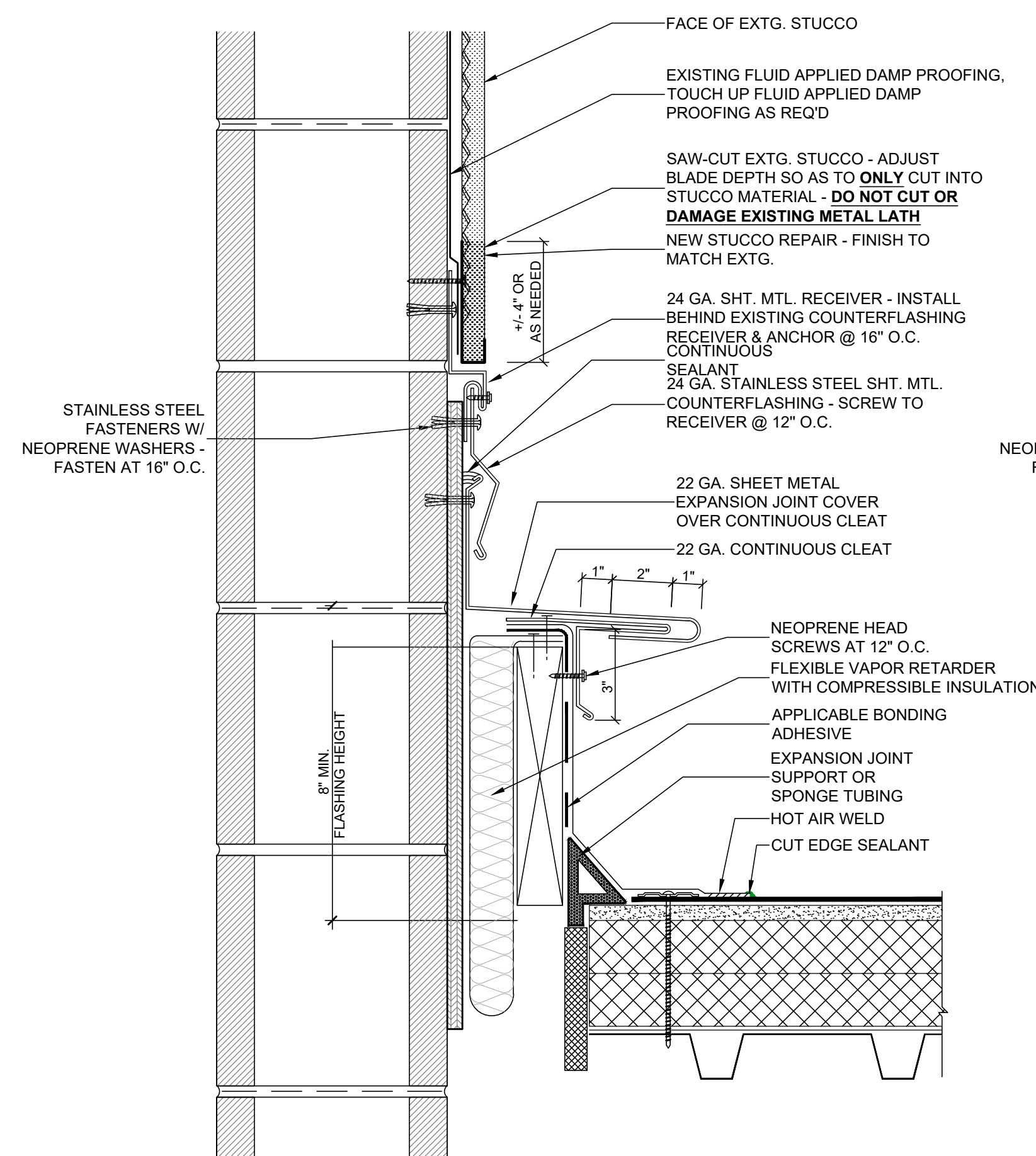
**1** LOW EAVE ROOF EDGE W/GUTTER  
3" = 1'-0"



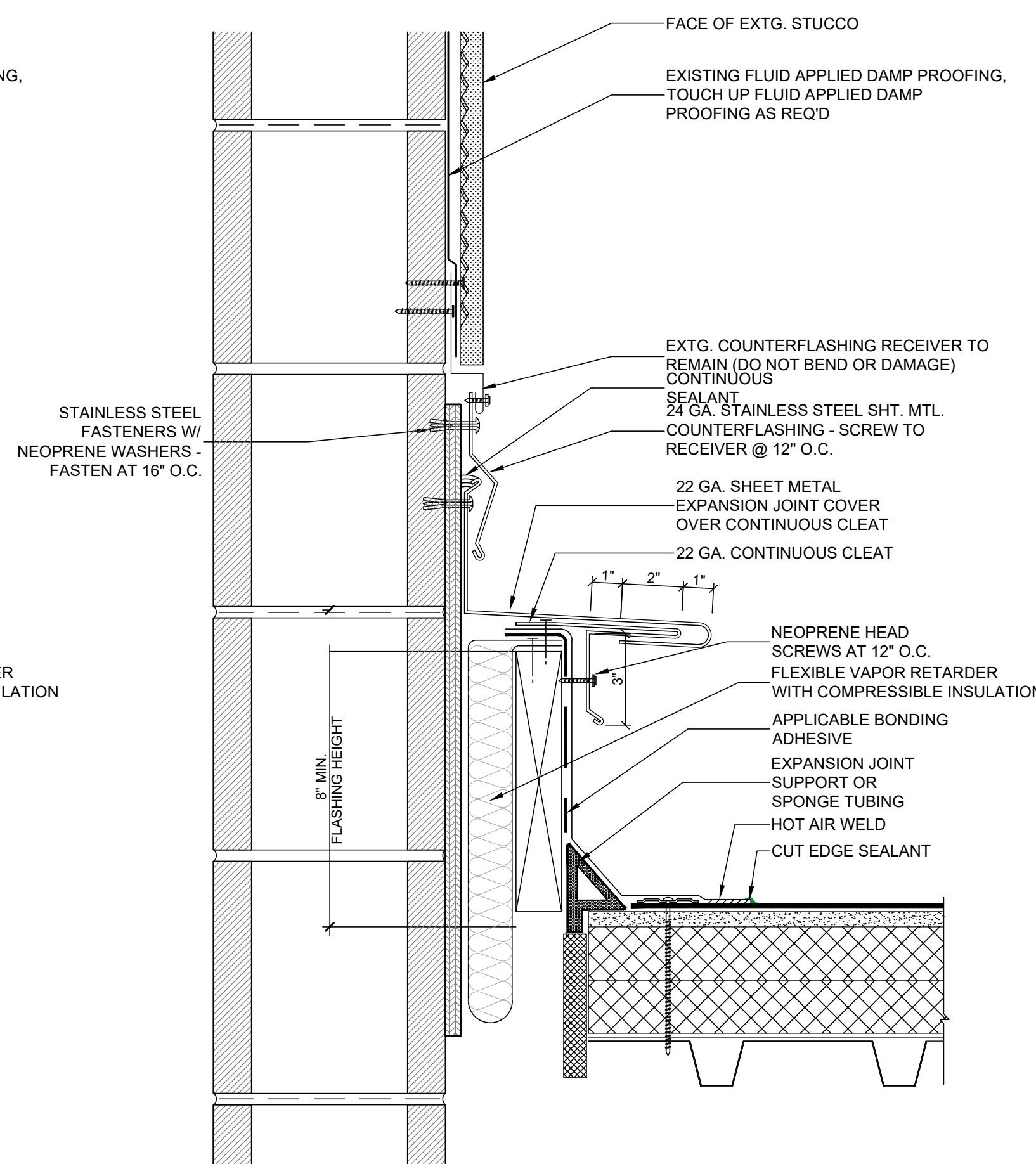
**2** HIGH-EAVE ROOF EDGE  
3" = 1'-0"



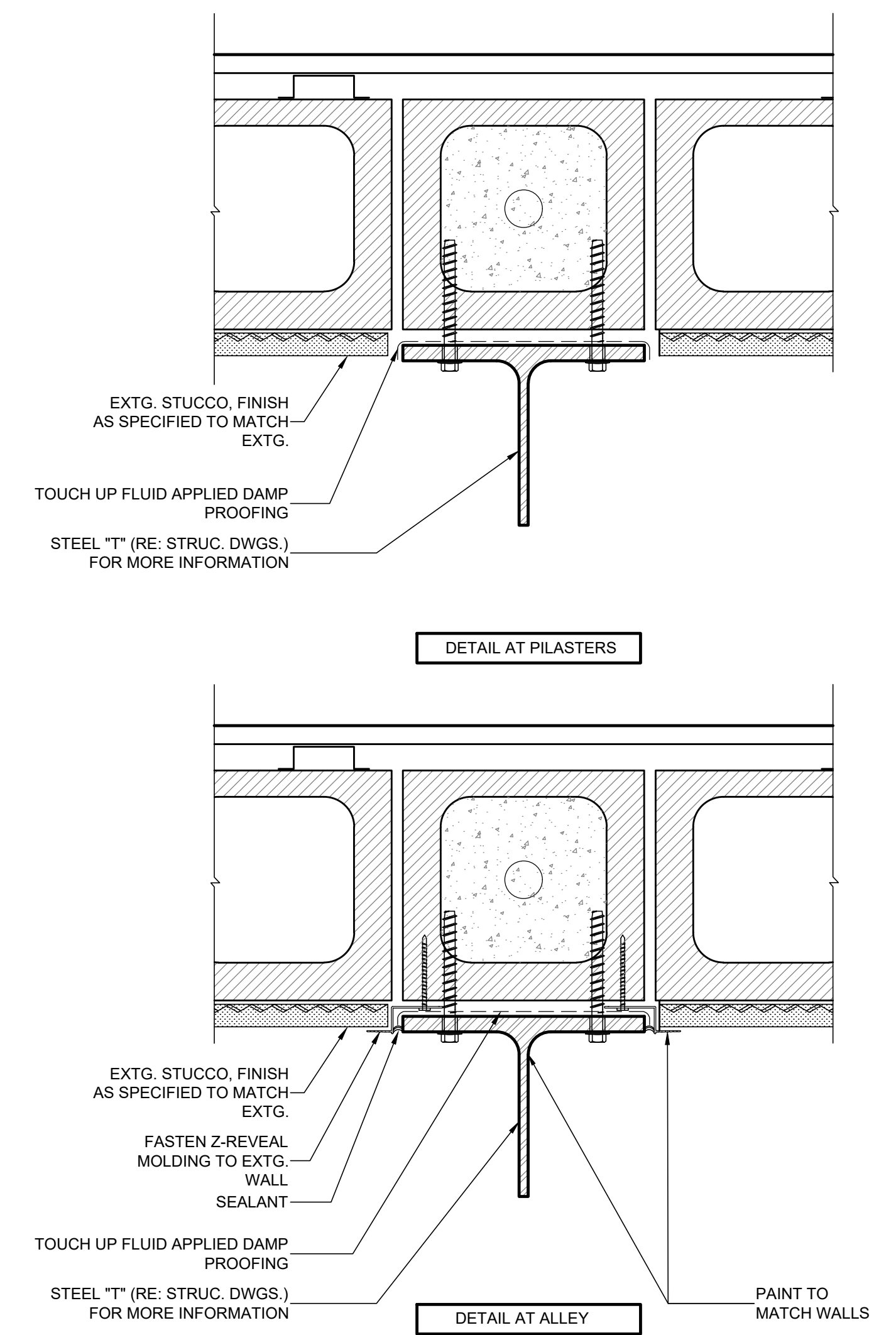
**3** ROOF EDGE @ ROOF AREA "A"  
NOT TO SCALE



**4** EXPANSION JOINT (ROOF TO STUCCO CLAD BLOCK)  
NOT TO SCALE



**5** EXPANSION JOINT (USING EXTG. FLASHING RECEIVER)  
NOT TO SCALE



**6** WATER PROOFING @ STEEL REINFORCEMENT  
NOT TO SCALE

REVISIONS:

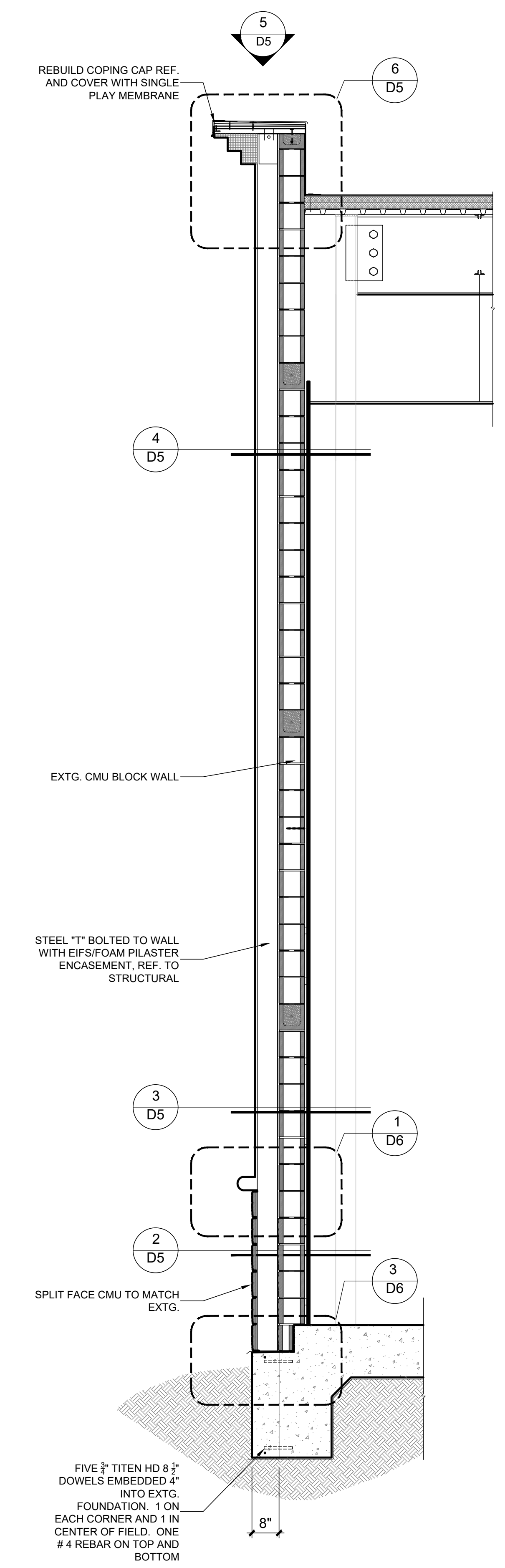

7/17/2019

CITY OF EDINBURG  
DUSTIN SEKULA MEMORIAL LIBRARY  
STRUCTURAL REPAIRS & ROOF REPLACEMENT  
2018

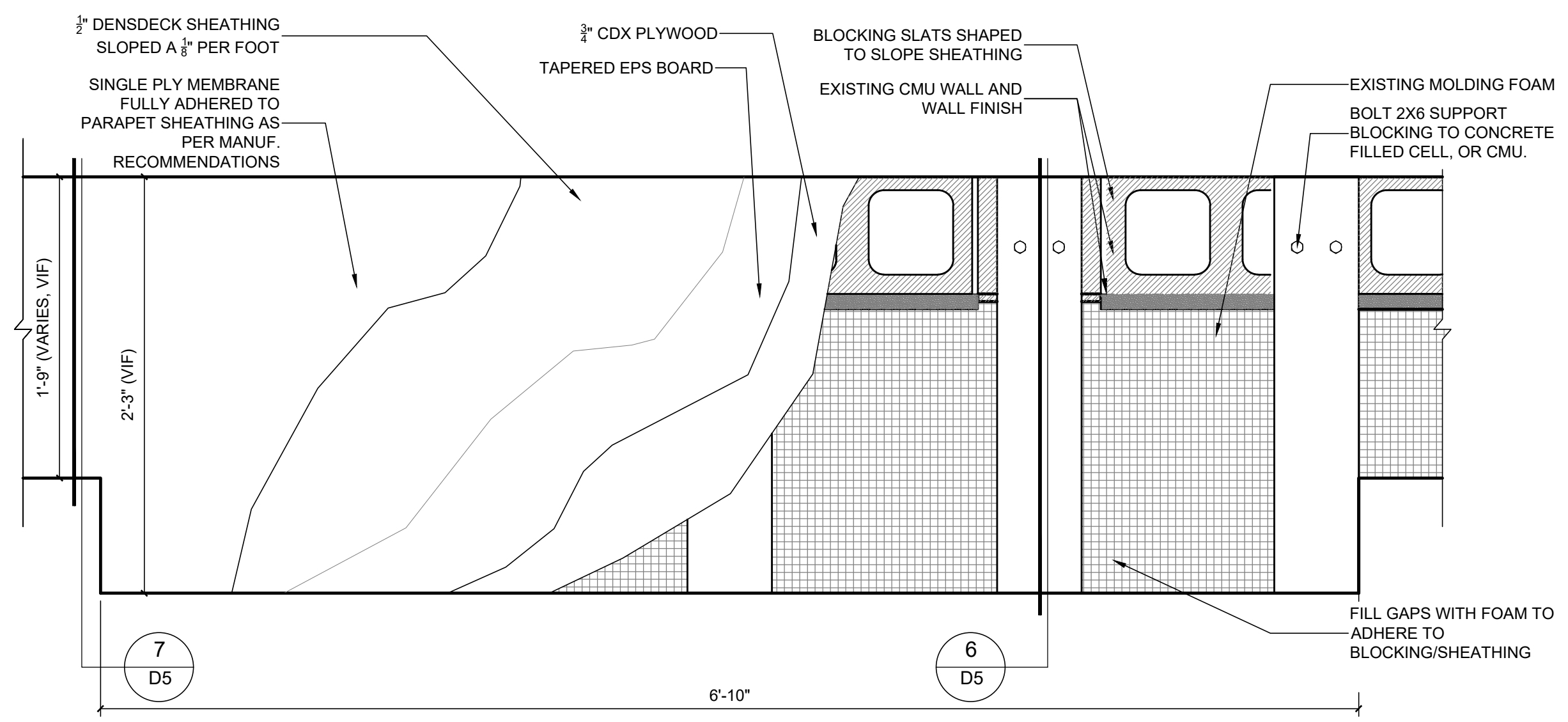
**AMTECH SOLUTIONS**  
1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577  
956.686.3095

DETAILS  
DRAWN BY: C.G. / S.E.  
CHECKED BY: A.H. / T.H.  
PROJECT NO.: RGV.2018.001027  
DATE: 7/17/2019 SCALE: SEE DRAWING  
14 OF 23 **D4**

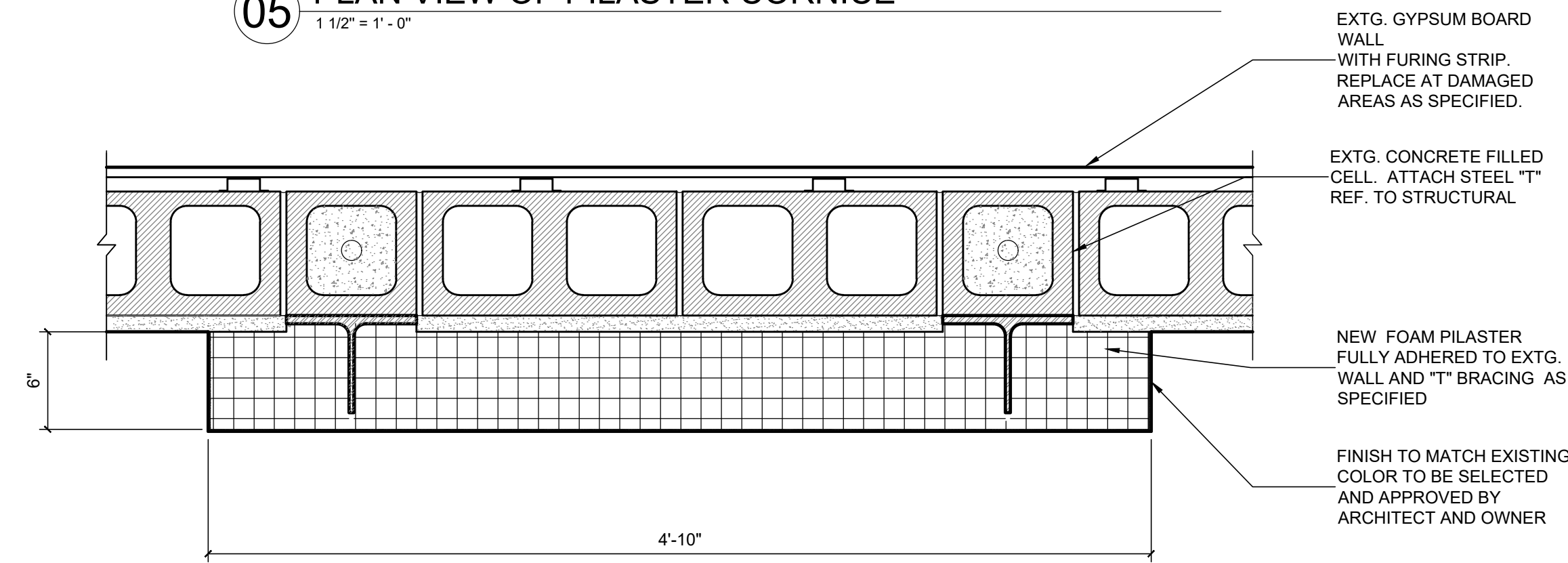




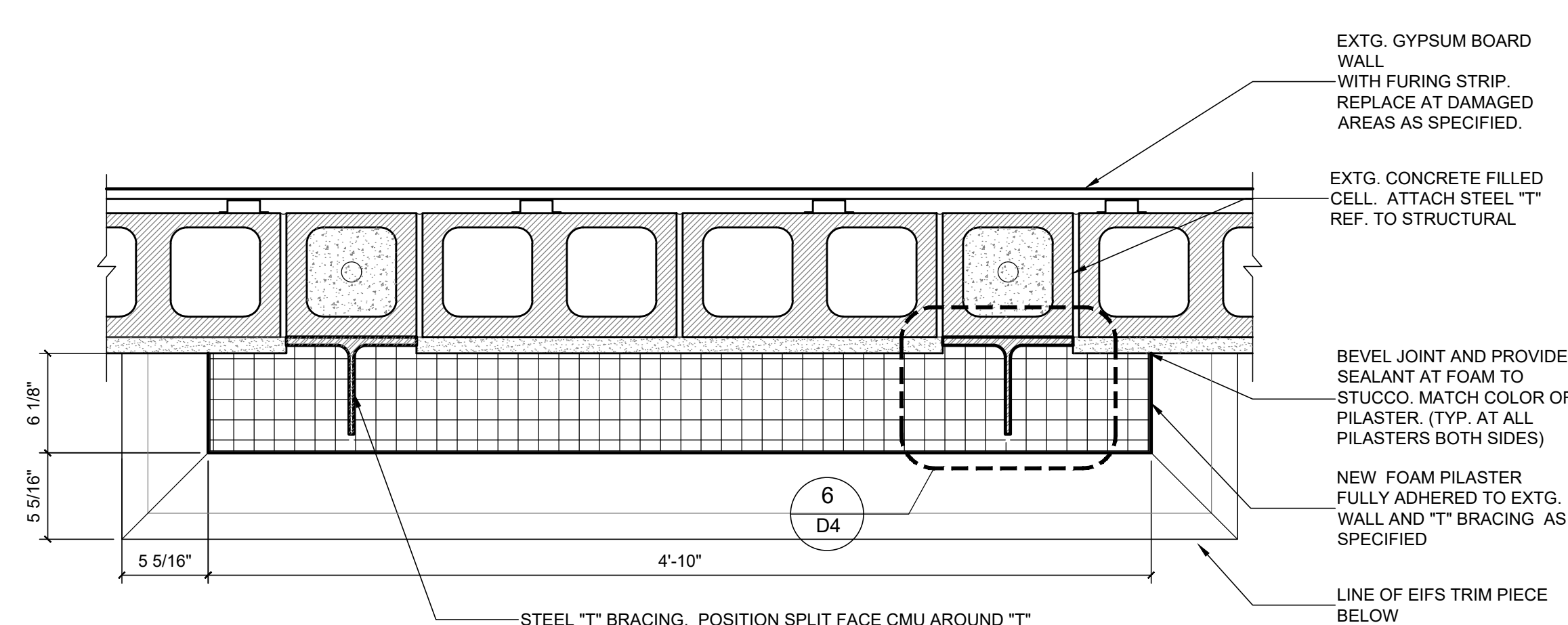
**1** WALL SECTION AT STEEL COVERED PILASTER  
1/2" = 1'-0"



