

BIDDING AND CONTRACT DOCUMENTS

FOR

FINE ARTS PERFORMNCE LAB EXTERIOR

PROJECT NO. 957450

CONTRACT NO. 957450-LF-2022-75



**City of Riverside, County of Riverside
California**

July 1, 2022

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CERTIFICATION

Fine Arts Performance Lab Exterior

Bidding Documents Prepared By:

Company
Name:

Miller Architectural Corporation

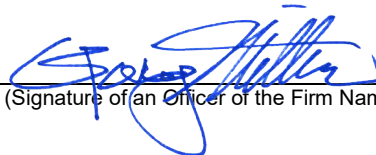
1177 Idaho Street, Suite 200

(Street Address)

Redlands, CA 92374

(City, State & Zip Code)

Signed:



(Signature of an Officer of the Firm Named Above)

Date: 3/1/2022

Gary Miller, AIA - President

(Print Name & Title)

Certification:



(Affix professional registration stamp of the person named above with signature and expiration date.)

ADVERTISEMENT FOR BIDS FROM PREQUALIFIED CONTRACTORS

Subject to conditions prescribed by the University of California, Riverside, sealed bids for a lump sum contract are invited from prequalified contractors for the following Project:

FINE ARTS PERFORMANCE LAB EXTERIOR
PROJECT NO. 957450
CONTRACT NO. 957450-LF-2022-75
UNIVERSITY OF CALIFORNIA, RIVERSIDE
RIVERSIDE, CALIFORNIA

PROJECT DESCRIPTION: Repair and replace damaged exterior walls that would include sheathing, waterproofing and stucco. Remove and replace roof.

PREQUALIFIED CONTRACTORS

Only prequalified contractors will be allowed to submit a Bid on this Project. The University has determined that the following contractors have been prequalified to bid on this Project for the Bid Packages and license classifications below:

2H Construction, Inc.- B General Contractor
Dalke & Sons Construction, Inc.- B General Contractor

The successful Bidder must have the following State of California Contractor's license current and active at the time of submission of the Bid: **B, General Building**.

Bidding and Contract Documents will be available at **8:00 AM**, on **Friday, July 1, 2022**, upon request by sending an email to kara.longtin@ucr.edu. Interested parties must use the following in the subject header:

Fine Arts Performance Lab Exterior – Request for Bid Documents

PRE-BID CONFERENCE & SITE VISIT

A mandatory Pre-Bid Zoom conference call will take place on **Wednesday, July 13, 2022** beginning promptly at **11:00 AM**. Only bidders who participate in the Pre-Bid conference will be allowed to bid on the Project as prime contractors. For further information, including the Zoom Meeting ID, interested bidders must contact the Project's Contract Administrator, **Kara Longtin** via email, at kara.longtin@ucr.edu. And must use the project's number and name in the subject header to request the Zoom information.

At this time, there are no plans for a site visit, if a bidder would like access to the site, this will be done by appointment only and through the coordination of the Contract Administrator noted above. Do not contact the project manager directly.

Any bidder who enters the Pre-Bid Conference after 11:05 AM will be precluded from bidding as a prime contractor and may only bid as a subcontractor. Subcontractors are not required to attend; however, we encourage their attendance.

BID DEADLINE

Bids must be received at or before **1:00 PM, August 2, 2022** for furnishing all labor, materials, services, and equipment to complete the Work described below in accordance with the enclosed Bidding Documents. Due to COVID-19 restrictions, all bids will be received electronically only at the email address above; the low bidder must produce the original bid, bid bond, notary acknowledgement and surety notice within 24 hours of making an announcement of who the low bidder is.

Bids are to be submitted to The Regents of the University of California ("University") **via email only** at:

Email: kara.longtin@ucr.edu

Immediately following the Bid Deadline, bids will be opened and posted on the University's website. Bids will be made available to be reviewed by bidders shortly after bids have been validated. Efforts will be made to accommodate and observe all typical procedures during COVID-19 restrictions.

Bid Security in the amount of 10% of the Lump Sum Base Bid shall accompany each Bid. The Surety issuing the Bid Bond shall be, on the Bid Deadline, an admitted surety insurer (as defined in California Code of Civil Procedure Section 995.120).

The successful Bidder and its subcontractors will be required to follow the nondiscrimination requirements set forth in the Bidding and Contract Documents and to pay prevailing wage rates at the location of the Work.

Every effort will be made to ensure that all persons have equal access to contracts and other business opportunities with the University within the limits imposed by law or University policy. Each Bidder may be required to show evidence of its equal employment opportunity policy. The successful Bidder and its subcontractors will be required to follow the nondiscrimination requirements set forth in the Bidding Documents and to pay prevailing wage at the location of the work.

The work described in the contract is a public work subject to section 1771 of the California Labor Code.

No contractor or subcontractor may be listed on a Bid for this project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

No contractor or subcontractor may be awarded any portion of this project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

Estimated construction cost: **\$720,000.00**

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
University of California, Riverside
6/24/2022 – 7/11/2022

PROJECT DIRECTORY

Project Name: **Fine Arts Performance Lab Exterior**

Project Number: **957450**

Location: **University of California, Riverside**

University: **The Regents of the University of California**

University's Representative: **Tameesha Hayes**
Project Manager
Planning, Design & Construction
University of California, Riverside
900 University Avenue
Riverside, CA 92521

Tel: (951) 827-1412
Email: Tameesha.hayes@ucr.edu

Kara Longtin
Contract Administrator
Planning, Design & Construction
University of California, Riverside
900 University Avenue
Riverside, CA 92521

Tel: (951) 827-2610
Email: kara.longtin@ucr.edu

Catherine Crouch
Senior Construction Inspector
Planning, Design & Construction
University of California, Riverside
900 University Avenue
Riverside, CA 92521

Tel: (951) 827-2265
Email: Catherine.crouch@ucr.edu

Design Professional: **Michael Bedell**
Architect, Project Manager
Miller Architecture
1177 Idaho Street Suite 200
Redlands, CA. 92374

Tel: (909) 335-7400
Email: mbedell@millar-aip.com

Address for Stop Notices: University of California, Riverside
Accounting Office -002
Riverside, CA 92521-0123

Address for Demand for Arbitration: Western Case Management Center
6795 N. Palm Avenue, 2nd Floor
Fresno, CA 93704

A copy of the Demand for Arbitration must be sent to: University of California
Office of the General Counsel
1111 Franklin Street, 8th Floor
Oakland, CA 94607-5200

END OF PROJECT DIRECTORY

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ARTICLE 1

DEFINITIONS

- 1.1 Except as otherwise specifically provided, definitions set forth in the General Conditions or in other Contract Documents are applicable to all Bidding Documents.
- 1.2 The term “Addenda” means written or graphic instruments issued by University prior to the Bid Deadline which modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections.
- 1.3 The term “Alternate” means a proposed change in the Work, as described in the Bidding Documents which, if accepted, may result in a change to either the Contract Sum or the Contract Time, or both.
- 1.4 The term “Bid Deadline” means the date and time on or before which Bids must be received, as designated in the Advertisement for Bids and which may be revised by Addenda.
- 1.5 The term “Bidder” means a person or firm that submits a Bid.
- 1.6 The term “Bidding Documents” means the construction documents prepared and issued for bidding purposes including all Addenda thereto.
- 1.7 The term “Estimated Quantity” means the estimated quantity of an item of Unit Price Work.
- 1.8 As used in these Instructions to Bidders, the term “Facility” means the University's Facility office issuing the Bidding Documents.
- 1.9 The term “Lump Sum Base Bid” means the sum stated in the Bid for which Bidder offers to perform the Work described in the Bidding Documents, but not including Unit Price items or Alternates.
- 1.10 The term “Planholder” means a person or entity known by the Facility to have received a complete set of Bidding Documents and who has provided a street address for receipt of any written pre-bid communications.
- 1.11 The term “Unit Price” means an amount stated in the Bid for which Bidder offers to perform an item of Unit Price Work for a fixed price per unit of measurement.
- 1.12 As used in these Instructions to Bidders, the term “Business Day” means any day other than a Saturday, a Sunday, and the holidays specified herein, and to the extent provided herein, if the Facility or applicable office of the University is closed for the whole of any day, insofar as the business of that office is concerned, that day shall be considered as a holiday for the purposes of computing time in these Instructions to Bidders. Holidays include January 1st, the third Monday in January, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, November 11th, Thanksgiving Day, December 25th, and every day designated by the University as a holiday.

ARTICLE 2

BIDDER'S REPRESENTATIONS

- 2.1 Bidder, by making a Bid, represents that:
- 2.1.1 Bidder has read, understood, and made the Bid in accordance with the provisions of the Bidding Documents.

2.1.2 Bidder has visited the Project site and is familiar with the conditions under which the Work is to be performed and the local conditions as related to the requirements of the Contract Documents.

2.1.3 The Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception.

2.1.4 At the time of submission of the Bid, Bidder and all Subcontractors, regardless of tier, have the appropriate current and active licenses issued by the State of California Contractors State License Board for the Work to be performed and any licenses specifically required by the Bidding Documents. If Bidder is a joint venture, at the time of submission of the Bid, Bidder shall have the licenses required by the preceding sentence in the name of the joint venture itself. The State of California Business and Professions Code, Division 3, Chapter 9, known as the "Contractor's License Law," establishes licensing requirements for contractors.

2.1.5 Bidder has read and shall abide by the nondiscrimination requirements contained in the Bidding Documents.

2.1.6 Bidder has the expertise and financial capacity to perform and complete all obligations under the Bidding Documents.

2.1.7 The person executing the Bid Form is duly authorized and empowered to execute the Bid Form on behalf of Bidder.

2.1.8 Bidder is aware of and, if awarded the Contract, will comply with Applicable Code Requirements in its performance of the Work.

ARTICLE 3

BIDDING DOCUMENTS

3.1 COPIES

3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement for Bids for the sum stated therein, if any. Documents are only available in full sets and shall not be returned.

3.1.2 Bidders shall use a complete set of Bidding Documents in preparing Bids.

3.1.3 University makes copies of the Bidding Documents available, on the above terms, for the sole purpose of obtaining Bids for the Work and does not confer a license or grant permission for any other use of the Bidding Documents.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

3.2.1 Bidder shall, before submitting its Bid, carefully study and compare the components of the Bidding Documents and compare them with any other work being bid concurrently or presently under construction which relates to the Work for which the Bid is submitted; shall examine the Project site, the conditions under which the Work is to be performed, and the local conditions; and shall at once report to University's Representative errors, inconsistencies, or ambiguities discovered. If Bidder is awarded the Contract, Bidder waives any claim arising from any errors, inconsistencies or ambiguities, that Bidder, its subcontractors or suppliers, or any person or entity under Bidder on the Contract became aware of, or reasonably should have become aware of, prior to Bidder's submission of its Bid.

3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be addressed only to the person or firm designated in the Supplementary Instructions to Bidders.

3.2.3 Clarifications, interpretations, corrections, and changes to the Bidding Documents will be made by Addenda issued as provided in Article 3.5. Clarifications, interpretations, corrections, and changes to the Bidding Documents made in any other manner shall not be binding and Bidders shall not rely upon them.

3.3 PRODUCT SUBSTITUTIONS

3.3.1 No substitutions will be considered prior to award of Contract. Substitutions will only be considered after award of the Contract and as provided for in the Contract Documents.

3.4 SUBCONTRACTORS

3.4.1 Each Bidder shall list in the Bid Form all first-tier Subcontractors that will perform work, labor or render such services as defined in Article 9 of the Bid Form. The Bid Form contains spaces for the following information when listing Subcontractors: (1) portion of the Work; (2) name of Subcontractor; (3) city of Subcontractor's business location. The failure to list, on the Bid Form, any one of the items set forth above will result in the University treating the Bid as if no Subcontractor was listed for that portion of the Work and Bidder will thereby represent to University that Bidder agrees that it is fully qualified to perform that portion of the Work and shall perform that portion of the Work.

3.4.2 Subcontractors listed in the Bid Form shall only be substituted after the Bid Deadline with the written consent of University and in accordance with the State of California "Subletting and Subcontracting Fair Practices Act."

3.5 ADDENDA

3.5.1 Addenda will be issued only by University and only in writing. Addenda will be identified as such and will be mailed or delivered to all Planholders. At its sole discretion, the University may elect to deliver Addenda via facsimile to Planholders who have provided a facsimile number for receipt of Addenda.

3.5.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for inspection.

3.5.3 Addenda will be issued such that Planholders should receive them no later than 3 full business days prior to the Bid Deadline. Addenda withdrawing the request for Bids or postponing the Bid Deadline may be issued anytime prior to the Bid Deadline.

3.5.4 Each Bidder shall be responsible for ascertaining, prior to submitting a Bid, that it has received all issued Addenda.

3.6 BUILDER'S RISK PROPERTY INSURANCE

3.6.1 University will provide builder's risk property insurance subject to the deductibles in the policy as required by the General Conditions if the Contract Sum exceeds \$200,000 at the time of award and the requirements of the Project are not excluded by such coverage. A summary of the provisions of the policy is included as an Exhibit to the Contract; the policy may be reviewed at the Facility's office. Bidder agrees that the University's provision of builder's risk property insurance containing said provisions meets the University's obligation to provide builder's risk property insurance under the Contract and, in the event of a conflict between the provisions of the policy and any summary or description of the provisions contained herein or otherwise, the provisions of the policy shall control and shall be conclusively presumed to fulfill the University's obligation to provide such insurance.

ARTICLE 4

PRE-BID CONFERENCE

4.1 Bidder shall attend the Pre-Bid Conference at which the requirements of the Bidding Documents are reviewed by University, comments and questions are received from Bidders, and a Project site visit is conducted. University requires all Pre-Bid Conference attendees to arrive for the meeting on time and to sign an attendance list, which in turn is used to determine if Bidders meet this requirement. Any Bidder not attending the Pre-Bid Conference in its entirety will be deemed to have not complied with the requirements of the Bidding Documents and its Bid will be rejected.

ARTICLE 5

BIDDING PROCEDURES

5.1 FORM AND STYLE OF BIDS

5.1.1 Bids shall be submitted on the Bid Form included with the Bidding Documents. Bids not submitted on the University's Bid Form shall be rejected.

5.1.2 The Bid Form shall be filled in legibly in ink or by typewriter. All portions of the Bid Form must be completed and the Bid Form must be signed before the Bid is submitted. Failure to comply with the requirements of this Article 5.1.2 will result in the Bid being rejected as nonresponsive.

5.1.3 Bidder's failure to submit a price for any Alternate or Unit Price will result in the Bid being considered as nonresponsive. If Alternates are called for and no change in the Lump Sum Base Bid is required, indicate "No Change" by marking the appropriate box.

5.1.4 Bidder shall make no stipulations on the Bid Form nor qualify the Bid in any manner.

5.1.5 The Bid Form shall be signed by a person or persons legally authorized to bind Bidder to a contract. Bidder's Representative shall sign and date the Declaration included in the Bid Form. Failure to sign and date the declaration will cause the Bid to be rejected.

5.2 BID SECURITY

5.2.1 Each Bid shall be accompanied by Bid Security in the amount of 10% of the Lump Sum Base Bid as security for Bidder's obligation to enter into a Contract with University on the terms stated in the Bid Form and to furnish all items required by the Bidding Documents. Bid Security shall be a Bid Bond on the form provided by University and included herein, or a certified check made payable to "The Regents of the University of California." When a Bid Bond is used for Bid Security, failure to use University's Bid Bond form will result in the rejection of the Bid. Bidder must use the Bid Bond form provided by the University or an exact, true and correct photocopy of such form. The Bid Bond form may not be retyped, reformatted, transcribed onto another form, or altered in any manner except for the purpose of completing the form.

5.2.2 If the apparent lowest responsible Bidder fails to sign the Agreement and furnish all items required by the Bidding Documents within the time limits specified in these Instructions to Bidders, University may reject such Bidder's Bid and select the next apparent lowest responsible Bidder until all Bids have been exhausted or University may reject all Bids. The Bidder whose Bid is rejected for such failure(s) shall be liable for and forfeit to University the amount of the difference, not to exceed the amount of the Bid Security, between the amount of the Bid of the Bidder so rejected and the greater amount for which University procures the Work.

5.2.3 If a Bid Bond is submitted, the signature of the person executing the Bid Bond must be notarized. If an attorney-in-fact executes the Bid Bond on behalf of the surety, a copy of the current power of attorney

bearing the notarized signature of the appropriate corporate officer shall be included with the Bid Bond. Additionally, the surety issuing the Bid Bond shall be, on the Bid Deadline, an admitted surety insurer (as defined in the California Code of Civil Procedure Section 995.120).

5.2.4 Bid Security will be returned after the contract has been awarded. Notwithstanding the preceding, if a Bidder fails or refuses, within 10 days after receipt of notice of selection, to sign the Agreement or submit to University all of the items required by the Bidding Documents, the University will retain that Bidder's Bid Security. If the Bid Security is in the form of a Bid Bond, the Bid Security will be retained until the University has been appropriately compensated; if the Bid Security is in the form of certified check, the University will negotiate said check and after deducting its damages, return any balance to Bidder.

5.3 SUBMISSION OF BIDS

5.3.1 The Bid Form, Bid Security, and all other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the office designated in the Supplementary Instructions to Bidders for receipt of Bids. The envelope shall be identified with the Project name, Bidder's name and address, and, if applicable, the designated portion of the Project for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

5.3.2 Bids shall be deposited at the designated location on or before the Bid Deadline. A Bid received after the Bid Deadline will be returned to Bidder unopened.

5.3.3 Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

5.3.4 Oral, telephonic, electronic mail (e-mail), facsimile, or telegraphic Bids are invalid and will not be accepted.

5.4 MODIFICATION OR WITHDRAWAL OF BID

5.4.1 Prior to the Bid Deadline, a submitted Bid may be modified or withdrawn by notice to the Facility receiving Bids at the location designated for receipt of Bids. Such notice shall be in writing over the signature of Bidder and, in order to be effective, must be received on or before the Bid Deadline. A modification so made shall be worded so as not to reveal the amount of the original Bid.

5.4.2 A withdrawn Bid may be resubmitted on or before the Bid Deadline, provided that it then fully complies with the Bidding Requirements.

5.4.3 Bid Security shall be in an amount sufficient for the Bid as modified or resubmitted.

5.4.4 Bids may not be modified, withdrawn, or canceled within 60 days after the Bid Deadline unless otherwise provided in Supplementary Instructions to Bidders.

ARTICLE 6

CONSIDERATION OF BIDS

6.1 OPENING OF BIDS

6.1.1 Bids which have the required identification as stipulated in Article 5.3.1 and are received on or before the Bid Deadline will be opened publicly.

6.2 REJECTION OF BIDS

6.2.1 University will have the right to reject all Bids.

6.2.2 University will have the right to reject any Bid not accompanied by the required Bid Security or any other item required by the Bidding Documents, or a Bid which is in any other way incomplete or irregular.

6.3 AWARD

6.3.1 University will have the right, but is not required, to waive nonmaterial irregularities in a Bid. If the University awards the Contract, it will be awarded to the responsible Bidder submitting the lowest responsive Bid as determined by University and who is not rejected by University for failing or refusing, within 10 days after receipt of notice of selection, to sign the Agreement or submit to University all of the items required by the Bidding Documents.

6.3.2 University will have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents. The opening of Bids and evaluation of Alternates will be conducted in accordance with a procedure that, at University's option, either (i) prescribes, prior to the time of Bid opening, the order in which Alternates will be selected or (ii) prevents, before the determination of the apparent low Bidder has been made, information that would identify which Bid belongs to which Bidder from being revealed to the representative of the University selecting the Alternates to be used in determining the low Bidder. After determination of the apparent low Bidder has been made, University will publicly disclose the identity of each Bidder that submitted a Bid and the amount of each such Bid.

6.3.3 University will determine the low Bidder on the basis of the sum of the Lump Sum Base Bid plus all Unit Prices multiplied by their respective Estimated Quantities as stated in the Bid Form, if any, plus the daily rate for Compensable Delay multiplied by the "multiplier" as stated in the Bid Form, plus the amounts of all Alternates to be included in the Contract Sum at the time of award. The Contract Sum will be the sum of the Lump Sum Base Bid and the additive or deductive amounts for all Alternates that University has elected to be included in the Contract Sum as of the time of award.

6.3.4 The University will post the Bid results in a public place at the address where the Bids are received (unless another address is specified in the Bidding Documents).

6.3.5 University will select the apparent lowest responsive and responsible Bidder and notify such Bidder on University's form within 50 days (unless the number of days is modified in Supplementary Instructions to Bidders) after the Bid Deadline or reject all Bids. Within 10 days after receipt of notice of selection as the apparent lowest responsive and responsible Bidder, Bidder shall submit to University all of the following items:

- .1 Three originals of the Agreement signed by Bidder.
- .2 Three originals of the Payment Bond required under Article 11 of the General Conditions.
- .3 Three originals of the Performance Bond required under Article 11 of the General Conditions.
- .4 Certificates of Insurance on form provided by University required under Article 11 of the General Conditions.
- .5 Name of, qualifications of, and references for the Superintendent proposed for the Work.
- .6 Names of all Subcontractors, with their addresses, telephone number, facsimile number, contact person, portion of the Work and designation of any Subcontractor

as a Small Business Enterprise (SBE), Disadvantaged Business Enterprise (DBE), Women-owned Business Enterprise (WBE) and Disabled Veteran Business Enterprise (DVBE) on Report of Subcontractor Information in the form contained in the Exhibits. Evidence, as required by University, of the reliability and responsibility of the proposed Subcontractors such as statements of experience, statements of financial condition, and references.

- .7 Preliminary Contract Schedule as required under Article 3 of the General Conditions.
- .8 If Bidder wishes to utilize securities in lieu of retention beginning with the first Application for Payment, Selection of Retention Options accompanied by a completed Escrow Agreement for Deposit of Securities in Lieu of Retention and Deposit of Retention in the form contained in the Exhibits.
- .9 Cost Breakdown as required by Article 9 of the General Conditions.

6.3.6 Prior to award of the Contract, University will notify Bidder in writing, if University, after due investigation, objects to a Subcontractor or Superintendent proposed by Bidder, in which case Bidder shall propose a substitute acceptable to University. Substitution of Superintendent shall be made in accordance with Article 3 of the General Conditions. Substitution of a Subcontractor shall be made in accordance with Article 5 of the General Conditions. Failure of University to object to a proposed Superintendent or Subcontractor prior to award shall not preclude University from requiring replacement of Superintendent or any Subcontractor based upon information received subsequent to award, information which cannot be properly evaluated prior to award due to time constraints, or information relating to a failure to comply with the requirements of the Contract.

6.3.7 If Bidder submits three originals of the signed Agreement and all other items required to be submitted to University within 10 days after receipt of notice of selection as the apparent lowest responsive and responsible Bidder, and if all such items comply with the requirements of the Bidding Documents and are acceptable to University, University will award the Contract to Bidder by signing the Agreement and returning a signed copy of the Agreement to Bidder.

6.3.8 If University consents to the withdrawal of the Bid of the apparent lowest responsive and responsible Bidder, or the apparent lowest responsive and responsible Bidder fails or refuses to sign the Agreement or submit to University all of the items required by the Bidding Documents, within 10 days after receipt of notice of selection, or that Bidder is not financially or otherwise qualified to perform the Contract, University may reject such Bidder's Bid and select the next apparent lowest responsible Bidder, until all Bids are exhausted, or reject all Bids. Any Bidder whose Bid is rejected because the Bidder has failed or refused, within 10 days after receipt of notice of selection, to sign the Agreement or submit to University all of the items required by the Bidding Documents, shall be liable to the University for all resulting damages.

ARTICLE 7

BID PROTEST

7.1 FILING A BID PROTEST

7.1.1 Any Bidder, person, or entity may file a Bid protest. The protest shall specify the reasons and facts upon which the protest is based and shall be in writing and received by with the Facility not later than 5:00 PM on the 3rd business day following:

- .1 if the Bid Form does not contain any Alternate(s), the date of the Bid opening;
- .2 if the Bid Form contains any Alternate(s), the date of posting in a public place of Bid results.

7.1.2 If a Bid is rejected by the Facility, and such rejection is not in response to a Bid protest, any Bidder, person or entity may dispute that rejection by filing a Bid protest (limited to the rejection) in writing and received by the Facility not later than 5:00 PM on the 3rd business day following the rejected Bidder's receipt of the notice of rejection.

7.1.3 For the purpose of computing any time period in this Article 7, the date of receipt of any notice shall be the date on which the intended recipient of such notice actually received it. Delivery of any notice may be by any means, with verbal or written confirmation of receipt by the intended recipient.

7.2 RESOLUTION OF BID CONTROVERSY

7.2.1 Facility will investigate the basis for the Bid protest and analyze the facts. Facility will notify Bidder whose Bid is the subject of the Bid protest of evidence presented in the Bid protest and evidence found as a result of the investigation, and, if deemed appropriate, afford Bidder an opportunity to rebut such evidence, and permit Bidder to present evidence that it should be allowed to perform the Work. If deemed appropriate by Facility, an informal hearing will be held. Facility will issue a written decision within 15 days following receipt of the Bid protest, unless factors beyond Facility's reasonable control prevent such a resolution, in which event such decision will be issued as expeditiously as circumstances reasonably permit. The decision will state the reasons for the action taken by Facility. A written copy of the decision will be furnished to the protestor, the Bidder whose Bid is the subject of the Bid protest, and all Bidders affected by the decision. As used in this Article 7, a Bidder is affected by the decision on a Bid protest if a decision on the protest could have resulted in the Bidder not being the lowest responsible and responsive Bidder for the Contract. A written copy of the Facility's decision must be received by the protestor, the Bidder whose Bid is the subject of the Bid protest, and all Bidders affected by the decision no later than 3 business days prior to award of the contract.

7.2.2 Notwithstanding the provisions of Article 7.2.1, at the election of Facility, a Bid protest may be referred directly to University's Construction Review Board without prior investigation and review by Facility. The Chair of the Construction Review Board will either decide the Bid protest or appoint a Hearing Officer. If a Hearing Officer is appointed, the Hearing Officer will review the Bid protest in accordance with the provisions of Article 7.2.4.

7.2.3 Bidder whose Bid is the subject of the protest, all Bidders affected by the Facility's decision on the protest, and the protestor have the right to appeal to the Construction Review Board if not satisfied with Facility's decision. The appeal must be in writing and shall specify the decision being appealed and all the facts and circumstances relied upon in support of the appeal. A copy of the appeal must be received by the Chair, Construction Review Board, not later than 5:00 pm on the 3rd business day following appellant's receipt of the written decision of Facility, at the following address:

Chair, Construction Review Board
University of California
Office of the President
1111 Franklin Street, 6th Floor
Oakland, CA 94607-5200
Attention: Associate Director, Design & Construction Policy

And, by email to:

constructionreviewboard@ucop.edu

A copy of the appeal must be sent to all parties involved in the Bid protest and to Facility, to the same address and in the same manner as the original protest. An appeal received after 5:00 pm is considered received as of the next business day. If the final date for receipt of an appeal falls on a Saturday, Sunday, or University holiday, the appeal will be considered timely only if received by 5:00 pm on the following business day. The burden of proving timely receipt of the appeal is on the appealing party.

7.2.4 The Chair of the Construction Review Board will review the Facility's decision and the appeal, and issue a written decision, or if appropriate, appoint a Hearing Officer to conduct a hearing and issue a written decision. If a hearing is held, the hearing shall be held not later than the 10th day following the appointment of the Hearing Officer unless the Hearing Officer for good cause determines otherwise. The written decision of the Chair or Hearing Officer will state the basis of the decision, and the decision will be final and not subject to any further appeal to University. The Chair or Hearing Officer may consult with the University's Office of the General Counsel on the decision as to legal form. The University will complete its internal Bid protest procedures before award of the Contract.

END OF INSTRUCTIONS TO BIDDERS

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1. Contract Time: As specified in Section 1 of the Bid Form.
2. List of Subcontractors (Bid Form Paragraph 9.0) and List of Changes in Subcontractors Due to Alternates (Bid Form Paragraph 10.0).

The default rule is that, if a Bidder lists one subcontractor for a Work Activity (such as “Electrical”) under Bid Form Paragraph 9.0 and a different subcontractor for the same Work Activity (such as “Electrical”) for the Alternate Work under Bid Form Paragraph 10.0 without reference to the Alternate, then it is deemed that the second subcontractor listed in Paragraph 10.0 will perform the Base Bid Work and the Alternate Work, unless the Bidder expressly writes otherwise.

A Bidder may list more than one subcontractor per trade, provided that the Work Activity to be performed by each listed subcontractor is adequately described on the spaces provided on the Bid Form, so that which subcontractor will perform which Work Activity can be determined.

For example, in case of Alternates, if a Bidder wants one subcontractor to perform the electrical Base Bid Work and another subcontractor to perform the electrical Alternate Work, then the Bidder should list the first subcontractor under Bid Form Paragraph 9.0 as performing the “Electrical” Work Activity, and list the second subcontractor under Bid Form Paragraph 10.0 (for listing changes in subcontractors due to Alternates) as performing the “Electrical Alt” or “Electrical Alt Work” or “Electrical Alt Only” or similarly to define the Alternate Work Activity separately to be performed.

3. Requests for clarification or interpretation of the Bidding Documents must be submitted in writing, and shall be addressed only to:

Kara Longtin
Email: kara.longtin@ucr.edu
Tel: 951.827.2610

The deadline to submit requests for clarification or interpretation is on or before 2:00 PM, on Wednesday, July 20, 2022.