**05** PLAN VIEW OF PILASTER CORNICE  
1 1/2" = 1'-0"

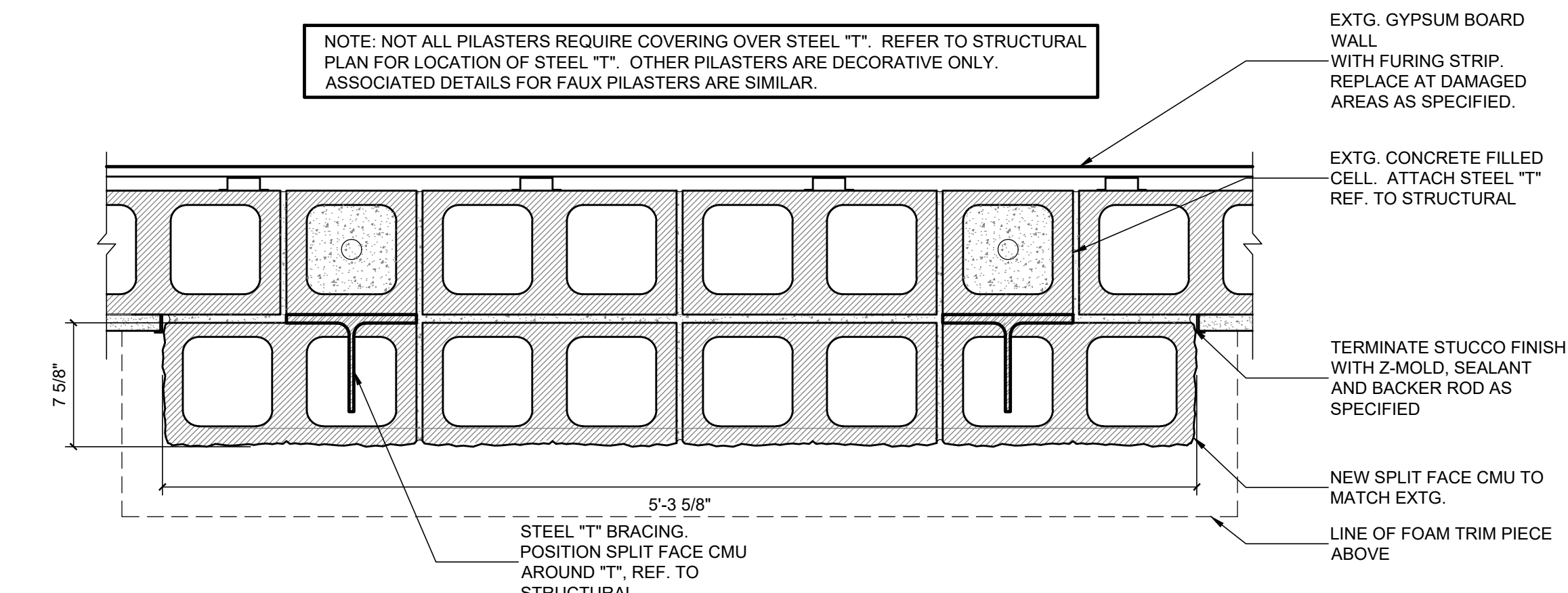


**04** ADJUSTABLE OF EIFS PILASTER  
1 1/2" = 1'-0"

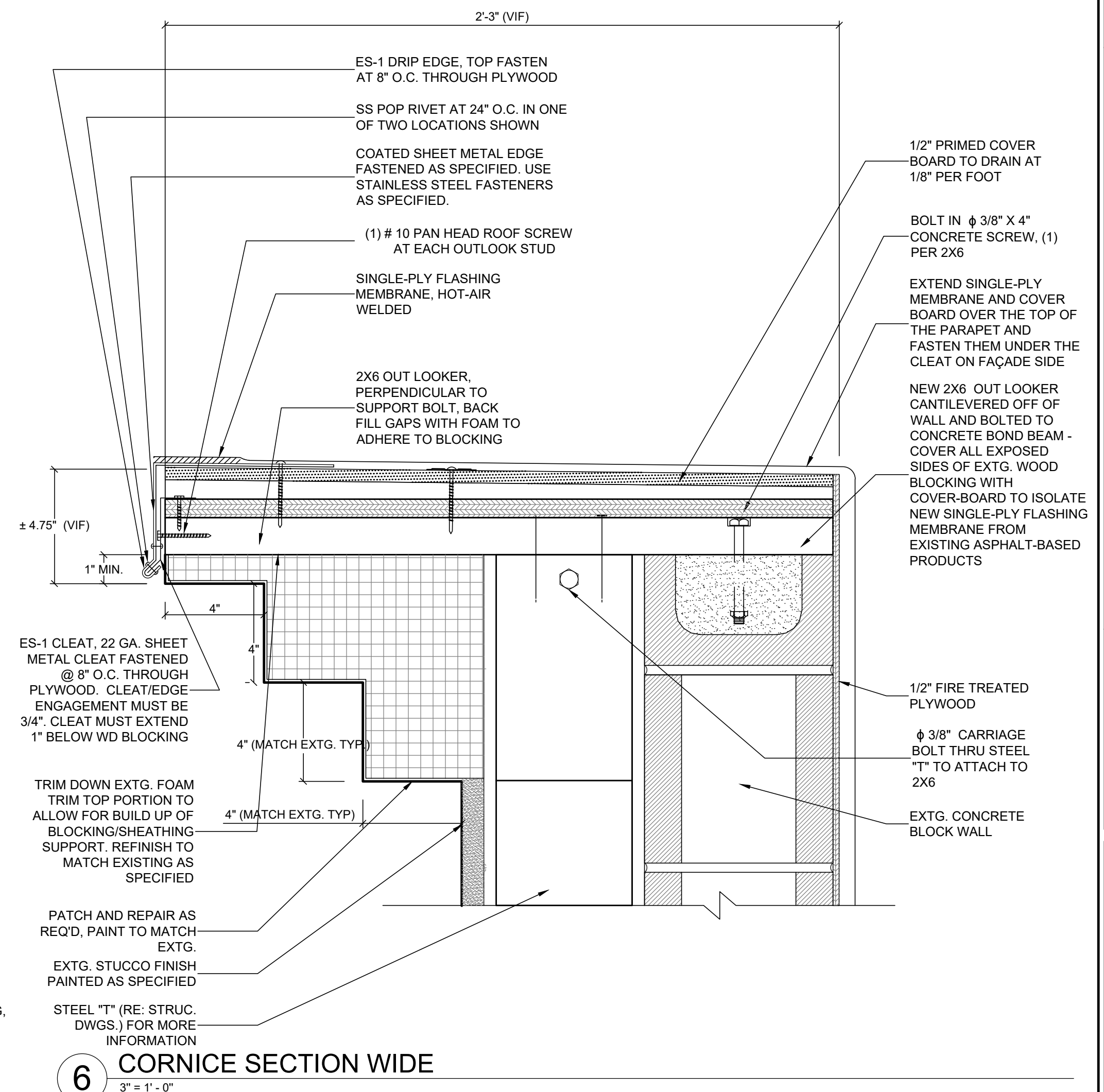


**03** SECTION OF EIFS PILASTER AT TRIM  
1 1/2" = 1'-0"

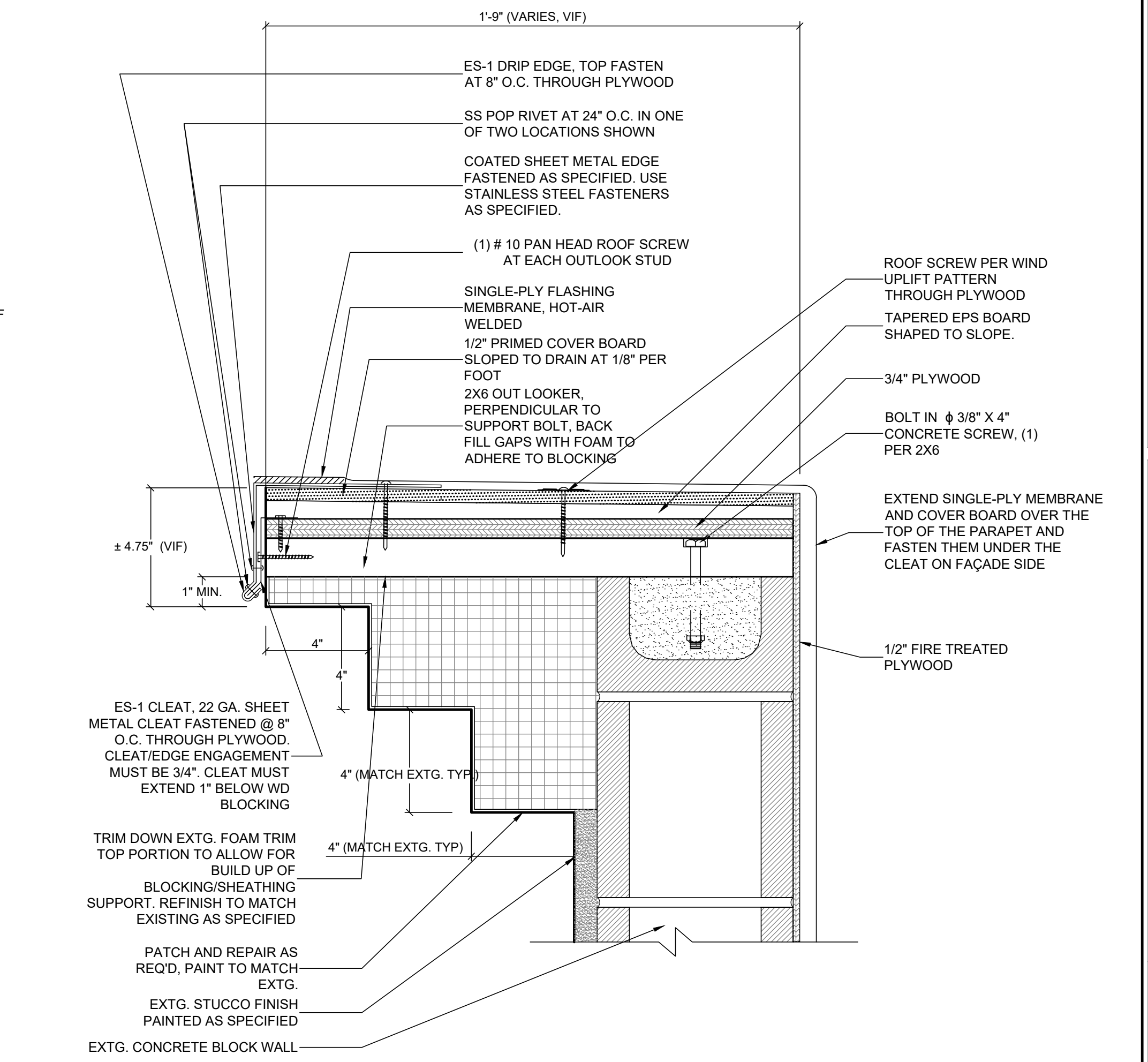
NOTE: NOT ALL PILASTERS REQUIRE COVERING OVER STEEL 'T'. REFER TO STRUCTURAL PLAN FOR LOCATION OF STEEL 'T'. OTHER PILASTERS ARE DECORATIVE ONLY. ASSOCIATED DETAILS FOR FAUX PILASTERS ARE SIMILAR.



**02** SECTION AT WAINSCOT  
1 1/2" = 1'-0"



**6** CORNICE SECTION WIDE  
3" = 1'-0"



**7** CORNICE SECTION NARROW  
3" = 1'-0"

REVISIONS:

7/17/2019

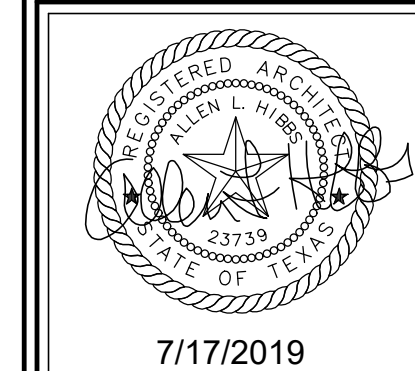
CITY OF EDINBURG  
DUSTIN SEKULA MEMORIAL LIBRARY  
STRUCTURAL REPAIRS & ROOF REPLACEMENT  
2018

**AMTECH SOLUTIONS**  
1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577  
956.686.3095

WALL SECTION  
DRAWN BY: C.G. / S.E.  
CHECKED BY: A.H. / T.H.  
PROJECT NO.: RGV.2018.001027  
DATE: 7/17/2019 SCALE: SEE DRAWING

15 OF 23 **D5**

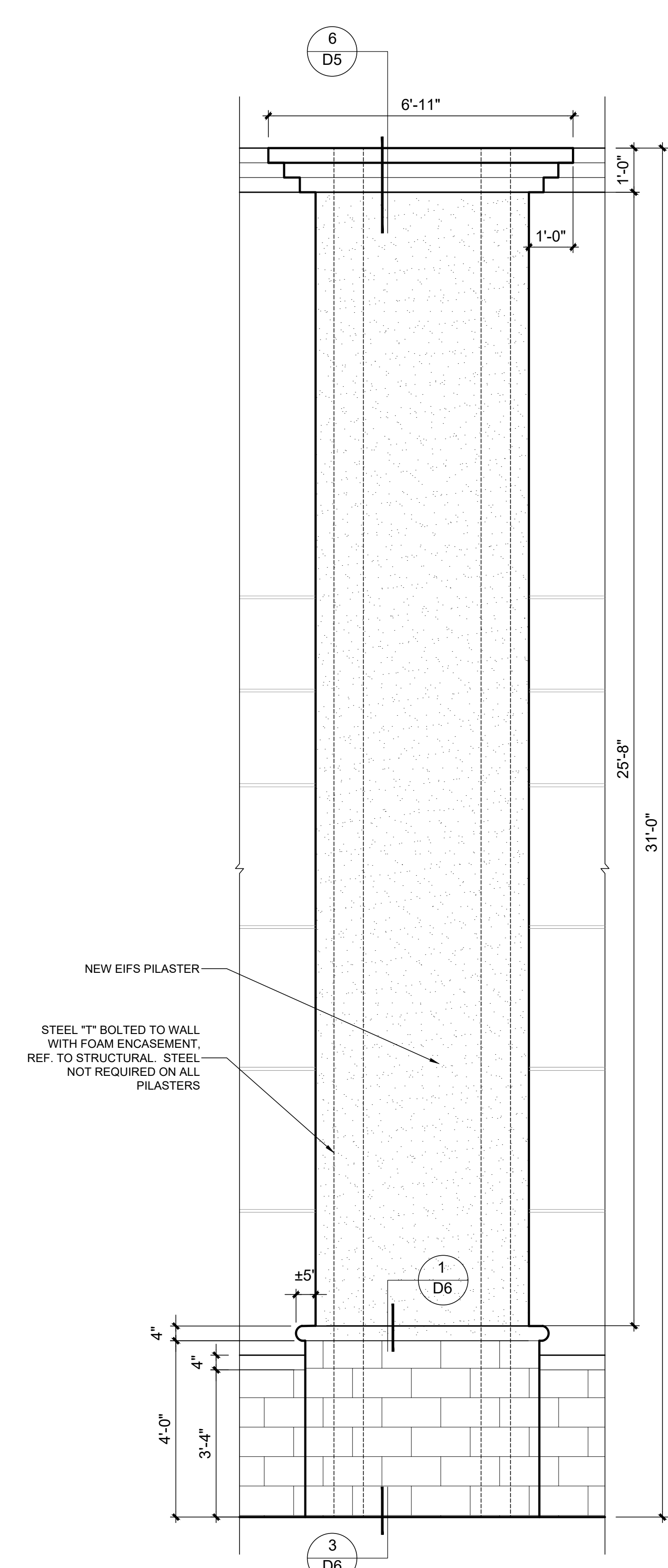




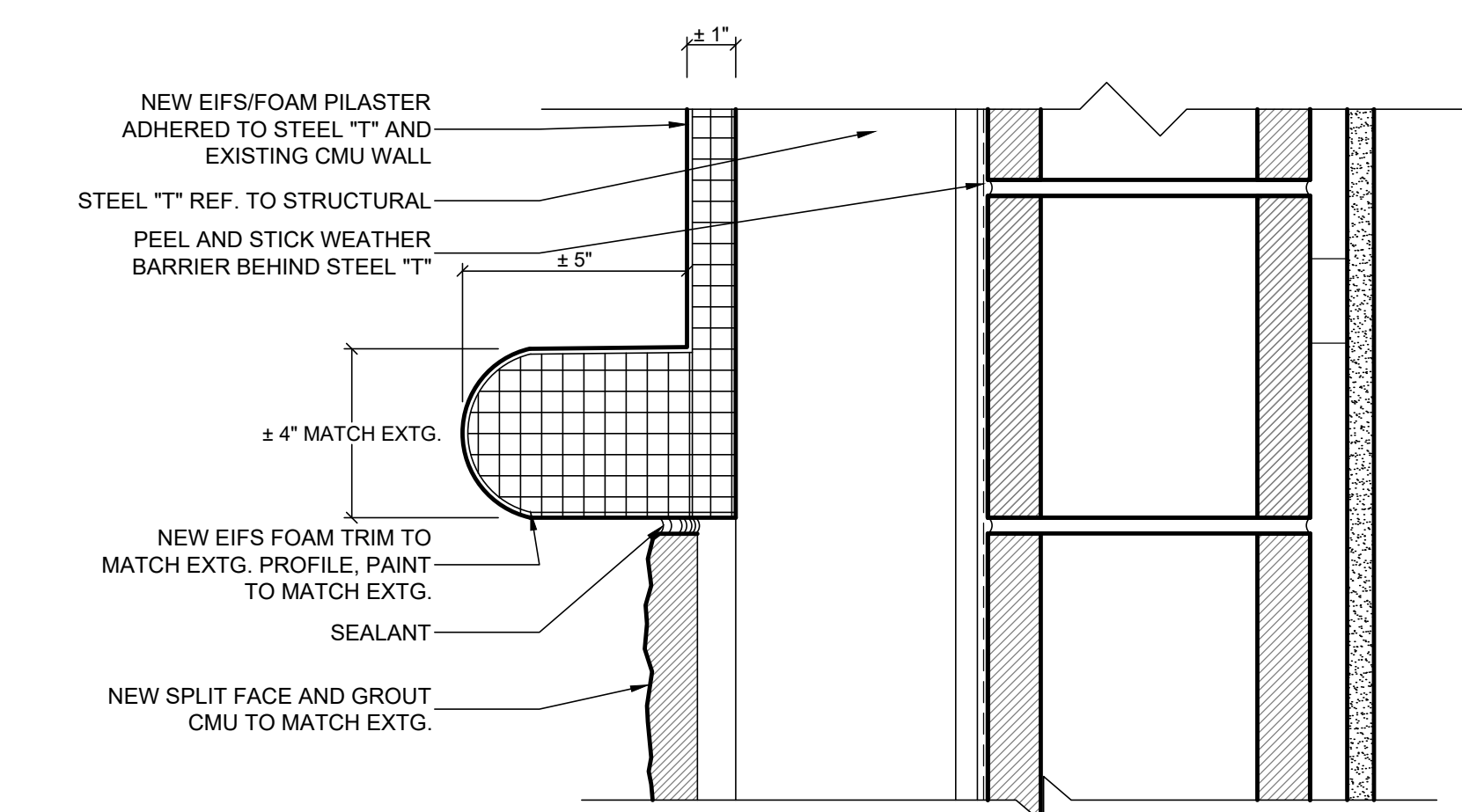
CITY OF EDINBURG  
**DUSTIN SEKULA MEMORIAL LIBRARY**  
**STRUCTURAL REPAIRS & ROOF REPLACEMENT**  
 2018

**AMTECH SOLUTIONS**  
 1600 N. JACKSON RD. STE #3  
 PHARR, TEXAS 78577  
 T 956.686.3095 F 956.686.2233

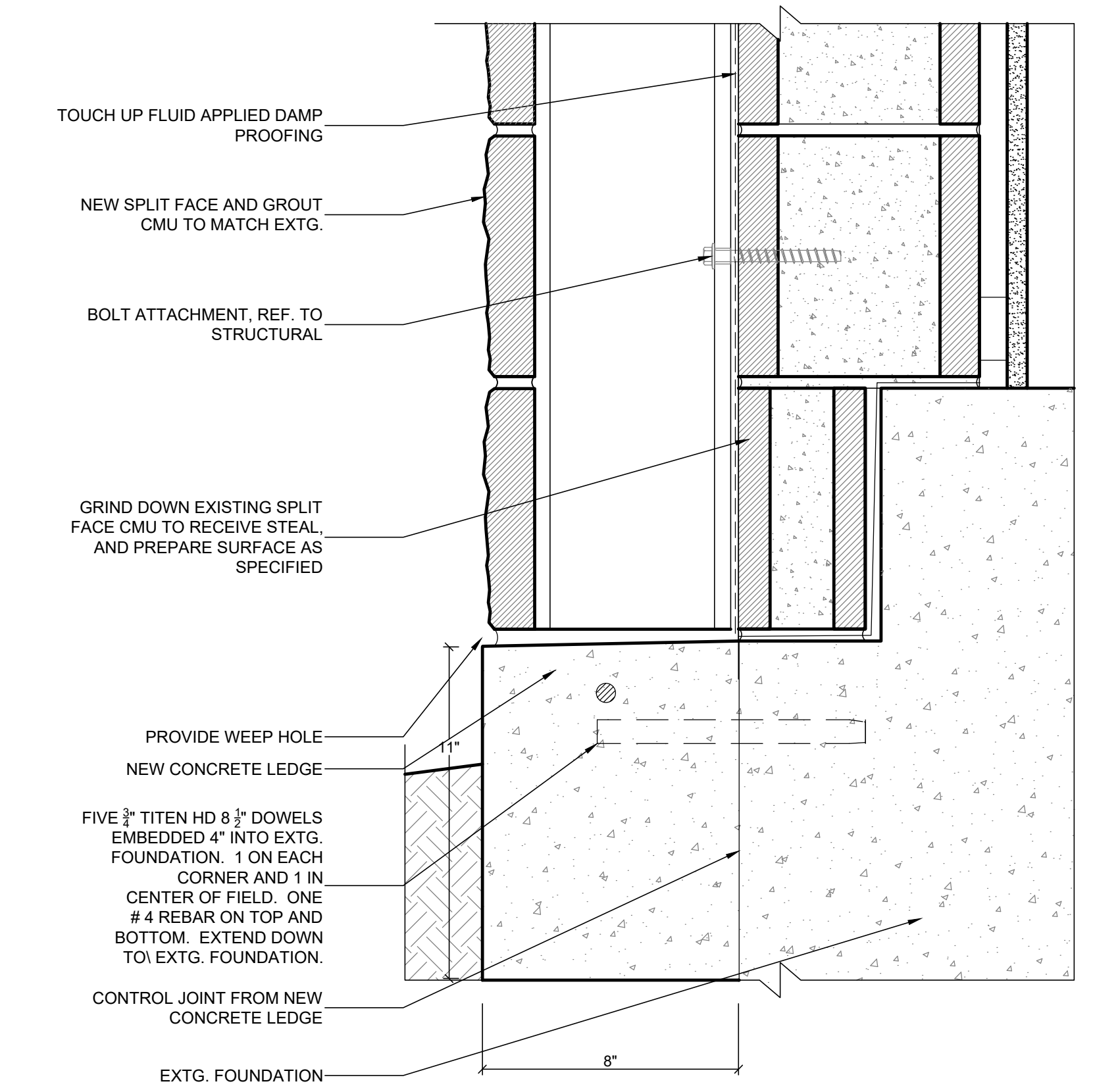
WALL DETAILS	
DRAWN BY:	C.G. / S.E.
CHECKED BY:	A.H. / T.H.
PROJECT NO.:	RGV.2018.001027
DATE:	7/17/2019
SCALE:	SEE DRAWING
16 OF 23	<b>D6</b>



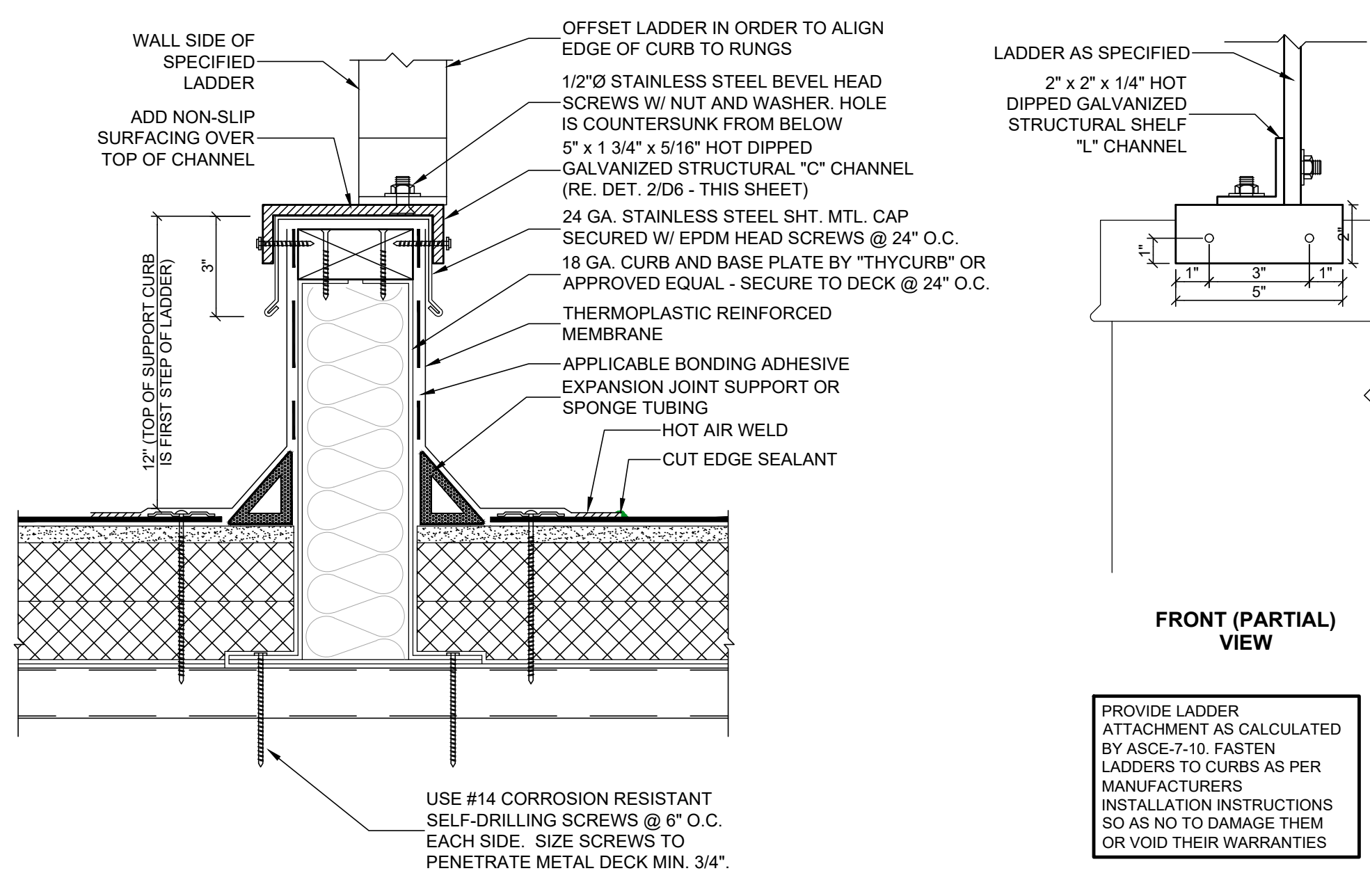
**2 ENLARGED ELEVATION OF PILASTER**  
 1/2" = 1'-0"



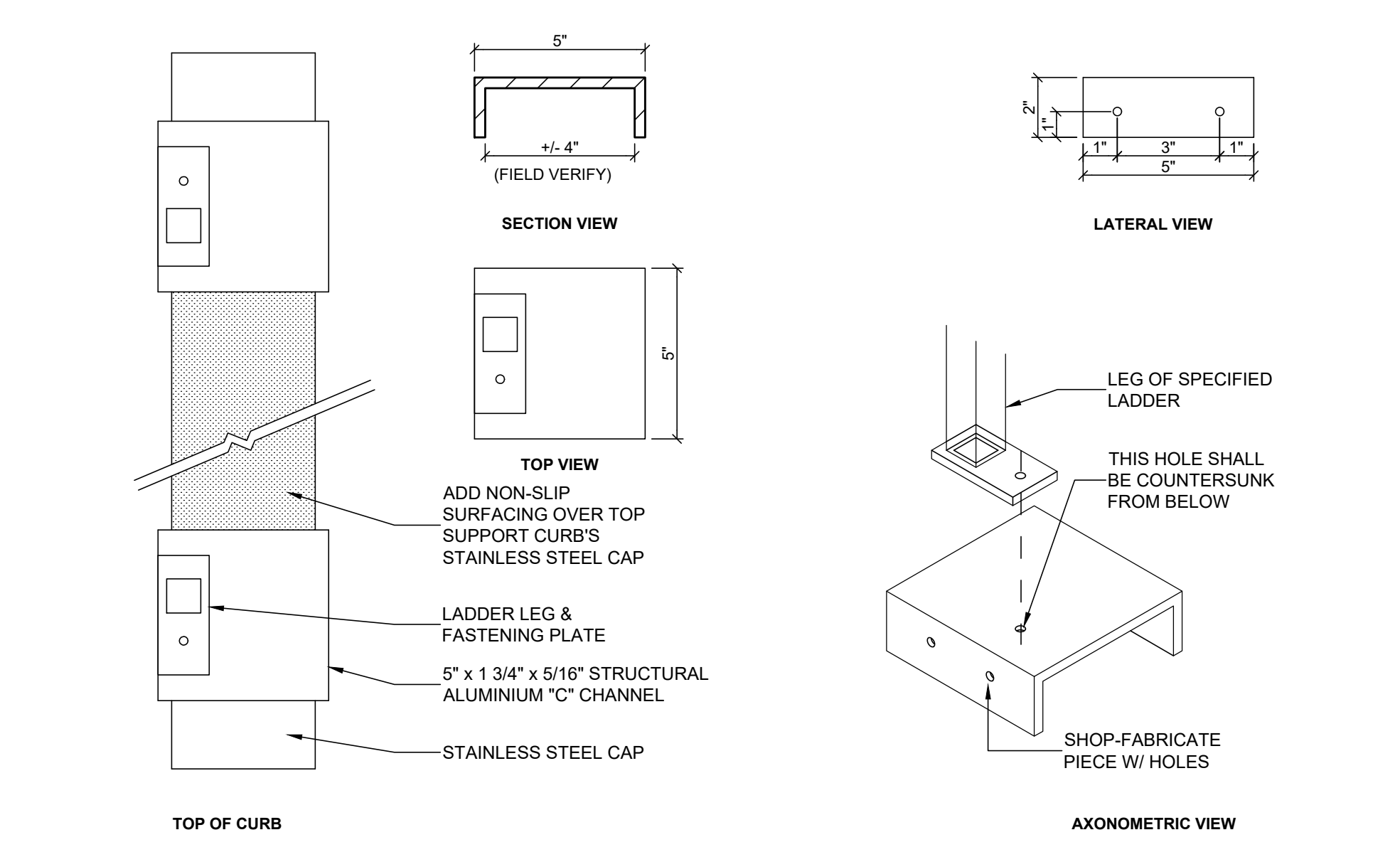
**1 TRIM AT PILASTER WAINSCOT**  
 3" = 1'-0"



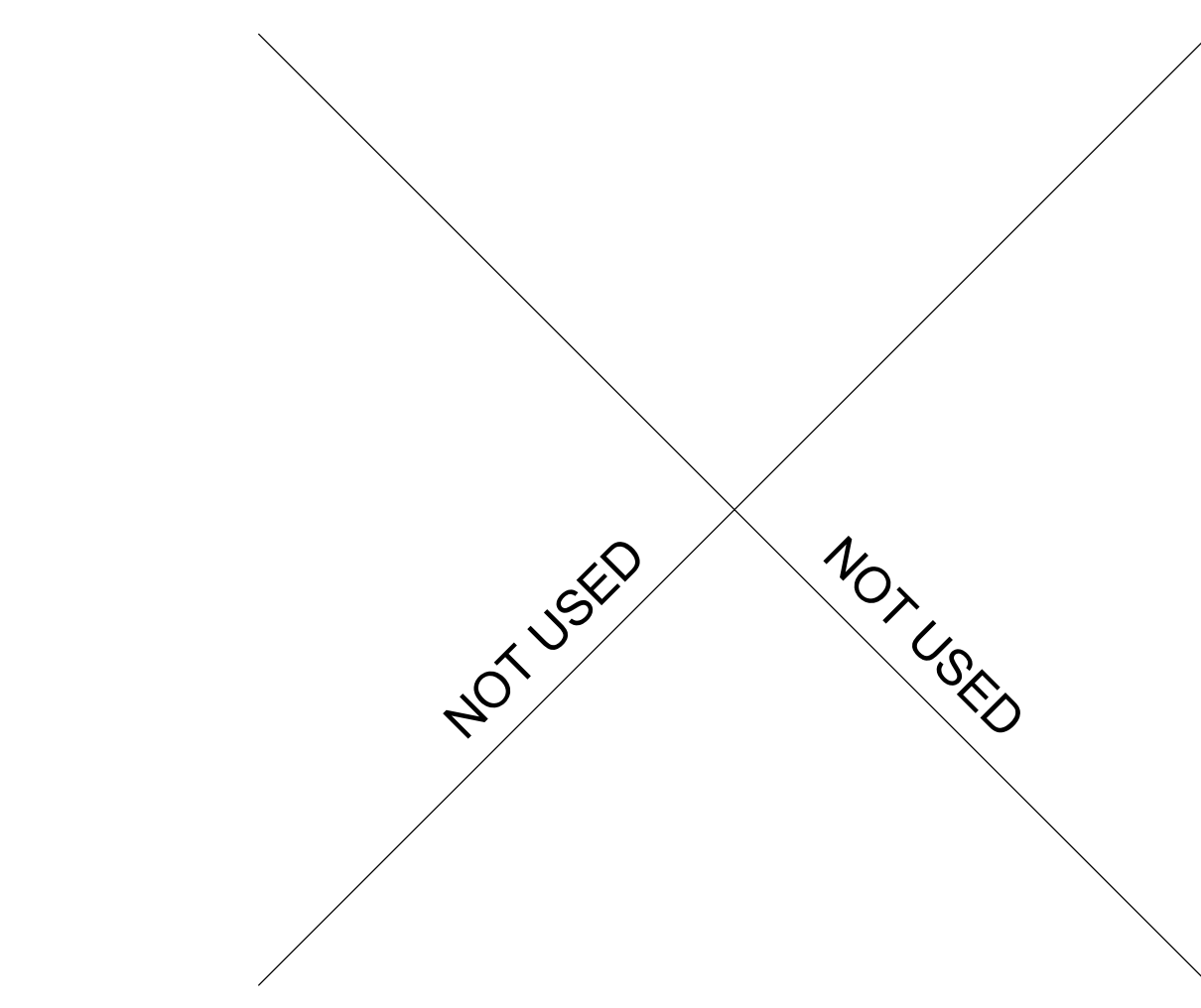
**3 FOUNDATION EXTENSION AT NEW PILASTER**  
 3" = 1'-0"



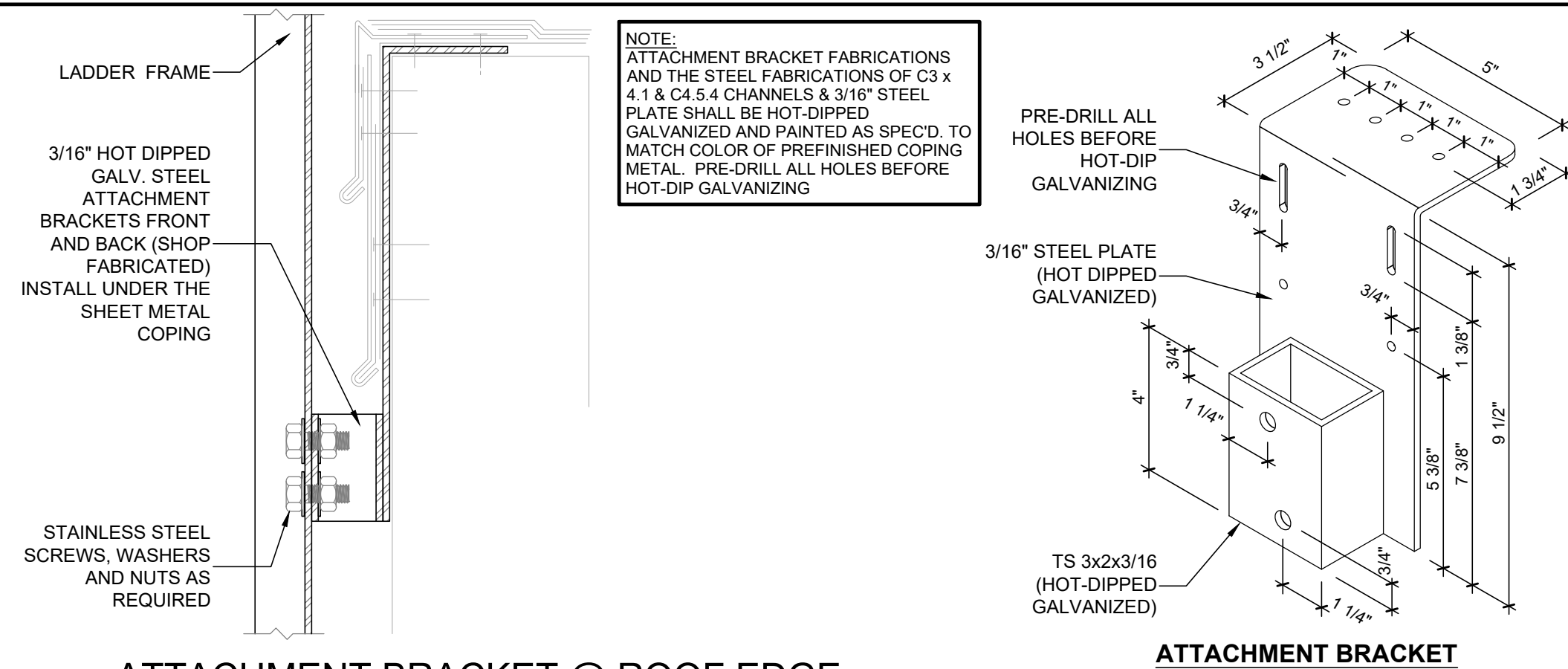
**1 VERTICAL WALL LADDER SUPPORT**  
3/4" = 1'-0"