4. The Pre Bid Conference will be conducted via ZOOM conference call on **Wednesday, July 13, 2022, at 11:00 AM.**

To request the meeting link and ID, please email kara.longtin@ucr.edu and use the following in the subject header:

957450 Fine arts Performance Lab Exterior- Request for Pre-Bid Meeting Link

At this time, there are no plans for a site visit, if a bidder would like access to the site, this will be done by appointment only and through the coordination of the Contract Administrator noted above. Do not contact the project manager directly.

5. Bids will be submitted electronically only. The Bid Form, and all other documents required to be submitted via email to kara.longtin@ucr.edu. The email shall be identified with the Project name, Bidder's name and address, and, if applicable, the designated portion of the Project for which the Bid is submitted.

6. Immediately following the Bid Deadline, bids will be opened and posted on the University's website. Bids will be made available to be reviewed by bidders shortly after bids have been validated. Efforts will be made to accommodate and observe all typical procedures during COVID-19 restrictions. .
7. Contractor will be assessed as liquidated damages the sum of **\$0.00** for each day the Work remains incomplete beyond the expiration of the Contract Time. After Substantial Completion, the rate for liquidated damages shall be reduced to the sum of **\$0.00** per day. See Article 5 of the Agreement for detailed requirements
8. Replace the existing Paragraph 1.4 with the following:
 - 1.4 The term "Bid Deadline" means the date and time on or before which Bids must be received, as designated in the **ADVERTISEMENT FOR BIDS FROM PREQUALIFIED BIDDERS** and which may be revised by Addenda.
9. Replace the existing Paragraph 3.1.1 with the following:
 - 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the **ADVERTISEMENT FOR BIDS FROM PREQUALIFIED BIDDERS** .
10. Replace the existing Paragraph 3.5.1 with the following:
 - 3.5.1 Addenda will be issued only by University and only in writing. Addenda will be identified as such and will be mailed or delivered to all Planholders. At its sole discretion, the University may elect to deliver Addenda via facsimile or email to Planholders who have provided a facsimile number or email address for receipt of Addenda or communications.
11. Replace the existing Paragraph 3.5.3 with the following:
 - 3.5.3 Addenda will be issued such that Planholders should receive them no later than 72 hours prior to the Bid Deadline. Addenda withdrawing the request for Bids or postponing the Bid Deadline may be issued anytime prior to the Bid Deadline.
12. Replace the existing Paragraph 5.2.4 with the following:
 - 5.2.4 Bid Security will be returned after the contract has been awarded. Notwithstanding the preceding, if a Bidder fails or refuses, within **10** days after receipt of notice of selection, to sign the Agreement or submit to University all of the items required by the Bidding Documents, the University will retain that Bidder's Bid Security. If the Bid Security is in the form of a Bid Bond, the Bid Security will be retained until the University has been appropriately compensated; if the Bid Security is in the form of certified check, the University will negotiate said check and after deducting its damages, return any balance to Bidder.
13. Add the following as Paragraph 5.3.5:
 - 5.3.5 As specified in the **ADVERTISEMENT FOR BIDS FROM PREQUALIFIED BIDDERS**, the University has determined that bidders who submit bids for this Project must be prequalified. All prequalified contractors are listed on the **ADVERTISEMENT FOR BIDS FROM PREQUALIFIED BIDDERS**.

14. Replace the existing Paragraph 5.4.4 with the following:
 - 5.4.4 Bids may not be modified, withdrawn, or canceled within **60** days after the Bid Deadline.

15. Replace the existing Paragraph 6.3.1 with the following:
 - 6.3.1 University will have the right, but is not required, to waive nonmaterial irregularities in a Bid. If the University awards the Contract, it will be awarded to the responsible Bidder submitting the lowest responsive Bid as determined by University and who is not rejected by University for failing or refusing, within **10** days after receipt of notice of selection, to sign the Agreement or submit to University all of the items required by the Bidding Documents.

16. Replace the existing Paragraph 6.3.5 with the following:
 - 6.3.5 University will select the apparent lowest responsive and responsible Bidder and notify such Bidder on University's form within **50** days (unless the number of days is modified in Supplementary Instructions to Bidders) after the Bid Deadline or reject all Bids. Within **10** days after receipt of notice of selection as the apparent lowest responsive and responsible Bidder, Bidder shall submit to University all of the following items:
 - .1 Three originals of the Agreement signed by Bidder.
 - .2 Three originals of the Payment Bond required under Article 11 of the General Conditions.
 - .3 Three originals of the Performance Bond required under Article 11 of the General Conditions.
 - .4 Certificates of Insurance on form provided by University required under Article 11 of the General Conditions.
 - .5 Names of all Subcontractors, with their addresses, telephone and facsimile numbers, contact persons, portions of the Work and designation of any Subcontractor as a Small Business Enterprise (SBE), Disadvantaged Business Enterprise (DBE), Women-owned Business Enterprise (WBE) and Disabled Veteran Business Enterprise (DVBE) on the Report of Subcontractor Information form, along with a completed Self-Certification form, contained in the Exhibits. Evidence, as required by University, of the reliability and responsibility of the proposed Subcontractors such as statements of experience, statements of financial condition, and references.
 - .6 Preliminary Contract Schedule as required under Article 3 of the General Conditions.
 - .7 If Bidder wishes to utilize securities in lieu of retention beginning with the first Application for Payment, a completed Selection of Retention Options form accompanied by a completed Escrow Agreement for Deposit of Securities in Lieu of Retention and Deposit of Retention in the form contained in the Exhibits.
 - .8 Cost Breakdown as required by Article 9 of the General Conditions.

17. Replace the existing Paragraph 6.3.7 with the following:
 - 6.3.7 If Bidder submits three originals of the signed Agreement and all other items required to be submitted to University within **10** days after receipt of notice of selection as the apparent lowest

- responsive and responsible Bidder, and if all such items comply with the requirements of the Bidding Documents and are acceptable to University, University will award the Contract to Bidder by signing the Agreement and returning a signed copy of the Agreement to Bidder.
18. Replace the existing Paragraph 6.3.8 with the following:
- 6.3.8 If University consents to the withdrawal of the Bid of the apparent lowest responsive and responsible Bidder, or the apparent lowest responsive and responsible Bidder fails or refuses to sign the Agreement or submit to University all of the items required by the Bidding Documents, within **10** days after receipt of notice of selection, or that Bidder is not financially or otherwise qualified to perform the Contract, University may reject such Bidder's Bid and select the next apparent lowest responsible Bidder, until all Bids are exhausted, or reject all Bids. Any Bidder whose Bid is rejected because the Bidder has failed or refused, within **10** days after receipt of notice of selection, to sign the Agreement or submit to University all of the items required by the Bidding Documents, shall be liable to the University for all resulting damages.
19. The University has negotiated contracts with certain suppliers (listed in the "Information Available to Bidders") to supply materials to University construction projects. Bidders may be able to obtain favorable pricing from the listed suppliers for materials required for this Contract. Bidders are not obligated to obtain any required materials from the listed suppliers. Use of any of the listed suppliers is at the Bidder's risk, and the University does provide any warranties, express or implied, with respect to the listed suppliers, their products and/or services. In particular, University does not warrant that the listed suppliers, their products and/or services are suitable for this Project.
20. **PREVAILING WAGE INFORMATION:** A bidder can obtain the prevailing wage information through the internet at www.dir.ca.gov or at <http://www.dir.ca.gov/DLSR/PWD>.

END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

INFORMATION AVAILABLE TO BIDDERS

The following information is made available for the convenience of bidders and is not a part of the Contract. The information is provided subject to the provisions of Article 3 of the General Conditions.

1. The University of California has contracts for materials, equipment and/or services with the suppliers listed on the Office of the President Procurement Services website at: <https://www.ucop.edu/procurement-services/for-suppliers/construction-supplier-resources.html>

General Contractors or others submitting bids for University construction projects may enter into agreements with these suppliers that utilize the pricing and terms contained in the University-supplier agreements. The university does not represent or warrant that materials/equipment/services of these suppliers meet the requirements of the University's construction contracts.

Use of such suppliers shall not relieve Contractor from its obligation to meet all contractual requirements in any contracts with the University. The university will not be a party to any agreements with such suppliers and accepts no performance obligations or liability with respect to such agreements.

2. Reports:

Limited Asbestos Survey, Envirocheck, June 9, 2022, 15 pages.
Preliminary Mold Investigation Report, Envirocheck, June 9, 2022, 18 pages.

3. Record Documents and As-Builts:

None

END OF INFORMATION AVAILABLE TO BIDDERS



2211 West Orangewood Avenue
 Orange, CA 92868
 Tel: (714) 937-0750
 Fax: (714) 937-0755
 www.envirocheck.com
 (800) 665-7586



NVLAP Lab Code: 200548-0

Inspection Date: 6/1/2022

Report Date: 6/9/2022

Limited Asbestos Survey

Customer: UCR Planning, Design & Construction Job Location: UCR - Arts Performance Lab
 1223 University Avenue, Suite 240 PO #: 957450-PSA-2022-1 25
 Riverside, CA 92507 900 University Avenue
 Riverside, CA 92521

1.0 Introduction/ Laboratory Summary:

This report presents the analytical results of the Limited Asbestos Survey of specified materials and locations as requested and directed by the client that was performed at the subject property listed above by Envirocheck, Inc. If suspect asbestos materials are uncovered and/or discovered during the renovation and/or demolition activities, suspend all activities until the newly discovered suspect materials are tested. Unless noted, this survey excludes sampling of the concrete slab/foundation, ceramic tile systems and masonry products.

Please read entire report prior to initiating any action.

The sampled materials that exceeded the EPA definition of Asbestos Containing Material (ACM) of >1% and/or the Cal-OSHA definition of Asbestos Containing Construction Material (ACCM) of >0.1% and/or found as Trace for asbestos content were:

- None

Positive Results:

#	Location	Material	Notes	Total % Asbestos	Types of Asbestos Present	Friable Condition	Sq. Ft.*
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No asbestos detected in the samples tested

Negative Results:

#	Location	Material	Notes
1	Roof	Roofing Material	N/A
2	Roof	Roofing Foam	N/A
3	Roof	Roofing Material	N/A
4	Roof	Roofing Foam	N/A
5	Roof	Roofing Material	N/A
6	Roof	Roofing Foam	N/A
7	Roof	Roofing Material	N/A
8	Roof	Roofing Foam	N/A
9	Roof	Roofing Material	N/A
10	Roof	Roofing Foam	N/A

11	Roof	Roofing Material	N/A
12	Roof	Roofing Foam	N/A
13	Roof	Roofing Material	N/A
14	Roof	Roofing Foam	N/A
15	Roof (Parapet)	Roofing Material	N/A
16	Roof (Parapet)	Roofing Material	N/A
17	Roof (Parapet)	Roofing Material	N/A
18	Roof (Parapet)	Mastic	N/A
19	Roof (Parapet)	Mastic	N/A
20	Roof (Parapet)	Mastic	N/A
21	Exterior	Stucco	N/A
21.1	Exterior	Stucco	N/A
22	Exterior (Overhang)	Stucco	N/A
22.1	Exterior (Overhang)	Stucco	N/A
22.2	Exterior (Overhang)	Stucco	N/A
23	Exterior (Overhang)	Stucco	N/A
24	Exterior (Overhang)	Stucco	N/A
24.1	Exterior (Overhang)	Stucco	N/A
25	Exterior (Overhang)	Stucco	N/A
25.1	Exterior (Overhang)	Stucco	N/A

2.0 Background, Sampling Protocol, and Test Methods

Testing by: Engaged by Representative:

Survey by:

Purpose of inspection:

Structure:

Exterior:

Roof:

Occupied?:

Exterior Condition:

Roof Condition:

Year Built:

Exterior Debris Pile(s):

No. of Stories:

Debris Pile Location(s):

Approx. SQ FT:

Debris Pile Size:

Foundation:

Debris Pile Contents:

Air Handling:

- Envirocheck personnel identified all accessible and recognizable types of suspect ACM and PACM that were anticipated to be impacted by the renovation or demolition. Suspect materials which were not anticipated to be impacted were not sampled.
- The samples were submitted to Envirocheck's in-house laboratory, located at 2211 W. Orangewood Avenue, Orange, CA 92868
- The inspector performed an inspection for suspect asbestos containing materials listed above following the provisions of 40 CFR Part 763.86.
- The inspector is Cal/OSHA certified and conformed to procedures outlined in the EPA Building Inspector Course.
- Modified AHERA (Asbestos Hazard Emergency Response Act) sampling methods and protocols were used.
- Each asbestos sample collected was analyzed utilizing the methods specified in EPA – Appendix E to Subpart E of 40 CFR Part 763: "Interim Method of the Determination of Asbestos in Bulk Insulation Samples" and EPA/600/R-93/116: "Method for the Determination of Asbestos in Bulk Building Materials", by a NVLAP-accredited laboratory.
- When Non-Friable Asbestos Containing Material (ACM) has suffered Damage and/or Disturbance, the Debris that is the result of the damage and/or disturbed ACM will be considered to be Friable ACM and shall be disposed of as Asbestos Containing Waste Material (ACWM).
- Asbestos testing and inspection was performed by Alfredo Calderon, CSST# 11-7009, of Envirocheck, on 6/1/2022, under the direction of Michael Powers, CAC# 11-4750.

3.0 Applicable Actions:

- Periodic surveillance for materials found in Good Condition
- As applicable, materials found to be in Good Condition can be left and managed in place under a proper Operations and Maintenance (O & M) Plan
- Repair or removal for materials found in Damaged Condition
- Removal for materials found in Significant Damage
- Removal prior to renovation or demolition activities that may cause disturbance
- Prior to any renovation or planned disturbance of any ACM, the contractor should be furnished with a copy of this survey report

Notice 1: According to AHERA, 40 CFR, 763.87 (c)(1),(2) - (1) A homogeneous area is considered not to be Asbestos Containing Material (ACM) only when all required samples collected from a homogeneous area indicate levels below regulated limits and (2) a homogeneous area is considered ACM when at least one of the required samples collected indicates levels above regulated limits. According to AHERA, 40 CFR, 763.83 - A homogeneous area means an area of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color and texture.

Notice 2: Cal-OSHA (DOSH) defines asbestos containing construction materials (ACCM) as manufactured materials containing asbestos in amounts greater than 0.1% by weight. Cal-OSHA requires that contractors be registered with DOSH when disturbing ACCM. Note that if "any level" of asbestos is detected, Cal-OSHA still requires applicable worker protections, training, communication, notification and engineering controls in accordance with CCR Title 8 Section 1529, even if it is determined to be less than or equal to 0.1% asbestos by weight, however the contractor would not be required to be "registered" with DOSH if the level is at or below 0.1% asbestos by weight. The EPA defines asbestos containing materials (ACM) as materials containing asbestos in amounts greater than 1%. Polarized Light Microscopy (PLM) analysis has a limit of quantification of <1%. PLM samples determined to contain levels of less than or equal to 1% can be presumed to contain levels greater than 1% or can be submitted for 400 point count for a more accurate result (Limited to a qualified <1%). In order to determine if materials are less than or equal to 0.1%, the 1000 point count method and/or Transmission Electron Microscopy (TEM) method will be needed to determine levels with quantification limits of a minimum of 0.1% in accordance with EPA/600/R-93/116. The 400 point counting method assists in determining proper waste handling and appropriate jurisdiction of regulatory agencies (such as: EPA, NESHAP, APCD, AQMD) and cannot be used to determine DOSH registration requirements (where a combination of 1000 point counting and/or TEM analysis will be required as per EPA 600/93-R/116 Method). Request for additional types of analysis must be made by the client and additional analytical costs will apply.

Notice 3: Asbestos NESHAP Requirement to Perform Point Counting (May 8, 1991) – This applies to all regulated asbestos containing materials (RACM) as defined in 40 CFR Section 61.141.

- "First, a sample in which no asbestos is detected by polarized light microscopy (PLM) does not have to be pointed counted. However, a minimum of three slide mounts should be prepared and examined in their entirety by PLM to determine if asbestos is present. This process should be carefully documented by the laboratory."
- "Second, if the analyst detects asbestos in the sample and estimates the amount by visual estimation to be less than 10%, the owner or operator of the building may (1) elect to assume the amount be greater than 1% and treat the material as asbestos-containing material or (2) require verification of the amount by point counting." If no election is made, then the materials shall be presumed to be ACM.
- "Third, if a result obtained by point count is different from a result obtained by visual estimation, the point count result will be used."
- It is the responsibility of the building owner, operator, and/or owner representative to determine the desired course of action and communicate the information to the relevant parties and request the laboratory to perform additional point count analysis as applicable. Point count laboratory analysis is not part of the standard procedure of PLM analysis and is considered an additional service.

Note: Interpretations of the regulatory language regarding wall system (i.e., drywall, gypsum board, wallboard, plaster and stucco) multi-layer composite sampling vary; therefore, it is important to be familiar with the local NESHAP (South Coast AQMD) enforcement and local OSHA enforcement agencies' individual interpretations of the standards to avoid citation and fines.

4.0 Asbestos-Related Terms

AHERA – Asbestos Hazard Emergency Response Act (Regulates school facilities)

ASHARA – Asbestos School Hazard Reauthorization Act (Includes public and commercial buildings under AHERA regulation)

ACM – Asbestos Containing Materials (Materials containing greater than one (1) percent by weight)

ACCM – Asbestos Containing Construction Materials (CAL-OSHA’s term for materials containing greater than one tenth of one (0.1) percent by weight)

PACM – Presumed Asbestos Containing Materials (Materials considered asbestos containing without laboratory analysis)

CAC – Certified Asbestos Consultant (State of California certified individual allowed to perform all aspects of asbestos related inspection, management, planning, and design work and to direct CSST(s) and review and execute asbestos reports under state law)

CSST – Certified Site Surveillance Technician (Allowed to perform all aspects of asbestos related inspection, management, and work under the direction of a CAC)

CAL-OSHA a.k.a. (**DOSH**) Division of Occupational Safety and Health (California governing body regulating worker protection)

OSHA – Occupational Health and Safety Administration

NIOSH – National Institute of Occupational Safety and Health

EPA – Environmental Protection Agency (Regulates environment and waste stream)

DOT – Department of Transportation

NESHAP – National Emissions Standards for Hazardous Air Pollutants

AQMD – Air Quality Management District (Local division of NESHAP)

NVLAP – National Voluntary Laboratory Accreditation Program

AIHA – American Industrial Hygiene Association

CFR – Code of Federal Regulations

CCR –California Code of Regulations

PLM – Polarized Light Microscopy (also known as “Bulk” sample)

PCM – Phase Contrast Microscopy

TEM – Transmission Electron Microscopy

APCD – Air Pollution Control District (Local division of NESHAP)

4.1 Laboratory Report Terms

ND – None Detected

A – Area Sample (Air monitoring)

AA – Area After (Clearance type sample)

P – Personal Sample (Employee monitoring type sample)

EX – Excursion (Employee monitoring type of sample during peak activities)

BK – Blank (Used for quality assurance)

Trace – Asbestos was detected in the PLM analysis, but not in the point count.

Negative – No asbestos detected, however it doesn't mean that there isn't any asbestos.

4.2 Laboratory Accreditation

NIST/NVLAP

National Institute of Standards and Technology

National Voluntary Laboratory Accreditation Program

NVLAP Lab Code: 200548-0



NVLAP Lab Code: 200548-0

California Water Boards ELAP
Certificate 2723

For a detailed explanation of our accreditations and quality assurance program, contact Envirocheck.

5.0 Limitations

The findings set forth in this report are strictly limited to the time, date and scope of the investigation. The results presented in this report are based on the analytical testing performed by the certified laboratory. The results from the sampled locations are representative of the entire homogeneous material/areas and not just the locations sampled. According to AHERA, 40 CFR, 763.87 (c)(1),(2) - A homogeneous area is considered not to be Asbestos Containing Material (ACM) only when all required samples collected from a homogeneous area indicate levels below regulated limits and a homogeneous area is considered ACM when at least one of the required samples collected indicates levels above regulated limits. This report does not guarantee that all inaccessible, hidden, or indistinguishable materials will be identified or sampled. Samples were limited to the materials and locations listed on the chain of custody. Materials/areas that were not sampled shall be presumed to be asbestos containing until proven otherwise by appropriate sampling procedures. Square footages are estimates only and should not be used for bidding purposes.

6.0 Certified Asbestos Consultant Signature

Any individual performing services as an asbestos consultant or site surveillance technician as referenced and defined in section 1529(b) of Title 8 of the California Code of Regulations must be certified by the State of California, Division of Occupational Safety and Health (DOSH). Asbestos consultant shall maintain copies of AHERA training certificates for management planner, abatement project designer, abatement contractor and supervisor, and all subsequent annual refresher courses. The complete abatement project designer course certificate is only required for certifications provided after July 1, 1994. Site surveillance technician applicants shall maintain copies of AHERA training completion certificates for inspector, and abatement contractor and supervisor, and all subsequent annual refresher courses. Certificates for abatement worker and abatement project designer may be utilized in lieu of the abatement contractor and supervisor certificate. Specific qualifications are required pursuant to section 1529(o) of Title 8 of the California Code of Regulations for certification. The educational qualifications, (diploma, official transcript, or other proof), and qualifying work experience as specified in Business and Professions Code sections 7184 and 7185 have been met by the individual(s) performing asbestos related consulting activities or activities. Qualifying work experience includes technical work associated with asbestos consulting activities. Written site surveillance technician references attesting to the applicant's qualifying work experience which are certified under the penalty of perjury as required.



Michael Powers, CAC# 11-4750

mike@envirocheck.com





**ENVIRO
CHECK**

2211 West Orangewood Avenue
Orange, CA 92868
Tel: (714) 937-0750
Fax: (714) 937-0755
www.envirocheck.com
(800) 665-7586



NVLAP Lab Code: 200548-0

Asbestos Laboratory Report, Page 1 of 3

California Water Boards ELAP Certificate 2723

Customer: UCR Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

Job Location: UCR - Arts Performance Lab
PO #: 957450-PSA-2022-1 25
900 University Avenue
Riverside, CA 92521

	1122060073	1122060074	1122060075	1122060076	1122060077	1122060078	1122060079	1122060080	1122060081	1122060082
Sample #	1	2	3	4	5	6	7	8	9	10
Asbestos	No	No	No	No	No	No	No	No	No	No
Total	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

1° Type										
2° Type										
3° Type										

Location	Roof	Roof	Roof	Roof	Roof	Roof	Roof	Roof	Roof	Roof
Material	Roofing Material	Roofing Foam	Roofing Material	Roofing Foam	Roofing Material	Roofing Foam	Roofing Material	Roofing Foam	Roofing Material	Roofing Foam

Notes										
Color	Gray, Black, Orange	Yellow	Gray, Black, Orange	Yellow	Gray, Black, Orange	Yellow	Gray, Black, Orange	Yellow	Gray, Black, Orange	Yellow
Homogeneous	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Components:

Non-fibrous Material	x	x	x	x	x	x	x	x	x	x
Paint										
Tar										
Cellulose										
Fiberglass										
Synthetic Fibers										
Other 1										
Other 2										

Comments/Method	None	None	None	None	None	None	None	None	None	None
Departures										

Received: 06/02/2022

Analyzed: 06/02/2022

Report Date: 06/02/2022

Analysts:			Admin QC:	JM
	Javier Osorio	Elaine Espique	Lab QC:	JS

Samples were analyzed in accordance with EPA - Appendix E to Subpart E of 40 CFR Part 763: "Interim Method of the Determination of Asbestos in Bulk Insulation Samples" and EPA/600/R-93/116: "Test Method for the Determination of Asbestos in Bulk Building Materials". The limit of detection for asbestos is <1%, and the limit of quantification is 1.0% or greater. The State of California defines an asbestos-containing construction material as having more than 0.1% asbestos. All samples are disposed of after 30 days unless the customer requests otherwise. This report shall not be reproduced except in full, without the written approval of the laboratory. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government. Test results apply to the sample as received. Asbestos percentage obtained through calibrated visual estimate. Components of inhomogeneous samples not analyzed separately unless listed as a sub-sample.

Various sample locations combined for composite purposes. *Not covered by NVLAP accreditation. Standard Deviation is ± 45.5% of asbestos concentration (1 Standard Deviation).



**ENVIRO
CHECK**

2211 West Oranewood Avenue
Orange, CA 92868
Tel: (714) 937-0750
Fax: (714) 937-0755
www.envirocheck.com
(800) 665-7586



NVLAP Lab Code: 200548-0

Asbestos Laboratory Report, Page 2 of 3

California Water Boards ELAP Certificate 2723

Customer: UCR Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

Job Location: UCR - Arts Performance Lab
PO #: 957450-PSA-2022-1 25
900 University Avenue
Riverside, CA 92521

	1122060083	1122060084	1122060085	1122060086	1122060087	1122060088	1122060089	1122060090	1122060091	1122060092
Sample #	11	12	13	14	15	16	17	18	19	20
Asbestos	No	No	No	No	No	No	No	No	No	No
Total	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

1° Type
2° Type
3° Type

Location	Roof	Roof	Roof	Roof	Roof (Parapet)	Roof (Parapet)	Roof (Parapet)	Roof (Parapet)	Roof (Parapet)	Roof (Parapet)
Material	Roofing Material	Roofing Foam	Roofing Material	Roofing Foam	Roofing Material	Roofing Material	Roofing Material	Mastic	Mastic	Mastic

Notes										
Color	Gray	Yellow	Gray	Yellow	Gray	Gray	Gray	Black	Black	Black
Homogeneous	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Components:

Non-fibrous Material	x	x	x	x	x	x	x	x	x	x
Paint										
Tar								x	x	x
Cellulose	2%	<1%	3%	1%	2%	2%	1%	2%	3%	2%
Fiberglass										
Synthetic Fibers										
Other 1										
Other 2										

Comments/Method Departures	None	None	None	None	None	None	None	None	None	None
----------------------------	------	------	------	------	------	------	------	------	------	------

Samples were analyzed in accordance with EPA - Appendix E to Subpart E of 40 CFR Part 763: "Interim Method of the Determination of Asbestos in Bulk Insulation Samples" and EPA/600/R-93/116: "Test Method for the Determination of Asbestos in Bulk Building Materials". The limit of detection for asbestos is <1%, and the limit of quantification is 1.0% or greater. The State of California defines an asbestos-containing construction material as having more than 0.1% asbestos. All samples are disposed of after 30 days unless the customer requests otherwise. This report shall not be reproduced except in full, without the written approval of the laboratory. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government. Test results apply to the sample as received. Asbestos percentage obtained through calibrated visual estimate. Components of inhomogeneous samples not analyzed separately unless listed as a sub-sample.

Various sample locations combined for composite purposes. *Not covered by NVLAP accreditation. Standard Deviation is ± 45.5% of asbestos concentration (1 Standard Deviation).



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NVLAP Lab Code: 200548-0

Asbestos Laboratory Report, Page 3 of 3

California Water Boards ELAP Certificate 2723

Customer: UCR Planning, Design & Construction
 1223 University Avenue, Suite 240
 Riverside, CA 92507

Job Location: UCR - Arts Performance Lab
 PO #: 957450-PSA-2022-1 25
 900 University Avenue
 Riverside, CA 92521

	1122060093	1122060093 Sub-sample	1122060094	1122060094 Sub-sample	1122060094 Sub-sample	1122060095	1122060096	1122060096 Sub-sample	1122060097	1122060097 Sub-sample
Sample #	21	21.1	22	22.1	22.2	23	24	24.1	25	25.1
Asbestos	No	No	No	No	No	No	No	No	No	No
Total	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

1° Type										
2° Type										
3° Type										
Location	Exterior	Exterior	Exterior (Overhang)	Exterior (Overhang)	Exterior (Overhang)	Exterior (Overhang)	Exterior (Overhang)	Exterior (Overhang)	Exterior (Overhang)	Exterior (Overhang)
Material	Stucco	Stucco	Stucco	Stucco	Stucco	Stucco	Stucco	Stucco	Stucco	Stucco

Notes										
Color	Purple	Light Gray	Purple	Light Gray	Gray	Gray	Purple	Light Gray	Purple	Light Gray
Homogeneous	No	Yes	No	Yes	Yes	No	No	Yes	No	Yes

Components:

Non-fibrous Material	x	x	x	x	x	x	x	x	x	x
Paint	x		x			x	x		x	
Tar										
Cellulose										
Fiberglass										
Synthetic Fibers										
Other 1										
Other 2										

Comments/Method Departures	None	None	None	None	None	None	None	None	None	None
----------------------------	------	------	------	------	------	------	------	------	------	------

Samples were analyzed in accordance with EPA - Appendix E to Subpart E of 40 CFR Part 763: "Interim Method of the Determination of Asbestos in Bulk Insulation Samples" and EPA/600/R-93/116: "Test Method for the Determination of Asbestos in Bulk Building Materials". The limit of detection for asbestos is <1%, and the limit of quantification is 1.0% or greater. The State of California defines an asbestos-containing construction material as having more than 0.1% asbestos. All samples are disposed of after 30 days unless the customer requests otherwise. This report shall not be reproduced except in full, without the written approval of the laboratory. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government. Test results apply to the sample as received. Asbestos percentage obtained through calibrated visual estimate. Components of inhomogeneous samples not analyzed separately unless listed as a sub-sample.

Various sample locations combined for composite purposes. *Not covered by NVLAP accreditation. Standard Deviation is ± 45.5% of asbestos concentration (1 Standard Deviation).



2211 West Orangewood Avenue
Orange, CA 92668
Tel: 800.665.7585 Fax: 714.937.0755 envirocheck.com

Chain of Custody - Asbestos & Lead

Date Sampled: 6/11/12
Sampled By: A. Cal
P.O. #: F94408

Project Name: UCR - Axis Performance Lab
Contact:
Job Address: 900 University Avenue
City, State, Zip: Riverside, CA, 92521

Inspection: Residential Commercial
Type of Loss: Fire Water Renol/Demo
Possible PRO-57 YES (Consult with CAC) NO

ID	Lab ID	Location	Material	Friable	Condition	Sq/FT
1	12201073	Roof	Roofing material	YES NO	G D SD	7873
2	94		Roofing foam	YES NO	G D SD	
3	95		Roofing material	YES NO	G D SD	
4	96		Roofing foam	YES NO	G D SD	
5	97		Roofing material	YES NO	G D SD	
6	98		Roofing foam	YES NO	G D SD	
7	99		Roofing material	YES NO	G D SD	
8	80		Roofing material	YES NO	G D SD	
9	81		Roofing material	YES NO	G D SD	
10	82		Roofing material	YES NO	G D SD	
11	83		Roofing material	YES NO	G D SD	
12	84		Roofing foam	YES NO	G D SD	
13	85		Roofing material	YES NO	G D SD	
14	86		Roofing material	YES NO	G D SD	
15	87		Roofing material	YES NO	G D SD	
16	88		Roofing material	YES NO	G D SD	53.7
17	89		Roofing material	YES NO	G D SD	
18	90		Mastic	YES NO	G D SD	5.0
19	91			YES NO	G D SD	
20	92			YES NO	G D SD	

Date	Time	*Samples Relinquished By	Samples Received By
6/11/12	2:17 pm	<i>[Signature]</i>	ES 6/1/12 1624

* By signing above, Client acknowledges that he/she/it has read the terms and conditions on the reverse side hereof, and agrees to be bound thereby.

Turnaround Time (T.A.T.)
Please see Key below
 Same Day Next Day
 2 Days 3-5 Days
 6-10 Days Other: _____

Procedure Requested

Asbestos Bulk
 NVLAP-accredited:
• EPA - Appendix E to Subpart E of 40 CFR Part 763: Interim Method of the Determination of Asbestos in Bulk Insulation Samples
• EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials
 NOT NVLAP-accredited:
Not building materials, e.g. soil, debris, dust wipe, paint, etc.

Asbestos by PCM
NIOSH 7400
 Asbestos by TEM
Method: _____

Lead
 Air Soil Paint Dust
 Waste Profile Chip Wipe
 (Circle applicable) TLCL / STLC / TCLP
Please provide 1/2 lb of sample for complete waste profile

Rotameter Calibration

Other: _____

Turnaround Time (T.A.T.) Key & Definitions:
Same Day: Samples must be received by lab before 2 PM for same business day results
Next Day: Results provided by end of next business day
2 Days: Results provided by end of 2nd business day (e.g. received Mon., results by Wed)
3-5 Days: Results provided by end of 5th business day or sooner
6-10 Days: Results provided by end of 10th business day or sooner



2211 West Orangewood Avenue
Orange, CA 92868
Tel: 800.665.7586 Fax: 714.937.0755 envirocheck.com

Chain of Custody - Asbestos & Lead

Date Sampled: 6/1/12
 Sampled By: A. Co.
 P.O. #: 694468

Project Name: WCR - Arts Performance Lab
 Contact: _____
 Job Address: 100 UNIVERSITY AVENUE
 City, State, Zip: Riverside, CA, 92521

Inspection: Residential Commercial Reno/Demo

Type of Loss: Fire Water YES (Consult with CAC) NO

ID	Lab ID	Location	Material	Friable	Condition	Sq/FT
21	93	Entrance	STC	YES (NO)	D SD	3543
22	94	(over way)		YES NO	G D SD	
23	95			YES NO	G D SD	
24	96			YES NO	G D SD	
25	97			YES NO	G D SD	
				YES NO	G D SD	
				YES NO	G D SD	
				YES NO	G D SD	
				YES NO	G D SD	
				YES NO	G D SD	
				YES NO	G D SD	
				YES NO	G D SD	
				YES NO	G D SD	
				YES NO	G D SD	
				YES NO	G D SD	
				YES NO	G D SD	

*Samples Relinquished By: _____

Date: 6/1/12 Time: 4:17 pm

Samples Received By: _____

Date: 6/1/12 Time: 10:24

* By signing above, Client acknowledges that he/she/it has read the terms and conditions on the reverse side hereof, and agrees to be bound thereby.

Turnaround Time (T.A.T.)
Please see Key below

Same Day Next Day
 2 Days 3-5 Days
 6-10 Days Other: _____

Procedure Requested

Asbestos Bulk

NVLAP-accredited:
 • EPA - Appendix E to Subpart E of 40 CFR Part 763: Interim Method of the Determination of Asbestos in Bulk Insulation Samples
 • EPA/500/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

NOT NVLAP-accredited:
 • Not building materials, e.g. soil, debris, dust wipe, paint, etc.

Asbestos by PCM
 NIOSH 7400

Asbestos by TEM
 Method: _____

Lead

Air Soil Paint Dust
 Waste Profile Chip Wipe
 (Circle applicable) TLCL / STLC / TCLP
 Please provide 1/2 lb of sample for complete waste profile

Rotameter Calibration

Other: _____

Turnaround Time (T.A.T.) Key & Definitions:

Same Day: Samples must be received by lab before 2 PM for same business day results

Next Day: Results provided by end of next business day

2 Days: Results provided by end of 2nd business day (e.g. received Mon, results by Wed)

3-5 Days: Results provided by end of 3rd business day or sooner

6-10 Days: Results provided by end of 10th business day or sooner

Field Datasheet

Client: UCR Planning Design; Constructor Job Site: UCR - Arts Performance Lab DATE: 10/01/22
900 University Ave TIME: 8:30 AM
Riverside, CA 92521 Inspector: A. Cal

Purpose of Inspec. Fire Water Reno/Demo Clearance Contam. Assess Other Occupied? Yes No
 Children: Yes No Unknown

Structure: SFH Apt. Condo Commercial School Day Care Church Other University

Year Built: 2000's Approx. SQ. FT.: 14,766 No. of Stories: 2 Foundation: Raised Slab

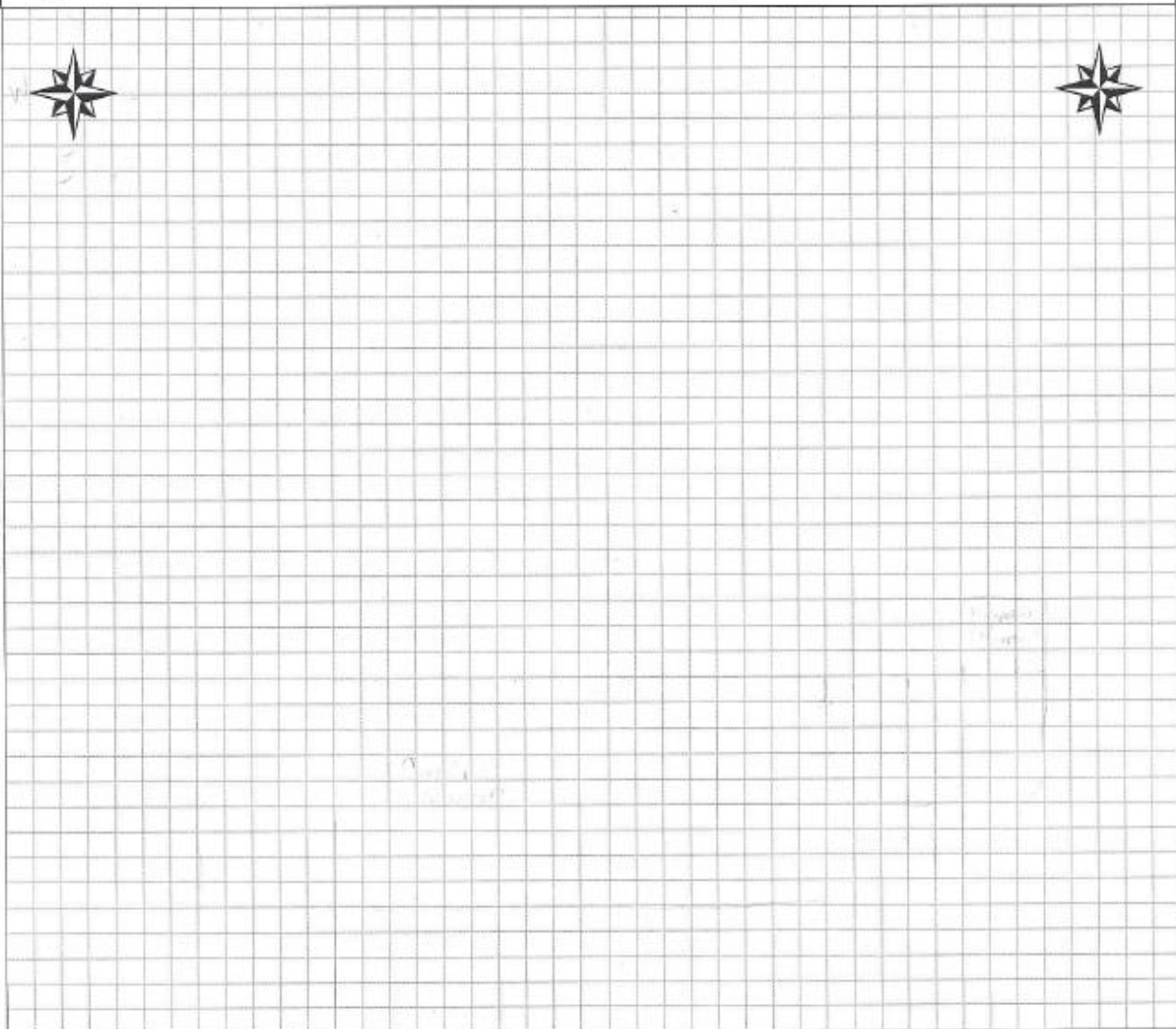
EXT: D SD Type: STC Metal Concrete Tilt-up Concrete Block Brick Siding Wood/Transite Other Asph

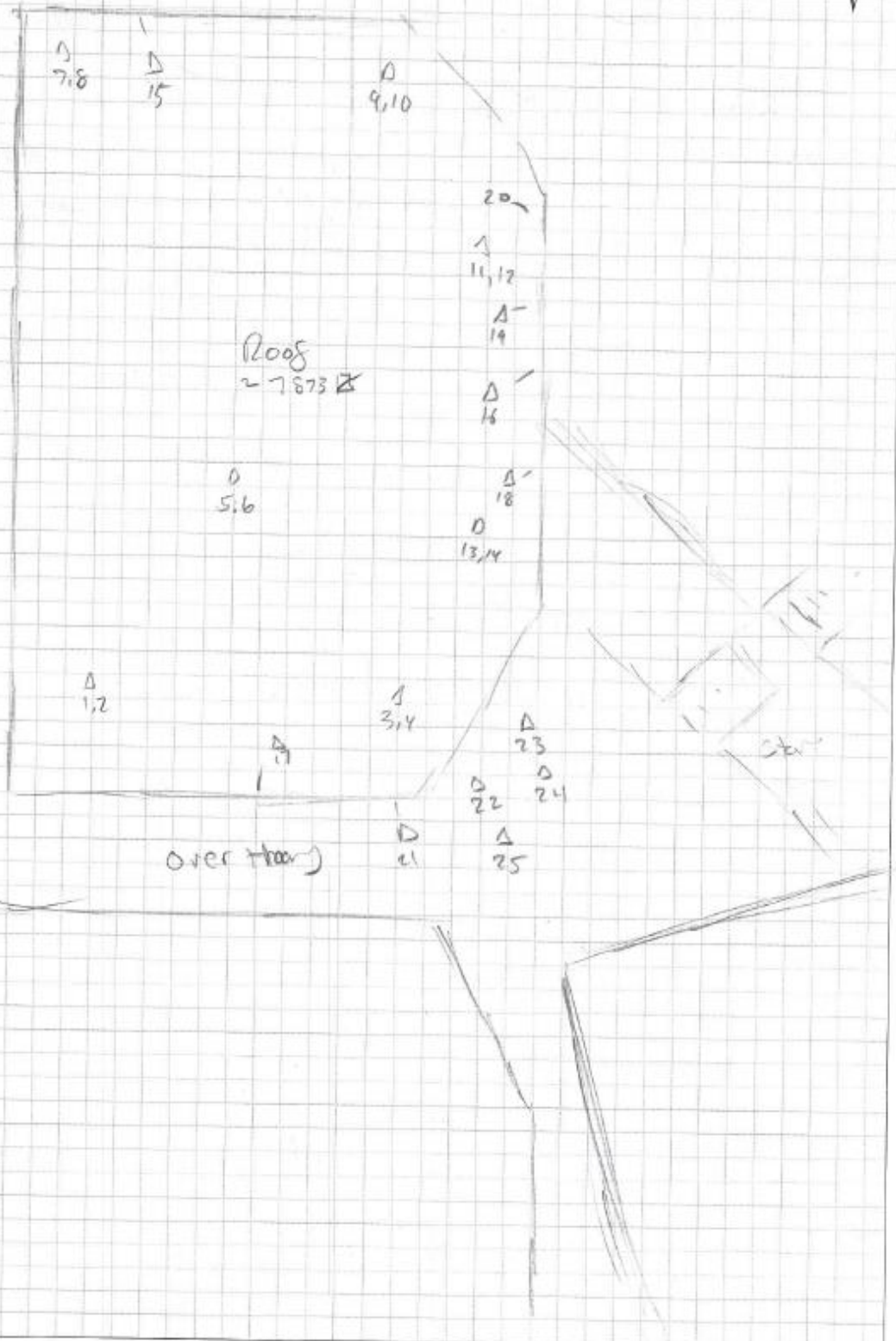
ROOF: D SD Type: Comp. Shingle Tile RRM Wood Shake Rock-Tar Transite Shingle Other Roofing Foam Sealant

Exterior Debris Pile(s): Yes No (If Yes or Damage Submit Notes) Air Handling: HVAC Wall/Floor Frnce Wndw AC Other: _____

XRF: Heuresis, Viken, or NITON Cal Readings _____ End Cal Readings _____ A/L _____

Diagram Legend : - Asbestos Bulk Samples - Positive Lead Reading = Other _____





DEPARTMENT OF INDUSTRIAL RELATIONS
Division of Occupational Safety and Health
Asbestos Certification & Training Unit
1750 Howe Avenue, Suite 460
Sacramento, CA 95825
(916) 574-2993 Office <http://www.dir.ca.gov/dosh/asbestos.html> actu@dir.ca.gov



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463

Envirocheck
Alfredo Calderon
2211 W Orangewood Ave
Orange CA 92868

February 28, 2022

Dear Certified Asbestos Consultant or Technician:

Congratulations, you have passed your certification examination!

Enclosed is your certification card. **To maintain your certification, please abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card in accordance with Title 8, California Code of Regulations, Division 1, Chapter 3.2, Article 2.6, Section 341.15(h) (1).

Please keep and do not send copies of your required AHERA refresher renewal certificates to the Division until you apply for renewal of your certification.

Please submit via U.S. Postal Service or other carrier, of any changes in your mailing or work address within 15 days of the change.

Sincerely,



Jeff Ferrell
Senior Safety Engineer

Attachment: Certification Card

cc: File



DEPARTMENT OF INDUSTRIAL RELATIONS
Division of Occupational Safety and Health
Asbestos Certification & Training Unit
1750 Howe Avenue, Suite 460
Sacramento, CA 95825
(916) 574-2993 Office <http://www.dir.ca.gov/dosh/asbestos.html> acru@dir.ca.gov



104224750C

352

Envirocheck, Inc
Michael P Powers
2211 W Oranewood Avenue
Orange CA 92868

June 09, 2021

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. **To maintain your certification, you must abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

Please notify our office via U.S. Postal Service or other carrier of any changes in your mailing or work address within 15 days of the change.

Sincerely,

Jeff Ferrell
Senior Safety Engineer

Attachment: Certification Card

cc: File

Renewal - Card Attached (Revised 06/2020)





Asbestos ■ Lead ■ Microbiology ■ Bacteria ■ Smoke & Soot ■ Industrial Hygiene ■ Laboratory ■ Project Management

Preliminary Mold Investigation Report

Attention:

UCR Planning, Design & Construction
Tameesha D. Hayes
1223 University Avenue, Suite 240
Riverside, CA 92507
Tel. (951) 827-1412

Subject Property:

UCR - Arts Performance Lab
900 University Avenue
Riverside, CA 92521
PO # 957450-PSA-2022-1 25

Inspection Date: June 1, 2022
Report Date: June 9, 2022

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INTRODUCTION

This report presents the analytical results of the limited preliminary mycological sampling performed by ENVIROCHECK, INC to determine for the possibility of fungal growth and/or spore presence, the type of fungi, the potential source of the problem, and to recommend the most efficient remediation strategies if necessary. The sampling methods and remediation recommendations are based in part to the *American Industrial Hygiene Association Field Guide for the Determination of Biological Contaminants in Environmental Samples*, in reference to the *American Conference of Governmental Industrial Hygienists handbook on Bioaerosols Assessment and Control*, the *Institute of Inspection, Cleaning, and Restoration Certification (IICRC) Standard and Reference Guide for Professional Mold Remediation S520*, the *Indoor Environmental Standards Organization (IESO) Standards of Practice for the Assessment of Indoor Environmental Quality, Volume 1: Mold Sampling; Assessment of Mold Contamination (2002)*, and the *EPA Recommendations of Mold Remediation in Schools and Commercial Buildings*. *Please read entire report prior to initiating any action.

BACKGROUND INFORMATION

ENVIROCHECK, INC. was contacted on May 31, 2022 and was requested to conduct a limited preliminary investigation to assess potential abnormal and/or above background mold and mycological spore presence at the above subject property. The investigation was initiated in response to concerns regarding potential fungal amplification which may have resulted in affecting the general indoor air quality in the specified interior areas of the Art Performance Lab building. It was reported by Tameesha D. Hayes (contact) that over-time moisture, due to rain and condensation, had degraded the exterior stucco of the subject building, and caused apparent efflorescence of the surface. Concerns of moisture intrusion and fungal amplification were raised due to the degradation of the exterior stucco that may have allowed water to intrude into the interior living space. The contact also reported that there are planned corrective actions pending. No additional history of water leaks or intrusion was reported at the time of the inspection. This investigation and assessment was limited to the areas inspected and the samples collected as directed by and deliberated upon with the client, respectively.

SAMPLING METHODS

NON-VIABLE AIR SAMPLES (Total Airborne Fungal Spore Counts)

Air sampling generally indicates the total (e.g. living and dead) fungal spores that are present in the ambient air in a referenced room or area. Air sampling is also used to reveal information concerning airborne spore diffusion, total airborne spore counts, and/or if cross contamination of fungal spores is occurring between two separate areas. The collection of air samples is attained, in accordance with the commonly accepted protocol published by the AIHA (American Industrial Hygiene Association), by connecting spore trap cassettes, e.g. Zefon Analytical Accessories Air-O-Cells, M2 Multi-Mold cassettes, etc. to a high volume pump, which draws in approximately 75-150 (e.g. five minutes or ten minutes) total liters of air. The cassettes are submitted to an appropriate laboratory for analysis, which includes total and individual fungal enumeration of spores, quantification, and genus identification where possible. Also included, total number of pollen grains and visual quantitation of particulate matter. Results are presented in spores per cubic meter.

INVESTIGATION

- On June 1, 2022, ENVIROCHECK, INC. performed a limited preliminary on-site mycological investigation, as contracted by UCR Planning, Design & Construction at the subject property listed above.
- At the time of the investigation, the occupants did not report experiencing irregular health symptoms.
- ENVIROCHECK, INC. was informed that professional efforts were not made to facilitate the drying of the building materials and structure with drying equipment.

VISUAL OBSERVATIONS

- **246 Control Room:** The area was approximately 120 square feet consisting of drywall walls with base coves, vinyl flooring and a T-bar style ceiling with ceiling tiles. No visible signs of water staining, water damage or suspect fungal growth were observed in the accessible areas. No musty odors were detected upon entry to the area.
- **247 Mechanical Room:** The area was approximately 25 square feet consisting of drywall and brick walls with base coves, concrete slab flooring and a flat style ceiling. No visible signs of water staining, water damage or suspect fungal growth were observed in the accessible areas. No musty odors were detected upon entry to the area.
- **166 Performance Lab:** The area was approximately 2,450 square feet consisting of drywall walls and wood paneling with baseboards, hardwood flooring and a flat metal style ceiling. Water staining (cascade pattern) measuring approximately 2 linear feet was observed on the east wall. No visible signs of suspect fungal growth were observed in the accessible areas. No musty odors were detected upon entry to the area.
- **171 Dimmer Room:** The area was approximately 60 square feet consisting of drywall and brick walls, concrete slab flooring and a flat style ceiling. No visible signs of water staining, water damage or suspect fungal growth were observed in the accessible areas. Musty odors were detected upon entry to the area.
- **166 Hallway:** The area was approximately 200 square feet consisting of drywall walls with base coves, concrete slab flooring and a flat style ceiling. No visible signs of water staining, water damage or suspect fungal growth were observed in the accessible areas. No musty odors were detected upon entry to the area.
- **166 Back Stage:** The area was approximately 670 square feet consisting of drywall walls with baseboards, wood laminate flooring and a flat style ceiling. No visible signs of water staining, water damage or suspect fungal growth were observed in the accessible areas. No musty odors were detected upon entry to the area.

- **North Exit Corridor:** The area was approximately 130 square feet consisting of drywall walls with base coves, concrete slab flooring and a flat style ceiling. No visible signs of water staining, water damage or suspect fungal growth were observed in the accessible areas. An unknown odor was detected upon entry to the area.
- **South Exit Corridor:** The area was approximately 100 square feet consisting of drywall and brick walls with base coves, concrete slab flooring and a flat style ceiling. No visible signs of water staining, water damage or suspect fungal growth were observed in the accessible areas. An unknown odor was detected upon entry to the area.
- **175 Green Room:** The area was approximately 120 square feet consisting of drywall walls, concrete slab flooring and a flat style ceiling. No visible signs of water staining, water damage or suspect fungal growth were observed in the accessible areas. No musty odors were detected upon entry to the area.
- **176 Restroom:** The area was approximately 50 square feet consisting of drywall and tile walls, tile flooring and a flat style ceiling. No visible signs of water staining, water damage or suspect fungal growth were observed in the accessible areas. No musty odors were detected upon entry to the area.

MOISTURE READINGS

- The moisture contents of the accessible building materials were measured with a Delmhorst BD-2100 Moisture Meter and the approximate readings are presented in Table 1 below. The BD-2100 Moisture Meter has three different moisture content scales for measurement; wood, gypsum (or drywall), and relative (plaster/concrete). According to the manufacturer specifications, the following numerical ranges are provided as a general guideline towards interpreting the measured values. *Moisture content values that may be of concern are bolded in Table 1 below.*

Substrate	Relatively Dry, Normal	Moist or Damp	Excessive Moisture, Wet
Wood	6% - 15%	15% - 17%	> 17%
Gypsum/Drywall	0.0% - 0.5%	0.5% - 1.0%	> 1.0%
Plaster/Concrete	0.0% - 85%	85% - 95%	> 95%

Table 1.

<u>Location</u>	<u>Substrate</u>	<u>Moisture Content (%)</u>
246 Control Room - Walls - Ceiling	Drywall Cellulose	0.1- 0.5 17.5-31.1
247 Mechanical Room - Walls - Brick Walls	Drywall Cementitious	0.1-0.4 8.1-24.1
166 Performance Lab - Remaining Walls - South Wall - Baseboards	Drywall Drywall Wood	0.1-0.4 0.3-0.5 6.3-7.8
171 Dimmer Room - Walls - Brick Walls	Drywall Cementitious	0.1-0.4 6.3-24.8
166 Hallway - Walls	Drywall	0.1-0.4
166 Back Stage - West Wall - East Wall - Remaining Walls - Baseboards	Drywall Drywall Drywall Wood	0.1- 0.5 0.3-0.5 0.1-0.4 6.7-8.9
North Exit Corridor - Wall at Exterior Door - Remaining Walls	Drywall Drywall	0.1- 0.5 0.1-0.4
South Exit Corridor - Walls - Brick Walls	Drywall Cementitious	0.1-0.4 8.9-24.3
175 Green Room - Walls	Drywall	0.3-0.6
176 Restroom - Walls	Drywall	0.2-0.3

RELATIVE HUMIDITY AND TEMPERATURE READINGS

- Preliminary measurements of relative humidity (RH) and temperature were also collected. Measurements were obtained using a TRACEABLE Humidity / Temperature Pen Thermal Hygrometer. According to the ASHRAE (American Society of Heating, Refrigeration, and Air Conditioning Engineers) Standard 62-2001, *Ventilation for Acceptable Indoor Air Quality*, "Relative humidity in habitable spaces preferably should be maintained between 30% and 60% relative humidity..." The approximate measurements are presented below in Table 2.

Table 2.

<u>Location</u>	<u>Relative Humidity (RH)</u> %	<u>Temperature (F)</u>
246 Control Room	58.7	66.9
247 Mechanical Room	58.8	70.1
166 Performance Lab	52.6	70.5
171 Dimmer Room	51.2	74.1
166 Back Stage	45.6	73.4
North Exit Corridor	51.7	69.6
South Exit Corridor	56.7	69.8
175 Green Room	52.5	68.7
176 Restroom	53.5	66.7
Outdoors	16.9	90.3

SAMPLE COLLECTION:

- Non-viable mold air samples were collected and were analyzed in a laboratory for the presence of mold spores. The areas tested are listed in Table 3 below.

Table 3.

<u>Sample #</u>	<u>Location</u>	<u>Sample Type</u>	<u>Result</u>
1	246 – Control Room	Air	Low / Insignificant when compared to the outdoors
2	247 – Mechanical Room	Air	Low / Insignificant when compared to the outdoors
3	166 – Performance Lab (Southeast Section)	Air	Low / Insignificant when compared to the outdoors
4	166 – Performance Lab (Northwest Section)	Air	Low / Insignificant when compared to the outdoors
5	166 – Back Stage	Air	No spores detected
6	166 – Hallway	Air	No spores detected
7	175 – Green Room	Air	Low / Insignificant when compared to the outdoors
8	176 – Restroom	Air	Low / Insignificant when compared to the outdoors
9	171 – Dimmer Room	Air	Low / Insignificant when compared to the outdoors
10	166 – Exit Corridor (North)	Air	Low / Insignificant when compared to the outdoors
11	166 – Exit Corridor (South)	Air	Generally similar to the outdoors
12	Outdoor Control 1 (Southwest)	Air	<i>Control</i>
13	Outdoor Control 2 (Northeast)	Air	<i>Control</i>

- A basic floor plan of the areas in question of the subject property is provided at the end of the report in the APPENDIX section for reference purposes only.

(No obvious adverse weather or outdoor conditions were noted at the time of the inspection.)

PRINCIPAL FINDINGS

(SEE ATTACHED LABORATORY RESULTS FOR DATA, EXACT LEVELS, AND GENUS)

SUMMARY

Non-Viable Air Samples:

The non-viable air monitoring results indicate that total ambient indoor levels of spores in the sampled areas of the 246 Control Room, 247 Performance Lab (Southeast Section), 247 Performance Lab (Northeast Section), 166 Back Stage, 166 Hallway, 175 Greenroom, 176 Restroom, 171 Dimmer Room, and 166 Exit Corridor (North) are quantitatively lower than when compared to the outdoor airborne levels. The non-viable air monitor results indicate that total ambient indoor levels of spores in 166 Exit Corridor (South) are generally similar to when compared to the outdoor airborne levels. Air monitoring samples were collected in the 246 Control Room, 247 Performance Lab (Southeast Section), 247 Performance Lab (Northeast Section), 166 Back Stage, 166 Hallway, 175 Greenroom, 176 Restroom, 171 Dimmer Room, and 166 Exit Corridor (North) and Exit Corridor (South) and outside. The samples from outside the subject property were used as a background negative control for comparative analysis. Ambient indoor air samples are typically similar or lower in concentration than outdoor negative control air samples. Common indoor environments will always consist of some levels of fungi. This is a basic principle that fungal spores occur naturally everyday and everywhere in the environment. So naturally, fungal spores will always be found, but it is the degree of dissimilarity between the comparison of total fungal spore concentrations of the suspect indoor samples and outdoor negative control air samples that determines the significance of the problem, as applicable. Orders of magnitude between the individual fungal genera types present within the indoor and outdoor or control samples are also considered. At this time, there are no federal regulations or standards in regards to exposure levels or to quantify the detected levels of spores, which is the primary reason why outdoors negative control air samples are collected. Further support in data interpretation is based in part by the American Industrial Hygiene Association *Field Guide for the Determination of Biological Contaminants in Environmental Samples*, "Dominance in indoor air samples by species of mold that are not the predominant outdoor species indicates that molds are growing in the building and that air quality is degraded", although this may not be applicable in every situation. Based on the laboratory results from the air monitoring samples and the comparative analyses of the general distribution of individual and total fungi detected, abnormal total airborne fungal spore conditions do not appear to exist in the areas tested.