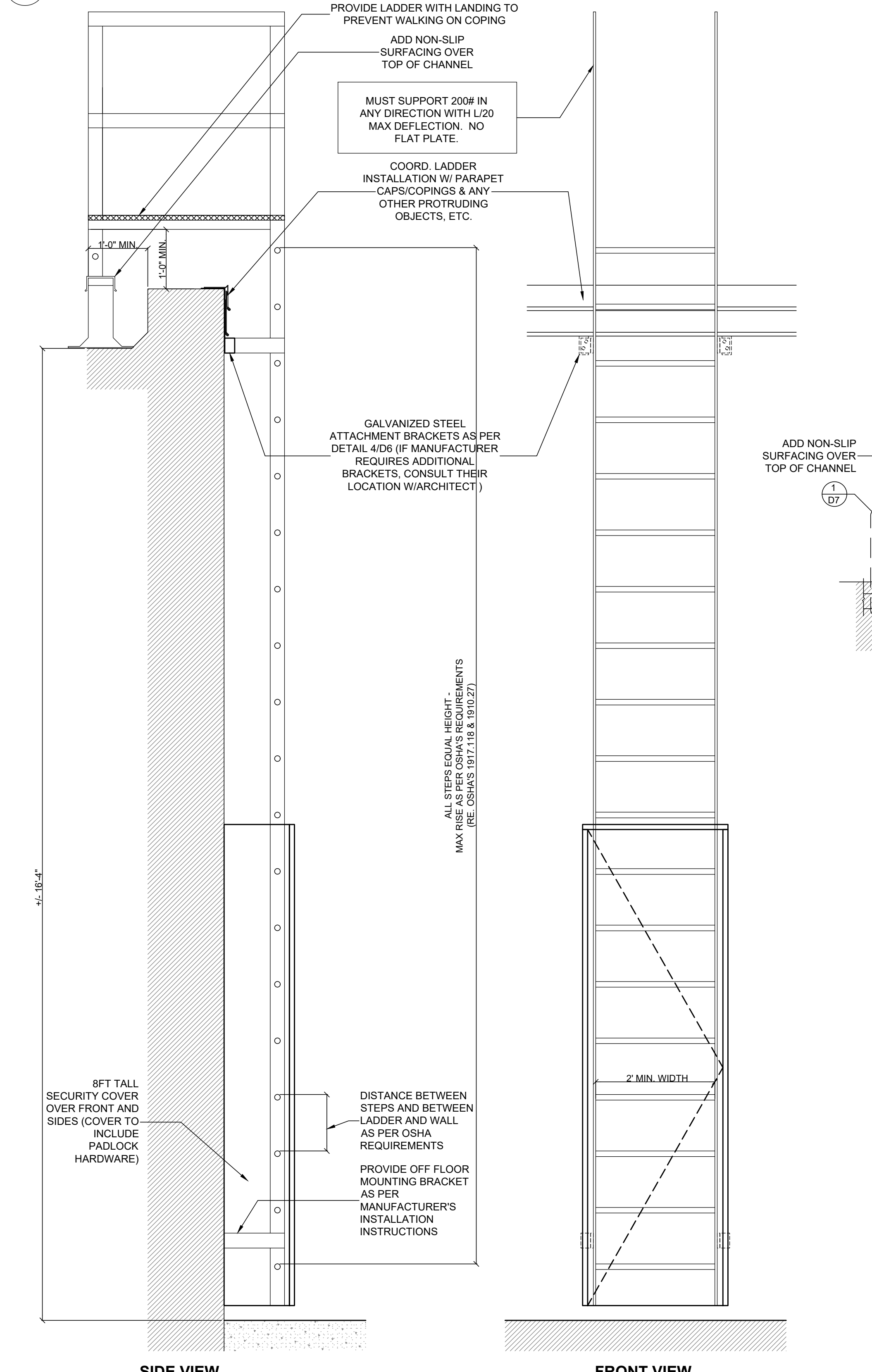
**2 ALTERNATE LADDER ATTACHMENT PIECE**  
3/4" = 1'-0"



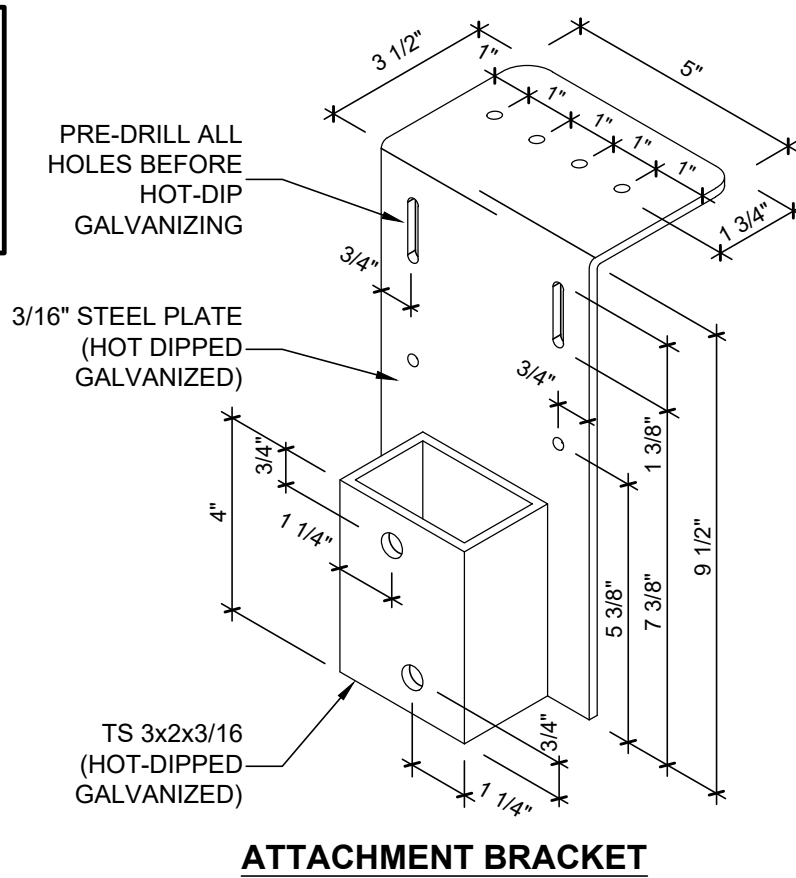
**3 NOT USED**



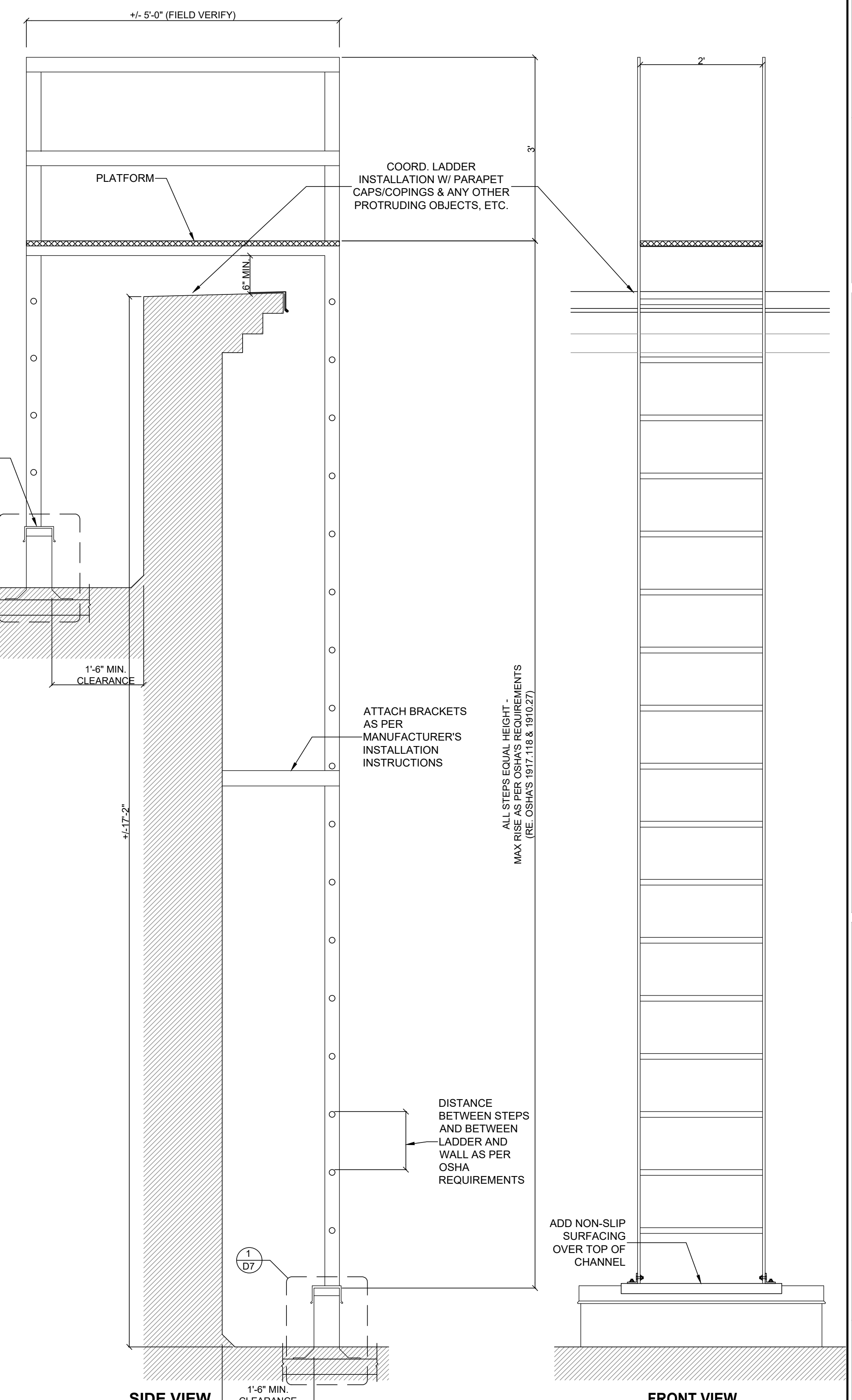
**4 ATTACHMENT BRACKET @ ROOF EDGE**  
3/4" = 1'-0"



**5 ROOF ACCESS LADDER L1 @ ROOF AREA "B"**  
3/4" = 1'-0"



**ATTACHMENT BRACKET**



**6 ROOF ACCESS LADDER L2 BETWEEN ROOF AREA "A" AND "B"**  
3/4" = 1'-0"

**CROSSEVER LADDER AS MANUFACTURED BY:**  
**OKEEFFE'S INC.**  
 100 N. HILL DRIVE  
 SUITE 12  
 BRISBANE, CA 94005  
 USA  
 TEL: 888.653.3333  
 FAX: 888.653.4444  
 HTTP://WWW.OKEEFFES.COM

(OR APPROVED EQUAL)

**LADDER CONSTRUCTION:**  
 - ALUMINIUM, ALL WELDED CONSTRUCTION  
 - 24" WIDE "MAX-TRAX" STAIR TREAD  
 - BASE PLATES AT SUPPORT LEGS FOR ATTACHMENT TO MOUNTING CURBS  
 - FINISH: STANDARD MILLED ALUMINIUM  
 - SIZE: FIELD VERIFY REQUIRED LENGTH OF LEGS AND SUPPORT CURB TO ACCOMMODATE A LEVEL PLATFORM INSTALLATION

**NOTE:**  
**TREADS, TREAD SPACING, HANDRAILS, GUARDRAILS & HEIGHTS OF HANDRAILS & GUARDRAILS SHALL BE DESIGNED & FABRICATED TO MEET THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, OSHA & AUTHORITIES HAVING JURISDICTION.**

**LADDERS SCHEDULE**

No.	HT.	"A" COMMENTS	"B" COMMENTS
L1	+/- 22'-0"		GROUND TO ROOF AREA "B"
L2	+/- 18'-0"		BETWEEN AREAS "A" & "B"

**NOTE: FIELD VERIFY ALL HEIGHTS & CLEARANCES FOR BIDDING & CONSTRUCTION.**

REVISIONS:


7/17/2019

CITY OF EDINBURG

**DUSTIN SEKULA MEMORIAL LIBRARY  
STRUCTURAL REPAIRS & ROOF REPLACEMENT**

2018

**AMTECH SOLUTIONS**

1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577

T 956.686.3095 F 956.686.2233

**LADDER DETAILS**

DRAWN BY: C.G. / S.E.  
 CHECKED BY: A.H. / T.H.  
 PROJECT NO.: RGV.2018.001027  
 DATE: 7/17/2019 SCALE: SEE DRAWING

17 OF 23 **D7**



GENERAL NOTES:

- 1. THE PROJECT IS TO:
a. REINFORCE THE WALLS IN LIBRARY SECTION A FOR IN-PLANE BENDING DUE TO WIND LOADS.
b. REDUCE EXISTING DEAD LOAD WEIGHT IN ROOF SECTIONS B AND C.
c. STRUCTURALLY REINFORCE THE OVER ROOF STRUCTURE FOR ROOF SECTIONS B AND C BY:
- CONFIRM PROPER FASTENER COUNT AND INSTALLATION AT EVERY VERTICAL STUD/POST CONNECTING EXISTING BAR JOIST TO ADDED ROOF PURLIN.
- ADD ADDITIONAL VERTICAL POST AT EVERY VERTICAL JOIST WEB MEMBER.
- COMPLETE INCOMPLETE CROSS BRACING.
- INSTALL NEW ROOF SUB-STRUCTURE CURB FRAMES FOR RTU AND MANUFACTURER'S RTU CURBS WHICH INCLUDES ADDITIONAL POST AND CROSS-BRACING.
2. THE PROJECT MANUAL (DRAWINGS AND SPECIFICATIONS) REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE INDICATED. THEY DO NOT INDICATE THE MEANS OR METHODS OF FABRICATION, ERECTION, OR CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: BRACING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING SAFETY NETS, SUPPORT AND BRACINGS FOR CRANES AND GIN POLES, ETC. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND THEY SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT AND/OR THE ENGINEER DO NOT INCLUDE INSPECTION OF THE ABOVE AND BELOW ITEMS.
3. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL COMPLY WITH THE GOVERNING BUILDING CODES AND REGULATIONS AS DEFINED IN THE FOLLOWING:
a. DESIGN CRITERIA (PRIORITY)
b. GENERAL NOTES
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AS CONSTRUCTED, AND CONDITIONS AT THE JOB SITE BEFORE COMMENCEMENT OF WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR OMISSIONS TO THE ENGINEER IN WRITING. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
5. IN CASE OF CONFLICT, NOTES AND DETAILS ON THE BALANCE OF THE DRAWINGS TAKE PRECEDENCE OVER STANDARD NOTES AND TYPICAL DETAILS.
6. WHERE CONSTRUCTION DETAILS ARE NOT SPECIFICALLY SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIALS. WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ARCHITECT AND/OR ENGINEER SHALL BE CONTACTED IN WRITING FOR CLARIFICATION.
7. EACH SUB-CONTRACTOR IS CONSIDERED AN EXPERT IN HIS RESPECTIVE FIELD AND SHALL, PRIOR TO THE SUBMISSION OF BID OR PERFORMANCE OF WORK, NOTIFY THE GENERAL CONTRACTOR OR OWNER OF ANY WORK CALLED OUT ON THE DRAWINGS IN HIS TRADE THAT CANNOT BE GUARANTEED.
8. THE CONTRACTOR SHALL COORDINATE ALL UTILITY, MECHANICAL, FUEL, AND ELECTRICAL EQUIPMENT AS TO WEIGHTS AND EXACT LOCATIONS, WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE PURCHASED EQUIPMENT DEVIATES IN WEIGHT AND LOCATION FROM THOSE INDICATED ON THE PLANS, THE ARCHITECT AND ENGINEER MUST BE NOTIFIED AND APPROVAL OBTAINED PRIOR TO INSTALLATION.
9. THIS STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING AS REQUIRED TO ENSURE THE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE, OR ANY PORTION THEREOF, DURING THE CONSTRUCTION PROCESS.
10. NEITHER THE OWNER, NOR THE ARCHITECT, NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES AND/OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
11. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE THE BASIS OF DESIGN AND MEET OUR QUALITY STANDARDS. SUBSTITUTIONS WILL BE PERMITTED, AS APPROVED BY THE ENGINEER IN WRITING, UNLESS OTHERWISE SPECIFIED. NO SUBSTITUTION IS ALLOWED FOR THAT SPECIFIC COMPONENT OR ELEMENT.
12. FOR ANY OPTIONS OR APPROVED SUBSTITUTIONS THAT ARE FOR THE CONTRACTORS CONVENIENCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES, ADDITIONAL COSTS, AND COORDINATION WITH ALL ITEMS THAT THE SUBSTITUTIONS MAY IMPACT.
13. THE ARCHITECT AND ENGINEER ARE TO BE NOTIFIED IN WRITING WHEN CONSTRUCTION AT THE SITE BEGINS.
14. ANY QUESTIONS RELATED TO INTERPRETATION OR INTENT OF THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER.
15. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ANY EXISTING UNDERGROUND OR CONCEALED UTILITIES SUCH AS CONDUITS, PLUMBING, OR OTHER UTILITIES PRIOR TO BEGINNING ANY WORK.
16. PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL NOT BE PLACED IN BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC. UNLESS NOTED, CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS.
17. IN WRITING IS CLASSIFIED AS WRITTEN INFORMATION BEING EITHER BY E-MAIL, FACSIMILE, U.S. MAIL, OR LIKE TEXTING NOT CLASSIFIED AS IN WRITING.
18. ADDITIONAL MISCELLANEOUS STEEL ITEMS NOT SHOWN ON STRUCTURAL DRAWINGS MAY BE REQUIRED. THE GENERAL CONTRACTOR AND FABRICATOR SHALL COORDINATE ALL REQUIREMENTS AND SHALL NOTIFY THE ARCHITECT AND ENGINEER IN WRITING OF ALL APPARENT INCONSISTENCIES FOR CLARIFICATIONS.

STUCTURAL CRITERIA:

- 1. DESIGN METHODOLOGY IS LRFD.
2. DESIGN LOADS, STRUCTURAL ANALYSIS AND PREPARATIONS OF STRUCTURAL MEMBERS ARE BASED UPON THE FOLLOWING CRITERIA:
2.1. CURRENT CITY OF EDINBURG APPLICABLE CODE:
2.1.1. 2012 INTERNATIONAL BUILDING CODE
2.1.2. 2009 INTERNATIONAL ENERGY CONSERVATION CODE
2.2. DESIGN BASIS:
2.2.1. AISC 13TH EDITION
3. LATERAL LOADS:
3.1. WIND LOADS FOR IN-PLANE BENDING REINFORCEMENT BASED ON ORIGINAL BUILDING ADDITION REQUIREMENTS: ORIGINAL DESIGN STANDARD ASCE 7-02
3.2. WIND SPEED:
3.2.1.1. ULTIMATE (3-SECOND GUST METHOD)137 MPH
3.2.1.2. ALLOWABLE STRESS DESIGN 106 MPH
3.2.2. EXPOSURE CATEGORY B
3.2.3. IMPORTANCE FACTOR 1.15
3.2.4. BUILDING RISK CATEGORY III
3.2.5. BASE ULTIMATE WIND PRESSURE (q) 29.01 PSF
4. SEISMIC:
4.1. SEISMIC DESIGN CATEGORY A
4.2. SITE CLASS D
5. VERTICAL LOADS:
5.1. OVER ROOF LOADS FOR SECTION B AND C USE THE REQUIREMENTS OF 2015 IBC AND ASCE 7-10 AND LRFD DESIGN METHODOLOGY:
5.2. ROOF:
5.2.1. DEAD LOAD: 25 PSF
5.2.2. LIVE LOAD: 20 PSF
5.2.3. WIND UPLIFT MWFRS: 30 PSF
5.2.4. WIND UPLIFT C&C (NEW ROOF SYSTEM):
5.2.5. ASCE 7-10
5.2.5.1. EXPOSURE CATEGORY: B
5.2.5.2. BUILDING RISK CTEGORY: III
5.2.5.3. ULTIMATE WIND SPEED: (ASCE HAZARD TOOL) 138 MPH
5.2.5.4. ENCLOSED Kd = 0.85, Kzt = 1, Kz = 0.70 (MEAN ROOF h < 30')
5.2.5.5. BASE WIND PRESSURE: 29.01 PSF
5.2.5.6. ENCLOSED BUILDING: Gcpi = +0.18/-0.18

COLD-FORMED STEEL:

- 1. COLD-FORMED STEEL SHALL BE NEW AND CONFORM TO AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, LATEST APPROVED EDITION, UNLESS OTHERWISE SPECIFIED. COLD-FORMED STEEL SECTIONS SHALL BE LESS THAN 1" IN THICKNESS AND ARE TO BE USED AS STRUCTURAL MEMBERS FOR LOAD CARRYING PURPOSES IN BUILDINGS.
2. ALL COLD-FORMED STEEL (CARBON-ALLOY, LOW-ALLOY, STRIP, PLATE, OR BAR) SHALL CONFORM TO THE FOLLOWING DESIGN CRITERIA:
a. MINIMUM METALLIC COATING DESIGNATION: G40 - G60
b. YIELD STRENGTH: 33 - 50 KSI
c. TENSILE STRENGTH: 45 - 65 KSI
3. THE UNCOATED MINIMUM STEEL THICKNESS OF THE COLD-FORMED STEEL PRODUCT DELIVERED TO THE JOB SITE SHALL NOT AT ANY LOCATION BE LESS THAN 95% OF THE THICKNESS, T, USED IN THE DESIGN DOCUMENTS. LESSER THICKNESS IS PERMITTED AT BENDS (E.G. CORNERS) DUE TO COLD FORMING EFFECTS.
4. ALL COLD-FORMED STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE PROJECT MANUAL (DRAWINGS AND SPECIFICATIONS) FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN IRON AND STEEL INSTITUTE.
5. UNLESS OTHERWISE NOTED, BENDING STEEL IN THE FIELD MAY CAUSE FRACTURES AT THE BEND LINE. FRACTURED STEEL WILL NOT CARRY LOAD AND MUST BE REPLACED.
6. DO NOT WELD COLD-FORMED STEEL UNLESS THE PROJECT DOCUMENTS SPECIFICALLY IDENTIFY THAT A COMPONENT IS ACCEPTABLE FOR WELDING, OR UNLESS SPECIFIC APPROVAL FOR WELDING IS PROVIDED IN WRITING BY THE MANUFACTURER OR ENGINEER. SOME STEEL ALLOYS HAVE POOR WELDABILITY AND A TENDENCY TO CRACK WHEN WELDED. CRACKED STEEL WILL NOT CARRY LOAD AND MUST BE REPLACED.
7. DO NOT ADD OR MODIFY FASTENER HOLE LOCATIONS UNLESS SPECIFIED IN THE PROJECT DOCUMENTS OR APPROVED BY THE ENGINEER AND MANUFACTURER. MODIFIED MEMBERS MAY BE WEAKENED AND MUST BE REPLACED.
8. FOR CONNECTION INSTALLATION, ANCHOR LEG MUST HAVE FULL BEARING ON THE SUPPORTING STRUCTURE WITH NO OVERHANG.
9. ANCHORAGE INSTALLATION SHALL CONSIDER FIELD CONDITIONS. FOR FASTENER INSTALLATIONS INTO STEEL BACKED BY CONCRETE, STEEL THICKNESS, EDGE DISTANCE AND EMBEDMENT IN CONCRETE, TYPE AND STRENGTH, ETC. MAY REQUIRE PRE-DRILLING OF BOTH THE STEEL, WOOD, AND CONCRETE FOR SELF-DRILLING SCREWS, OR MAY RESULT IN SPALLING OF CONCRETE FOR POWER-ACTUATED FASTENERS.
10. ALL FASTENERS AND CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
11. ALL FASTENERS SHALL BE COMMERCIAL GRADE (4 TO 8 MICRONS THICK) ELECTRO-ZINC PLATED.
12. ALL COLD-FORMED STEEL LOCATED TO THE INTERIOR SHALL RECEIVE (1) COAT OF SHOP PRIMER.
13. ALL COLD-FORMED STEEL EXPOSED TO THE EXTERIOR OR WEATHER SHALL BE HOT DIPPED GALVANIZED, WHICH INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER OR STUCCO.

STRUCTURAL STEEL (AISC) AND METAL DECK NOTES:

- 1. STRUCTURAL STEEL SHALL BE NEW AND SHALL CONFORM TO AISI "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS," LATEST APPROVED EDITION UNLESS OTHERWISE SPECIFIED.
2. ALL STRUCTURAL STEEL SHAPES, PLATES, ETCETERA, SHALL CONFORM TO THE FOLLOWING DESIGNATIONS, UNLESS NOTED OTHERWISE:
2.1. W SHAPES AND LIKE:
2.1.1. ASTM A572 OR ASTM A992, GRADE 50
2.2. ANGLES, CHANNELS, AND PLATES:
2.2.1. ASTM A36 OR AS NOTED ON DRAWINGS
2.3. HOLLOW STRUCTURAL SHAPES (HSS):
2.3.1. ASTM A500 GRADE "B" (46 KSI)
2.4. PIPES:
2.4.1. ASTM A53 GRADE B
3. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE PROJECT MANUAL (DRAWINGS AND SPECIFICATIONS) FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AMENDED AS FOLLOWS:
3.1. SECTION 7 - ALL REFERENCE TO THE OWNER OR OWNERS DESIGNATED REPRESENTATIVE FOR CONSTRUCTION SHALL BE CHANGED TO GENERAL CONTRACTOR.
3.2. SECTION 7.9 - THE CONTRACTOR SHALL PROVIDE THE SEQUENCE AND SCHEDULE OF PLACEMENT OF NON-SELF-SUPPORTING STEEL FRAMES.
3.3. SECTION 7.10 - THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
4. ALL STRUCTURAL STEEL LOCATED TO THE INTERIOR SHALL RECEIVE (1) COAT OF SHOP PRIMER. ALL STRUCTURAL STEEL LOCATED ON THE EXTERIOR TO BE GALVANIZED OR EPOXY COATED.
5. ALL STRUCTURAL STEEL SHAPES SHALL BE PRIMED WITH A RUST RESISTANT PRIMER BEFORE SHIPMENT TO THE PROJECT SITE. THE PRIMER SHALL NOT BE APPLIED TO THE IMMEDIATE AREA OF STEEL INTENDED TO RECEIVE SLIP CRITICAL BOLTED CONNECTIONS OR FIRE SPRAY BARRIER MATERIAL. ALL STEEL (INCLUDING BOLTS) EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED WHICH INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER OR STUCCO. SEE ARCHITECTURAL PLANS IF STRICTER REQUIREMENTS ARE REQUIRED. EXPOSED STEEL MAY BE PAINTED AS DEFINED IN THE PROJECT MANUAL.
6. ALL EXPOSED ARCHITECTURAL STEEL SHALL FOLLOW SECTION 10-ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) OF THE CODE OF STANDARD PRACTICE OF AISI.
8. ALL BOLTS, NUTS, AND WASHERS SHALL BE IN ACCORDANCE WITH LATEST SPECIFICATIONS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RSCC) OF THE ENGINEERING FOUNDATION. ALL BOLTED CONNECTIONS TO USE ASTM A325 HIGH STRENGTH BOLTS, NUTS, AND WASHERS. ALL BOLTED CONNECTIONS TO BE INSTALLED SNUG TIGHT.
9. ALL BOLTS AND BOLTED CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
10. ALL FIELD CONNECTIONS SHALL BE BOLTED (ASTM A325-N UNLESS NOTED OTHERWISE) OR WELDED AS SHOWN ON THESE DRAWINGS. ALL NON-COMPOSITE BEAM CONNECTIONS SHALL BE EQUAL TO ONE-HALF OF THE AISI BEAM (ALLOWABLE UNIFORM LOAD) TABLE VALUE FOR THE CORRESPONDING SPAN, EXCEPT AS SHOWN ON THESE DRAWINGS.
11. TYPICAL HOLES IN CONNECTION PLATES SHALL BE NO MORE THAN 1/16-INCH LARGER THAN THE BOLT DIAMETER. IF LARGER DIAMETER HOLES ARE USED FOR ERECTION PURPOSES THE CONTRACTOR MUST PROVIDE PLATE WASHERS. HOLES FOR BOLTS IN STRUCTURAL STEEL SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES SHALL NOT BE PERMITTED.
12. ALL BOLTED CONNECTIONS SHALL BE MADE USING 3/4" DIAMETER HIGH STRENGTH BOLTS, ASTM A325, BEARING TYPE CONNECTION WITH WASHERS ASTM F436, UNLESS OTHERWISE SPECIFIED IN PROJECT MANUAL (DRAWINGS AND SPECIFICATIONS). SPECIAL INSPECTION IS REQUIRED FOR ALL HIGH STRENGTH BOLTING. ALL NUTS SHALL BE PER ASTM A563.
13. STEEL MEMBERS SHALL NOT BE SPLICED EXCEPT WHERE SHOWN ON THE DRAWINGS, UNLESS APPROVED BY THE ENGINEER.
14. ALL STRUCTURAL STEEL DETAILS AND CONNECTIONS SHALL CONFORM TO THE STANDARDS OF THE AISI.
15. DETAILS AND OR SCHEDULED CONNECTIONS HAVE BEEN DESIGNED BY THE ENGINEER. ANY CONNECTION NOT DETAILED OR SCHEDULED OR ALTERED FOR FABRICATION PURPOSES SHALL BE SIZED AND DETAILED BY FABRICATOR AND SHALL BE MARKED FOR THE ENGINEER'S VERIFICATION. FABRICATOR SIZED AND DETAILED CONNECTIONS SHALL SUPPORT ONE HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE TABLES OF UNIFORM CONSTANTS, PART 2 OF THE AISI MANUAL OF STEEL CONSTRUCTION FOR THE GIVEN BEAM, SPAN, AND GRADE OF STEEL SPECIFIED. THE EFFECT OF ANY CONCENTRATION LOADS MUST BE TAKEN INTO ACCOUNT.
16. ALL CONNECTION PLATES AND STIFFENERS SHALL BE MADE WITH 1/4" THICK PLATES, UNLESS OTHERWISE SPECIFIED ON DRAWINGS OR SPECIFICATIONS.
17. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, EXCEPT AS NOTED. REFER TO BASEPLATE DETAILS FOR LOCATIONS WHERE ASTM A325 ANCHOR BOLTS ARE REQUIRED.
18. FOR ALL HIGH STRENGTH BOLTS, HARDENED WASHERS SHALL BE PROVIDED AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS.
19. SUBMIT STEEL SHOP DRAWINGS PRIOR TO FABRICATION SHOWING ALL FIELD VERIFIED DIMENSIONS OF MEMBERS AND CONNECTIONS. ALLOW SUFFICIENT TIME FOR REVIEW BY THE ENGINEER TO BE COMPLETED PRIOR TO BEGINNING FABRICATION.
20. FIELD MEASURE ALL DIMENSIONS AND DETAILS REQUIRED FOR COORDINATION WITH STEEL AND CONCRETE WORK.
21. ALL WELDED CONNECTIONS SHALL BE MADE USING 1/4" FILLET WELD, UNLESS OTHERWISE SPECIFIED.
22. SEE ARCHITECTURAL PLANS FOR MISCELLANEOUS STEEL ITEMS NOT INDICATED ON STRUCTURAL DRAWINGS. STEEL ITEMS SHOWN ON ARCHITECTURAL DRAWINGS AND NOT SPECIFIED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY THE STEEL FABRICATOR. SEE DESIGN CRITERIA FOR LOADING.

WELDING NOTES:

- 1. WELDING SHALL BE DONE IN ACCORDANCE WITH THE STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION AS PUBLISHED BY THE AMERICAN WELDING SOCIETY, EXCEPT THAT ALL WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO ANSII/AWS D 1.1-15.
2. TYPICAL WELDS SHALL:
a. USE 70 KSI ELECTRODES, STICK OR WIRE FILLER IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED.
b. COMPLY WITH AWS REQUIREMENTS AND PROCEDURES FOR WELDING, APPEARANCE AND QUALITY OF WELDS, AND METHODS USED IN CORRECTING WELDING WORK.
c. ALL WELDS SHALL BE MADE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE AWS, USING E70 ELECTRODES.
d. PROVIDE FIELD TOUCH UP PAINT TO MATCH SHOP-APPLIED PRIMER WHERE PAINT HAS BEEN BURNED OFF.
3. WHEN WELDS ARE NOT CALLED OUT ON THE DRAWINGS, THEY ARE MINIMUM SIZE CONTINUOUS FILLET WELDS IN ACCORDANCE WITH AWS D1.1. FILLET WELDS NOT SPECIFIED AS TO LENGTH SHALL BE CONTINUOUS.
4. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL PREPARED GROOVE WELD SHALL BE FULL PENETRATION.
5. PROVIDE FILLET WELDS AT ALL CONTACT JOINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT UNLESS NOTED OTHERWISE ON THE DRAWINGS.
6. WELDING OF METAL FORM DECK SHALL CONFORM TO AWS D1.3.

OPEN WEB STEEL JOISTS NOTES:

- 1. ALL STEEL FOR JOISTS SHALL CONFORM TO THE STEEL JOIST INSTITUTE (SJI) REQUIREMENTS FOR K-SERIES OPEN WEB JOISTS, AND VS-SERIES STEEL JOISTS, MINIMUM 50,000 PSI YIELD POINT.
2. ALL STEEL JOISTS SHALL RECEIVE MANUFACTURER'S STANDARD BASE PAINT, APPLIED BY DIPPING OR SPRAYING, BEFORE LEAVING THE FABRICATION SHOP.
3. ALL STEEL JOISTS BEARING ON STEEL SHALL HAVE A MINIMUM 2" BEARING LENGTH AND SHALL BE WELDED TO THE STEEL WITH (2) WELDS AT EACH END OF THE JOIST. EACH WELD LENGTH WILL BE A MINIMUM OF 2" LONG. JOIST BEARING LESS THAN 2 1/2" SHALL BE DESIGNED BY THE JOIST SUPPLIER TO RESIST THE INCREASED STRESS. JOIST SUPPLIER TO PROVIDE SPECIAL SEATS AND ANCHORAGE REQUIREMENTS FOR LOCATION WITH DEFICIENT BEARING.
4. PROVIDE 2"x2"x1/4" ANGLE BOTTOM CHORD EXTENDS AT STEEL JOIST END AT COLUMN LINES OR AT JOIST NEAREST COLUMN LINES.
5. CHECK ARCHITECTURAL PLANS IF BOTTOM CHORD EXTENSIONS ARE REQUIRED.
6. BOTTOM CHORD EXTEND ENDS SHALL NOT BE INSTALLED UNTIL AFTER ROOF HAS BEEN COMPLETELY INSTALLED.
7. ROOF TOP A/C UNITS SHALL HAVE AN OPERATING WEIGHT NOT TO EXCEED 500 LBS. AND SHALL BE LOCATED OVER A MINIMUM OF 2 JOISTS. ROOF TOP UNITS WEIGHING MORE THAN 500 LBS. SHALL BE LOCATED AS SHOWN ON THE PLANS.
8. STEEL JOISTS TO BE DESIGNED PER DESIGN CRITERIA LIST IN THE STRUCTURAL SHEETS. THE FABRICATOR OF THE JOIST SHALL WRITE THE ENGINEER OF ANY PERCEIVED CODE CONFLICTS WITHIN THE DEFINED PROJECT MANUAL (DRAWINGS AND SPECIFICATIONS).
9. ALL STEEL JOISTS SHALL BE MANUFACTURED BY VULCRAFT OR SMI, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
10. PROVIDE ANGLES FOR SUPPORT AROUND OPENINGS AT METAL DECK.
11. STEEL JOIST SUPPLIER TO VERIFY THAT THE SPECIFIED JOISTS MEET ALL THE MINIMUM REQUIREMENTS OF SJI BEFORE PROVIDING A BID.
12. MECHANICAL EQUIPMENT ABOVE JOIST: (SEE PLANS) FUEL, PIPES, CONDUIT, AND MECHANICAL EQUIPMENT SHALL BE SUPPORTED BY THE TOP CHORD OF THE STEEL JOISTS ONLY.
13. WHERE STEEL JOIST PASS THROUGH CMU, CONCRETE, OR FRAMED WALLS, PROVIDE HALF INCH GAP BETWEEN THE WALL ASSEMBLY AND STEEL JOIST. PROVIDE ELASTOMERIC MATERIAL BETWEEN THE STEEL JOIST AND WALL ASSEMBLY. CONTRACTOR TO CONFIRM IF SMOKE OR FIRE STOP MATERIAL IS REQUIRED.
14. PROVIDE CLOSURE ANGLE 3"x3"x3/8" AT ALL PERIMETER CONDITIONS TO FRAME OUT ALL ROOF PENETRATIONS UNLESS NOTED OTHERWISE.
15. IF JOIST IS NOT MANUFACTURED BY VULCRAFT OR SMI, THEN ALL JOISTS SHALL BE SHOP INSPECTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY TO MEET THE WELD REQUIREMENTS AS FOLLOWS:
a. THE WELD HAS NO CRACKS.
b. THROUGH FUSION EXISTS BETWEEN ADJACENT LAYERS OF WELD METAL AND BETWEEN WELD METAL AND THE BASE METAL AT THE WELDED CONNECTION.
c. ALL CRATERS ARE FILLED TO THE FULL CROSS SECTION OF THE WELD JOINT.
d. ALL WELD PROFILES SHALL BE REASONABLY UNIFORM. IT IS RECOGNIZED THAT ALL WEB JOINT WELDS WILL NOT HAVE A PERFECT PROFILE. HOWEVER, THE EFFECTIVE THROAT AND PENETRATION SHALL BE EQUAL TO THE THROAT REQUIRED BY THE DESIGN DRAWINGS. VISUAL INSPECTION OF THE WELDS SHALL BE MADE TO CONFIRM THAT UNEQUAL LEGS, EXCESSIVE CONVEXITY, OR OVERLAP CONDITIONS DO NOT DETRACT FROM THE EFFECTIVE THROAT OF THE WELD.
e. UNDERCUTTING OF WELDS IS UNDESIRABLE BUT IS ACCEPTABLE IF THE DEPTH OF UNDERCUTTING DOES NOT EXCEED 1/32". WELDS THAT HAVE UNDERCUTTING IN EXCESS OF 1/32" SHALL BE REPAIRED AND RE-INSPECTED.
f. ANY CLUSTER OF SURFACE POROSITY IN THE WELD AREA IS TO BE REMOVED AND REPLACED WITH SOUND WELD METAL. THE SURFACE OF THE SHOP WELDS SHALL BE REASONABLY CLEAN PRIOR TO THE INSPECTION.
g. ALL REPAIR PROCEDURES SHALL BE IN ACCORDANCE WITH AWS D1.1. CONTRACTOR SHALL BEAR THE COST FOR ALL REINSPECTION. RESULTS OF THE INSPECTION SHALL BE PROVIDED TO THE STRUCTURAL ENGINEER PRIOR TO SHIPMENT OF THE JOIST.

ROOF METAL DECK NOTES:

- 1. GALVANIZED SHEET METAL:
1.1. ASTM A446, GRADE A, G60 ZINC COATED ACCORDING TO ASTM A525.
1.2. DECK PROFILE: F
1.3. PROFILE DEPTH: 1.5 INCHES
1.4. GAUGE: 22
2. METAL DECK SHALL BE ATTACHED AS FOLLOWS:
2.1. AT SUPPORTS:
2.2. #12 TEK SCREWS
2.3. 364 FASTENER LAYOUT
3. AT LONG SEAMS (SIDE LAP):
3.1. #10 TEK SCREWS
3.2. (4) SCREWS PER SPAN
4. INSTALL DECK ENDS OVER SUPPORTING FRAMING WITH A MINIMUM END BEARING OF 2-INCHES WITH END JOINTS UPPED AT A MINIMUM OF 2-INCHES AND SHALL OCCUR OVER SUPPORTS. SCREWS MUST BE INSTALLED USING PROPERLY CALIBRATED TOOLS TO AVOID OVER-DRIVING WHICH CAN STRIP THE THREADS AT SIDE LAPS OR SEVER THE SCREW WHEN IT IS PLACED INTO HEAVIER SUBSTRATE.
5. WELDING OF METAL DECKING NOT ALLOWED. ALL METAL DECKING THAT HAS BEEN WELDED SHALL BE REMOVED AT CONTRACTORS EXPENSE. REMOVED METAL DECKING SHALL NOT BE USED.
6. DECK UNITS SHALL BE 3 OR MORE SPANS AND SHALL BE ATTACHED TO THE STRUCTURAL SUPPORT.

REVISIONS:



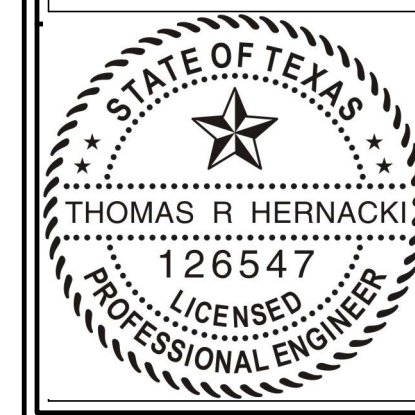
CITY OF EDINBURG
DUSTIN SEKULA MEMORIAL LIBRARY
STRUCTURAL REPAIRS & ROOF REPLACEMENT
2018

AMTECH SOLUTIONS
1600 N. JACKSON RD. STE #3
PHARR, TEXAS 78577
956.686.3095 956.686.2233

STRUCTURAL NOTES

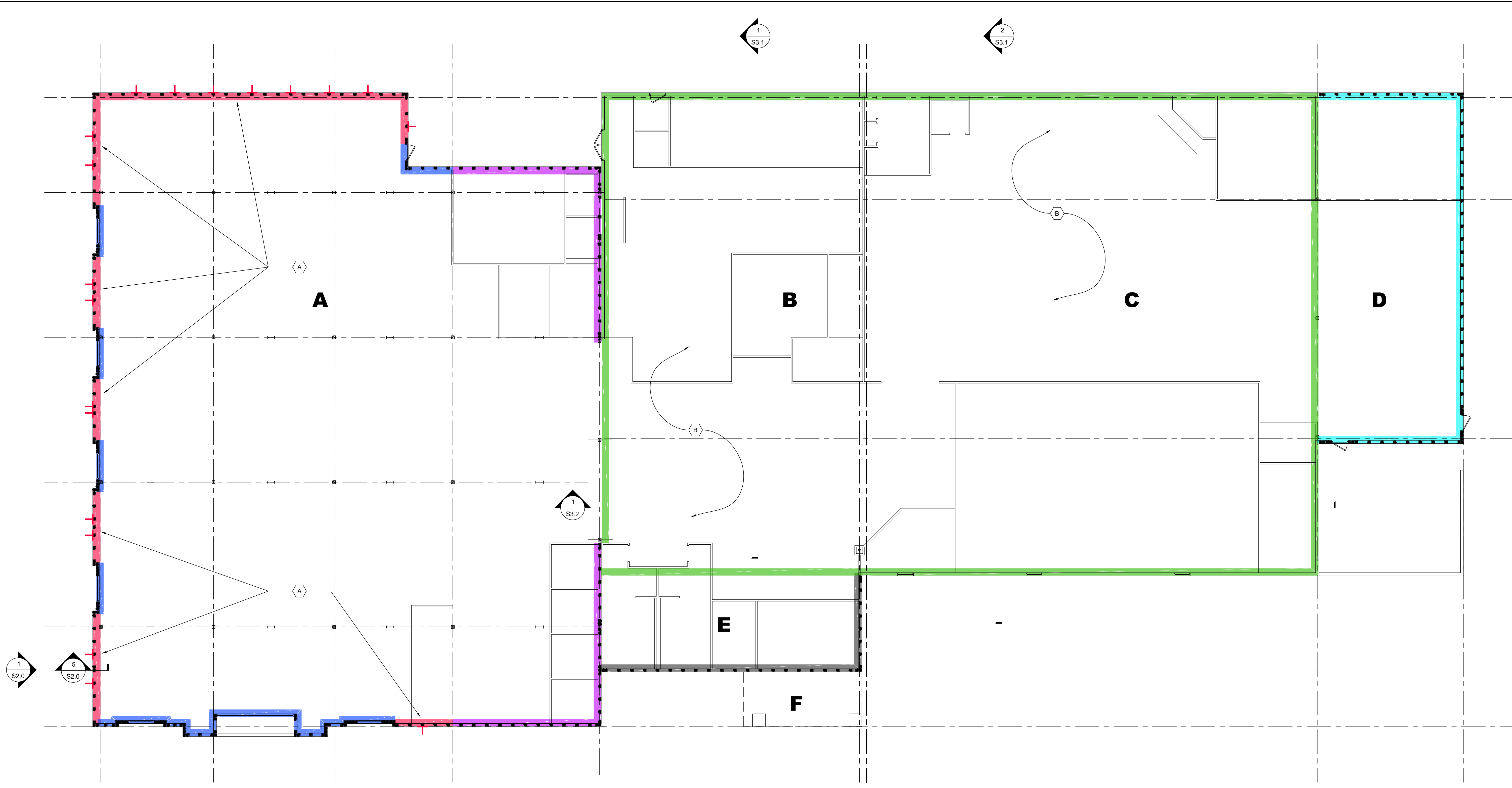
DRAWN BY: C.G./S.E.
CHECKED BY: A.H./T.H.
PROJECT NO.: RGV.2018.001027
DATE: 7/17/2019 SCALE: SEE DRAWING