CONCLUSION:

From the information obtained from this limited preliminary investigation and the representative samples collected, ENVIROCHECK, INC. finds that the tested areas in the 246 Control Room, 247 Performance Lab (Southeast Section), 247 Performance Lab (Northeast Section), 166 Back Stage, 166 Hallway, 175 Greenroom, 176 Restroom, 171 Dimmer Room, and 166 Exit Corridor (North) and Exit Corridor (South) of the subject property do not appear to exhibit an abnormal or above background total airborne fungal spore presence.

Elevated moisture levels were detected in multiple inspected areas (see Table 1 above) and it is recommended that dehumidifiers be placed to reduce moisture levels down to relatively dry conditions. These drying efforts should be performed in addition or in correspondence of anticipated corrective actions to fixed the suspected water intrusion.

The following general recommendations may be used as a strategic guide towards the proper maintenance of the subject property as it pertains to mold and includes precautionary suggestions in an effort to minimize any future occurrences of mold related issues.

GENERAL RECOMMENDATIONS

1. If there are any medical questions or concerns, ENVIROCHECK recommends seeking the consultation of a medical professional.
2. 'Anderson Air Sampling' or viable impact air sampling can be performed for speciation, to detect viable or culturable fungal spores that have the ability to amplify, to determine if elevated/amplified ("living") fungal spore conditions exist, and/or for the presence of potentially pathogenic fungal species.
3. Areas of the subject property with active plumbing or internal water type systems (i.e. water filters, water heaters, toilets, sinks, etc.) should be regularly inspected for any leaks or undesired water incursion. Appropriate efforts should be made to prevent any water leaks or water intrusion damage into the subject property and immediately corrected if found.
4. The facility operator should sustain a routine schedule of maintenance for the air handling system, HVAC system, furnace, or etc. including but not limited to the cleaning of the air ducts and the replacing of air filters. Appropriate cleaning of the HVAC system should be performed in accordance with the National Air Duct Cleaners Association's (NADCA) *ACR 2006 Standard: Assessment, Cleaning, and Restoration of HVAC Systems*.
5. ENVIROCHECK, INC. recommends a re-inspection if visible mold appears, water intrusion reoccurs, or irregular health symptoms that can be associated to mold or fungi exposure surface or worsen.

LIMITATIONS

The findings set forth in this assessment are strictly limited to the time, date and scope of the evaluation. Regulatory standards for microbial contamination do not currently exist and therefore the results and conclusions of this investigation are based on analytical microbial testing, field observations, and in part to the American Industrial Hygiene Association *Field Guide for the Determination of Biological Contaminants in Environmental Samples*, in reference to the American Conference of Governmental Industrial Hygienists handbook on *Bioaerosols Assessment and Control*, the *Institute of Inspection, Cleaning, and Restoration Certification (IICRC) Standard and Reference Guide for Professional Mold Remediation S520*, the *Indoor Environmental Standards Organization (IESO) Standards of Practice for the Assessment of Indoor Environmental Quality, Volume 1: Mold Sampling; Assessment of Mold Contamination (2002)*, and the *EPA Recommendations of Mold Remediation in Schools and Commercial Buildings*, and not on any procedures beyond the scope of the agreed upon work. Instructions including, but not limited to, procedures, conclusions, recommendations, and specifications, offered to the client, (person(s), or entity) who may utilize this report, are only opinions made in an effort to assist the client with their decision making process. No warranties, implied or otherwise, are made with respect to any instruction given. ENVIROCHECK, INC. does not guarantee that all individuals will be free from mold and fungi exposure. Mold and Fungi are naturally occurring in both indoor and outdoor environments and there are no published regulations regarding the exposure, removal, or assessment of fungi.

It should be fully understood that this investigation is limited to the sampled areas of the subject property and/or areas that are related to the original and/or reported water loss only. Due to its dynamic nature, mold and fungi growth and/or amplification can be present in hidden and/or unknown areas within the subject property. Unless all past and/or present water intrusion/incursion incidents throughout the history of the subject property and/or any conditions that may contribute to mold growth/amplification are identified and disclosed to ENVIROCHECK, INC. it would be impossible to identify or detect these areas. ENVIROCHECK, INC. cannot be held responsible if the client, current property owner, and/or future property owner(s) discover such areas. This investigation/assessment and sampling protocol specifically excludes the identification and detection of wood decay type fungi, including but not limited to *Poria incrassata*, due to the unpredictable nature and general lack of spore production that would be typically detected in environmental fungal samples.

SIGNATURE PAGE

Prepared by:



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Industrial Hygiene Technician
Certified Water Damage Restoration Technician, IICRC #70011157
NIOSH 582 Certified
State of California Department of Public Health Lead-Related Construction Certificate #00009254

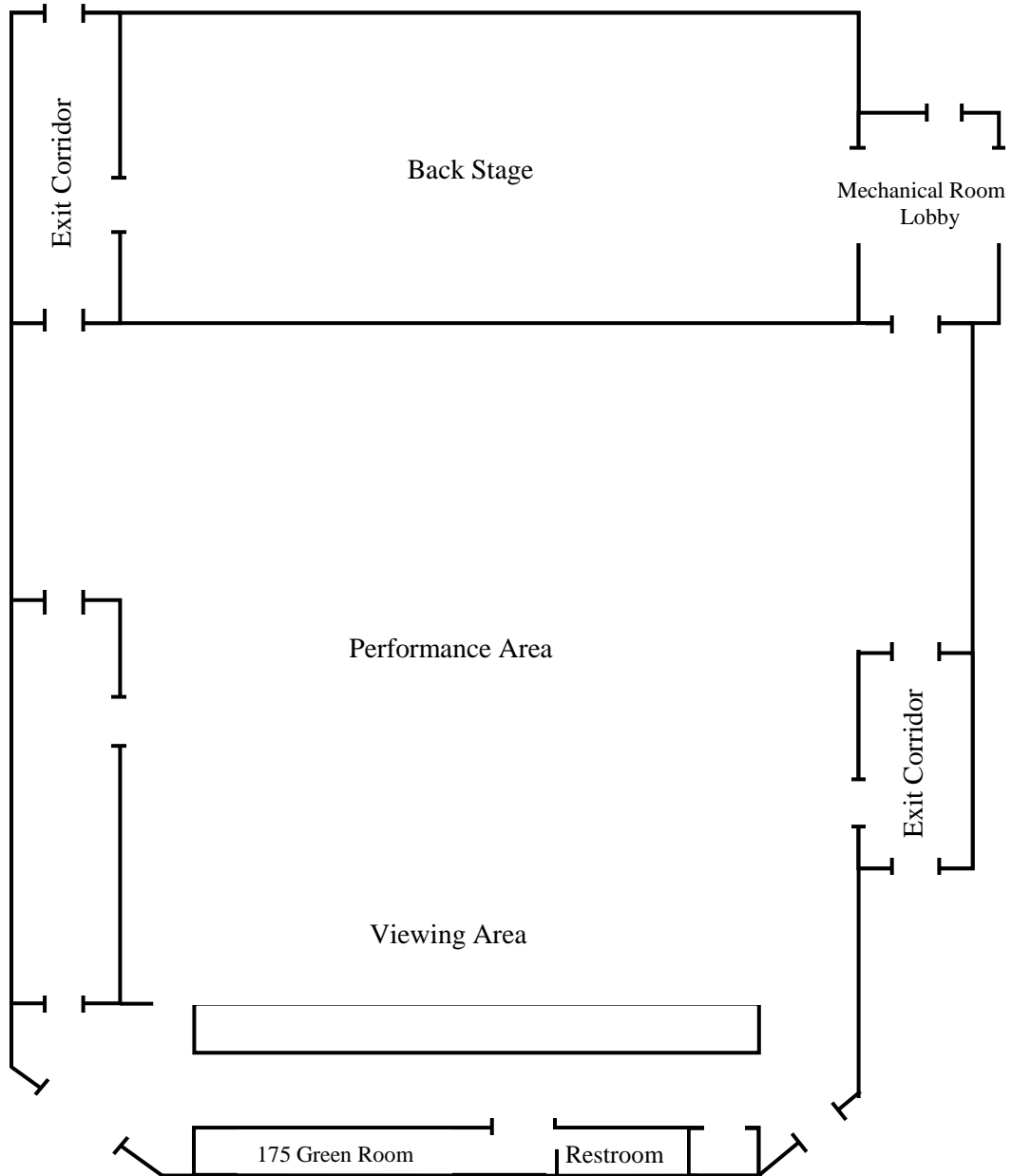
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Council-certified Indoor Environmentalist (CIE) #01676, American Council for Accredited Certification (ACAC)
Council-certified Indoor Environmental Consultant (CIEC) #0612058, American Council for Accredited Certification (ACAC)
State of California Division of Occupational Safety and Health (DOSH) CAC #03-3356
State of California Department of Public Health Lead-Related Inspector/Assessor, # LRC-00002582
Certified Water Damage Restoration Technician, IICRC # 72811
Council-certified Fire and Smoke Damage Consultant #2005026, American Council for Accredited Certification (ACAC)

APPENDIX: Floor plan

*(Not to scale, for reference purposes only.)



APPENDIX: Lab Report



2211 West Orangewood Avenue
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 Fax: (714) 937-0755
 www.envirocheck.com
 (800) 665-7586



Non-Viable Mold Spore Report, Page 1 of 4

Customer Name: UCR Planning, Design & Construction
 Address: 1223 University Avenue, Suite 240
 City, State, Zip: Riverside, CA 92507

Project Name: UCR - Arts Performance Lab
 Address: 900 University Avenue
 City, State, Zip: Riverside, CA 92521

Sample Number	[1]	[2]	[3]	[4]
Collection Method	Air	Air	Air	Air
Cassette Type	Air-o-cell	Air-o-cell	Air-o-cell	Air-o-cell
Laboratory ID	1322060037	1322060038	1322060039	1322060040
Location	246 - Control Room	247 - Mechanical Room	166 - Performance Lab (Southeast Section)	166 - Performance Lab (Northwest Section)
Debris Rating	2	2	1	1
Identification:	Raw Count		Raw Count	
Basidiospores	3	160	1	53
Myxomycetes/Periconia/Smuts	1	53	1	53
Pollen			1	53
Alternaria sp.		1	53	
Cladosporium sp.	6	320		
Other Fungal Spores	1	53		1 53
Total	11	590	3	160
Flow Rate LPM	15	15	15	15
Number of Minutes	5	5	5	5
Percentage of Trace Analyzed	25%	25%	25%	25%
Reporting Limit	53 spores/m ³	53 spores/m ³	53 spores/m ³	53 spores/m ³

Date Sampled: 06/01/2022

Date Received: 06/01/2022

Date of Report: 06/02/2022

06/01/2022

Analyzed by: Julie Nguyen

Matt Fonda

Admin QC: SS

Lab QC: EE

Comments: For air cassette samples, the number and type of particles counted per cubic meter of air are calculated based on the length of the deposition trace, percentage of trace actually examined, volume of air collected, number of particles counted, and are rounded to two significant figures to account for uncertainty as required by the AIHA-LAP (identification: SOP 001; preparation and analysis: SOP 003). Results for bulk, swab, and tape-lift samples are depicted in order from lowest to highest as trace (1x), minor (2x), major (3x), or abundant (4x) based on a qualitative assessment of the tape-lifted sample as a whole (identification: SOP 001; preparation and analysis: SOP 002). Results only relate to the items actually tested. Sampling parameters are dependent on information provided by client or field technician. Sample volume and/or area provided by the customer can affect the validity of results; results apply to the sample as received. All samples will be disposed of in thirty (30) days unless otherwise specified or requested. Unless otherwise noted, these samples were not blank corrected. Regulatory standards do not currently exist for microbiological analyses. This report shall not be reproduced without the written approval of the laboratory. This report must not be used by the client to claim product endorsement by AIHA-LAP or any agency of the U.S. Government. Note: Using a visual system of fungal identification, some genus identification may vary due to similar spore characteristics between genera.

Lactophenol Cotton Blue lot number: 1766-01



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Non-Viable Mold Spore Report, Page 2 of 4

Customer Name: UCR Planning, Design & Construction
 Address: 1223 University Avenue, Suite 240
 City, State, Zip: Riverside, CA 92507

Project Name: UCR - Arts Performance Lab
 Address: 900 University Avenue
 City, State, Zip: Riverside, CA 92521

Sample Number	[5]	[6]	[7]	[8]
Collection Method	Air	Air	Air	Air
Cassette Type	Air-o-cell	Air-o-cell	Air-o-cell	Air-o-cell
Laboratory ID	1322060041	1322060042	1322060043	1322060044
Location	166 - Back Stage	166 - Hallway	175 - Green Room	176 - Restroom
Debris Rating	2	2	1	2
Identification:	Raw Count Spores/m ³		Raw Count Spores/m ³	
No Spores Detected	-	-	-	-
Ascospores			1	53
Hyphae-like Fragments				1 53
Pollen				1 53
Other Fungal Spores				1 53
Total	- <53	- <53	1 53	3 160
Flow Rate LPM	15	15	15	15
Number of Minutes	5	5	5	5
Percentage of Trace Analyzed	25%	25%	25%	25%
Reporting Limit	53 spores/m ³	53 spores/m ³	53 spores/m ³	53 spores/m ³

Date Sampled: 06/01/2022 Date Received: 06/01/2022 Date of Report: 06/02/2022

Date Analyzed: 06/01/2022

Comments: For air cassette samples, the number and type of particles counted per cubic meter of air are calculated based on the length of the deposition trace, percentage of trace actually examined, volume of air collected, number of particles counted, and are rounded to two significant figures to account for uncertainty as required by the AIHA-LAP (identification: SOP 001; preparation and analysis: SOP 003). Results for bulk, swab, and tape-lift samples are depicted in order from lowest to highest as trace (1x), minor (2x), major (3x), or abundant (4x) based on a qualitative assessment of the tape-lifted sample as a whole (identification: SOP 001; preparation and analysis: SOP 002). Results only relate to the items actually tested. Sampling parameters are dependent on information provided by client or field technician. Sample volume and/or area provided by the customer can affect the validity of results; results apply to the sample as received. All samples will be disposed of in thirty (30) days unless otherwise specified or requested. Unless otherwise noted, these samples were not blank corrected. Regulatory standards do not currently exist for microbiological analyses. This report shall not be reproduced without the written approval of the laboratory. This report must not be used by the client to claim product endorsement by AIHA-LAP or any agency of the U.S. Government. Note: Using a visual system of fungal identification, some genus identification may vary due to similar spore characteristics between genera.



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Non-Viable Mold Spore Report, Page 3 of 4

Customer Name: UCR Planning, Design & Construction
 Address: 1223 University Avenue, Suite 240
 City, State, Zip: Riverside, CA 92507

Project Name: UCR - Arts Performance Lab
 Address: 900 University Avenue
 City, State, Zip: Riverside, CA 92521

Sample Number
 Collection Method
 Cassette Type
 Laboratory ID
 Location

	[9]		[10]		[11]		[12]	
	Air		Air		Air		Air	
	Air-o-cell		Air-o-cell		Air-o-cell		Air-o-cell	
	1322060045		1322060046		1322060047		1322060048	
	171 - Dimmer Room		166 - Exit Corridor (North)		166 - Exit Corridor (South)		Outdoor Control 1 (Southwest)	
Debris Rating	2		2		3		2	
Identification:	Raw Count	Spores/m ³	Raw Count	Spores/m ³	Raw Count	Spores/m ³	Raw Count	Spores/m ³
Ascospores			2	110	3	160	1	53
Basidiospores			8	430	33	1800	22	1200
Hyphae-like Fragments			1	53	4	210	1	53
Mildew							1	53
Myxomycetes/Periconia/Smuts			1	53	12	640	5	270
Pollen					3	160	2	110
Alternaria sp.					1	53	2	110
Aspergillus/Penicillium sp.	1	53	2	110	1	53	1	53
Cladosporium sp.	1	53			14	750	7	370
Curvularia sp.					1	53	1	53
Torula sp.					1	53		
Other Fungal Spores					10	530	2	110
Total	2	110	14	750	83	4400	45	2400
Flow Rate LPM	15		15		15		15	
Number of Minutes	5		5		5		5	
Percentage of Trace Analyzed	25%		25%		25%		25%	
Reporting Limit	53 spores/m ³		53 spores/m ³		53 spores/m ³		53 spores/m ³	

Date Sampled: 06/01/2022 Date Received: 06/01/2022 Date of Report: 06/02/2022

Date Analyzed: 06/01/2022

Comments: For air cassette samples, the number and type of particles counted per cubic meter of air are calculated based on the length of the deposition trace, percentage of trace actually examined, volume of air collected, number of particles counted, and are rounded to two significant figures to account for uncertainty as required by the AIHA-LAP (identification: SOP 001; preparation and analysis: SOP 003). Results for bulk, swab, and tape-lift samples are depicted in order from lowest to highest as trace (1x), minor (2x), major (3x), or abundant (4x) based on a qualitative assessment of the tape-lifted sample as a whole (identification: SOP 001; preparation and analysis: SOP 002). Results only relate to the items actually tested. Sampling parameters are dependent on information provided by client or field technician. Sample volume and/or area provided by the customer can affect the validity of results; results apply to the sample as received. All samples will be disposed of in thirty (30) days unless otherwise specified or requested. Unless otherwise noted, these samples were not blank corrected. Regulatory standards do not currently exist for microbiological analyses. This report shall not be reproduced without the written approval of the laboratory. This report must not be used by the client to claim product endorsement by AIHA-LAP or any agency of the U.S. Government. Note: Using a visual system of fungal identification, some genus identification may vary due to similar spore characteristics between genera.



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Non-Viable Mold Spore Report, Page 4 of 4

Customer Name: UCR Planning, Design & Construction
 Address: 1223 University Avenue, Suite 240
 City, State, Zip: Riverside, CA 92507

Project Name: UCR - Arts Performance Lab
 Address: 900 University Avenue
 City, State, Zip: Riverside, CA 92521

Sample Number
 Collection Method
 Cassette Type
 Laboratory ID
 Location

[13]					
Air					
Air-o-cell					
1322060049					
Outdoor Control 2 (Northeast)					

Debris Rating
 Identification:

2					
Raw Count	Spores/m ³				
3	160				
34	1800				
1	53				
3	160				
3	160				
1	53				
1	53				
2	110				
23	1200				
1	53				

Total
 Flow Rate LPM
 Number of Minutes
 Percentage of Trace Analyzed
 Reporting Limit

72	3800				
15	5				
25%					
53 spores/m ³					

Date Sampled: 06/01/2022 Date Received: 06/01/2022 Date of Report: 06/02/2022

Date Analyzed: 06/01/2022

Comments: For air cassette samples, the number and type of particles counted per cubic meter of air are calculated based on the length of the deposition trace, percentage of trace actually examined, volume of air collected, number of particles counted, and are rounded to two significant figures to account for uncertainty as required by the AIHA-LAP (identification: SOP 001; preparation and analysis: SOP 003). Results for bulk, swab, and tape-lift samples are depicted in order from lowest to highest as trace (1x), minor (2x), major (3x), or abundant (4x) based on a qualitative assessment of the tape-lifted sample as a whole (identification: SOP 001; preparation and analysis: SOP 002). Results only relate to the items actually tested. Sampling parameters are dependent on information provided by client or field technician. Sample volume and/or area provided by the customer can affect the validity of results; results apply to the sample as received. All samples will be disposed of in thirty (30) days unless otherwise specified or requested. Unless otherwise noted, these samples were not blank corrected. Regulatory standards do not currently exist for microbiological analyses. This report shall not be reproduced without the written approval of the laboratory. This report must not be used by the client to claim product endorsement by AIHA-LAP or any agency of the U.S. Government. Note: Using a visual system of fungal identification, some genus identification may vary due to similar spore characteristics between genera.



Report Definitions, Page 1 of 1

Air-O-Cell: An air sampling cassette manufactured by Zefon International. Also referred to as a "spore trap." Data is obtained through non-viable laboratory analysis.

Andersen Sampler: Equipment used to obtain viable samples from air. Draws air from the environment and causes particulates, such as mold spores, to impact onto the surface of an enclosed media plate for culture in the laboratory.

Bulk Sample: One that consists of portions of environmental materials, such as carpet, drywall, or wood.

Colony Forming Units (CFU): This term is used instead of "spores" or "bacteria" because single colonies formed on a media plate may have originated from an individual bacterium/spore or from a clump.

CFU/in²: Colony Forming Units per square inch.

Colony: A visible, individual growth of a particular type of mold or bacteria that forms on a media plate.

Cubic meter (m³): Metric unit of volume typically associated with air samples. 1 m³ = 35.31 ft³. 1 m = 3.28 ft.

Debris: Particulate matter present in the sample, other than fungal spores or pollen; such as skin cells, insect parts, plant parts, smoke, and dust.

Debris Rating: Amount of debris in the sample trace, based on a scale of 0 to 4. Can interfere with spore identification and counts.

0: Little to none 1: Approximately 1/4 (25%) 2: Approximately 1/2 (50%) 3: Approximately 3/4 (75%) 4: Excessive (Approximately 100%)

Detected: For testing procedures that do not provide quantitative data, a positive result is reported as "detected."

Extrapolation: An estimated raw count based on a partial count of the sample trace. Applied as "estimated count."

Flow Rate: Air flow speed measured during sampling, defined in liters per minute (LPM).

Media: For culturable samples, the type of nutrient material used to sustain the growth of fungi or bacteria.

Micro 5: An air sampling cassette manufactured by Environmental Monitoring Systems, Inc. Also referred to as a "spore trap." Non-viable laboratory analysis.

Mold Snap: An air sampling cassette manufactured by Zefon International. Also referred to as a "spore trap." Data is obtained through non-viable laboratory analysis.

Multi-Mold (M2): An air sampling cassette manufactured by Allegro Industries. Also referred to as a "spore trap." Data is obtained through non-viable laboratory analysis.

Non-Viable: Non-culturable. This type of sample is analyzed through direct microscopic examination.

None Detected (ND): Results are not given as absolutes, such as "negative." Rather, non-positive results are reported as "None Detected."

PCM: Cassette normally used for phase contrast microscopy. Used in microbial analysis for sampling from surface materials such as couches, curtains, carpet, etc.

Qualitative: Term applied to testing that is not defined by measurements.

Quantitative: Term applied to testing that is defined by measurements, such as time, area, and/ or volume.

Raw Count: Analytical result prior to calculation of the final reported concentration.

Reporting Limit: The lowest numerical positive result an analysis can produce. Formula: $1000 / [(LPM) (Minutes) (\% \text{ Analyzed})] * 1 \text{ spore}$ Typical parameters for nonviable air sample (15 LPM, 5 Min, 0.25); nonviable wall cavity (5 LPM, 2 Min, 0.25); air viable (28.3 LPM, 3 Min).

Spores/m³: "Spores per Cubic Meter" is the estimated concentration of airborne spores in the sampled location.

Tape-lift: Method of sample collection whereby a strip of clear plastic tape is used to obtain a surface sample. Non-viable.

Tape-lift Qualitative Scale: Results not defined by values such as volume or time, but by a qualitative scale ranging from 1x - 4x. Also applies to Bulk and Swab samples.

1x: Trace (less than 10 count) 2x: Minor (10-20 count) 3x: Major (21-50 count) 4x: Abundant (greater than 50 count)

Viable: Culturable. This type of sample analysis requires culturing and incubation.

Z5: An air sampling cassette manufactured by Zefon International. Also referred to as a "spore trap." Data is obtained through non-viable laboratory analysis.

BID FORM

FOR: FINE ARTS PERFORMANCE LAB EXTERIOR
PROJECT NUMBER: 957450
CONTRACT NUMBER: 957450-LF-2022-75
UNIVERSITY OF CALIFORNIA, RIVERSIDE
RIVERSIDE, CALIFORNIA

July 1, 2022

BID TO:

Planning, Design & Construction
UNIVERSITY OF CALIFORNIA, RIVERSIDE
1223 University Avenue, Suite 240
Riverside, CA 92521

(951) 827-2610

BID FROM:

(Name of Bidder)

(Contact Name)

(Address)

(City, State, Zip Code)

(Telephone Number) (Facsimile Number)

(E-mail)

(Date Bid Submitted)

Note: All portions of this Bid Form must be completed, and the Bid Form must be signed before the Bid is submitted. Failure to do so will result in the Bid being rejected as non-responsive.

BIDDER'S NAME: _____

1.0 BIDDER'S REPRESENTATIONS

Bidder, represents that a) Bidder and all Subcontractors, regardless of tier, has the appropriate current and active Contractor's licenses required by the State of California and the Bidding Documents; b) it has carefully read and examined the Bidding Documents for the proposed Work on this Project; c) it has examined the site of the proposed Work and all Information Available to Bidders; d) it has become familiar with all the conditions related to the proposed Work, including the availability of labor, materials, and equipment; e) Bidder and all Subcontractors, regardless of tier, are currently registered with the California Department of Industrial Relations pursuant to California Labor Code Section 1725.5 and 1771.1. Bidder hereby offers to furnish all labor, materials, equipment, tools, transportation, and services necessary to complete the proposed Work on this Project in accordance with the Contract Documents for the sums quoted. Bidder further agrees that it will not withdraw its Bid within {60} days after the Bid Deadline, and that, if it is selected as the apparent lowest responsive and responsible Bidder, that it will, within 10 days after receipt of notice of selection, sign and deliver to University the Agreement in triplicate and furnish to University all items required by the Bidding Documents. If awarded the Contract, Bidder agrees to complete the proposed Work within **100** days after the date of commencement specified in the Notice to Proceed.

2.0 ADDENDA

Bidder acknowledges that it is Bidder's responsibility to ascertain whether any Addenda have been issued and if so, to obtain copies of such Addenda from University's Facility at the appropriate address stated on Page 1 of this Bid Form. Bidder therefore agrees to be bound by all Addenda that have been issued for this Bid.

3.0 NOT USED

4.0 LUMP SUM BASE BID

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(Place figures in appropriate boxes.)

5.0 SELECTION OF APPARENT LOW BIDDER

Refer to the Instructions to Bidders for selection of apparent low bidder.

BIDDER'S NAME: _____

6.0 UNIT PRICES

The quantities set forth in the Unit Prices are estimates. University does not represent that the actual quantity of any Unit Price item will equal the Estimated Quantity stated below. University will perform the extension of the Unit Price times the respective Estimated Quantity.

Unit Price No. 1: At the angled walls only, provide unit sq. ft. price for 'Stucco Crack Reduction System' (mesh) that is Alkali resistant, minimum 4.0 oz., & woven glass fiber fabrics ILO reinforcement fiber admixture. Base coat and other admixes must be compatible with mesh & finish coats, as specified in Specification Section 01 2200.

Estimated Quantity of units: 100 Square Feet

\$, . per Square Feet

(Place Unit Price figures in appropriate boxes.)

Unit Price No. 2: Provide lineal foot pricing for metal guards & handrails, as specified in Specification Section 01 2200.

Estimated Quantity of units: 100 Lineal Feet

\$, . per Lineal Feet

(Place Unit Price figures in appropriate boxes.)

Unit Price No. 3: Provide a square foot pricing for mold remediation, if required, based on information from the survey report furnished by the university., as specified in Specification Section 01 2200.

Estimated Quantity of units: 100 Square Feet

\$, . per Square Feet

(Place Unit Price figures in appropriate boxes.)

BIDDER'S NAME: _____

7.0 DAILY RATE OF COMPENSATION FOR COMPENSABLE DELAYS

Bidder shall determine and provide below the daily rate of compensation for any Compensable Delay caused by University at any time during the performance of the Work. A Facility may choose a minimum compensable delay in the best interests of the Project. If so, use the language in parentheses { } and in grey highlight:

\$

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 •

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 X

30

 multiplier

(Place figures in appropriate boxes.)

Failure to fill in a dollar figure for the daily rate for Compensable Delay shall render the bid non-responsive. University will perform the extension of the daily rate times the multiplier.

The daily rate shown above will be the total amount of Contractor entitlement for each day of Compensable Delay caused by University at any time during the performance of the Work and shall constitute payment in full for all delay costs, direct or indirect (including, without limitation, compensation for all extended home office overhead and extended general conditions), of the Contractor and all subcontractors, suppliers, persons, and entities under or claiming through Contractor on the Project. The number of days of Compensable Delay shown as a "multiplier" above is not intended as an estimate of the number of days of Compensable Delay anticipated by the University. The University will pay the daily rate of compensation only for the actual number of days of Compensable Delay, as defined in the General Conditions; the actual number of days of Compensable Delay may be greater or lesser than the "multiplier" shown above.

8.0 ALTERNATES- NOT USED

BIDDER'S NAME: _____

11.0 BIDDER INFORMATION

TYPE OF ORGANIZATION

(Corporation, Partnership, Individual, Joint Venture, etc.)

IF A CORPORATION, THE CORPORATION IS ORGANIZED UNDER THE LAWS OF:

THE STATE OF _____
(State)

NAME OF PRESIDENT OF THE CORPORATION:

(Insert Name)

NAME OF SECRETARY OF THE CORPORATION:

(Insert Name)

IF A PARTNERSHIP, NAMES OF ALL GENERAL PARTNERS:

(Insert Name(s))

CALIFORNIA CONTRACTORS LICENSE(S):

(Classification(s)) (License Number) (Expiration Date)

(For Joint Venture, list Joint Venture's license and licenses for all Joint Venture partners.)