CITY OF EDINBURG  
**DUSTIN SEKULA MEMORIAL LIBRARY**  
**STRUCTURAL REPAIRS & ROOF REPLACEMENT**  
 2018

**AMTECH SOLUTIONS**  
 1600 N. JACKSON RD. STE #3  
 PHARR, TEXAS 78577  
 T 956.686.3095 F 956.686.2233



**KEYED NOTES:**

(A) ADD WALL REINFORCEMENT FOR WIND IN-PLACE WALL BENDING PER S2.0

(B) ADD ROOF OVER REINFORCEMENT PER S3.0

(C) WALL REINFORCEMENT FOR IN-PLANE WALL BENDING FOR WIND LOADS:  
 • WTBX20 PLACED @ 1/2 OF FILLED CELL CMU AS SHOWN V.I.F.  
 LOCATION OF FILLED CELLS  
 • ASTM A992 STEEL ALLOY  
 • PAINT AT FABRICATOR:  
 •• (1) COAT PRIMER  
 •• (1) COAT CORROSION RESISTANT PAINT  
 OR  
 •• (2) COAT D.T.M. PAINT  
 •• Ø1/2" HOLE THRU AS SHOWN

(D) SIMPSON TIED HD CONC. SCREW Ø3/8X4 P/N THD 37400H

**KEY**

WALL A - NEW CONSTRUCTION  
 • REINFORCE FOR WIND BENDING WITH WTBX20 FASTENED @ 24" O.C. STAGGERED THROUGH CENTER OF FILLED CELLS

WALL B - NEW CONSTRUCTION  
 • WALL STRUCTURE SUFFICIENT  
 • 16" DEEP COLUMNS

WALL C - NEW CONSTRUCTION  
 • WALL STRUCTURE SUFFICIENT  
 • 2-STORY CONSTRUCTION BRACED @ 12.5' BY 2ND FLOOR

WALL D - NEW CONSTRUCTION  
 • WALL STRUCTURE SUFFICIENT  
 • UNDER 19'

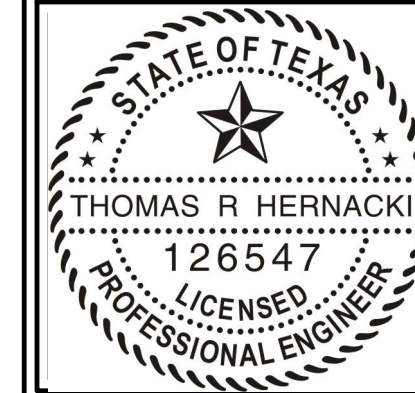
WALL E - ORIGINAL CONSTRUCTION & EXTG.  
 • ORIGINAL WALLS REMOVED FOR NEW CONSTRUCTION

WALL F - NEW CONSTRUCTION  
 • WALL STRUCTURE SUFFICIENT  
 • UNDER 19'

**STRUCTURAL - REINFORCEMENT PLAN**  
 SCALE: 1" = 10' - 0"



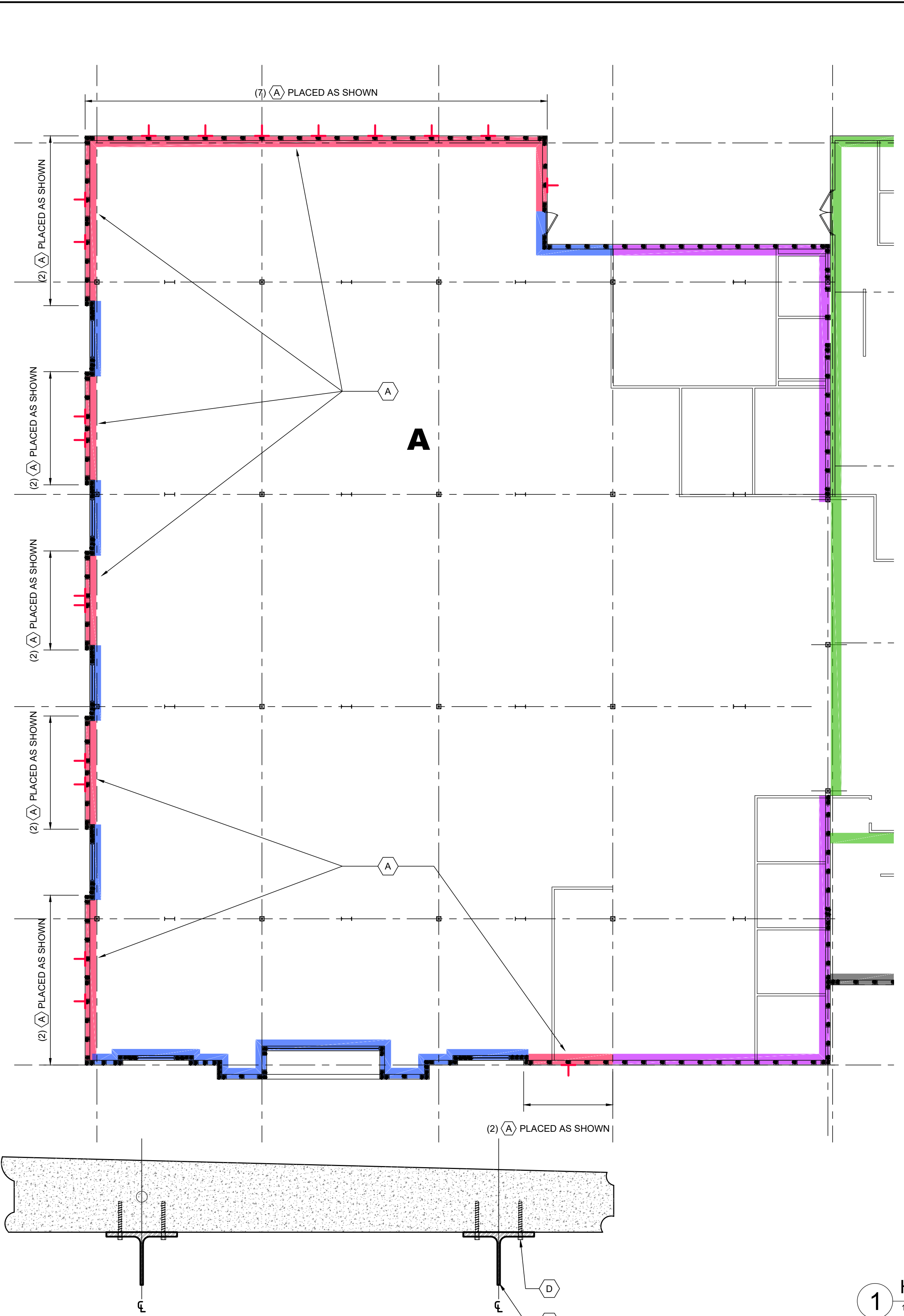
- KEYED NOTES:**
- (A) ADD WALL REINFORCEMENT FOR WIND IN-PLACE WALL BENDING PER S2.0
  - (B) ADD ROOF OVER REINFORCEMENT PER S3.0
  - (C) WALL REINFORCEMENT FOR IN-PLANE WALL BENDING FOR WIND LOADS
    - WT6X20 PLACED @ 1/2 OF FILLED CELL CMU AS SHOWN V.I.F.
    - LOCATION OF FILLED CELLS
    - ASTM A992 STEEL ALLOY
    - PAINT AT FABRICATOR:
      - (1) COAT PRIMER
      - (1) COAT CORROSION RESISTANT PAINT OR
      - (2) COAT D.T.M. PAINT
    - Ø1/2" HOLE THRU AS SHOWN
  - (D) SIMPSON TIED HD CONC. SCREW Ø3/8X4 P/N THD 37400H



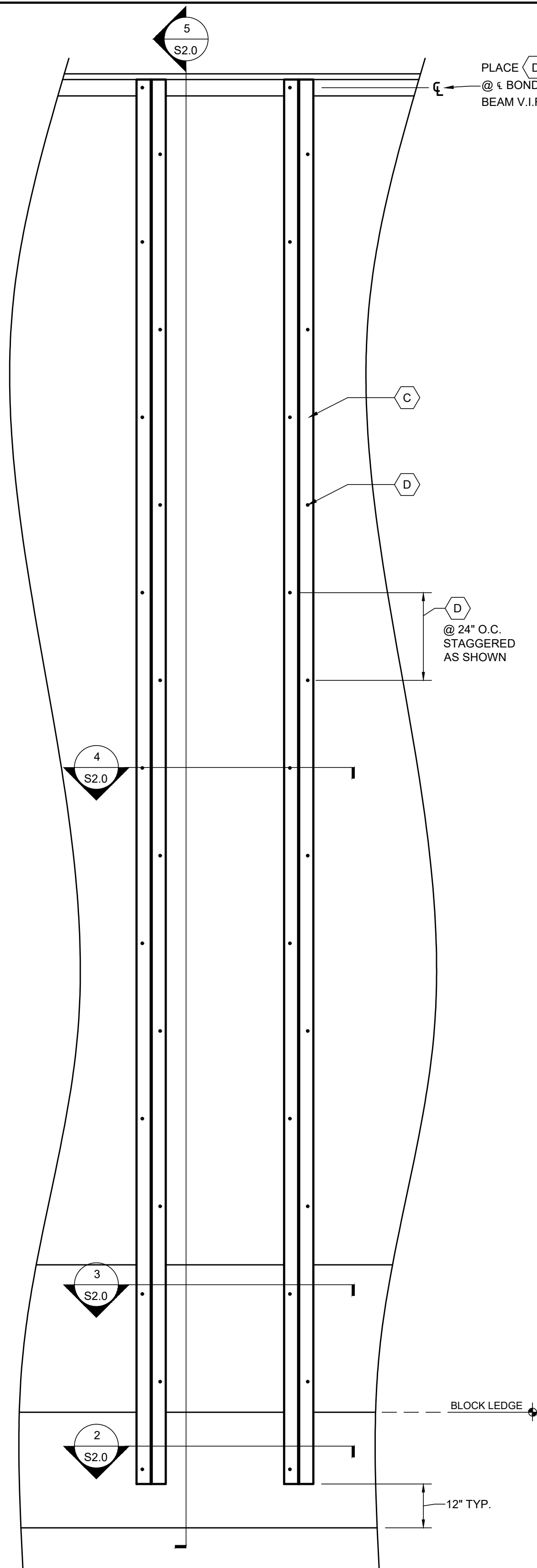
CITY OF EDINBURG  
**DUSTIN SEKULA MEMORIAL LIBRARY**  
 STRUCTURAL REPAIRS & ROOF REPLACEMENT  
 2018

**AMTECH SOLUTIONS**  
 1600 N. JACKSON RD. STE #3  
 PHARR, TEXAS 78577  
 T 956.686.3095 F 956.686.2233

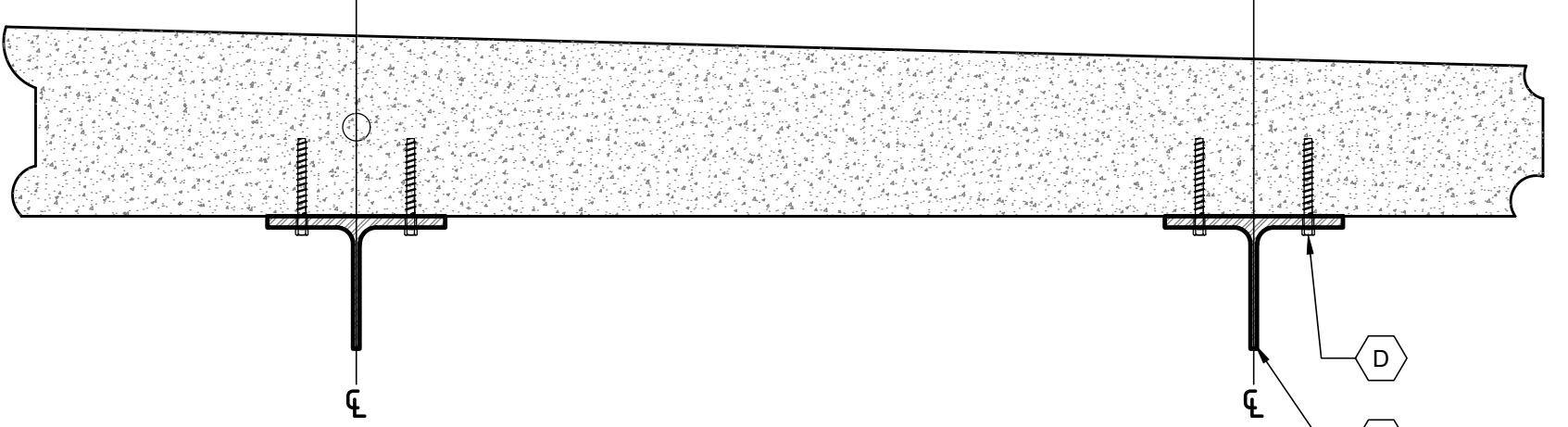
REINFORCEMENT PLAN	
DRAWN BY:	C.G. / S.E.
CHECKED BY:	A.H. / T.H.
PROJECT NO.:	RGV.2018.001027
DATE:	7/17/2019
SCALE:	SEE DRAWING



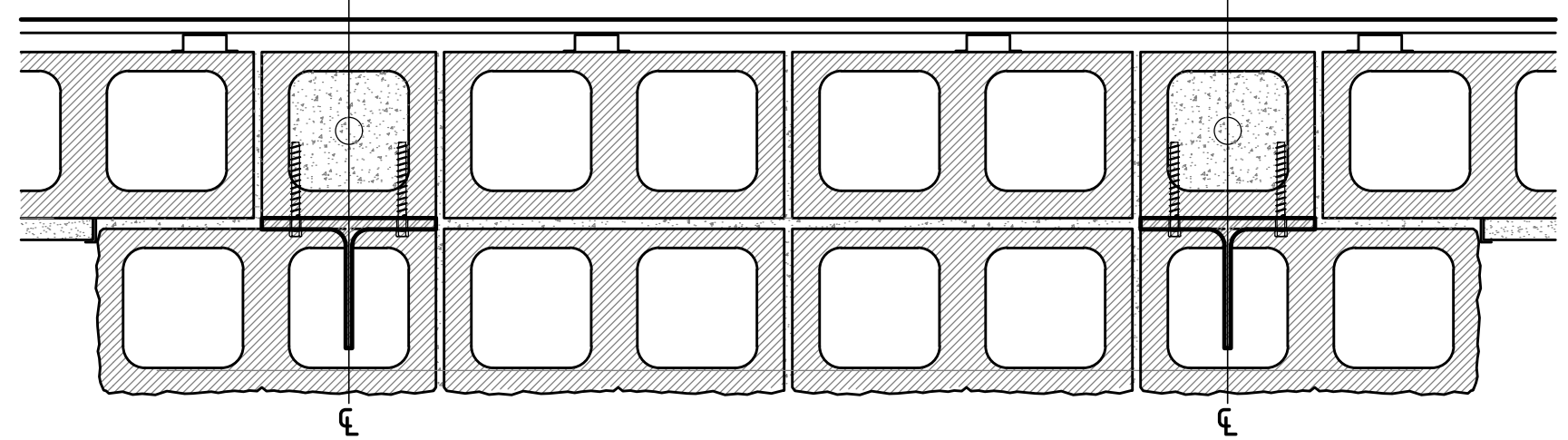
**1** HIGH WALL REINFORCEMENT ELEVATION (TYP.)  
 1/2" = 1'-0"



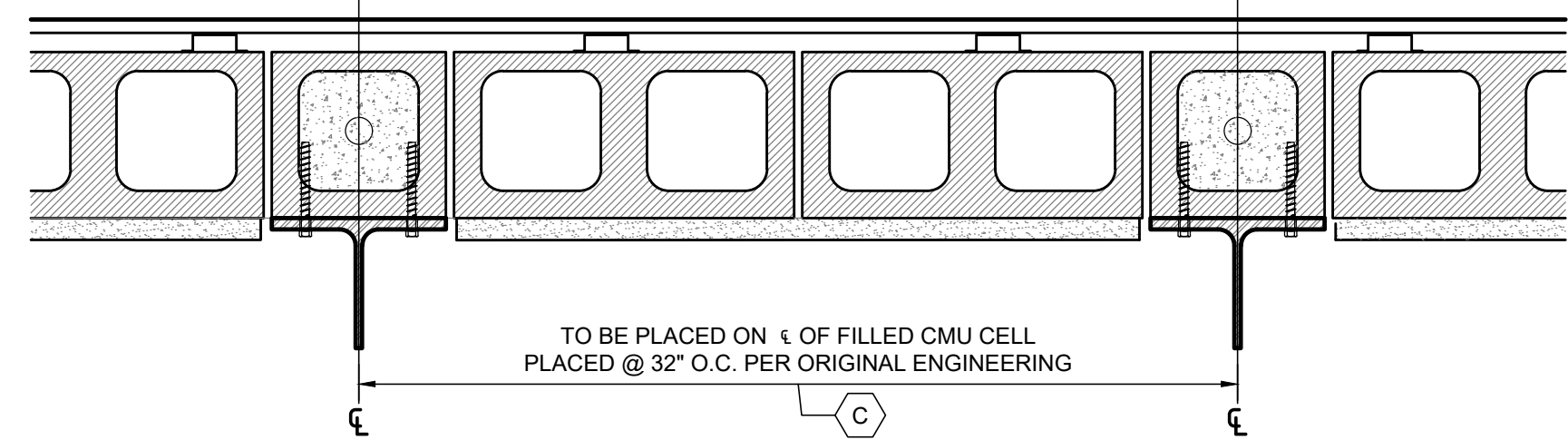
**5** HIGH WALL REINFORCEMENT WALL SECTION (TYP.)  
 1/2" = 1'-0"



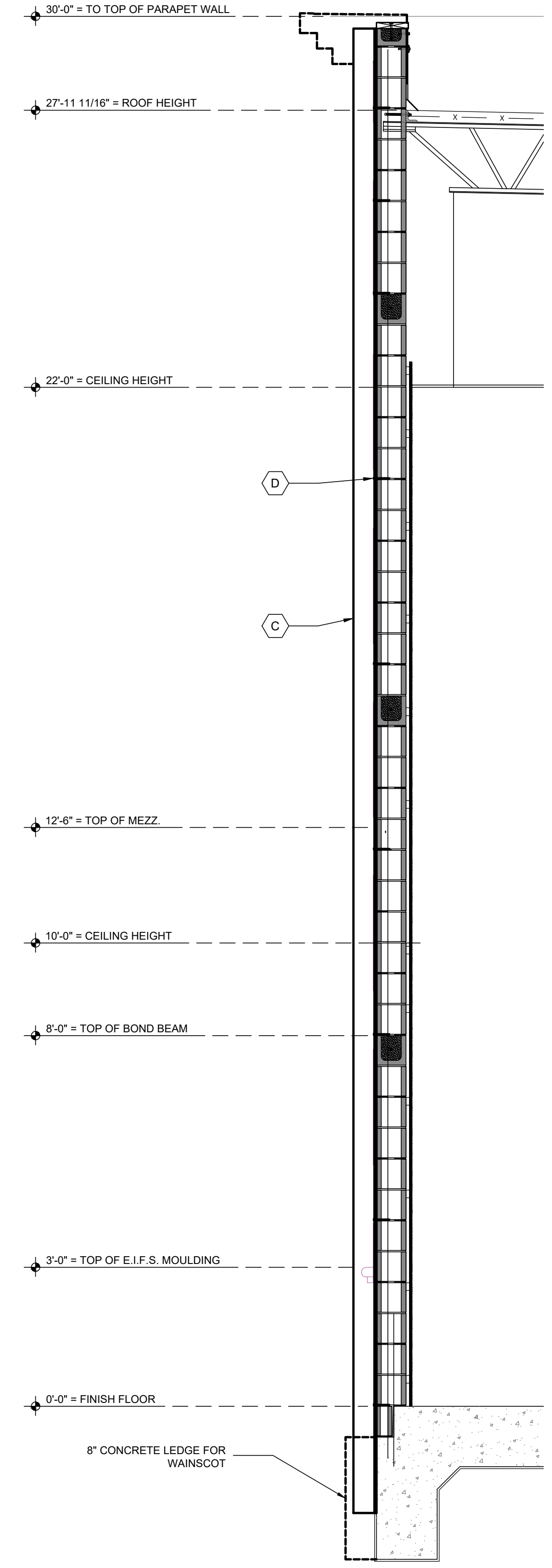
**2** SECTION AT FOUNDATION  
 1 1/2" = 1'-0"