BIDDER'S NAME: _____

12.0 REQUIRED COMPLETED ATTACHMENTS

The following documents are submitted with and made a condition of this Bid:

1. Bid Security in the form of _____
(Bid Bond or Certified Check)

13.0 DECLARATION

I, _____, hereby declare that I am the
(Printed Name)
_____ of _____
(Title) (Name of Bidder)

submitting this Bid Form; that I am duly authorized to execute this Bid Form on behalf of Bidder; and that all information set forth in this Bid Form and all attachments hereto are, to the best of my knowledge, true, accurate, and complete as of its submission date.

I further declare that this bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

I declare, under penalty of perjury, that the foregoing is true and correct and that this Declaration was executed at:

_____, in the State of _____,
(Name of City if within a City, otherwise Name of County) (State)

on _____
(Date)

(Signature)

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____,
 as Principal, and _____, as Surety, are held and firmly bound unto THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, hereinafter called THE REGENTS, in the sum of 10% of the Lump Sum Base Bid amount for payment of which in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT, WHEREAS, Principal has submitted a Bid for the work described as follows:

Project Name: Fine Arts Performance Lab Exterior
 Project Number: 957450, Contract Number: 957450-LF-2022-75
 Location: 900 University Avenue, Riverside, CA. 92521

NOW, THEREFORE, if Principal shall not withdraw said Bid within the time period specified after the Bid Deadline, as defined in the Bidding Documents, or within **60** days after the Bid Deadline if no time period be specified, and, if selected as the apparent lowest responsible Bidder, Principal shall, within the time period specified in the Bidding Documents, do the following:

- (1) Enter into a written agreement, in the prescribed form, in accordance with the Bid.
- (2) File two bonds with THE REGENTS, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by the Bidding Documents.
- (3) Furnish certificates of insurance and all other items as required by the Bidding Documents.

In the event of the withdrawal of said Bid within the time period specified, or within **60** days if no time period be specified, or the disqualification of said Bid due to failure of Principal to enter into such agreement and furnish such bonds, certificates of insurance, and all other items as required by the Bidding Documents, if Principal shall pay to THE REGENTS an amount equal to the difference, not to exceed the amount hereof, between the amount specified in said Bid and such larger amount for which THE REGENTS procure the required work covered by said Bid, if the latter be in excess of the former, then this obligation shall be null and void, otherwise to remain in full force and effect.

In the event suit is brought upon this bond by THE REGENTS, Surety shall pay reasonable attorneys' fees and costs incurred by THE REGENTS in such suit.

IN WITNESS WHEREOF, we have hereunto set our hands this ____ day of _____, 20__.

PRINCIPAL:

SURETY:

 (Name of Company)

By: _____
 (Signature)

 (Printed Name)

 (Title)

 (Name of Company)

By: _____
 (Signature)

 (Printed Name)

 (Title)

Address for Notices:

 (Street Address)

 (City, State & Zip Code)

NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.

AGREEMENT

This AGREEMENT is made on _____, between THE REGENTS OF THE UNIVERSITY OF CALIFORNIA (“University”),

whose Facility is: University of California, Riverside

whose address for notices is: UCR Planning, Design & Construction
UNIVERSITY OF CALIFORNIA, RIVERSIDE
900 University Avenue
Riverside, CA 92521

and Contractor: **Name**

whose address for notices is: **Street Address**
City, State & Zip

for the Project: FINE ARTS PERFORMANCE LAB EXTERIOR
Project Number: 957450
University of California, Riverside
County of Riverside
Riverside, California 92521

University's Responsible Administrator: Drew Hecht, Architect
Director of Project Management
Planning, Design & Construction

University's Representative is: **Tameesha Hayes**
Project Manager
Planning, Design & Construction

whose address for notices is: UCR Planning, Design & Construction
UNIVERSITY OF CALIFORNIA, RIVERSIDE
900 University Avenue
Riverside, CA 92521

Contract Documents for the Work Prepared by: Michael Bedell
MILLER ARCHITECTURE
1177 Idaho Street, Suite 200
Redlands, CA. 92374
Tel: (909) 335-7400

University and Contractor hereby agree as follows:

ARTICLE 1 WORK

Contractor shall provide all work required by the Contract Documents (the "Work"). Contractor agrees to do additional Work arising from changes ordered by the University pursuant to Article 7 of the General Conditions. Contractor shall (1) pay all sales, consumer and other taxes and (2) obtain and pay for any governmental licenses and permits necessary for the work, other than building and utility permits.

ARTICLE 2 CONTRACT DOCUMENTS

"Contract Documents" means the Advertisement for Bids From Prequalified Bidders, Instructions To Bidders, Supplementary Instructions to Bidders, Bid Form, this Agreement, General Conditions, Supplementary Conditions, Exhibits, Specifications, List of Drawings, Drawings, Addenda, Notice to Proceed, Change Orders, Notice of Completion, and all other documents identified in this Agreement that together form the contract between University and Contractor for the Work (the "Contract"). The Contract constitutes the complete agreement between University and Contractor and supersedes any previous agreements or understandings.

ARTICLE 3 CONTRACT SUM

Subject to the provisions of the Contract Documents University shall pay to Contractor, for the performance of the Work, \$ [REDACTED], the "Contract Sum".

Unit Prices, if any, are as follows:

List Unit Price Items

The Contract Sum will be increased by an amount equal to the Unit Price multiplied by the actual number of units of each Unit Price item incorporated in the Work.

ARTICLE 4 CONTRACT TIME

Contractor shall commence the Work on the date specified in the Notice to Proceed and fully complete the work within **100** days, the "Contract Time".

By signing this agreement, Contractor represents to University that the Contract Time is reasonable for completion of the work and that Contractor will complete the Work within the Contract Time. Time limits stated in the Contract Documents are of the essence of the Contract.

ARTICLE 5 LIQUIDATED DAMAGES

If Contractor fails to complete the Work within the Contract Time, Contractor shall pay to University, as liquidated damages and not as a penalty, the sum of **\$0.00** for each day after the expiration of the Contract Time that the Work remains incomplete. After Substantial Completion, the rate for liquidated damages shall be reduced to the sum of **\$0.00** per day. University and Contractor agree that if the Work is not completed within the Contract Time, University's damages would be extremely difficult or impracticable to determine and that the aforesaid amounts are reasonable estimates of and reasonable sums for such damages. University may deduct any liquidated damages due from Contractor from any amounts otherwise due to Contractor under the Contract Documents. This provision shall not limit any right or remedy of University in the event of any other default of Contractor other than failing to complete the Work within the Contract Time.

ARTICLE 6 COMPENSABLE DELAY

If Contractor is entitled to an increase in the Contract Sum as a result of a Compensable Delay, determined pursuant to Articles 7 and 8 of the General Conditions, the Contract Sum will be increased by the sum of \$ [REDACTED] per day for each day for which such compensation is payable.

ARTICLE 7 DUE AUTHORIZATION

The person or persons signing this Agreement on behalf of Contractor hereby represent and warrant to University that this Agreement is duly authorized, signed, and delivered by Contractor.

THIS AGREEMENT is entered into by University and Contractor as of the date set forth above.

CONTRACTOR:

_____ (Name of Company)	California Contractor's License(s):
a _____ (Type of Organization)	_____ (Name of Licensee)
By: _____ (Signature)	_____ (Classification and License Number)
_____ (Print Name)	_____ (Expiration Date)
_____ (Title)	_____ (Employer Identification Number)

Recommended:

By University's Representative:

 (Signature & Date)
Tameesha Hayes
 Project Manager
 Planning, Design & Construction

 (Print Name & Title)

Funds Sufficient:

By Financial Administrative Officer:

 (Signature & Date)
Susan McFadden
 Senior Financial Analyst
 Planning, Design & Construction

 (Print Name & Title)

UNIVERSITY:

By The Regents of the University of California:

 (Signature & Date)
Drew Hecht, Architect
 Director of Project Management
 Planning, Design & Construction

 (Print Name & Title)

Account No.:	_____	Activity Code:	_____
Fund:	_____	Function:	_____
Cost Center:	_____	Project Code:	_____

Attach notary acknowledgement for all signatures of Contractor. If signed by other than the sole proprietor, a general partner, or corporate officer, attach original notarized Power of Attorney or Corporate Resolution.

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ARTICLE 1 GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 APPLICABLE CODE REQUIREMENTS

The term "Applicable Code Requirements" means all laws, statutes, the most recent building codes, ordinances, rules, regulations, and lawful orders of all public authorities having jurisdiction over University, Contractor, any Subcontractor, the Project, the Project site, the Work, or the prosecution of the Work including without limitation the requirements set forth in Article 3.7.

1.1.2 APPLICATION FOR PAYMENT

The term "Application For Payment" means the submittal from Contractor wherein payment for certain portions of the completed Work is requested in accordance with Article 9.

1.1.3 BENEFICIAL OCCUPANCY

The term "Beneficial Occupancy" means the University's occupancy or use of any part of the Work in accordance with Article 9.

1.1.4 CERTIFICATE FOR PAYMENT

The term "Certificate For Payment" means the form signed by University's Representative attesting to the Contractor's right to receive payment for certain completed portions of the Work in accordance with Article 9.

1.1.5 CHANGE ORDER

See Article 7.2 of the General Conditions.

1.1.6 CLAIM

See Article 4.3 of the General Conditions.

1.1.7 COMPENSABLE DELAY

The term "Compensable Delay" means a delay that entitles the Contractor to an adjustment of the Contract Sum and an adjustment of the Contract Time pursuant to Articles 7 and 8 of the General Conditions.

1.1.8 CONTRACT

The term "Contract" shall have the meaning identified in Article 2 of the Agreement.

1.1.9 CONTRACT DOCUMENTS

The term "Contract Documents" means all documents listed in Article 2 of the Agreement, as modified by Change Order, including but not limited to the Drawings and Specifications.

1.1.10 CONTRACT MILESTONE

The term "Contract Milestone" means any requirement in the Contract Documents that reflects a planned point in time for the start or completion of a portion of the Work measured from i) the date of the Notice to Proceed or ii) the date of another Contract Milestone defined in the Contract Documents, as applicable.

1.1.11 CONTRACT SCHEDULE

The term "Contract Schedule" means the graphical representation of a practical plan, in accordance with the Specifications, to perform and complete the Work within the Contract Time in accordance with Article 3.

1.1.12 CONTRACT SUM

The term "Contract Sum" means the amount of compensation stated in the Agreement for the performance of the Work, as adjusted by Change Order.

1.1.13 CONTRACT TIME

The term "Contract Time" means the number of days set forth in the Agreement, as adjusted by Change Order, within which Contractor must achieve Final Completion.

1.1.14 CONTRACTOR

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

1.1.15 CONTRACTOR FEE

See Article 7.3 of the General Conditions.

1.1.16 COST OF EXTRA WORK

See Article 7.3 of the General Conditions.

1.1.17 DAY

The term “day,” as used in the Contract Documents, shall mean calendar day, unless otherwise specifically provided.

1.1.18 DEFECTIVE WORK

The term “Defective Work” means work that is unsatisfactory, faulty, omitted, incomplete, deficient, or does not conform to the requirements of the Contract Documents, directives of University’s Representative, or the requirements of any inspection, reference standard, test, or approval specified in the Contract Documents.

1.1.19 DRAWINGS

The term “Drawings” means 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. The Drawings are listed in the List of Drawings.

1.1.20 EXCUSABLE DELAY

The term “Excusable Delay” means a delay that entitles the Contractor to an adjustment of the Contract Time but not an adjustment of the Contract Sum, pursuant to Articles 7 and 8 of the General Conditions.

1.1.21 EXTRA WORK

The term “Extra Work” means Work beyond or in addition to the Work required by the Contract Documents.

1.1.22 FIELD ORDER

See Article 7.2 of the General Conditions.

1.1.23 FINAL COMPLETION

The term “Final Completion” means the date at which the Work has been fully completed in accordance with the requirements of the Contract Documents pursuant to Article 9.8.1 of the General Conditions.

1.1.24 GUARANTEE TO REPAIR PERIOD

See Article 12.2 of the General Conditions.

1.1.25 HAZARDOUS MATERIAL

The term “Hazardous Material” means any substance or material identified as hazardous under any California or federal statute governing handling, disposal and/or cleanup of any such substance or material.

1.1.26 PROJECT

The term “Project” means the Work of the Contract and all other work, labor, equipment, and materials necessary to accomplish the Project . The Project may include construction by University or by Separate Contractors.

1.1.27 PROJECT SITE

The term “Project Site” or “Project site” or “Site” or “site” means lands and facilities upon which the Work pertaining to physical construction operations is performed, including such access and other lands and facilities designated in the Contract Documents for use by Contractor.

1.1.28 SEPARATE CONTRACTOR

The term “Separate Contractor” means a person or firm under separate contract with University performing other work related to the Project.

1.1.29 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

See Article 3.12 of the General Conditions.

1.1.30 SPECIFICATIONS

The term “Specifications” means that portion of the Contract Documents consisting of the written requirements

for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

1.1.31 SUBCONTRACTOR

The term “Subcontractor” means a person or firm that has a contract with Contractor or with a Subcontractor to perform a portion of the Work. Unless otherwise specifically provided, the term Subcontractor includes Subcontractors of all tiers.

1.1.32 SUBSTANTIAL COMPLETION

See Article 9.7 of the General Conditions.

1.1.33 SUPERINTENDENT

The term “Superintendent” means the person designated by Contractor to represent Contractor at the Project site in accordance with Article 3.

1.1.34 TIER

The term “tier” means the contractual level of a Subcontractor or supplier with respect to Contractor. For example, a first-tier Subcontractor is under subcontract with Contractor, a second-tier Subcontractor is under subcontract with a first-tier Subcontractor, and so on.

1.1.35 UNEXCUSABLE DELAY

The term “Unexcusable Delay” means a delay that does not entitle the Contractor to an adjustment of the Contract Sum and does not entitle the Contractor to an adjustment of the Contract Time.

1.1.36 UNILATERAL CHANGE ORDER.

See Article 7.2 of the General Conditions.

1.1.37 UNIVERSITY

The term “University” means The Regents of the University of California.

1.1.38 UNIVERSITY’S BUILDING OFFICIAL

The term “University’s Building Official,” or “Certified Building Official,” means the individual the University has designated to act in the capacity as the “Building Official” as defined by the California Building Standards Code. The University’s Building Official will determine whether the Work complies with Applicable Code Requirements and will determine whether and when it is appropriate to issue a Certificate of Occupancy.

1.1.39 UNIVERSITY’S REPRESENTATIVE

The term “University’s Representative” means the person identified as such in the Agreement.

1.1.40 UNIVERSITY’S RESPONSIBLE ADMINISTRATOR

The term “University’s Responsible Administrator” means the person, or his or her authorized designee, who is authorized to execute the Agreement, Change Orders, Field Orders, and other applicable Contract Documents on behalf of the University.

1.1.41 WORK

The term “Work” means all construction, services and other requirements of the Contract Documents as modified by Change Order, whether completed or partially completed, and includes all labor, materials, equipment, tools, and services provided or to be provided by Contractor to fulfill Contractor’s obligations. The Work may constitute the whole or a part of the Project.

1.2 OWNERSHIP AND USE OF CONTRACT DOCUMENTS

1.2.1 The Contract Documents and all copies thereof furnished to or provided by Contractor are the property of the University and are not to be used on other work.

1.3 INTERPRETATION

1.3.1 The Contract Documents are complementary and what is required by one shall be as binding as if required by all. In the case of conflict between terms of the Contract Documents, the following order of precedence shall apply:

- .1 The Agreement,
- .2 The Supplementary Conditions,
- .3 The General Conditions,
- .4 The Specifications,
- .5 The Drawings.

1.3.2 With respect to the Drawings, figured dimensions shall control over scaled measurements and specific details shall control over typical or standard details.

1.3.3 With respect to the Contract Documents, Addenda shall govern over other portions of the Contract Documents to the extent specifically noted; subsequent Addenda shall govern over prior Addenda only to the extent specifically noted.

1.3.4 Organization of the Specifications into various subdivisions and the arrangement of the Drawings shall not control Contractor in dividing the Work among Subcontractors or in establishing the extent of work to be performed by any trade.

1.3.5 Unless otherwise stated in the Contract Documents, technical words and abbreviations contained in the Contract Documents are used in accordance with commonly understood construction industry meanings; and non-technical words and abbreviations are used in accordance with their commonly understood meanings.

1.3.6 The Contract Documents may 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. The use of the word "including," when following any general statement, shall not be construed to limit such statement to specific items or matters set forth immediately following such word or to similar items or matters, whether or not nonlimiting language (such as "without limitation," "but not limited to," or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement.

1.3.7 Whenever the context so requires, the use of the singular number shall be deemed to include the plural and vice versa. Each gender shall be deemed to include any other gender, and each shall include corporation, partnership, trust, or other legal entity whenever the context so requires. The captions and headings of the various subdivisions of the Contract Documents are intended only for reference and convenience and in no way define, limit, or prescribe the scope or intent of the Contract Documents or any subdivision thereof.

ARTICLE 2 UNIVERSITY

2.1 INFORMATION AND SERVICES PROVIDED BY UNIVERSITY

2.1.1 If required for performance of the Work, as determined by University's Representative, University will make available a survey describing known physical characteristics, boundaries, easements, and utility locations for the Project site.

2.1.2 University is not subject to any requirement to obtain or pay for local building permits, inspection fees, plan checking fees, or certain utility fees. Except as otherwise provided in the Contract Documents, University will obtain and pay for any utility permits, demolition permits, easements, and government approvals for the use or occupancy of permanent structures required in connection with the Work.

2.1.3 Contractor will be furnished, free of charge, such copies of the Contract Documents as University deems reasonably necessary for execution of the Work.

2.2 ACCESS TO PROJECT SITE

2.2.1 University will provide, no later than the date designated in the Contract Schedule accepted by University's Representative, access to the lands and facilities upon which the Work is to be performed, including such access and other lands and facilities designated in the Contract Documents for use by

Contractor.

2.3 UNIVERSITY'S RIGHT TO STOP THE WORK

2.3.1 If Contractor fails to correct Defective Work as required by Article 12.2 or fails to perform the Work in accordance with the Contract Documents, University or University's Representative may direct Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated by Contractor. Contractor shall not be entitled to any adjustment of Contract Time or Contract Sum as a result of any such order. University and University's Representative have no duty or responsibility to Contractor or any other party to exercise the right to stop the Work.

2.4 UNIVERSITY'S RIGHT TO CARRY OUT THE WORK

2.4.1 If Contractor fails to carry out the Work in accordance with the Contract Documents, fails to provide sufficient labor, materials, equipment, tools, and services to maintain the Contract Schedule, or otherwise fails to comply with any material term of the Contract Documents, and, after receipt of written notice from University, fails within 2 days, excluding Saturdays, Sundays and legal holidays, or within such additional time as the University may specify, to correct such failure, University may, without prejudice to other remedies University may have, correct such failure at Contractor's expense. In such case, University will be entitled to deduct from payments then or thereafter due Contractor the cost of correcting such failure, including without limitation compensation for the additional services and expenses of University's consultants made necessary thereby. If payments then or thereafter due Contractor are not sufficient to cover such amounts, Contractor shall pay the additional amount to University.

2.5 UNIVERSITY'S RIGHT TO REPLACE UNIVERSITY'S REPRESENTATIVE

2.5.1 University may at any time and from time to time, without prior notice to or approval of Contractor, replace University's Representative with a new University's Representative. Upon receipt of notice from University informing Contractor of such replacement and identifying the new University's representative, Contractor shall recognize such person or firm as University's Representative for all purposes under the Contract Documents.

ARTICLE 3 CONTRACTOR

3.1 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

3.1.1 Contractor and its Subcontractors shall review and compare each of the Contract Documents with the others and with information furnished or made available by University, and shall promptly report in writing to University's Representative any errors, inconsistencies, or omissions in the Contract Documents or inconsistencies with Applicable Code Requirements observed by Contractor or its Subcontractors.

3.1.2 Contractor and its Subcontractors shall take field measurements, verify field conditions, and carefully compare with the Contract Documents such field measurements, conditions, and other information known to Contractor before commencing the Work. Errors, inconsistencies, or omissions discovered at any time shall be promptly reported in writing to University's Representative.

3.1.3 If Contractor and its Subcontractors performs any construction activity involving an error, inconsistency, or omission referred to in Articles 3.1.1 and 3.1.2, without giving the notice required in those Articles and obtaining the written consent of University's Representative, Contractor shall be responsible for the resultant losses, including, without limitation, the costs of correcting Defective Work.

3.2 SUPERVISION AND CONSTRUCTION PROCEDURES

3.2.1 Contractor shall supervise, coordinate, and direct the Work using Contractor's best skill and attention. Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, procedures, and the coordination of all portions of the Work.

3.2.2 Contractor shall be responsible to University for acts and omissions of Contractor's agents, employees, and Subcontractors, and their respective agents and employees.

3.2.3 Contractor shall not be relieved of its obligation to perform the Work in accordance with the Contract Documents either by acts or omissions of University or University's Representative in the administration of the Contract, or by tests, inspections, or approvals required or performed by persons or firms other than Contractor.

3.2.4 Contractor shall be responsible for inspection of all portions of the Work, including those portions already performed under this Contract, to determine that such portions conform to the requirements of the Contract and are ready to receive subsequent Work.

3.2.5 Contractor shall at all times maintain good discipline and order among its employees and Subcontractors. Contractor shall provide competent, fully qualified personnel to perform the Work.

3.3 LABOR AND MATERIALS

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

3.4 CONTRACTOR'S WARRANTY

3.4.1 Contractor warrants to University that all materials and equipment used in or incorporated into the Work will be of good quality, new, and free of liens, claims, and security interests of third parties; that the Work will be of good quality and free from defects; and that the Work will conform with the requirements of the Contract. If required by University's Representative, Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

3.5 TAXES

3.5.1 Contractor shall pay all sales, consumer, use, and similar taxes for the Work or portions thereof provided by Contractor.

3.6 PERMITS, FEES, AND NOTICES

3.6.1 Except for the permits and approvals which are to be obtained by University or the requirements with respect to which University is not subject as provided in Article 2.1.2, Contractor shall secure and pay for all permits, approvals, government fees, licenses, and inspections necessary for the proper execution and performance of the Work. Contractor shall deliver to University all original licenses, permits, and approvals obtained by Contractor in connection with the Work prior to the final payment or upon termination of the Contract, whichever is earlier.

3.7 APPLICABLE CODE REQUIREMENTS

3.7.1 Contractor shall perform the Work in accordance with the following Applicable Code Requirements:

- .1 All laws, statutes, the most recent building codes, ordinances, rules, regulations, and lawful orders of all public authorities having jurisdiction over University, Contractor, any Subcontractor, the Project, the Project site, the Work, or the prosecution of the Work.
- .2 All requirements of any insurance company issuing insurance required hereunder.
- .3 The Federal Occupational Safety and Health Act and all other Applicable Code Requirements relating to safety.
- .4 Applicable titles in the State of California Code of Regulations.
- .5 Applicable sections in the State of California Labor Code.
- .6 All Applicable Code Requirements relating to nondiscrimination, payment of prevailing wages, payroll records, apprentices, and work day.

Without limiting the foregoing, Contractor shall comply with the provisions regarding nondiscrimination, payment of prevailing wages, payroll records, apprentices, and work day set forth in Article 14.

3.7.2 Contractor shall comply with and give notices required by all Applicable Code Requirements,

including all environmental laws and all notice requirements under the State of California Safe Drinking Water and Enforcement Act of 1986 (State of California Health and Safety Code Section 25249.5 and applicable sections that follow). Contractor shall promptly notify University's Representative in writing if Contractor becomes aware during the performance of the Work that the Contract Documents are at variance with Applicable Code Requirements.

3.7.3 If Contractor performs Work which it knows or should know is contrary to Applicable Code Requirements, without prior notice to University and University's Representative, Contractor shall be responsible for such Work and any resulting damages including, without limitation, the costs of correcting Defective Work.

3.8 SUPERINTENDENT

3.8.1 Contractor shall employ a competent Superintendent satisfactory to University who shall be in attendance at the Project site at all times during the performance of the Work. Superintendent shall represent Contractor and communications given to and received from Superintendent shall be binding on Contractor.

3.8.2 Contractor shall provide the Key Personnel, in addition to the Superintendent, as named in the Key Personnel Exhibit to this Contract. Substitution or replacement of any named individual requires the written approval of the University's Representative and approval will be at the sole discretion of University. Failure to maintain a Superintendent on the Project site at all times Work is in progress shall be considered a material breach of this Contract, entitling University to terminate the Contract or alternatively, issue a stop Work order until the Superintendent is on the Project site. If, by virtue of issuance of said stop Work order, Contractor fails to complete the Contract on time, Contractor will be assessed Liquidated Damages in accordance with the Agreement.

3.8.3 The Superintendent approved for the Project must be able to read, write and verbally communicate in English.

3.8.4 The Superintendent may not perform the Work of any trade, pick-up materials, or perform any Work not directly related to the supervision and coordination of the Work at the Project site when Work is in progress.

3.9 SCHEDULES REQUIRED OF CONTRACTOR

3.9.1 Contractor shall submit a Preliminary Contract Schedule to University's Representative in the form and within the time limit required by the Specifications. University's Representative will review the Preliminary Contract Schedule with Contractor within the time limit required by the Specifications, or, if no such time period is specified, within a reasonable period of time.

3.9.2 Contractor shall submit a Contract Schedule and updated Contract Schedules to University's Representative in the form and within the time limits required by the Specifications and acceptable to University's Representative. University's Representative will determine acceptability of the Contract Schedule and updated Contract Schedules within the time limits required by the Specifications, or if no such time period is specified, within a reasonable period of time. If University's Representative deems the Contract Schedule or updated Contract Schedule unacceptable, it shall specify in writing to Contractor the basis for its objection.

3.9.3 The Preliminary Contract Schedule, the Contract Schedule, and updated Contract Schedules shall represent a practical plan to complete the Work within the Contract Time. Schedules showing the Work completed in less than the Contract Time may be acceptable if judged by University's Representative to be practical. Schedules showing the Work completed beyond the Contract Time may be submitted under the following circumstances:

.1 If accompanied by a Change Order Request seeking an adjustment of the Contract Time consistent the requirements of paragraph 8.4 for Adjustment of the Contract Time for Delay.; or

.2 If the Contract Time has passed, or if it is a practical impossibility to complete the Work within the Contract Time, then the updated Contract Schedule or fragnet schedule shall show completion at the earliest practical date.

University's Representative will timely review the updated Contract Schedule or Fagnet Schedule submitted by Contractor. If University's Representative determines that additional supporting data are necessary to fully evaluate the updated Contract Schedule or Fagnet Schedule, University's Representative will request such additional supporting data in writing. Such data shall be furnished no later than 10 days after the date of such request. University's Representative will render a decision promptly and in any case within 30 days after the later of the receipt of the updated Contract Schedule or Fagnet Schedule or the deadline for furnishing such additional supporting data. Failure of University's Representative to render a decision by the applicable deadline will be deemed a decision denying approval of the updated Contract Schedule or Fagnet Schedule.

Acceptance of any schedule showing completion beyond the Contract Time by University's Representative shall not change the Contract Time and is without prejudice to any right of the University. The Contract Time, not the Contract Schedule, shall control in the determination of liquidated damages payable by Contractor under Article 4 and Article 5 of the Agreement and in the determination of any delay under Article 8 of the General Conditions.

3.9.4 If a schedule showing the Work completed in less than the Contract Time is accepted, Contractor shall not be entitled to extensions of the Contract Time for Excusable Delays or Compensable Delays or to adjustments of the Contract Sum for Compensable Delays until such delays extend the Final Completion of the Work beyond the expiration of the Contract Time.

3.9.5 Contractor shall prepare and keep current to the reasonable satisfaction of University's Representative, a Submittal Schedule in the form contained in the Exhibits, for each submittal, as required by the Specifications, and that are coordinated with the other activities in the Contract Schedule.

3.9.6 The Preliminary Contract Schedule, Contract Schedule, and the Updated Contract Schedules shall meet the following requirements:

- .1 Schedules must be suitable for monitoring progress of the Work.
- .2 Schedules must provide necessary data about the timing for University decisions and University furnished items.
- .3 Schedules must be in sufficient detail to demonstrate adequate planning for the Work.
- .4 Schedules must represent a practical plan to perform and complete the Work within the Contract Time.

3.9.7 University's Representative's review of the form and general content of the Preliminary Contract Schedule, Contract Schedule, and Updated Contract Schedules is for the purpose of determining if the above-listed requirements have been satisfied.

3.9.8 Contractor shall plan, develop, supervise, control, and coordinate the performance of the Work so that its progress and the sequence and timing of Work will permit its completion within the Contract Time, any Contract milestones and any Contract phases.

3.9.9 In preparing the Preliminary Contract Schedule, the Contract Schedule, and updated Contract Schedules, Contractor shall obtain such information and data from Subcontractors as may be required to develop a reasonable and appropriate schedule for performance of the work and shall provide such information and data to the University's Representative upon request. Contractor shall continuously obtain from Subcontractors information and data about the planning for and progress of the Work and the delivery of equipment, shall coordinate and integrate such information and data into updated Contract Schedules, as appropriate, and shall monitor the progress of the Work and the delivery of equipment.

3.9.10 Contractor shall act as the expeditor of potential and actual delays, interruptions, hindrances, or disruptions for its own forces and those forces of Subcontractors, regardless of tier.

3.9.11 Contractor shall cooperate with University's Representative in the development of the Contract Schedule and updated Contract Schedules. University's Representative's acceptance of or its review comments about any schedule or scheduling data shall not relieve Contractor from its sole responsibility to plan for, perform, and complete the Work within the Contract Time. Acceptance of or review comments about any schedule shall not transfer responsibility for any schedule to University's Representative or University nor imply their agreement with (1) any assumption upon which such schedule is based or (2) any matter underlying or contained in such schedule. Failure of University's Representative to discover errors or omissions in schedules that it has reviewed, or to inform Contractor that Contractor, Subcontractors, or others are behind schedule, or to direct or enforce procedures for complying with the Contract Schedule shall not relieve

Contractor from its sole responsibility to perform and complete the Work within the Contract Time and shall not be a cause for an adjustment of the Contract Time or the Contract Sum.

3.10 AS-BUILT DOCUMENTS

3.10.1 Contractor shall maintain one set of As-built drawings and specifications, which shall be kept up to date during the Work of the Contract. All changes which are incorporated into the Work which differ from the documents as drawn and written shall be noted on the As-built set. Notations shall reflect the actual materials, equipment and installation methods used for the Work and each revision shall be initialed and dated by Superintendent. Prior to filing of the Notice of Completion each drawing and the specification cover shall be signed by Contractor and dated attesting to the completeness of the information noted therein. As-built Documents shall be turned over to the University's Representative and shall become part of the Record Documents.

3.11 DOCUMENTS AND SAMPLES AT PROJECT SITE

3.11.1 Contractor shall maintain the following at the Project site:

- .1 One as-built copy of the Contract Documents, in good order and marked to record current changes and selections made during construction.
- .2 The current accepted Contract Schedule.
- .3 Shop Drawings, Product Data, and Samples.
- .4 All other required submittals.

These shall be available to University's Representative and shall be delivered to University's Representative for submittal to University upon the earlier of Final Completion or termination of the Contract.

3.12 SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND ENVIRONMENTAL PRODUCT DECLARATIONS

3.12.1 Definitions:

- .1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by Contractor or a Subcontractor to illustrate some portion of the Work.
- .2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by Contractor to illustrate or describe materials or equipment for some portion of the Work.
- .3 Samples are physical examples which illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged.
- .4 Environmental Product Declarations are those documents and other submissions required to be furnished by Contractor or a Subcontractor pursuant to California Public Contract Code Section 3500 et seq., the Buy Clean California Act, as further described in Article 3.12.9 below.

3.12.2 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate, for those portions of the Work for which submittals are required, how Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents.

3.12.3 Contractor shall review, approve, and submit to University's Representative Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of University or of Separate Contractors. Submittals made by Contractor which are not required by the Contract Documents may be returned without action by University's Representative.

3.12.4 Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples, or similar submittals until the respective submittal has been reviewed by University's Representative and no exceptions have been taken by University's Representative. Such Work shall be in accordance with approved submittals and the Contract Documents.

3.12.5 By approving and submitting Shop Drawings, Product Data, Samples, and similar submittals,

Contractor represents that it has determined or verified materials and field measurements and conditions related thereto, and that it has checked and coordinated the information contained within such submittals with the requirements of the Contract Documents and Shop Drawings for related Work.

3.12.6 If Contractor discovers any conflicts, omissions, or errors in Shop Drawings or other submittals, Contractor shall notify University's Representative and receive instruction before proceeding with the affected Work.

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

1.12.8 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 University's Representative on previous submittals.

1.12.9 Environmental Product Declarations

3.12.9.1 Contractor shall comply with California Public Contract Code Section 3500 et seq., the Buy Clean California Act ("BCCA").

3.12.9.2 The term "Eligible Materials", as used herein, shall mean the same as defined by the BCCA, and shall include at a minimum the following materials:

- (1) Carbon steel rebar.
- (2) Flat glass.
- (3) Mineral wool board insulation.
- (4) Structural steel.

3.12.9.3 Compliance with the BCCA and this Article applies to all Eligible Materials for the Project.

3.12.9.4 Contractor shall submit to University a current facility-specific Environmental Product Declaration ("EPD"), Type III, as defined by the International Organization for Standardization ("ISO") standard 14025, or similarly robust life cycle assessment methods that have uniform standards in data collection consistent with ISO standard 14025, industry acceptance, and integrity, for each Eligible Material proposed to be used on the Project.

3.12.9.5 Eligible Materials installed on the Project by Contractor must comply with any standards to the extent established in the BCCA or by University, whichever is more stringent. The facility-specific global warming potential for any Eligible Material must not exceed any existing maximum acceptable global warming potential for that material pursuant to the BCCA or by University, whichever is more stringent ("EM Standards").

3.12.9.6 Contractor shall not install any Eligible Materials on the Project until Contractor submits a facility-specific EPD for that material which demonstrates that the material complies with any existing EM Standards and this Article. Contractor shall be responsible for any losses, expenses, penalties or damages of any type incurred or sustained by University, including any tear out and replacement of Defective Work, which are caused by Contractor's failure to comply with the requirements of the BCCA or this Article.

3.13 USE OF SITE AND CLEAN UP

3.13.1 Contractor shall confine operations at the Project site to areas permitted by law, ordinances, permits, and the Contract Documents. Contractor shall not unreasonably encumber the Project site with materials or equipment.

3.13.2 Contractor shall, during performance of the Work, keep the Project site and surrounding area free from the accumulation of excess dirt, waste materials, and rubbish caused by Contractor. Contractor shall

remove all excess dirt, waste material, and rubbish caused by the Contractor; tools; equipment; machinery; and surplus materials from the Project site and surrounding area at the completion of the Work.

3.13.3 Personnel of Contractor and Subcontractors shall not occupy, live upon, or otherwise make use of the Project site during any time that Work is not being performed at the Project site, except as otherwise provided in the Contract Documents.

3.14 CUTTING, FITTING, AND PATCHING

3.14.1 Contractor shall do all cutting, fitting, or patching of the Work required to make all parts of the Work come together properly and to allow the Work to receive or be received by work of Separate Contractors shown upon, or reasonably implied by, the Contract Documents.

3.14.2 Contractor shall not endanger the Work, the Project, or adjacent property by cutting, digging, or otherwise. Contractor shall not cut or alter the work of any Separate Contractor without the prior consent of University's Representative.

3.15 ACCESS TO WORK

3.15.1 University, University's Representative, their consultants, and other persons authorized by University will at all times have access to the Work wherever it is in preparation or progress. Contractor shall provide safe and proper facilities for such access and for inspection.

3.16 ROYALTIES AND PATENTS

3.16.1 Contractor shall pay all royalties and license fees required for the performance of the Work. Contractor shall defend suits or claims resulting from Contractor's or any Subcontractor's infringement of patent rights and shall Indemnify, defend and hold harmless University and University's Representative from losses on account thereof.

3.17 DIFFERING SITE CONDITIONS

3.17.1 If Contractor encounters any of the following conditions at the site, Contractor shall immediately notify the University's Representative in writing of the specific differing conditions before they are disturbed and before any affected Work is performed, and permit investigation of the conditions:

- .1 Subsurface or latent physical conditions at the site (including Hazardous Materials) which differ materially from those indicated in this Contract, or if not indicated in this Contract, in the Information Available to Bidders; or
- .2 Unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

3.17.2 Contractor shall be entitled to an adjustment to the Contract Sum and/or Contract Time as the result of extra costs and/or delays resulting from a materially differing site condition, if and only if Contractor fulfills the following conditions:

- .1 Contractor fully complies with Article 3.17.1; and
- .2 Contractor fully complies with Article 4 (including the timely filing of a Change Order Request and all other requirements for Change Orders Requests and Claims).

3.17.3 Adjustments to the Contract Sum and/or Contract Time shall be subject to the procedures and limitations set forth in Articles 7 and 8.

3.18 CONCEALED, UNFORESEEN, OR UNKNOWN CONDITIONS OR EVENTS

3.18.1 Except and only to the extent provided otherwise in Articles 3.17, 7 and 8 of the General Conditions, by signing the Agreement, Contractor agrees:

- .1 To bear the risk of concealed, unforeseen or unknown conditions or events, if any, which may be encountered in performing the Contract; and
- .2 That Contractor's bid for the Contract was made with full knowledge of this risk.

In agreeing to bear the risk of concealed, unforeseen or unknown conditions or events, Contractor understands that, except and only to the extent provided otherwise in Articles 3.17, 7 and 8, concealed, unforeseen or unknown conditions or events shall not excuse Contractor from its obligation to achieve Final Completion of the Work within the Contract Time, and shall not entitle the Contractor to an adjustment of the Contract Sum.

3.18.2 If Contractor encounters concealed, unforeseen or unknown conditions or events that may require a change to the design shown in the Contract Documents, Contractor shall immediately notify University's Representative in writing such that University's Representative can determine if a change to the design is required. Contractor shall be liable to University for any extra costs incurred as the result of Contractor's failure to immediately give such notice.

3.18.3 If, as the result of concealed, unforeseen or unknown conditions or events, the University issues a Change Order or Field Order that changes the design from the design depicted in the Contract Documents, Contractor shall be entitled, subject to compliance with all the provisions of the Contract, including those set forth in Articles 4, 7 and 8, to an adjustment of the Contract Sum and/or Contract Time, for the cost and delay resulting from implementing the changes to the design. Except as provided in this Article 3.18.3, or as may be expressly provided otherwise in the Contract, there shall be no adjustment of the Contract Sum and/or Contract Time as a result of concealed, unforeseen or unknown conditions or events.

3.18.4 Contractor shall, as a condition precedent to any adjustment in Contract Sum or Contract Time under Article 3.18.3, fully comply with Article 4 (including the timely filing of a Change Order Request and all other requirements for Change Orders Requests and Claims).

3.19 HAZARDOUS MATERIALS

3.19.1 The University shall not be responsible for any Hazardous Material brought to the site by the Contractor.

3.19.2 If the Contractor: (i) introduces and/or discharges a Hazardous Material onto the site in a manner not specified by the Contract Documents; and/or (ii) disturbs a Hazardous Material identified in the Contract Documents, the Contractor shall hire a qualified remediation contractor at Contractor's sole cost to eliminate the condition as soon as possible. Under no circumstance shall the Contractor perform Work for which it is not qualified. University, in its sole discretion, may require the Contractor to retain at Contractor's cost an independent testing laboratory.

3.19.3 If the Contractor encounters a Hazardous Material which may cause foreseeable injury or damage, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such material or substance (except in an emergency situation); and (iii) notify University (and promptly thereafter confirm such notice in writing)

3.19.4 Subject to Contractor's compliance with Article 3.19.3, the University shall verify the presence or absence of the Hazardous Material reported by the Contractor, except as qualified under Section 3.19.1 and 3.19.3, and, in the event such material or substance is found to be present, verify that the levels of the hazardous material are below OSHA Permissible Exposure Levels and below levels which would classify the material as a state of California or federal hazardous waste. When the material falls below such levels, Work in the affected area shall resume upon direction by the University. The Contract Time and Sum shall be extended appropriately as provided in Articles 7 and 8.

3.19.5 The University shall indemnify and hold harmless the Contractor from and against claims, damages, losses and expenses, arising from a Hazardous Material on the Project site, if such Hazardous Material: (i) was not shown on the Contract Documents or Information Available to Bidders; (ii) was not brought to the site by Contractor; and (iii) exceeded OSHA Permissible Exposure Levels or levels which would classify the material as a state of California or federal hazardous waste. The indemnity obligation in this Article shall not apply to:

- .1 Claims, damages, losses or expenses arising from the breach of contract, negligence or willful misconduct of Contractor, its suppliers, its Subcontractors of all tiers and/or any persons or entities working under Contractor; and
- .2 Claims, damages, losses or expenses arising from a Hazardous Material subject to Article 3.19.2.

3.19.6 In addition to the requirements in Article 3.22, Contractor shall indemnify and hold harmless the University from and against claims, damages, losses and expenses, arising from a Hazardous Material on the Project site, if such Hazardous Material exceeded OSHA Permissible Exposure Levels or levels which would classify the material as a state of California or federal hazardous waste, and was either i) shown on the Contract Documents or Information Available to Bidders; or (ii) brought to the site by Contractor. Nothing in this paragraph shall obligate the Contractor to indemnify University in the event of the sole negligence of the University, its officers, agents, or employees.

3.20 INFORMATION AVAILABLE TO BIDDERS

3.20.1 Any information provided pursuant to INFORMATION AVAILABLE TO BIDDERS is subject to the following provisions:

- .1 The information is made available for the convenience of Bidders and is not a part of the Contract.
- .2 The Contractor may rely on written descriptions of physical conditions included in the information to the extent such reliance is reasonable.
- .3 Other components of the information, including but not limited to recommendations, may not be relied upon by Contractor. University shall not be responsible for any interpretation of or conclusion drawn from the other components of the information by the Contractor.

3.21 LIABILITY FOR AND REPAIR OF DAMAGED WORK

3.21.1 Contractor shall be liable for any and all damages and losses to the Project (whether by fire, theft, vandalism, earthquake or otherwise) prior to University's acceptance of the Project as fully completed except that Contractor shall not be liable for damages and losses to the Project caused by earthquake in excess of magnitude 3.5 on the Richter Scale, tidal wave, or flood, provided that the damages or losses were not caused in whole or in part by the negligent acts or omissions of Contractor, its officers, agents or employees (including all Subcontractors and suppliers of all tiers). As used herein, "flood" shall have the same meaning as in the builder's risk property insurance.

3.21.2 Contractor shall promptly repair and replace any Work or materials damaged or destroyed for which the Contractor is liable under Article 3.21.1.

3.22 INDEMNIFICATION

3.22.1 Contractor shall indemnify, defend and hold harmless University, University's consultants, University's Representative, University's Representative's consultants, and their respective directors, officers, agents, and employees from and against losses (including without limitation the cost of repairing defective work and remedying the consequences of defective work) arising out of, resulting from, or relating to the following:

- .1 The failure of Contractor to perform its obligations under the Contract.
- .2 The inaccuracy of any representation or warranty by Contractor given in accordance with or contained in the Contract Documents.
- .3 Any claim of damage or loss by any Subcontractor against University arising out of any alleged act or omission of Contractor or any other Subcontractor, or anyone directly or indirectly employed by Contractor or any Subcontractor.
- .4 Any claim of damage or loss resulting from Hazardous Materials introduced, discharged, or disturbed by Contractor as required per Article 3.19.6.

3.22.2 The University shall not be liable or responsible for any accidents, loss, injury (including death) or damages happening or accruing during the term of the performance of the Work herein referred to or in connection therewith, to persons and/or property, and Contractor shall fully indemnify, defend and hold harmless University and protect University from and against the same as provided in paragraph 3.22.1 above.

In addition to the liability imposed by law upon the Contractor for damage or injury (including death) to persons or property by reason of the negligence of the Contractor, its officers, agents, employees or Subcontractors, which liability is not impaired or otherwise affected hereby, the Contractor shall defend, indemnify, hold harmless, release and forever discharge the University, its officers, employees, and agents from and against and waive any and all responsibility of same for every expense, liability, or payment by reason of any damage or injury (including death) to persons or property suffered or claimed to have been suffered through any negligent act, omission, or willful misconduct of the Contractor, its officers, agents, employees, or any of its Subcontractors, or anyone directly or indirectly employed by either of them or from the condition of the premises or any part of the premises while in control of the Contractor, its officers, agents, employees, or any of its Subcontractors or anyone directly or indirectly employed by either of them, arising out of the performance of the Work called for by this Contract. Contractor agrees that this indemnity and hold harmless shall apply even in the event of negligence of University, its officers, agents, or employees, regardless of whether such negligence is contributory to any claim, demand, loss, damage, injury, expense, and/or liability; but such indemnity and hold harmless shall not apply (i) in the event of the sole negligence of University, its officers, agents, or employees; or (ii) to the extent that the University shall indemnify and hold harmless the Contractor for Hazardous Materials pursuant to Article 3.19.5 .

3.22.3 In claims against any person or entity indemnified under this Article 3.22 that are made by an employee of Contractor or any Subcontractor, a person indirectly employed by Contractor or any Subcontractor, or anyone for whose acts Contractor or any Subcontractor may be liable, the indemnification obligation under this Article 3.22 shall not be limited by any limitation on amount or type of damages, compensation, or benefits payable by or for Contractor or any Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

3.22.4 The indemnification obligations under this Article 3.22 shall not be limited by any assertion or finding that the person or entity indemnified is liable by reason of a non-delegable duty.

3.22.5 Contractor shall indemnify University from and against Losses resulting from any claim of damage made by any Separate Contractor against University arising out of any alleged acts or omissions of Contractor, any Subcontractor, anyone directly or indirectly employed by either of them, or anyone for whose acts either of them may be liable.

3.22.6 Contractor shall indemnify Separate Contractors from and against Losses arising out of the negligent acts, omissions, or willful misconduct of Contractor, any Subcontractor, anyone directly or indirectly employed by either of them, or anyone for whose acts either of them may be liable.

ARTICLE 4 ADMINISTRATION OF THE CONTRACT

4.1 ADMINISTRATION OF THE CONTRACT BY UNIVERSITY'S REPRESENTATIVE

4.1.1 University's Representative will provide administration of the Contract as provided in the Contract Documents and will be the representative of University. University's Representative will have authority to act on behalf of University only to the extent provided in the Contract Documents.

4.1.2 University's Representative will have the right to visit the Project site at such intervals as deemed appropriate by the University's Representative. However, no actions taken during such Project site visit by University's Representative shall relieve Contractor of its obligations as described in the Contract Documents.

4.1.3 University's Representative will not have control over, will not be in charge of, and will not be responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely Contractor's responsibility.

4.1.4 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, University and Contractor shall communicate through University's Representative. Except when direct communication has been specifically authorized in writing by University Representative, communications by Contractor with University's consultants and University's Representative's consultants shall be through University's Representative. Communications by University and University's Representative with Subcontractors will be through Contractor. Communications by Contractor and Subcontractors with Separate Contractors shall be through University's Representative. Contractor shall not rely on oral or other non-written communications.

4.1.5 Based on University's Representative's Project site visits and evaluations of Contractor's Applications For Payment, University's Representative will recommend amounts, if any, due Contractor and will issue Certificates For Payment in such amounts.

4.1.6 University's Representative will have the authority to reject the Work, or any portion thereof, which does not conform to the Contract Documents. University's Representative will have the authority to stop the Work or any portion thereof. Whenever University's Representative considers it necessary or advisable for implementation of the intent of the Contract Documents, University's Representative will have the authority to require additional inspection or testing of the Work in accordance with the Contract Documents, whether or not such Work is fabricated, installed, or completed. However, no authority of University's Representative conferred by the Contract Documents nor any decision made in good faith either to exercise or not exercise such authority, will give rise to a duty or responsibility of University or University's Representative to Contractor, or any person or entity claiming under or through Contractor.

4.1.7 University's Representative will have the authority to conduct inspections as provided in the Contract Documents, to take Beneficial Occupancy and to determine the dates of Substantial Completion and Final Completion; will receive for review and approval any records, written warranties, and related documents required by the Contract Documents and assembled by Contractor; and will issue a final Certificate For Payment upon Contractor's compliance with the requirements of the Contract Documents.

4.1.8 University's Representative will be, in the first instance, the interpreter of the requirements of the Contract Documents and the judge of performance thereunder by Contractor. Should Contractor discover any conflicts, omissions, or errors in the Contract Documents; have any questions about the interpretation or clarification of the Contract Documents; question whether Work is within the scope of the Contract Documents; or question that Work required is not sufficiently detailed or explained, then, before proceeding with the Work affected, Contractor shall notify University's Representative in writing and request interpretation, clarification, or furnishing of additional detailed instructions. University's Representative's response to questions and requests for interpretations, clarifications, instructions, or decisions will be made with reasonable promptness. Should Contractor proceed with the Work affected before receipt of a response from University's Representative, any portion of the Work which is not done in accordance with University's Representative's interpretations, clarifications, instructions, or decisions shall be removed or replaced and Contractor shall be responsible for all resultant losses.

4.2 CONTRACTOR CHANGE ORDER REQUESTS

4.2.1 Contractor may request changes to the Contract Sum and/or Contract Time for Extra Work, materially differing site conditions, or Delays to Final Completion of the Work.

4.2.2 Conditions precedent to obtaining an adjustment of the Contract Sum and/or Contract Time, payment of money, or other relief with respect to the Contract Documents, for any other reason, are:

.1 Timely submission of a Change Order Request that meets the requirements of Articles 4.2.3.1 and 4.2.3.2; and

.2 If requested, timely submission of additional information requested by the University Representative pursuant to Article 4.2.3.3.

4.2.3 Change Order Request:

4.2.3.1 A Change Order Request will be deemed timely submitted if, and only if, it is submitted within 7 days of the date the Contractor discovers, or reasonably should discover the circumstances giving rise to the Change Order Request, unless additional time is allowed in writing by University's Representative for submission of the Change Order Request, provided that if :

- .1 the Change Order Request includes compensation sought by a Subcontractor; AND
- .2 the Contractor requests in writing to the University's Representative, within the 7-day time period, additional time to permit Contractor to conduct an appropriate review of the Subcontractor Change Order Request,

the time period for submission of the actual Change Order Request shall be extended by the number of days specified in writing by the University's Representative.

4.2.3.2 A Change Order Request must state that it is a Change Order Request, state and justify the reason for the request, and specify the amount of any requested adjustment of the Contract Sum, Contract Time, and/or other monetary relief. If the Contractor requests an adjustment to the Contract Sum or other monetary relief, the Contractor shall submit the following with the Change Order Request:

- .1 a completed Cost Proposal in the form contained in the Exhibits meeting the requirements of Article 7; OR
- .2 a partial Cost Proposal and a declaration of what required information is not then known to Contractor. If Contractor failed to submit a completed Cost Proposal with the Change Order Request, Contractor shall submit a completed Cost Proposal meeting the requirements of Article 7 within 7 days of the date the Contractor submitted the Change Order Request unless additional time is allowed by the University's Representative.

4.2.3.3 Upon request of University's Representative, Contractor shall submit such additional information as may be requested by University's Representative for the purpose of evaluating the Change Order Request. Such additional information may include:

- .1 If Contractor seeks an adjustment of the Contract Sum or other monetary relief, actual cost records for any changed or extra costs (including without limitation, payroll records, material and rental invoices and the like), shall be submitted by the deadline established by the University's Representative, who may require such actual cost records to be submitted and reviewed, on a daily basis, by the University's Representative and/or representatives of the University's Representative.
- .2 If Contractor seeks an adjustment of the Contract Time, written documentation demonstrating Contractor's entitlement to a time extension under Article 8.4, which shall be submitted within 15 days of the date requested. If requested, Contractor may submit a fragnet in support of its request for a time extension. The University may, but is not obligated to, grant a time extension on the basis of a fragnet alone which, by its nature, is not a complete schedule analysis. If deemed appropriate by University Representative, Contractor shall submit a more detailed schedule analysis in support of its request for a time extension.
- .3 If Contractor seeks an adjustment of the Contract Sum or other monetary relief for delay, written documentation demonstrating Contractor's entitlement to such an adjustment under Article 7.3.9, which shall be submitted within 15 days of the date requested.
- .4 Any other information requested by the University's Representative for the purpose of evaluating the Change Order Request, which shall be submitted by the deadline established by the University's Representative.

4.2.4 University's Representative will make a decision on a Change Order Request, within a reasonable time, after receipt of a Change Order Request. In the event the Change Order Request is submitted pursuant to Article 8.4.1, the University's Representative shall promptly review and accept or reject it within thirty (30) days. A final decision is any decision on a Change Order Request which states that it is final. If University's Representative issues a final decision denying a Change Order Request in whole or in part, Contractor may contest the decision by filing a timely Claim under the procedures specified in Article 4.4.

4.2.5 Contractor may file a written demand for a final decision by University's Representative on all or part of any Change Order Request as to which the University's Representative has not previously issued a final decision pursuant to Article 4.2.4; such written demand may not be made earlier than the 30th day after submission of the Change Order Request. Within 30 days of receipt of the demand, University's Representative will issue a final decision on the Change Order Request. The University's Representative's failure to issue a decision within the 30-day period shall be treated as the issuance, on the last day of the 30-day period, of a final decision to deny the Change Order Request in its entirety.

4.3 CLAIMS

4.3.1 The term "Claim" means a written demand or assertion by Contractor seeking an adjustment or interpretation of the terms of the Contract Documents, payment of money, extension of time, or other relief with respect to the Contract Documents, including a determination of disputes or matters in question between University and Contractor arising out of or related to the Contract Documents or the performance of the Work. However, the term "Claim" shall not include, and the Claims procedures provided under this Article 4, including but not limited to arbitration, shall not apply to the following:

- .1 Claims respecting penalties for forfeitures prescribed by statute or regulation which a government agency is specifically authorized to administer, settle, or determine.
- .2 Claims respecting personal injury, death, reimbursement, or other compensation arising out of or resulting from liability for personal injury or death.
- .3 Claims by University, except as set forth in Articles 4.5, 4.6, and 4.7.
- .4 Claims respecting stop payment notices.

4.3.2 A Claim arises upon the issuance of a written final decision denying in whole or in part Contractor's Change Order Request pursuant to Articles 4.2.4 and 4.2.5.

4.3.3 A Claim must include the following:

- .1 A statement that it is a Claim and a request for a decision pursuant to Article 4.5.
- .2 A detailed factual narrative of events fully describing the nature and circumstances giving rise to the Claim, including but not limited to, necessary dates, locations, and items of work affected.
- .3 A certification, executed by Contractor, that the claim is filed in good faith. The certification must be made on the Claim Certification form, included in the Exhibits to the Contract. The language of the Claim Certification form may not be modified.
- .4 A certification, executed by each Subcontractor claiming not less than 5% of the total monetary amount sought by the claim, that the subcontractor's portion of the claim is filed in good faith. The certification must be made on the Claim Certification form, included in the Exhibits to the Contract. The language of the Claim Certification form may not be modified.
- .5 A statement demonstrating that a Change Order Request was timely submitted as required by Article 4.2.3
- .6 If a Cost Proposal or declaration was required by Article 4.2.3, a statement demonstrating that the Cost Proposal or the declaration was timely submitted as required by Article 4.2.3.
- .7 A detailed justification for any remedy or relief sought by the Claim, including to the extent applicable, the following:
 - .1 If the Claim involves Extra Work, a detailed cost breakdown of the amounts claimed, including the items specified in Article 7.3.2. An estimate of the costs must be provided even if the costs claimed have not been incurred when the Claim is submitted. To the extent costs have been incurred when the Claim is submitted, the Claim must include actual cost records (including without limitation, payroll records, material and rental invoices and the like) demonstrating that costs claimed have actually been incurred. To the extent costs have not yet been incurred at the time the Claim is submitted, actual cost records must be submitted on a current basis not less than once a month during any periods costs are incurred. A cost record will be considered current if submitted within 30 days of the date the cost reflected in the record is incurred. At the request of the University's Representative, claimed extra costs may be subject to further verification procedures (such as having an inspector verify the performance of alleged Extra Work on a daily basis). The cost breakdown must include an itemization of costs for i) labor including workers' names, classifications, regular hours and overtime hours worked, dates worked, and other pertinent information; ii) materials stored or incorporated in the work including invoices, purchase orders, location of materials either

- stored or incorporated into the work, dates materials were transported to the project or incorporated into the work, and other pertinent information; and iii) itemization of machinery and equipment including make, model, hours of use, dates of use and equipment rental rates of any rented equipment.
- .2 If the Claim involves an extension of the Contract Time, written documentation demonstrating the Contractor's entitlement to a time extension under Article 8.4, including the specific dates for which a time extension is sought and the specific reasons for entitlement of a time extension.
 - .3 If the Claim involves an adjustment of the Contract Sum for delay, written documentation demonstrating the Contractor's entitlement to such an adjustment under Article 7.3.9, including but not limited to, a detailed time impact analysis of the Contract Schedule. The Contract Schedule must demonstrate Contractor's entitlement to such an adjustment under Article 7.3.9.

4.4 ASSERTION OF CLAIMS

4.4.1 Claims by Contractor shall be first submitted to University's Representative for decision.

4.4.2 Notwithstanding the making of any Claim or the existence of any dispute regarding any Claim, unless otherwise directed by University's Representative, Contractor shall not cause any delay, cessation, or termination in or of Contractor's performance of the Work, but shall diligently proceed with performance of the Work in accordance with the Contract Documents.

4.4.3 Contractor shall submit a Claim in writing, together with all supporting data specified in Article 4.3.3, to University's Representative as soon as possible but not later than 30 days after the date the Claim arises under Article 4.3.2, provided that after written notification to the University's Representative within such time period, the time period for submission of the Claim shall be extended by the number of days specified in writing by the University's Representative where the Claim includes compensation sought by a Subcontractor and the Contractor requests an extension of time to permit it to discharge its responsibilities to conduct an appropriate review of the Subcontractor claim.

4.4.4 Strict compliance with the requirements of Articles 4.2, 4.3 and 4.4 are conditions precedent to Contractor's right to an informal conference to meet and confer to resolve a Claim, mediate a Claim, or arbitrate or litigate a Claim. Contractor specifically agrees to assert no Claims via an informal conference, mediation, arbitration or litigation unless there has been strict compliance with Articles 4.2, 4.3, and 4.4. The failure of Contractor to strictly comply with the requirements of Articles 4.2, 4.3 and 4.4 constitutes a failure by Contractor to exhaust its administrative remedies with the University, thereby denying any court or arbitration panel of jurisdiction to adjudicate the Claim.