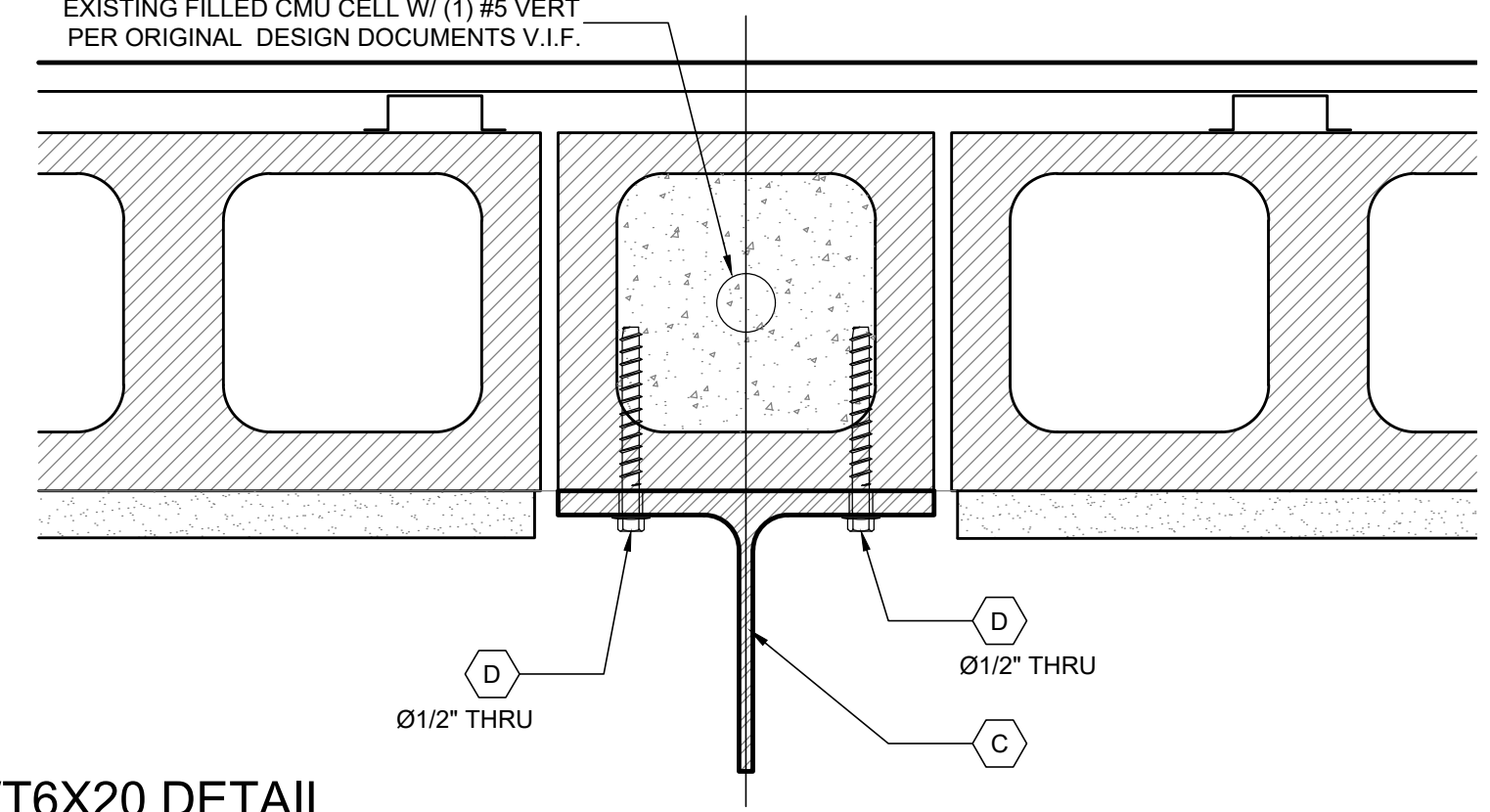
**3** SECTION AT BROKEN FACE WAINSCOT CMU  
 1 1/2" = 1'-0"



**4** SECTION OF STD CMU  
 1 1/2" = 1'-0"



**5** HIGH WALL REINFORCEMENT WALL SECTION (TYP.)  
 1/2" = 1'-0"



**6** WT6X20 DETAIL  
 1 1/2" = 1'-0"



REVISIONS:

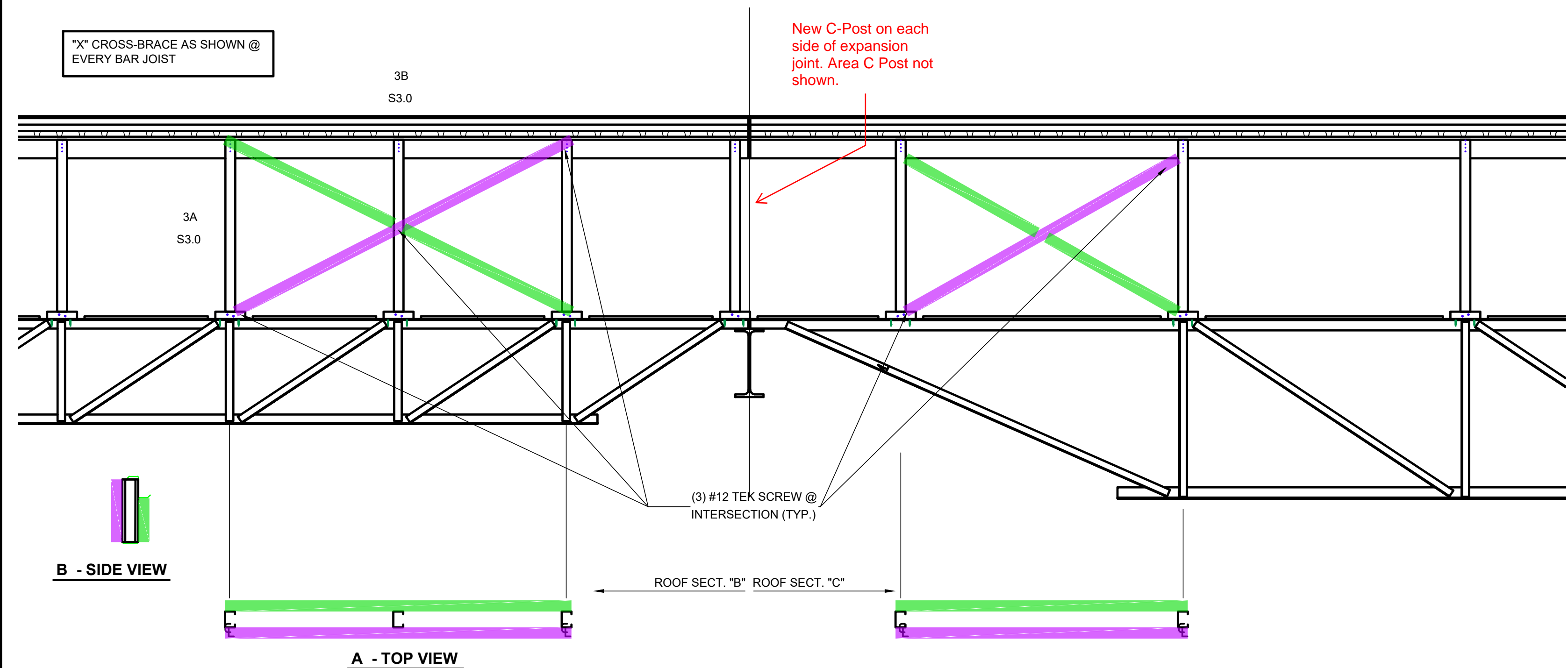

CITY OF EDINBURG  
**DUSTIN SEKULA MEMORIAL LIBRARY**  
**STRUCTURAL REPAIRS & ROOF REPLACEMENT**  
 2018

**AMTECH SOLUTIONS**  
 1600 N. JACKSON RD. STE #3  
 PHARR, TEXAS 78577  
 T 956.686.3095 F 956.686.2233

REINFORCEMENT PLAN  
 DRAWN BY: C.G. / S.E.  
 CHECKED BY: A.H. / T.H.  
 PROJECT NO.: RGV.2018.001027  
 DATE: 7/17/2019 SCALE: SEE DRAWING  
**18 OF 23**      **S3.0**

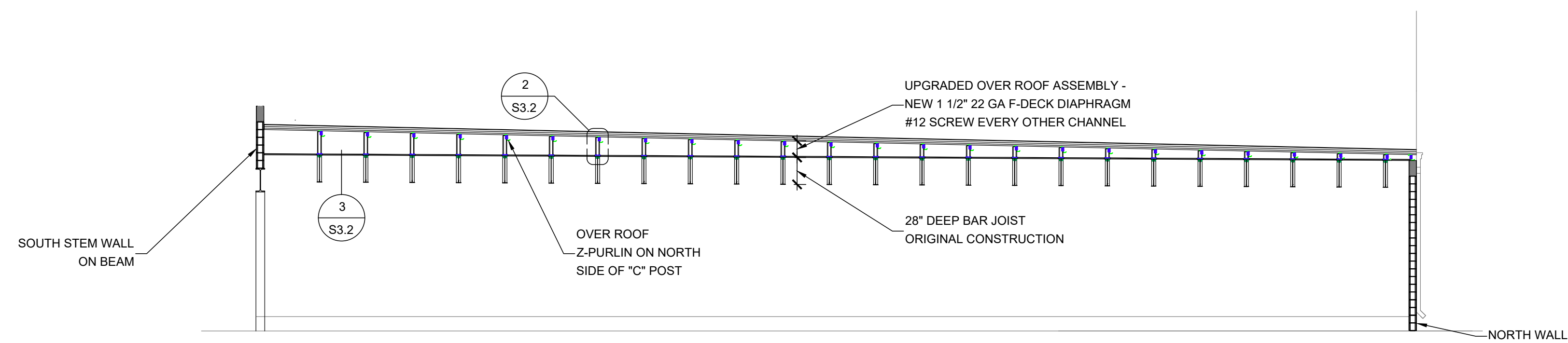


1 BRACING PLAN ROOF AREA "B" AND "C"  
 1" = 10' - 0"

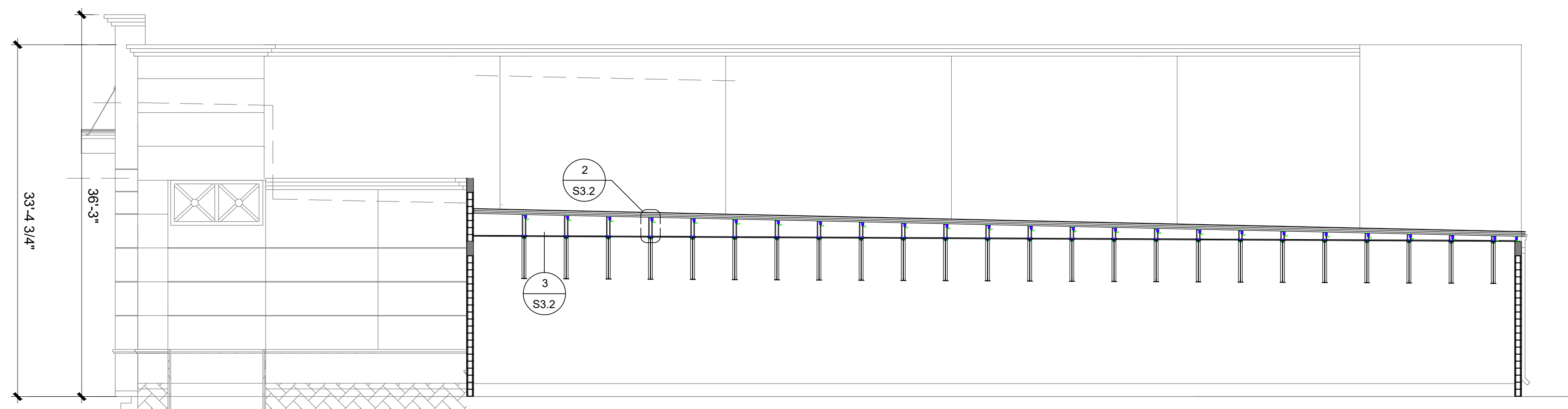


2 "X" CROSS-BRACE  
 1/2" = 1' - 0"

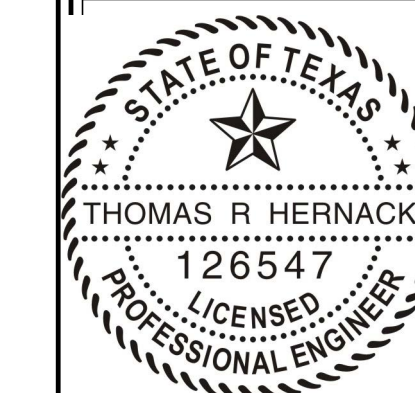




1 SECTION A-A  
1/8" = 1'-0"



2 SECTION B-B  
1/8" = 1'-0"

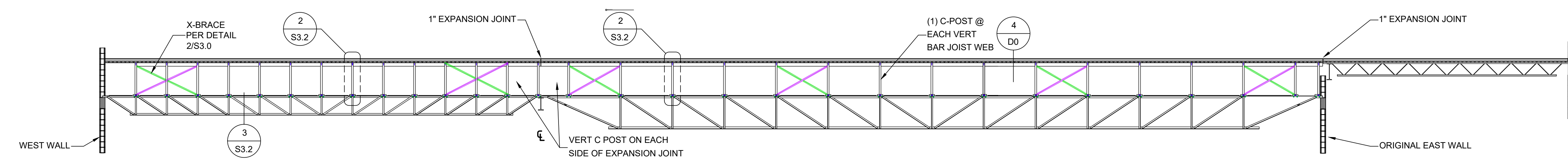


CITY OF EDINBURG  
**DUSTIN SEKULA MEMORIAL LIBRARY**  
**STRUCTURAL REPAIRS & ROOF REPLACEMENT**  
 2018

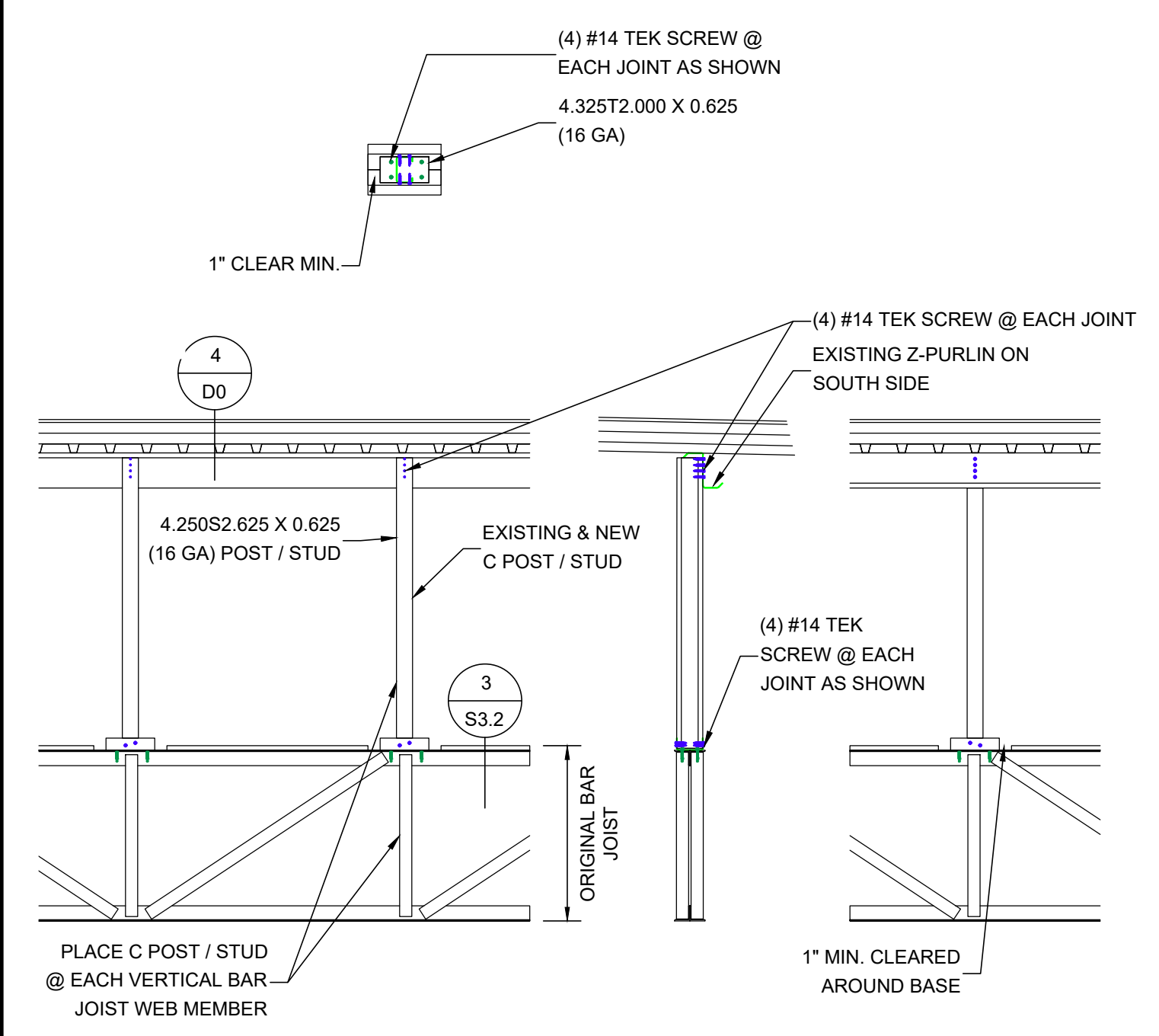
**AMTECH SOLUTIONS**  
 1600 N. JACKSON RD. STE #3  
 PHARR, TEXAS 78577  
 T 956.686.3095 F 956.686.2233

SECTIONS A-A & B-B	
DRAWN BY:	C.G. / S.E.
CHECKED BY:	A.H. / T.H.
PROJECT NO.:	RGV.2018.001027
DATE:	7/17/2019
SCALE:	SEE DRAWING

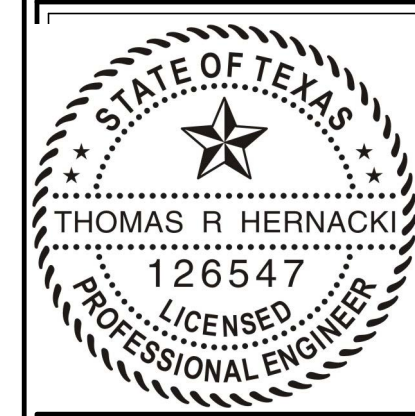
REVISIONS:



**1** SECTION C-C  
1/8" = 1' - 0"



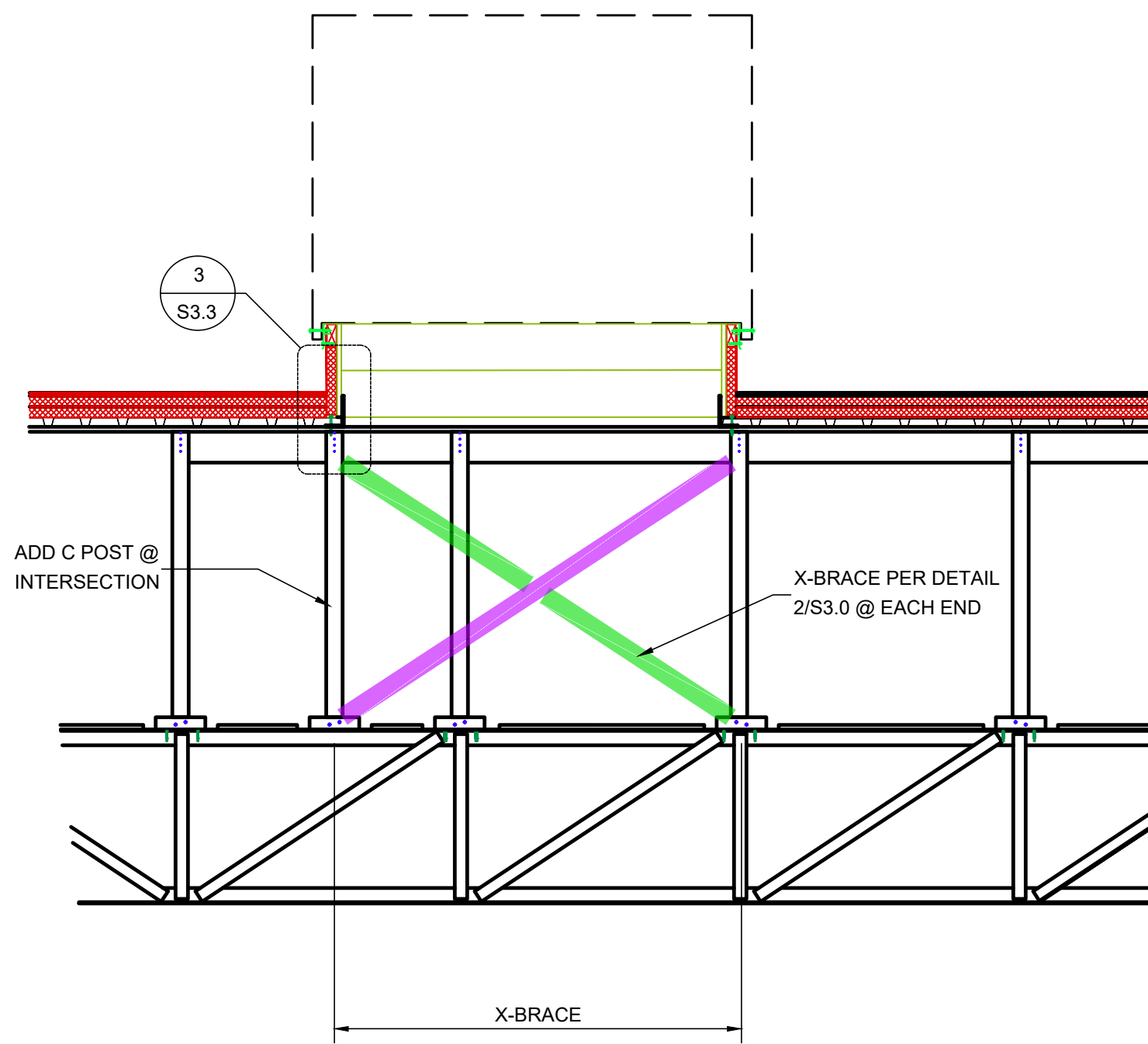
**2** DETAIL X  
1/2" = 1' - 0"