4.5 DECISION OF UNIVERSITY'S REPRESENTATIVE ON CLAIMS

4.5.1 University's Representative will timely review Claims submitted by Contractor. If University's Representative determines that additional supporting data are necessary to fully evaluate a Claim, University's Representative will request such additional supporting data in writing. Such data shall be furnished no later than 10 days after the date of such request. University's Representative will render a decision promptly and in any case within 30 days after the later of the receipt of the Claim or the deadline for furnishing such additional supporting data; provided that, if the amount of the Claim is in excess of \$50,000, the aforesaid 30-day period shall be 45 days. Failure of University's Representative to render a decision by the applicable deadline will be deemed a decision denying the Claim on the date of the deadline, unless, upon receipt of a Claim, Contractor and University mutually agree to extend the time periods provided herein, or unless otherwise extended by law. The decision of University's Representative will be final and binding unless appealed in accordance with Articles 4.5.2, 4.6, and 4.7. The University's Representative's decision on a Claim or dispute will include a written statement both identifying all disputed and undisputed portions of the Claim and substantially including the following:

"This is a decision under Article 4.5 of the General Conditions of your contract. If you are dissatisfied with the decision, and if you complied with the procedural requirements for

asserting claims specified in Article 4 of the General Conditions of your contract, you may have the right to demand in writing an informal conference to meet and confer for settlement of any remaining issues in dispute, following which, if still dissatisfied, you may demand in writing a further resolution via nonbinding mediation, after which you have the right to arbitrate or litigate this decision. If you fail to take appropriate action within 30 days of the date of this decision, the decision shall become final and binding and not subject to further appeal.”

4.5.2 If either Contractor or University disputes University’s Representative’s decision on a Claim, then, within 30 days after the decision of University’s Representative on the Claim, or, if no decision has been issued, within 30 days from the date of the applicable deadline in Article 4.5.1 for University Representative to render a decision, such party (the “Disputing Party”) must provide written notice demanding an informal conference to meet and confer. University shall schedule the conference within 30 days upon receipt of the notice demanding an informal conference. The parties will attempt in good faith to resolve any controversy or Claim arising out of or relating to this Contract by negotiation at the conference.

4.6 MEDIATION

4.6.1 Within 10 business days following the informal conference to meet and confer stated in Article 4.5.2, if the Claim or any portion of the Claim remains in dispute, the University shall provide a written statement identifying the disputed and undisputed portions of the Claim. Within 30 days of receipt of the statement, if either Contractor or University disputes any portion of the Claim, then the Disputing Party must provide written notice to the non-disputing party demanding non-binding mediation. The Contractor and the University shall share the associated costs equally and shall mutually agree to a mediator within 10 business days. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim, with each party bearing the fees and costs of its respective mediator. Mediation shall include, but not be limited to, neutral evaluation, a dispute review board, or other negotiation or evaluation through an independent third party or board. The Contractor and the University may mutually agree to waive any individual mediation in writing and proceed to arbitration or litigation pursuant to this Contract.

4.7 LITIGATION AND ARBITRATION

4.7.1 Either party may provide a written notice of its election to arbitrate or provide written notice of its election to litigate the Claim within 30 days after the mediation pursuant to Article 4.6.1, or, if the parties mutually agreed in writing to waive mediation, within 30 days after the agreement is signed by both parties.

4.7.2 If a notice of election to arbitrate or litigate is not given by either party within 30 days pursuant to Article 4.7.1, University’s Representative’s decision on the Claim will be final and binding and not subject to appeal or challenge.

4.7.3 If the Disputing Party gives timely notice of its election to arbitrate the University’s Representative’s decision on a Claim, Disputing Party shall have the right, within 120 days after a Notice of Completion, or a Notice of Cessation, as applicable, is filed for the Contract, to make a demand for arbitration in accordance with Article 4.7. Failure to perfect a Claim for which a timely election to arbitrate has been made by the timely filing of a demand for arbitration and timely payment of all applicable and required fees to the American Arbitration Association (“AAA”) shall result in the University’s Representative’s decision on said Claim becoming final and binding and not subject to appeal or challenge. If the Disputing Party makes a timely demand for arbitration, and the amount of the Claim in question, when combined with all other Claims, if any, which are the subject of previously filed demands for arbitration that have not been resolved by settlement or arbitration award, is \$100,000 or more, then the other party may elect to litigate all such Claims by filing a written notice with the “AAA” within 30 days after its receipt of notice from the AAA of the Disputing Party’s demand for arbitration of the Claim that raises the total amount of Claims subject to arbitration to \$100,000 or more. If the other party fails to give notice of its election to litigate within such 30-day period, it shall be deemed to have consented to arbitration and waived the right to litigate. If after commencement of arbitration the amount of unresolved Claims in arbitration are allowed to be increased to \$100,000 or more, through an AAA-allowed amendment or otherwise, either party may elect to litigate within 30 days following the date that the electing party first receives written notification from the AAA that total Claims in arbitration equal or exceed \$100,000. If neither party gives notice of its election to litigate within such 30-day period as applicable, then

both parties shall be deemed to have consented to arbitration and waived the right to litigate.

4.7.4 A demand for arbitration pursuant to Article 4.7.3 shall include a copy of the Claim presented to University's Representative pursuant to Article 4.4, a copy of the decision of University's Representative pursuant to Article 4.5, if any, a copy of the University's written statement identifying the portion of the Claim that remained in dispute following the informal conference pursuant to Article 4.6.1, and a summary of the remaining portions of the Claim in dispute. The demand shall state the amount in controversy, if any, and state the remedy sought. The demand shall identify the University's Responsible Administrator as the representative of the responding party and the Office of the General Counsel as counsel for the responding party. The demand shall be filed with the AAA and shall not be deemed to have been made until all applicable fees have been paid to the AAA by the demanding party. Copies of the demand and attachments shall be sent to University's Responsible Administrator as the representative of the responding party and the University's Office of General Counsel as attorney for the responding party, at the addresses set forth in the Project Directory, at the time the demand for arbitration is initiated with the AAA.

4.7.5 Except as modified by this Article 4.7, arbitration shall be initiated and conducted in accordance with the Construction Industry Arbitration Rules of the AAA then in effect. The following additional modifications shall be made to the aforesaid AAA rules:

- .1 Civil discovery shall be permitted for the production of documents and taking of depositions. Other discovery may be permitted at the discretion of the arbitrator. All disputes regarding discovery shall be decided by the arbitrator.
- .2 University's Representative and/or University's consultants, shall if required by agreement with University, upon demand by University join in and be bound by the Arbitration. University's Representative and University's consultants will have the same rights in any arbitration proceeding as are afforded by the AAA rules to Contractor and University.
- .3 Contractor's sureties shall be bound by any arbitration award and may join in any arbitration proceeding.
- .4 Except as provided in Articles 4.7.5.2. and 4.7.5.3 above, no Subcontractor or other person shall have a right or obligation to join in or be a party to any arbitration proceeding provided for in this Article 4 either directly, by joinder, by consolidation or actions, by counterclaim or crossclaim, or otherwise without the express written consent of University, Contractor, and the joining party.
- .5 If more than one demand for arbitration is made by a party with respect to Claims referred to University's Representative, all such Claims shall be consolidated into a single arbitration unless the parties otherwise agree in writing.
- .6 If total Claims are less than \$50,000, the AAA expedited procedures as modified by this Article 4 shall apply. If total Claims are between \$50,000 and \$100,000 they shall be heard by a single arbitrator who shall be an attorney. If total Claims are in excess of \$100,000 and are submitted to arbitration, either by agreement or by failure to elect litigation the controversy shall be heard by a panel of three arbitrators, one of which shall be an attorney.
- .7 No arbitrator shall be appointed and no discovery may be commenced prior to the date of Final Completion unless University and Contractor otherwise agree.
- .8 The exclusive forum for determining arbitrability shall be the Superior Court of the State of California. The AAA shall not submit to any arbitrator any matter concerning the arbitrability of the dispute if the arbitrability is contested.
- .9 If the expedited procedures of the AAA are applicable, the AAA shall submit simultaneously to each party an identical list of 7 proposed arbitrators drawn from the National Panel of Commercial Arbitrators, and each party may strike 3 names from the list on a peremptory basis and return the list to the AAA within 10 days from the date of receipt.
- .10 Except as provided herein, the arbitration shall be conducted and enforced under California law, including the California Arbitration Act (California Code of Civil Procedure section 1280 and following). The Federal Arbitration Act shall not apply to the arbitration.

4.7.6 Unless University and Contractor otherwise agree in writing, the arbitration decision shall be binding upon the parties, made under and in accordance with the laws of the State of California, supported by substantial evidence, and in writing. If the total of all Claims or cross Claims submitted to arbitration is in

excess of \$50,000, the award shall contain the basis for the decision, findings of fact, and conclusions of law. Any arbitration award shall be subject to confirmation, vacation, or correction under the procedures and on the grounds specified in the California Code of Civil Procedure including without limitation Section 1296. The expenses and fees of the arbitrators and the administrative fees of the AAA shall be divided among the parties equally. Each party shall pay its own counsel fees, witness fees, and other expenses incurred for its own benefit.

4.7.7 University may, but is not required, to assert as a counterclaim any matter arising out of the claims asserted by Contractor in the arbitration. University's failure to assert any such counterclaim in an arbitration shall be without prejudice to the University's right to assert the counterclaim in litigation or other proceeding.

4.7.8 Any litigation shall be filed in the Superior Court of the State of California for the County in which the contract was to be performed.

4.8 WAIVER

4.8.1 A waiver of or failure by University or University's Representative to enforce any requirement in this Article 4 in connection with any Claim shall not constitute a waiver of, and shall not preclude the University or University's Representative from enforcing such requirements in connection with any other Claims.

4.8.2 The Contractor agrees and understands that no oral approval, either express or implied, of any Claim shall be binding upon University unless and until such approval is ratified by execution of a written Change Order.

ARTICLE 5 SUBCONTRACTORS

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

5.1.1 Unless otherwise stated in the Contract Documents, Contractor shall submit in writing, prior to entering into subcontract agreements, the names and addresses of all Subcontractors proposed for the Work that were not previously listed in Contractor's Bid.

5.1.2 Any Subcontractor may be disqualified if University or University's Representative determines that such Subcontractor fails to meet the requirements of the Contract Documents or for any other reason.

5.1.3 In accordance with the Subletting and Subcontracting Fair Practices Act, nothing herein shall be deemed to entitle Contractor, without the approval of University, to substitute other subcontractors for those named in Contractor's List of Subcontractors and List of Changes in Subcontractors Due to Alternates contained in the completed Bid Form; and, except with such approval, no such substitution shall be made.

5.1.4 Except as hereinafter provided, any increase in the cost of the Work resulting from the replacement or substitution of a Subcontractor, as required by University or University's Representative pursuant to Article 5.1.1 shall be borne solely by Contractor and Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time on account of such replacement or substitution.

5.2 SUBCONTRACTUAL RELATIONS

5.2.1 Any part of the Work performed for Contractor by a first-tier Subcontractor shall be pursuant to a written subcontract. Each such subcontract shall require the Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to Contractor by the terms of the Contract Documents, to assume toward Contractor all the obligations and responsibilities which Contractor assumes towards University by the Contract Documents, and to perform such portion of the Work in accordance with the Contract Documents. Each such subcontract shall preserve and protect the rights of University under the Contract Documents, with respect to the Work to be performed by Subcontractor, so that subcontracting thereof will not prejudice such rights. Contractor shall cause each such subcontract to expressly include the following requirements:

- .1 Subcontractor waives all rights that Subcontractor may have against University for damages caused by fire or other perils covered by builder's risk property insurance carried by Contractor or University, except for such rights Subcontractor may have to the proceeds of such insurance held by University under Article 11.
- .2 University and entities and agencies designated by University will have access to

and the right to audit and the right to copy at University's cost all of Subcontractor's books, records, contracts, correspondence, instructions, drawings, receipts, vouchers, purchase orders, and memoranda relating to the Work. Subcontractor shall preserve all such records and other items for a period of at least 3 years after Final Completion.

- .3 Subcontractor recognizes the rights of University under Article 5.3, Contingent Assignment of Subcontracts, and agrees, upon notice from University that University has elected to accept said assignment and to retain Subcontractor pursuant to the terms of the subcontract, to complete the unperformed obligations under the subcontract and, if requested by University, to execute a written agreement confirming that Subcontractor is bound to University under the terms of the subcontract.

5.2.2 Upon the request of University, Contractor shall promptly furnish to University a true, complete, and executed copy of any subcontract.

5.2.3 Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and University, except when, and only to the extent that, University elects to accept the assignment of the subcontract with such Subcontractor pursuant to Article 5.3, Contingent Assignment of Subcontracts.

5.3 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

5.3.1 Contractor hereby assigns to University all its interest in first-tier subcontracts now or hereafter entered into by Contractor for performance of any part of the Work. The assignment will be effective upon acceptance by University in writing and only as to those subcontracts which University designates in writing. University may accept said assignment at any time during the course of the Work and prior to Final Completion in the event of a suspension or termination of Contractor's rights under the Contract Documents. Such assignment is part of the consideration to University for entering into the Contract with Contractor and may not be withdrawn prior to Final Completion.

ARTICLE 6 CONSTRUCTION BY UNIVERSITY OR BY SEPARATE CONTRACTORS

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

6.1.1 University reserves the right to award separate contracts for, or to perform with its own forces, construction or operations related to the Work or other construction or operations at or affecting the Project site, including portions of the Work which have been deleted by Change Order. Contractor shall cooperate with University's forces and Separate Contractors.

6.1.2 University will provide coordination of the activities of University's forces and of each Separate Contractor with the Work of Contractor. Contractor shall participate with University and Separate Contractors in joint review of construction schedules and Project requirements when directed to do so. Contractor shall make necessary revisions to the Contract Schedule after such joint review.

6.2 MUTUAL RESPONSIBILITY

6.2.1 Contractor shall afford University and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities. Contractor shall connect, schedule, and coordinate its construction and operations with the construction and operations of University and Separate Contractors as required by the Contract Documents.

6.2.2 If a portion of the Work is dependent upon the proper execution or results of other construction or operations by University or Separate Contractors, Contractor shall inspect such other construction or operations before proceeding with that portion of the Work. Contractor shall promptly report to University's Representative apparent discrepancies or defects which render the other construction or operations unsuitable to receive the Work. Unless otherwise directed by University's Representative, Contractor shall not proceed with the portion of the Work affected until apparent discrepancies or defects have been corrected. Failure of Contractor to so report within a reasonable time after discovering such discrepancies or defects

shall constitute an acknowledgment that the other construction or operations by University or Separate Contractors is suitable to receive the Work, except as to defects not then reasonably discoverable.

6.3 UNIVERSITY'S RIGHT TO CLEAN UP

6.3.1 If a dispute arises between Contractor and Separate Contractors as to the responsibility under their respective contracts for maintaining the Project site and surrounding areas free from waste materials and rubbish, University may clean up and allocate the cost between those firms it deems to be responsible.

ARTICLE 7 CHANGES IN THE WORK

7.1 CHANGES

7.1.1 University may, from time to time, order or authorize additions, deletions, and other changes in the Work by Change Order or Field Order without invalidating the Contract and without notice to sureties. Absence of such notice shall not relieve such sureties of any of their obligations to University.

7.1.2 Contractor may request a Change Order under the procedures specified in Article 4.2.

7.1.3 A Field Order may be issued by University, does not require the agreement of Contractor, and shall be valid with or without the signature of Contractor.

7.1.4 Contractor shall proceed promptly with any changes in the Work, unless otherwise provided in the relevant Change Order or Field Order.

7.2 DEFINITIONS

7.2.1 A Change Order is a Contract Document (as shown in the Exhibits) which has been signed by both University and Contractor, and states their agreement, as applicable, to the following:

- .1 A change in the Work, if any.
- .2 The amount of an adjustment of the Contract Sum, if any.
- .3 The amount of an adjustment of the Contract Time, if any.
- .4 A modification to any other Contract term or condition.

7.2.2 A Unilateral Change Order may be issued by University, without the Contractor' signature, where the University determines that a change in the Work requires an adjustment of the Contract Sum or Contract Time, even though no agreement has been reached between University and Contractor with regard to such change in the Work.

7.2.3 A Field Order (as shown in the Exhibits) is a Contract Document issued by the University that orders the Contractor to perform Work. A Field Order may, but need not, constitute a change in the Work and may, but need not, entitle Contractor to an adjustment of the Contract Sum or Contract Time.

7.3 CHANGE ORDER PROCEDURES

7.3.1 Contractor shall provide a Change Order Request and Cost Proposal pursuant to Article 4.2 and this Article 7.3 of the General Conditions. Adjustments of the Contract Sum resulting from Extra Work and Deductive Work shall be determined using one of the methods described in this Article 7.3. Adjustments of the Contract Time shall be subject to the provisions in Article 8. Contractor's obligation to provide Cost Proposals shall be subject to the following:

- .1 The obligation of Contractor to provide Cost Proposals is not Extra Work, and shall not entitle the Contractor to an adjustment of the Contract Sum or Contract Time.
- .2 The failure of Contractor to timely provide a Cost Proposal pursuant to Article 4.2 and this Article 7.3.1 is a material breach of the Contract. Contractor shall be responsible for any delay in implementing a change for which Contractor failed to timely provide a Cost Proposal consistent with the requirements of Article 4.2 and this Article 7.3.1.

7.3.2 The term "Cost of Extra Work" as used in this Article 7.3 shall mean actual costs incurred or to be incurred by Contractor and each Subcontractor regardless of tier involved, to the extent not otherwise

disallowed under Article 7.3.3, and shall be limited to the following (to the extent the Contractor demonstrates that the costs are both reasonable and actually incurred, if such costs have been incurred):

- .1 Straight-time wages or salaries for employees employed at the Project site, or at fabrication sites off the Project site, incurred as a result of the performance of the Extra Work.2 Fringe Benefits and Payroll Taxes for employees employed at the Project site, or at fabrication sites off the Project site, incurred as a result of the performance of the Extra Work.
- .3 Overtime wages or salaries, specifically authorized in writing by University's Representative, for employees employed at the Project site, or at fabrication sites off the Project site, incurred as a result of the performance of the Extra Work.
- .4 Fringe Benefits and Payroll Taxes for overtime Work specifically authorized in writing by University's Representative, for employees employed at the Project site, or at fabrication sites off the Project site, incurred as a result of the performance of the Extra Work.
- .5 Costs of materials and consumable items which are furnished and incorporated into the Extra Work, as approved by University's Representative. Such costs shall be charged at the lowest price available to the Contractor but in no event shall such costs exceed competitive costs obtainable from other subcontractors, suppliers, manufacturers, and distributors in the area of the Project site. All discounts, rebates, and refunds and all returns from sale of surplus materials and consumable items shall accrue to University and Contractor shall make provisions so that they may be obtained.
- .6 Sales taxes on the costs of materials and consumable items which are incorporated into and used in the performance of the Extra Work pursuant to Article 7.3.2.5 above.
- .7 Rental charges for necessary machinery and equipment, whether owned or hired, as authorized in writing by University's Representative, exclusive of hand tools, used directly in the performance of the Extra Work. Such rental charges shall not exceed the current Equipment Rental Rates published by the California Department of Transportation for the area in which the work is performed. Such rental rates are found at <http://www.dot.ca.gov/hq/construc/equipmnt.html> . Contractor shall attach a copy of said schedule to the Cost Proposal. The charges for any machinery and equipment shall cease when the use thereof is no longer necessary for the Extra Work.
- .8 Additional costs of royalties and permits due to the performance of the Extra Work.
- .9 The cost for Insurance and Bonds shall not exceed 2% of items .1 through .8 above.

University and Contractor may agree upon rates to be charged for any of the items listed in this Article 7.3.2. Such agreed upon rates shall be subject to audit pursuant to Article 15.7. Contractor shall promptly refund to University any amounts (including associated mark-ups) in excess of the actual costs of such items.

7.3.3 Cost of Extra Work shall not include any of the following:

- .1 Supervision
- .2 Superintendent(s).
- .3 Assistant Superintendent(s).
- .4 Project Engineer(s).
- .5 Project Manager(s).
- .6 Scheduler(s).
- .7 Estimator(s).
- .8 Small tools (Replacement value does not exceed \$300).
- .9 Office expenses including staff, materials and supplies.
- .10 On-site or off-site trailer and storage rental and expenses.
- .11 Site fencing.
- .12 Utilities including gas, electric, sewer, water, telephone, facsimile, copier equipment.

- .13 Data processing personnel and equipment.
- .14 Federal, state, or local business income and franchise taxes.
- .15 Overhead and Profit.
- .16 Costs and expenses of any kind or item not specifically and expressly included in Article 7.3.2.

7.3.4 The term “Contractor Fee” shall mean the full amount of compensation, both direct and indirect (including without limitation all overhead and profit), to be paid to Contractor for its own Work and the Work of all Subcontractors, for all costs and expenses not included in the Cost of Extra Work, whether or not such costs and expenses are specifically referred to in Article 7.3.3. The Contractor Fee shall not be compounded.

The Contractor Fee shall be computed as follows:

- .1 Fifteen percent (15%) of the cost of that portion of the Extra Work to be performed by the prime contractor with its own forces.
- .2 Fifteen percent (15%) of the cost of that portion of the Work to be performed by a Subcontractor with its own forces, plus 5% for the prime contractor. Total combined Contractor and Subcontractor fee shall not exceed 20%.
- .3 Fifteen percent (15%) of the cost of that portion of the Work to be performed by a sub-subcontractor with its own forces, or any lower tier of Subcontractor, plus 5% for the Subcontractor, plus 5% for the prime contractor. Total combined Contractor, Subcontractor and all sub-subcontractor fee shall not exceed 25%.

7.3.5 Compensation for Extra Work shall be computed on the basis of one or more of the following:

- .1 Where the Work involved is covered by Unit Prices contained in the Contract Documents, by application of the Unit Prices to the quantities of the items involved.
- .2 Where Unit Prices are not applicable, a mutually agreed upon lump sum supported by a Cost Proposal pursuant to 7.3.1.
- .3 Where Contractor and University cannot agree upon a lump sum, by Cost of Extra Work plus Contractor Fee applicable to such Extra Work.

7.3.6 As a condition to Contractor's right to an adjustment of the Contract Sum pursuant to Article 7.3.5.3, Contractor must keep daily detailed and accurate records itemizing each element of cost and shall provide substantiating records and documentation, including time cards and invoices. Such records and documentation shall be submitted to University's Representative on a daily basis.

7.3.7 For Work to be deleted by Change Order, the reduction of the Contract Sum shall be computed on the basis of one or more of the following:

- .1 Unit Prices stated in the Contract Documents.
- .2 Where Unit Prices are not applicable, a lump sum agreed upon by University and Contractor, based upon the actual costs which would have been incurred in performing the deleted portions of the Work as calculated in accordance with Articles 7.3.2 and 7.3.3, supported by a Cost Proposal pursuant to Article 7.3.1.

7.3.8 If any one Change involves both Extra Work and Deleted Work in the same portion of the Work, a Contractor fee will not be allowed if the deductive cost exceeds the additive cost. If the additive cost exceeds the deductive cost, a Contractor Fee will be allowed only on the difference between the two amounts.

7.3.9 The Contract Sum will be adjusted for a delay if, and only if, Contractor demonstrates that all of the following three conditions are met:

- .1 Condition Number One: The delay results in an extension of the Contract Time pursuant to Article 8.4.1.
- .2 Condition Number Two: The delay is caused solely by one or more of the following:
 - .1 An error or omission in the Contract Documents; or
 - .2 The University's decision to change the scope of the Work, where such decision is not the result of any default or

- .3 misconduct of the Contractor; or
- .3 The University's decision to suspend the Work, where such decision is not the result of any default or misconduct of the Contractor; or
- .4 The failure of the University (including the University acting through its consultants, Design Professionals, Separate Contractors or the University's Representative) to perform any Contract obligation where the failure to so perform is not the result of any default or misconduct of the Contractor.
- .5 A materially differing site condition pursuant to Article 3.17.

- .3 Condition Number Three: The delay is not concurrent with a delay caused by an event other than those listed in Article 7.3.9.2.

7.3.10 For each day of delay that meets all three conditions prescribed in Article 7.3.9 the Contract Sum will be adjusted by the daily rate included in the Agreement and specifically identified as the rate to be paid to Contractor for Compensable Delays. Pursuant to Article 9.7.4, said daily rate shall not apply to delays occurring after Substantial Completion.

7.3.11 Except as provided in Articles 7 and 8, Contractor shall have no claim for damage or compensation for any delay, interruption, hindrance, or disruption.

7.3.12 If for any reason one or more of the conditions prescribed in Article 7.3.9 is held legally unenforceable, the remaining conditions must be met as a condition to obtaining an adjustment of the Contract Time under Article 7.3.10.

7.4 FIELD ORDERS

7.4.1 Field Orders issued by the University Representative shall be subject to the following:

- .1 A Field Order may state that it does or does not constitute a change in the Work.
- .2 If the Field Order states that it does not constitute a change in the Work and the Contractor asserts that the Field Order constitutes a change in the Work, in order to obtain an adjustment of the Contract Sum or Contract Time for the Work encompassed by the Field Order, Contractor must follow all procedures set forth in Article 4, starting with the requirement of submitting a timely Change Order Request within 7 days of Contractor's receipt of the Field Order; failure to strictly follow those procedures is a bar to any Claim for an adjustment of the Contract Sum or Contract Time arising from performance of the Work described in the Field Order.
- .3 If the Field Order states that it does constitute a change in the Work, the Work described in the Field Order shall be considered Extra Work and the Contractor shall be entitled to an adjustment of the Contract Sum and Contract Time, calculated under and subject to Contractor's compliance with the procedures for verifying and substantiating costs and delays in Articles 7 and 8.
- .4 In addition, if the Field Order states that it does constitute a change in the Work, the Field Order may or may not contain University's estimate of adjustment of Contract Sum and/or Contract Time. If the Field Order contains an estimate of adjustment of Contract Sum or Contract Time, the Field Order is subject to the following:
 - .1 The Contractor shall not exceed the University's estimate of adjustment to Contract Sum or Contract Time without prior written notification to the University's Representative.
 - .2 If the Contractor asserts that the change in the Work encompassed by the Field Order may entitle Contractor to an adjustment of Contract Sum or Contract Time in excess of the University's estimate, in order not to be bound by University's estimate Contractor must follow all procedures set forth in Article 4, starting with the requirement of submitting a timely Change Order Request within 7 days of

Contractor's receipt of the Field Order; failure to strictly follow those procedures is a bar to any Claim for an adjustment of the Contract Sum or Contract Time, in excess of the University's estimate, arising from performance of the Work described in the Field Order.

7.4.2 Upon receipt of a Field Order, Contractor shall promptly proceed to perform the Work as ordered in the Field Order notwithstanding any disagreement by the Contractor concerning whether the Work is extra.

7.5 VARIATION IN QUANTITY OF UNIT PRICE WORK

7.5.1 University has the right to increase or decrease the quantity of any Unit price item for which an Estimated Quantity is stated in the Bid Form.

7.6 WAIVER

7.6.1 A waiver of or failure by University or University's Representative to enforce any requirement in this Article 7, including without limitation the requirements in Articles 7.3.6, 7.3.8, 7.3.9, 7.3.10, 7.3.11, or 7.3.12 in connection with any adjustment of the Contract Sum, will not constitute a waiver of, and will not preclude the University or University's Representative from enforcing, such requirements in connection with any other adjustments of the Contract Sum.

7.6.2 The Contractor agrees and understands that no oral approval, either express or implied, of any adjustment of the Contract Sum by University or its agents shall be binding upon University unless and until such approval is ratified by execution of a written Change Order.

ARTICLE 8 CONTRACT TIME

8.1 COMMENCEMENT OF THE WORK

8.1.1 The date of commencement of the Work shall be set forth in the Notice To Proceed. The date of commencement of the Work shall not be postponed by the failure of Contractor, Subcontractors, or of persons or firms for whom Contractor is responsible, to act.

8.2 PROGRESS AND COMPLETION

8.2.1 By signing the Agreement:

- .1 Contractor represents to University that the Contract Time is reasonable for performing the Work and that Contractor is able to perform the Work within the Contract Time.
- .2 Contractor agrees that University is purchasing the right to have the Contractor present on the Project site for the full duration of the Contract Time, even if Contractor could finish the Contract in less than the Contract Time.

8.2.2 Contractor shall not, except by agreement or instruction of University in writing, commence operations on the Project site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by Contractor. The dates of commencement and Final Completion of the Work shall not be changed by the effective date of such insurance.

8.2.3 Contractor shall proceed expeditiously with adequate forces and shall achieve full completion of the Work within the Contract Time. If University's Representative determines and notifies Contractor that Contractor's progress is such that Contractor will not achieve full completion of the Work within the Contract Time, Contractor shall immediately and at no additional cost to University, take all measures necessary, including working such overtime, additional shifts, Sundays, or holidays as may be required to ensure that the Work is fully completed within the Contract Time. Upon receipt of such notice from University's representative, Contractor shall immediately notify University's Representative of all measures to be taken to ensure full completion of the Work within the Contract Time. Contractor shall reimburse University for any extra costs or expenses (including the reasonable value of any services provided by University's employees) incurred by University as the result of such measures.