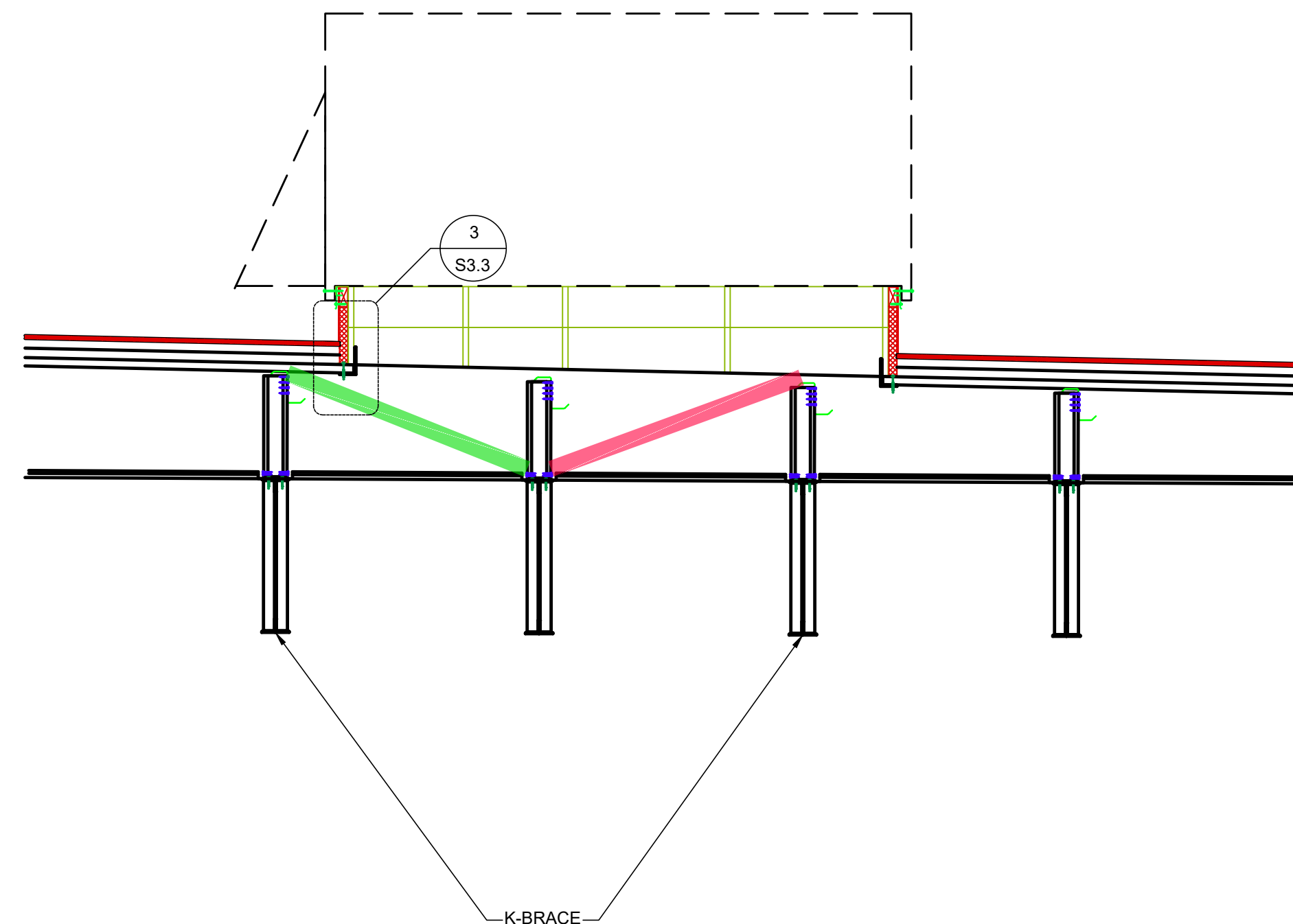
CITY OF EDINBURG  
**DUSTIN SEKULA MEMORIAL LIBRARY**  
**STRUCTURAL REPAIRS & ROOF REPLACEMENT**  
 2018

**AMTECH SOLUTIONS**  
 1600 N. JACKSON RD. STE #3  
 PHARR, TEXAS 78577  
 T 956.686.3095 F 956.686.2233

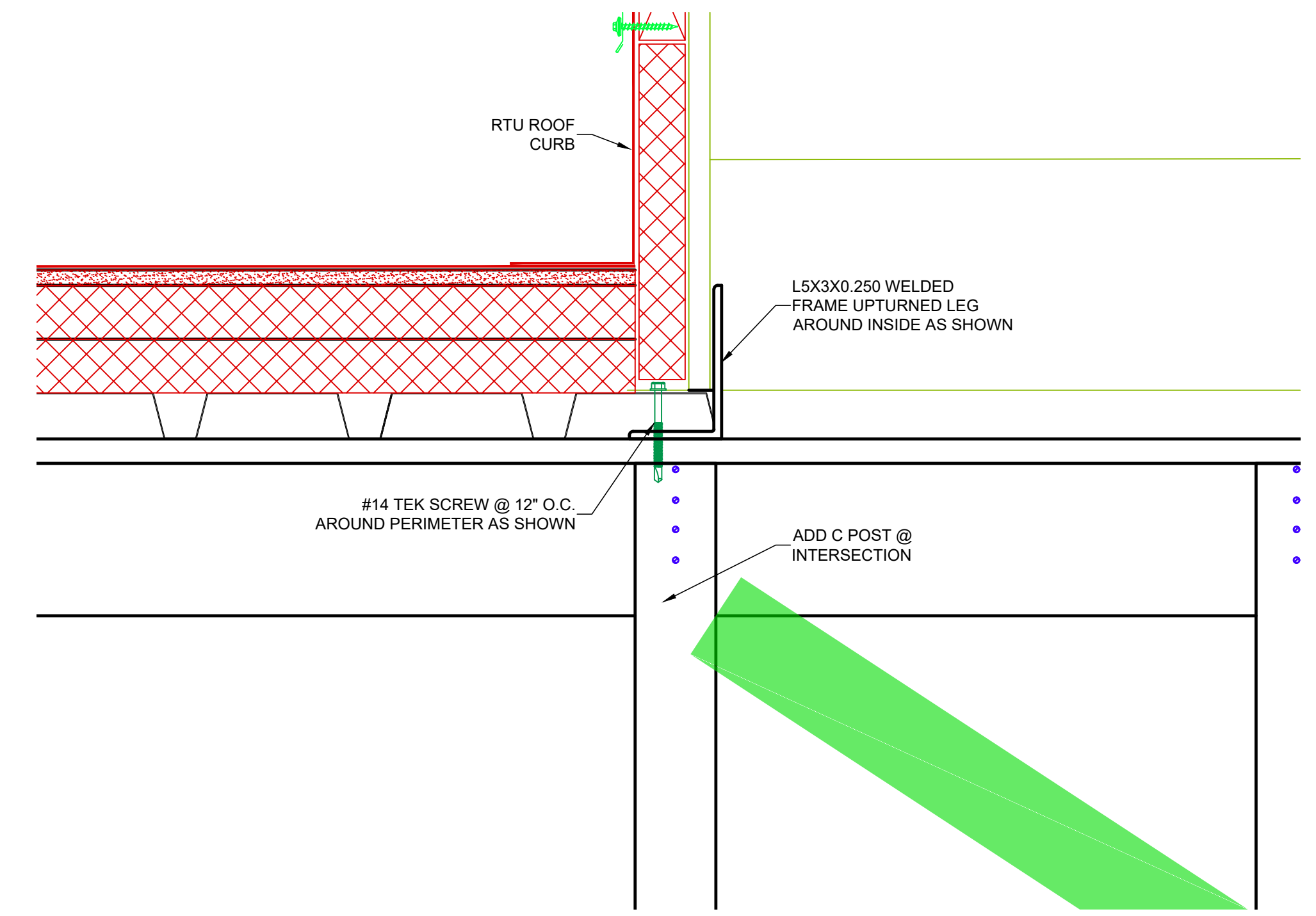
SECTION C-C	
DRAWN BY:	C.G. / S.E.
CHECKED BY:	A.H. / T.H.
PROJECT NO.:	RGV.2018.001027
DATE:	7/17/2019
SCALE:	SEE DRAWING



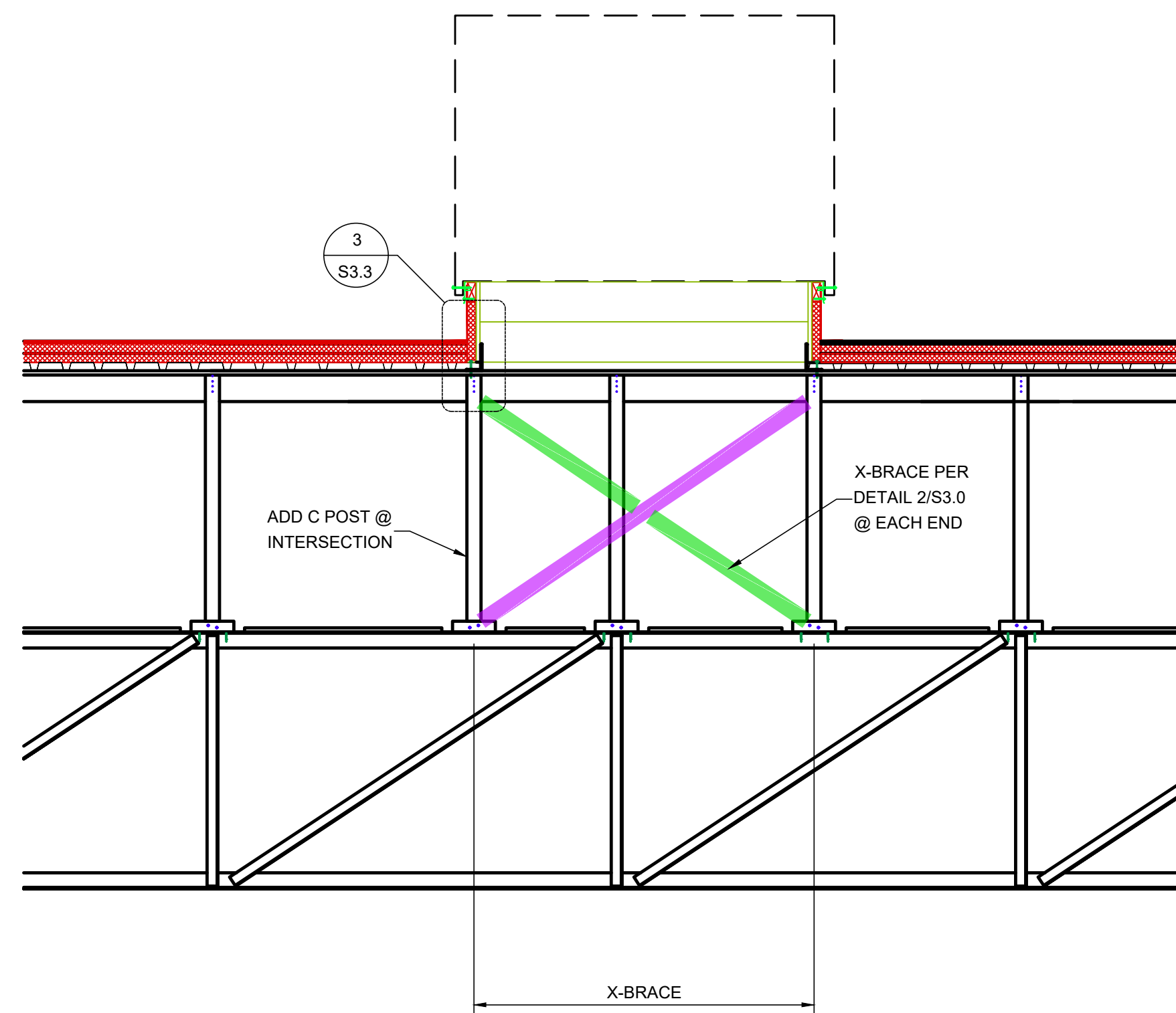
1 RTU CURB @ ROOF SECT B (TYP)  
1/2" = 1'-0"



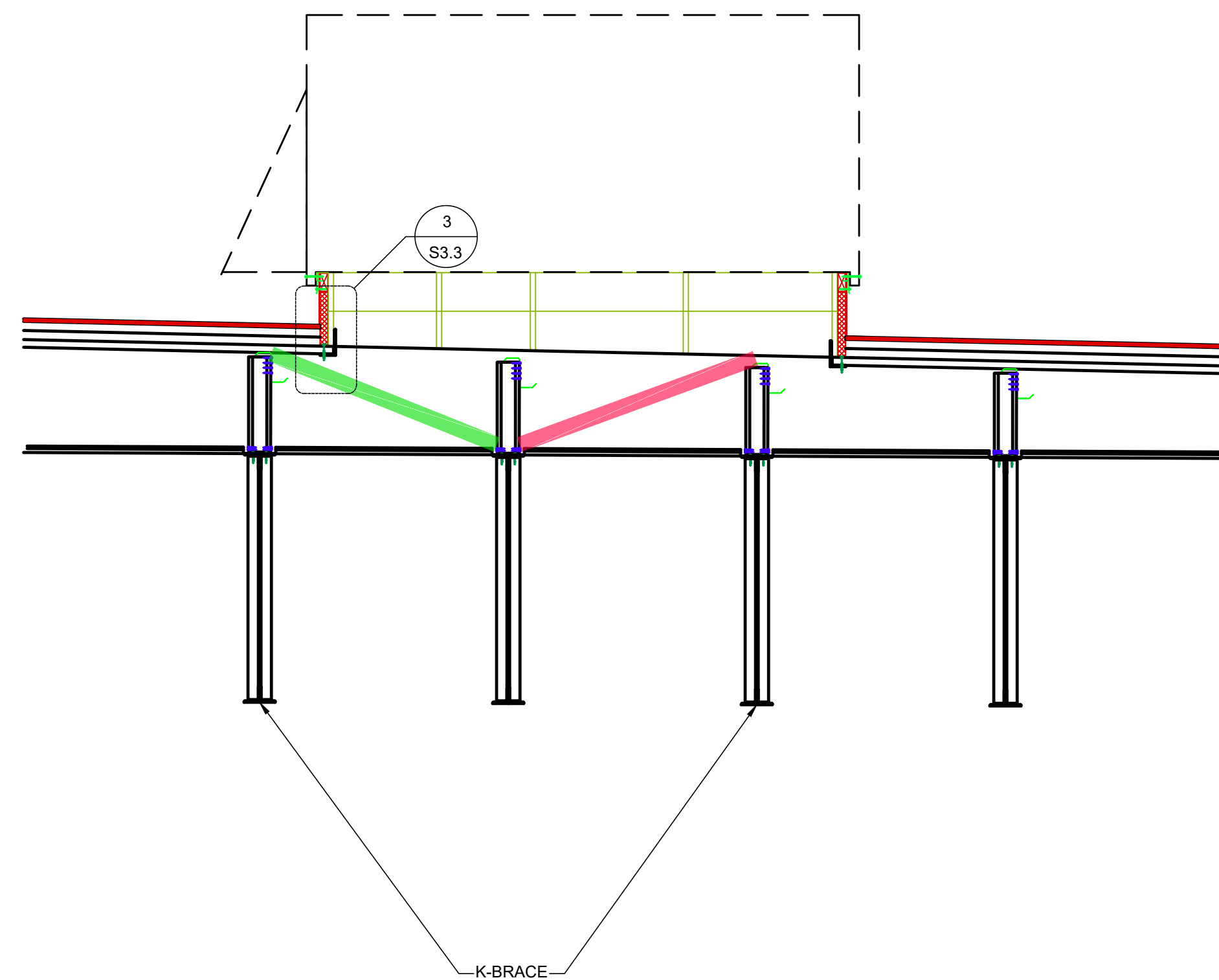
2 RTU CURB @ ROOF SECTION B (TYP)  
1/2" = 1'-0"



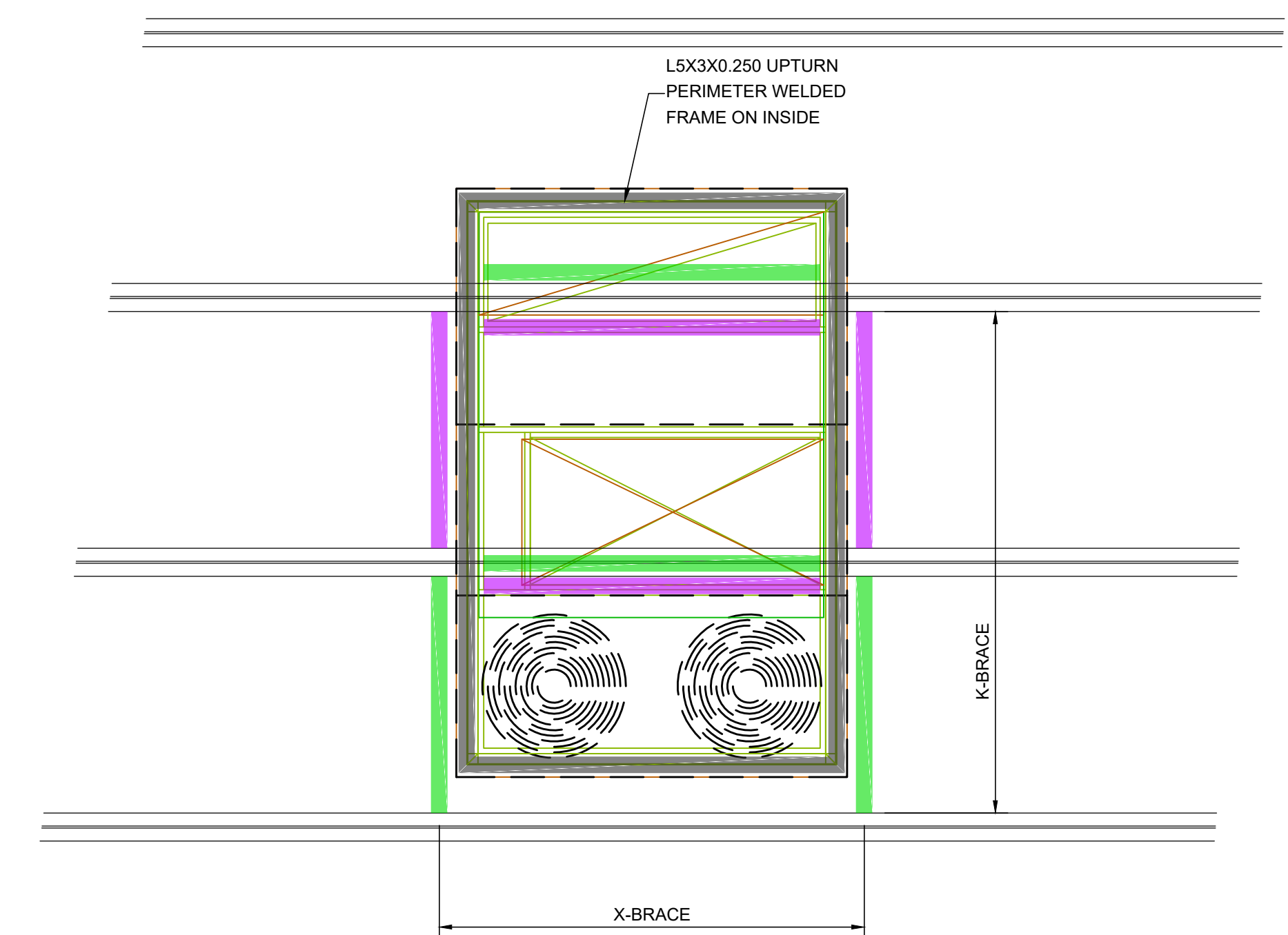
3 RTU CURB @ WELDED FRAME  
3/8" = 1'-0"



4 RTU CURB @ ROOF SECT C (TYP)  
1/2" = 1'-0"



5 RTU CURB @ ROOF SECT C (TYP)  
1/2" = 1'-0"



6 RTU  
1/2" = 1'-0"

REVISIONS:


STATE OF TEXAS  
THOMAS R. HERNACKI  
126547  
LICENSED PROFESSIONAL ENGINEER

CITY OF EDINBURG  
DUSTIN SEKULA MEMORIAL LIBRARY  
STRUCTURAL REPAIRS & ROOF REPLACEMENT  
2018

**AMTECH SOLUTIONS**  
1600 N. JACKSON RD. STE #3  
PHARR, TEXAS 78577  
T 956.686.3095 F 956.686.2233

STRUCTURAL DETAILS

DRAWN BY:	C.G. / S.E.
CHECKED BY:	A.H. / T.H.
PROJECT NO.:	RGV.2018.001027
DATE:	7/17/2019
SCALE:	SEE DRAWING

23 OF 23 **S3.3**