8.3 DELAY

8.3.1 Except and only to the extent provided otherwise in Articles 7 and 8, by signing the Agreement, Contractor agrees:

- .1 to bear the risk of delays to the Work; and
- .2 that Contractor's bid for the Contract was made with full knowledge of this risk.

In agreeing to bear the risk of delays to the Work, Contractor understands that, except and only to the extent provided otherwise in Articles 7 and 8, the occurrence of events that delay the Work shall not excuse Contractor from its obligation to achieve Final Completion of the Work within the Contract Time, and shall not entitle the Contractor to an adjustment of the Contract Sum.

8.4 ADJUSTMENT OF THE CONTRACT TIME FOR DELAY

8.4.1 Subject to Article 8.4.2, the Contract Time will be extended for each day of delay for which Contractor demonstrates that all of the following four conditions have been met; a time extension will not be granted for any day of delay for which Contractor fails to demonstrate compliance with the four conditions:

- .1 Condition Number One: The delay is critical. A delay is critical if and only to the extent it delays a work activity that cannot be delayed without delaying Final Completion of the Work beyond the Contract Time. Under this Article 8.4.1.2, if the Contract Schedule shows Final Completion of the Work before expiration of the Contract Time, a delay is critical if and only to the extent the delay pushes Final Completion of the Work to a date that is beyond the Contract Time.
- .2 Condition Number Two: Within 7 days of the date the Contractor discovers or reasonably should discover an act, error, omission or unforeseen condition or event causing the delay is likely to have an impact on the critical path of the Project, (even if the Contractor has not yet been delayed when the Contractor discovers or reasonably should discover the critical path impact of the act, error, omission or unforeseen condition giving rise to the delay) the Contractor submits both a timely and complete Change Order Request that meets the requirements of Article 4.2.
- .3 Condition Number Three: The delay is not caused by:
 - .1 A concealed, unforeseen or unknown condition or event except for a materially differing site condition pursuant to Article 3.17; or
 - .2 The financial inability, misconduct or default of the Contractor, a Subcontractor or supplier; or
 - .3 The unavailability of materials or parts.
- .4 Condition Number Four: The delay is caused by:
 - .1 Fire; or
 - .2 Strikes, boycotts, or like obstructive actions by labor organizations; or
 - .3 Acts of God (As used herein, "Acts of God" shall include only earthquakes in excess of a magnitude of 3.5 on the Richter Scale and tidal waves); or
 - .4 A materially differing site condition pursuant to Article 3.17; or
 - .5 An error or omission in the Contract; or
 - .6 The University's decision to change the scope of the Work, where such decision is not the result of any default or misconduct of the Contractor; or
 - .7 The University's decision to suspend the Work, where such decision is not the result of any default or misconduct of the Contractor; or
 - .8 The failure of the University (including the University acting through its consultants, Design Professionals, Separate Contractors or the University's representative) to perform any

- Contract obligation unless such failure is due to Contractor's default or misconduct.
- .9 "Adverse weather," but only for such days of adverse weather, or on-site conditions caused by adverse weather, that are in excess of the number of days specified in the Supplementary Conditions. In order for a day to be considered a day of adverse weather for the purpose of determining whether Contractor is entitled to an adjustment in Contract Time, both of the following conditions must be met:
 - .1 the day must be a day in which, as a result of adverse weather, less than one half day of critical path work is performed by Contractor; and
 - .2 the day must be identified in the Contract Schedule as a scheduled work day.

8.4.2 If and only if a delay meets all four conditions prescribed in Article 8.4.1, then a time extension will be granted for each day that Final Completion of the Work is delayed beyond the Contract Time, subject to the following:

- .1 When two or more delays (each of which meet all four conditions prescribed in Article 8.4.1) occur concurrently on the same day, and each such concurrent delay by itself without consideration of the other delays would be critical, then all such concurrent delays shall be considered critical. For the purpose of determining whether and to what extent the Contract Time should be adjusted pursuant to Article 8.4.2, such concurrent critical delays shall be treated as a single delay for each such day.
- .2 Contractor shall be entitled to a time extension for a day of delay that meets all four requirements of Article 8.4.1 if the delay is concurrent with a delay that does not meet all four conditions of Article 8.4.1.

8.4.3 If for any reason one or more of the four conditions prescribed in Article 8.4.1 is held legally unenforceable, then all remaining conditions must be met as a condition to obtaining an extension of the Contract Time under Article 8.4.2.

8.5 COMPENSATION FOR DELAY

8.5.1 To the maximum extent allowed by law, any adjustment of the Contract Sum as the result of delays shall be limited to the amounts specified in Article 7. Such adjustment shall, to the maximum extent allowed by law, constitute payment in full for all delay related costs (including costs for disruption, interruption and hindrance, general conditions, on and off-site overhead and profit) of Contractor, its Suppliers and Subcontractors of all tiers and all persons and entities working under or claiming through Contractor in connection with the Project.

8.5.2 By signing the Agreement, the parties agree that the University is buying the right to do any or all of the following, which are reasonable and within the contemplation of the parties:

- .1 To order changes in the Work, regardless of the extent and number of changes, including without limitation:
 - .1 Changes to correct errors or omissions, if any, in the Contract Documents.
 - .2 Changes resulting from the University's decision to change the scope of the Work subsequent to execution of the Contract.
 - .3 Changes due to unforeseen conditions.
- .2 To suspend the Work or any part thereof.
- .3 To delay the Work, including without limitation, delays resulting from the failure of the University or the University's Representative to timely perform any Contract obligation and delays for University's convenience.

8.6 WAIVER

8.6.1 A waiver of or failure by University or University's Representative to enforce any requirement in this Article 8, including without limitation the requirements in Article 8.4, in connection with any or all past delays shall not constitute a waiver of, and shall not preclude the University or University's Representative from enforcing, such requirements in connection with any present or future delays.

8.6.2 Contractor agrees and understands that no oral approval, either express or implied, of any time extension by University or its agents shall be binding upon University unless and until such approval is ratified by execution of a written Change Order.

ARTICLE 9 PAYMENTS AND COMPLETION

9.1 COST BREAKDOWN

9.1.1 Within 10 days after receipt of the Notice of Selection as the apparent lowest responsible Bidder, and with the Agreement, Contractor shall submit to University's Representative a Cost Breakdown of the Contract Sum in the form contained in the Exhibits. The Cost Breakdown shall itemize as separate line items the cost of each Work Activity and all associated costs, including but not limited to warranties, as-built documents, overhead expenses, and the total allowance for profit. Insurance and bonds shall each be listed as separate line items. The total of all line items shall equal the Contract Sum. The Cost Breakdown, when approved by the University's Representative, shall become the basis for determining the cost of Work performed for Contractor's Applications for Payment.

9.2 PROGRESS PAYMENT

9.2.1 University agrees to pay monthly to Contractor, subject to Article 9.4.3, an amount equal to 95% of the sum of the following:

- .1 Cost of the Work in permanent place as of the date of the Contractor's Application For Payment.
- .2 Plus cost of materials not yet incorporated in the Work, subject to Article 9.3.5.
- .3 Less amounts previously paid.

Under this Article 9.2.1, University may, but is not required, to pay Contractor more frequently than monthly.

9.2.2 After Substantial Completion and subject to Article 9.4.3, University will make any of the remaining progress payments in full.

9.3 APPLICATION FOR PAYMENT

9.3.1 On or before the 10th day of the month or such other date as is established by the Contract Documents, Contractor shall submit to University's Representative an itemized Application For Payment, for the cost of the Work in permanent place, as approved by University's Representative, which has been completed in accordance with the Contract Documents, less amounts previously paid.

The Application For Payment shall be prepared as follows:

- .1 Use the form contained in the Exhibits.
- .2 Itemize in accordance with the Cost Breakdown.
- .3 Include such data substantiating Contractor's right to payment as University's Representative may reasonably require, such as invoices, certified payrolls, daily time and material records, and, if securities are deposited in lieu of retention pursuant to Article 9.5, a certification of the market value of all such securities as of a date not earlier than 5 days prior to the date of the Application For Payment.
- .4 Itemize retention.

9.3.2 Applications For Payment shall not include requests for payment on account of (1) changes which have not been authorized by Change Orders or (2) amounts Contractor does not intend to pay a Subcontractor

because of a dispute or other reason.

9.3.3 If required by University, an Application For Payment shall be accompanied by (1) a summary showing payments that will be made to Subcontractors covered by such application and conditional releases upon progress payment or final payment and (2) unconditional waivers and releases of claims and stop payment notices, in the form contained in the Exhibits, from each Subcontractor listed in the preceding Application For Payment covering sums disbursed pursuant to that preceding Application For Payment.

9.3.4 Contractor warrants that, upon submittal of an Application For Payment, all Work, for which Certificates For Payment have been previously issued and payment has been received from University, shall be free and clear of all claims, stop payment notices, security interests, and encumbrances in favor of Contractor, Subcontractors, or other persons or firms entitled to make claims by reason of having provided labor, materials, or equipment relating to the Work.

9.3.5 At the sole discretion of University, University's Representative may approve for inclusion in the Application For Payment the cost of materials not yet incorporated in the Work but already delivered and suitably stored either at the Project site or at some other appropriate location acceptable to University's Representative. In such case, Contractor shall furnish evidence satisfactory to University's Representative (1) of the cost of such materials and (2) that such materials are under the exclusive control of Contractor. Only materials to be incorporated in the Work will be considered for payment. Any payment shall not be construed as acceptance of such materials nor relieve Contractor from sole responsibility for the care and protection of such materials; nor relieve Contractor from risk of loss to such materials from any cause whatsoever; nor relieve Contractor from its obligation to complete the Work in accordance with the Contract; nor act as a waiver of the right of University to require fulfillment of all terms of the Contract. Nothing contained within this Article 9.3.5 shall be deemed to obligate University to agree to payment for any non-incorporated materials or any part thereof, payment being in the sole and absolute discretion of University.

9.4 CERTIFICATE FOR PAYMENT

9.4.1 If Contractor has submitted an Application For Payment in accordance with Article 9.3, University's Representative shall, not later than 5 working days after the date of receipt of the Application For Payment, issue to University, with a copy to Contractor, a Certificate For Payment for such amount as University's Representative determines to be properly due.

9.4.2 If any such Application For Payment is determined not to be in accordance with Article 9.3, University will inform Contractor as soon as practicable, but not later than 5 working days after receipt. Thereafter, Contractor shall have 3 days to revise and resubmit such Application For Payment; otherwise University's Representative may issue a Certificate For Payment in the amount that University's Representative determines to be properly due without regard to such Application For Payment.

9.4.3 Approval of all or any part of an Application For Payment may be withheld, a Certificate For Payment may be withheld, and all or part of a previous Certificate For Payment may be nullified and that amount withheld from a current Certificate For Payment on account of any of the following:

- .1 Defective Work not remedied.
- .2 Third-party claims against Contractor or University arising from the acts or omissions of Contractor or Subcontractors.
- .3 Stop payment notices.
- .4 Failure of Contractor to make timely payments due Subcontractors for material or labor.
- .5 A reasonable doubt that the Work can be completed for the balance of the Contract Sum then unpaid.
- .6 Damage to University or Separate Contractor for which Contractor is responsible.
- .7 Reasonable evidence that the Work will not be completed within the Contract Time; and that the unpaid balance of the Contract Sum would not be adequate to cover University's damages for the anticipated delay.
- .8 Failure of Contractor to maintain and update as-built documents.
- .9 Failure of Contractor to submit schedules or their updates as required by the Contract Documents.
- .10 Failure to provide conditional or unconditional releases from any Subcontractor or supplier, if such waiver(s) have been requested by University's Representative.

- .11 Performance of Work by Contractor without properly processed Shop Drawings.
- .12 Liquidated damages assessed in accordance with Article 5 of the Agreement.
- .13 Failure to provide updated Reports of Subcontractor Information and Self-Certifications, as applicable.
- .14 Failure to provide a Final Distribution of Contract Dollars with final Application for Payment.
- .15 Any other failure of Contractor to perform its obligations under the Contract Documents.

9.4.4 Subject to the withholding provisions of Article 9.4.3, University will pay Contractor the amount set forth in the Certificate For Payment no later than 10 days after the issuance of the Certificate For Payment.

9.4.5 Neither University nor University's Representative will have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

9.4.6 Neither a Certificate For Payment nor a progress payment made by University will constitute acceptance of Defective Work.

9.5 DEPOSIT OF SECURITIES IN LIEU OF RETENTION AND DEPOSIT OF RETENTION INTO ESCROW

9.5.1 At the request and expense of Contractor, a substitution of securities may be made for any monies retained by University under Article 9.2 to ensure performance under the Contract Documents. Securities equivalent in value to the retention amount required by the Contract Documents for each Certificate For Payment shall be deposited by Contractor with a state or federally chartered bank in the State of California ("Escrow Agent"), which shall hold such securities pursuant to the escrow agreement referred to in Article 9.5.3 until retention is due in accordance with Article 9.8. Securities shall be valued as often as conditions of the securities market warrant, but in no case less than once per month. Contractor shall deposit additional securities so that the current market value of the total of all deposited securities shall be at least equal to the total required amount of retention.

9.5.2 Alternatively to Article 9.5.1, and at the request and expense of Contractor, University will deposit retention directly with Escrow Agent. Contractor may direct the investment of such deposited retention into interest bearing accounts or securities, and such deposits or securities shall be held by Escrow Agent upon the same terms provided for securities deposited by Contractor. Contractor and its surety shall bear the risk of failure of the Escrow Agent selected.

9.5.3 A prerequisite to the substitution of securities in lieu of retention or the deposit of retention into escrow shall be the execution by Contractor, University, and Escrow Agent of an Escrow Agreement for Deposit of Securities in Lieu of Retention and Deposit of Retention in the form contained in the Exhibits. The Contractor shall submit the Selection of Retention Options and the Escrow Agreement for Deposit of Securities in Lieu of Retention and Deposit of Retention not later than the date when 50% of the Work has been completed. The terms of such escrow agreement are incorporated into the requirements of this Article 9.5.

9.6 BENEFICIAL OCCUPANCY

9.6.1 University reserves the right, at its option and convenience, to occupy or otherwise make use of any part of the Work at any time prior to Substantial Completion or Final Completion upon 10 days' notice to Contractor. Such occupancy or use is herein referred to as "Beneficial Occupancy." Beneficial Occupancy shall be subject to the following conditions:

- .1 University's Representative will make an inspection of the portion of the Project to be beneficially occupied and prepare a list of items to be completed or corrected prior to Final Completion. Prior to Beneficial Occupancy, University will issue a Certificate of Beneficial Occupancy on University's form.
- .2 Beneficial Occupancy by University shall not be construed by Contractor as an acceptance by University of that portion of the Work which is to be occupied.
- .3 Beneficial Occupancy by University shall not constitute a waiver of existing claims of University or Contractor against each other.

- .4 Contractor shall provide, in the areas beneficially occupied and on a 24 hour and 7 day week basis as required, utility services, heating, and cooling for systems which are in operable condition at the time of Beneficial Occupancy. All responsibility for the operation and maintenance of equipment shall remain with Contractor while the equipment is so operated. Contractor shall submit to University an itemized list of each piece of equipment so operated with the date operation commences.
- .5 The Guarantee to Repair Periods, as defined in Article 12.2, will commence upon the occupancy date stated in the Certificate of Beneficial Occupancy except that the Guarantee to Repair Periods for that part of equipment or systems that serve portions of the Work for which University has not taken Beneficial Occupancy or issued a Certificate of Substantial Completion shall not commence until the University has taken Beneficial Occupancy for that portion of the Work or has issued a Certificate of Substantial Completion with respect to the entire Project.
- .6 University will pay all normal operating and maintenance costs resulting from its use of equipment in areas beneficially occupied.
- .7 University will pay all utility costs which arise out of the Beneficial Occupancy.
- .8 Contractor shall not be responsible for providing security in areas beneficially occupied.
- .9 University will use its best efforts to prevent its Beneficial Occupancy from interfering with the conduct of Contractor's remaining Work.
- .10 Contractor shall not be required to repair damage caused by University in its Beneficial Occupancy.
- .11 Except as provided in this Article 9.6, there shall be no added cost to University due to Beneficial Occupancy.
- .12 Contractor shall continue to maintain all insurance required by the Contract in full force and effect.

9.7 SUBSTANTIAL COMPLETION

9.7.1 "Substantial Completion" means the stage in the progress of the Work, as determined by University's Representative, when the Work is complete and in accordance with the Contract Documents except only for completion of minor items which do not impair University's ability to occupy and fully utilize the Work for its intended purpose and a Certificate of Occupancy has been issued by the University.

9.7.2 When Contractor gives notice to University's Representative that the Work is substantially complete, unless University's Representative determines that the Work is not sufficiently complete to warrant an inspection to determine Substantial Completion, University's Representative will inspect the Work. If the University's Representative determines that the Work is not substantially completed the University's Representative will prepare and give to Contractor a comprehensive list of items to be completed or corrected before establishing Substantial Completion. Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of Contractor to complete all Work in accordance with the Contract Documents. Upon notification that the items on the list are completed or corrected, as applicable, the University's Representative will make an inspection to determine whether the Work is substantially complete. Costs for additional inspection by University's Representative shall be deducted from any monies due and payable to Contractor.

9.7.3 When University's Representative determines that the Work is substantially complete, University's Representative will arrange for inspection by University's Building Official and other officials, as appropriate, for the purpose of issuing a Certificate of Occupancy. After a Certificate of Occupancy has been issued by the University, the University's Representative will prepare a Certificate of Substantial Completion on University's form as contained in the Exhibits, which, when signed by University, shall establish the date of Substantial Completion and the responsibilities of University and Contractor for security, maintenance, utilities, insurance, and damage to the Work. The University's Representative will prepare and furnish to the Contractor a comprehensive "punch list" of items to be completed or corrected prior to Final Completion.

9.7.4 Unless otherwise provided in the Certificate of Substantial Completion, the Guarantee To Repair Period for the Work covered by the Certificate of Substantial Completion, shall commence on the date of Substantial Completion of the Work except that Substantial Completion shall not commence the Guarantee to Repair Period for any equipment or systems that:

- .1 Are not operational (equipment or systems shall not be considered operational if they cannot be used to provide the intended service; or
- .2 Are not accepted by the University.

The Guarantee To Repair Period for equipment or systems which become operational and accepted subsequent to Substantial Completion will begin on the date of their written acceptance by University.

9.7.5 The daily rate included in the Agreement and specifically identified as the rate to be paid to Contractor for Compensable Delays shall not apply to any delays occurring after the Work is substantially completed.

9.8 FINAL COMPLETION, FINAL PAYMENT, AND RELEASE OF RETENTION

9.8.1 Upon receipt of notice from Contractor that the Work is ready for final inspection, University's Representative will make such inspection. Final Completion shall be when University's Representative determines that the Work is fully completed and in accordance with the Contract Documents, including without limitation, satisfaction of all "punch list" items, and determines that a Certificate of Occupancy has been issued by the University. University will file a Notice of Completion within 15 days after Final Completion. After receipt of the final Application For Payment, if University's Representative determines that Final Completion has occurred, University's Representative will issue the final Certificate For Payment.

9.8.2 Final payment and retention shall be released to Contractor, as set forth in Article 9.8.3, after:

- .1 Contractor submits the final Application For Payment and all submittals required in accordance with Article 9.3;
- .2 Contractor submits all guarantees and warranties procured by Contractor from Subcontractors, all operating manuals for equipment installed in the Project, as-built documents, and all other submittals required by the Contract Documents;
- .3 Contractor submits the Final Distribution of Contract Dollars in the form contained in the Exhibits; and
- .4 University's Representative issues the final Certificate For Payment.

At its sole discretion, after Final Completion, University may waive the requirement that Contractor submit a final Application For Payment before making final payment and/or release of retention to Contractor.

9.8.3 Final payment shall be paid not more than 10 days after University's Representative issues the final Certificate For Payment. Retention shall be released to Contractor 35 days after the filing of the Notice of Completion.

9.8.4 Acceptance of final payment by Contractor shall constitute a waiver of all claims, except claims for retention and claims previously made in writing and identified by Contractor as unsettled at the time of the final Application For Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 Contractor shall be solely 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 Contractor shall take adequate precautions for safety of and shall provide adequate protection to prevent damage, injury, or loss to the following:

- .1 Employees involved in the Work and other persons who may be affected thereby.

- .2 The Work in place and materials and equipment to be incorporated therein, whether in storage on or off the Project site, under care, custody, or control of Contractor or Subcontractors.
- .3 Other property at the Project site and adjoining property.

10.2.2 Contractor shall erect and maintain, as required by existing conditions and performance of the Work, adequate safeguards for safety and protection, including providing adequate lighting and ventilation, posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.

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

10.2.4 Contractor shall designate a responsible member of Contractor's organization at the Project site whose duty shall be the prevention of accidents. That person shall be the Superintendent, unless otherwise designated by Contractor in writing to University and University's Representative.

10.2.5 Contractor shall not load or permit any part of the Work or the Project site to be loaded so as to endanger the safety of persons or property.

10.3 EMERGENCIES

10.3.1 In an emergency affecting the safety of persons or property, Contractor shall act to prevent or minimize damage, injury, or loss. Contractor shall promptly notify University's Representative, which notice may be oral followed by written confirmation, of the occurrence of such an emergency and Contractor's action.

ARTICLE 11 INSURANCE AND BONDS

11.1 CONTRACTOR'S INSURANCE

11.1.1 Contractor shall, at its expense, purchase and maintain in full force and effect such insurance as will protect itself and University from claims, such as for bodily injury, wrongful death, and property damage, which may arise out of or result from the Work required by the Contract Documents, whether such Work is done by Contractor, by any Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. The amounts of such insurance and any additional insurance requirements are specified in the Supplementary Conditions. See Article 3.21 regarding the scope and extent of Contractor's liability for and repair of damaged Work.

11.1.2 The following policies and coverages shall be furnished by Contractor:

- .1 **COMMERCIAL GENERAL LIABILITY INSURANCE** subject to terms no less broad than the Insurance Services Office's (ISO) form CG 0001 (2004 or later edition), or a substitute form providing coverage at least as broad as the ISO form specified, covering all Work done by or on behalf of Contractor and providing insurance for bodily injury, wrongful death, personal injury, property damage, and contractual liability. There shall be no limitations or exclusions of coverage beyond those contained in the standard ISO form CG 0001 (2004 or later edition). Except with respect to bodily injury and property damage included within the products and completed operations hazards, the aggregate limit shall apply separately to Work required of Contractor by these Contract Documents. Contractor shall continue to maintain Products/Completed Operations liability insurance coverage for a minimum completed operations period of 10 year(s) or the applicable Statute of Repose as provided by the law of the jurisdiction where the project is located as shown in the policy(ies), whichever is less. All terms and conditions of such coverage shall be maintained during this completed operations period, including the required minimum coverage limits and the requirement to provide the University with coverage as an additional insured for completed operations as

specified under this Article 11.1 and the Supplementary Conditions.

- .2 BUSINESS AUTOMOBILE LIABILITY INSURANCE subject to terms no less broad than the Insurance Services Office's (ISO) form CA 0001 (1990 or later edition), or a substitute form providing coverage at least as broad as the ISO form specified, covering owned, hired, leased, and non-owned automobiles used by or on behalf of Insured, and providing liability insurance for bodily injury and property damage arising from the use or operation of such auto(s) with a minimum combined single limit of not less than \$1,000,000 per accident. The minimum limits required may be satisfied by combination of primary and umbrella/excess policies. The Commercial Automobile Liability Insurance shall be provided by Contractor for all on site and off site Work.
- .3 WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE as required by Federal and State of California law. Contractor shall also require all of its Subcontractors to maintain this insurance coverage.

11.1.3 The coverages required under this Article 11 shall not in any way limit the liability of Contractor.

11.1.4 Contractor's Certificates of Insurance, executed by a duly authorized representative of each broker of record or each insurer as evidence of the insurance required by these Contract Documents and on the form contained in the Exhibits, shall be submitted by Contractor to University prior to the commencement of Work by the Contractor. The Certificates of Insurance shall provide for no cancellation or modification of coverage without prior written notice to University, in accordance with policy provisions.

11.1.5 In the event Contractor does not comply with these insurance requirements, University may, at its option, provide insurance coverage to protect University; and the cost of such insurance shall be paid by Contractor and may be deducted from the Contract Sum.

11.1.6 Contractor's insurance as required by Article 11.1.2, shall, by endorsement to the policies, include the following:

- .1 The Regents of the University of California, The University of California, University, and each of their Representatives, consultants, officers, agents, employees, and each of their Representative's consultants, regardless of whether or not identified in the Contract Documents or to the Contractor in writing, will be included as additional insureds on the Contractor's General Liability insurance for and relating to the Work to be performed by the Contractor and Subcontractors. Additional Insured provision or endorsement shall be at least as broad as the CG 20 07 04 in combination with the CG 20 37 07 04 (or earlier versions of CG 20 10 and CG 20 37 or Form B - CG 20 10 11 85 by itself), as published by Insurance Services Offices (ISO) and shall be included with Certificates of Insurance. The additional insured requirement shall not apply to Worker's Compensation and Employer's Liability insurance.

Further, the amount of insurance available to the University shall be for the full amount of the loss up to the available policy limits and shall not be limited to any minimum requirements stated in the Contract Documents.

- .2 University, University's consultants, University's Representative, and University's Representative's consultants will not by reason of their inclusion as insureds incur liability to the insurance carriers for payment of premiums for such insurance.
- .3 Coverage provided is primary and is not in excess of or contributing with any insurance or self-insurance maintained by University, University's consultants, University's Representative, and University's Representative's consultants. This provision, however, shall only apply as per the stipulations of Article 11.1.6.1.

11.1.7 The form and substance of all insurance policies required to be obtained by Contractor shall be subject to approval by University. All policies required by Articles 11.1.2.1, 11.1.2.2, and 11.1.2.3 shall be issued by companies with ratings and financial classifications as specified in the Supplementary Conditions.

11.1.8 Contractor shall, by mutual agreement with University, furnish any additional insurance as may be required by University. Contractor shall provide Certificates of Insurance evidencing such additional insurance.

11.1.9 The Certificate of Insurance shall show (1) all companies affording coverage and (2) the name of the insured exactly in the manner as shown on the Bid Form. The name of the insured must be the name under which the entity is licensed by the Contractors State License Board.

11.1.10 If insurance company refuses to use the Certificate of Insurance form as contained in the Exhibits, it must provide a Certificate of Insurance evidencing compliance with this Article including those provisions noted under DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES section of the Certificate of Insurance Exhibit by including an endorsement to its Certificate of Insurance form covering those noted provisions exactly as they appear on the Certificate of Insurance Exhibit.

11.1.11 At the request of University, Contractor shall submit to University copies of the policies obtained by Contractor.

11.2 BUILDER'S RISK PROPERTY INSURANCE

11.2.1 If and only if the Contract Sum exceeds \$300,000 at the time of award, University will provide its standard builder's risk property insurance, subject to the deductibles, terms and conditions, exclusions, and limitations as contained in the provisions of the policy. A copy of the University's standard builder's risk property insurance policy is available at the University's Facility office. In addition, a summary of the provisions of the policy is included as an Exhibit to the Contract. Contractor agrees that the University's provision of its standard builder's risk property insurance policy meets the University's obligation to provide builder's risk property insurance under the Contract and, in the event of a conflict between the provisions of the policy and any summary or description of the provisions contained herein or otherwise, the provisions of the policy shall control and shall be conclusively presumed to fulfill the University's obligation to provide such insurance. The proceeds under such insurance policies taken out by University insuring the Work and materials will be payable to University and Contractor as their respective interests, from time to time, may appear. Contractor shall be responsible for the deductible amount in the event of a loss. In addition, nothing in this Article 11.2 shall be construed to relieve Contractor of full responsibility for loss of or damage to materials not incorporated in the Work, and for Contractor's tools and equipment used to perform the Work, whether on the Project site or elsewhere, or to relieve Contractor of its responsibilities referred to under this Article 11. Materials incorporated in the Work, as used in this Article 11.2, shall mean materials furnished while in transit to, stored at, or in permanent place at the Project site.

11.2.2 Insurance policies referred to under this Article 11.2 shall:

- .1 Include a provision that the policies are primary and do not participate with nor are excess over any other valid collectible insurance carried by Contractor.
- .2 Include a waiver of subrogation against Contractor, its Subcontractors, its agents, and employees.

11.2.3 Builder's risk insurance coverage under this Article 11.2 will expire on the date of Final Completion recited in a Notice of Completion filed pursuant to Article 9.8.1. Should a Notice of Completion be filed more than 10 days after the date of Final Completion, the date of Final Completion recited in the Notice of Completion will govern.

11.3 PERFORMANCE BOND AND PAYMENT BOND

11.3.1 Contractor shall furnish bonds covering the faithful performance of the Contract (Performance Bond) and payment of obligations arising thereunder (Payment Bond) on the forms contained in Exhibits 3 and 2.

11.3.2 The Payment Bond and Performance Bond shall each be in the amount of the Contract Sum.

11.3.3 The Payment Bond and Performance Bond shall be in effect on the date the Contract is signed by University.

11.3.4 Contractor shall promptly furnish such additional security as may be required by University to protect its interests and those interests of persons or firms supplying labor or materials to the Work. Contractor shall furnish supplemental Payment and Performance Bonds each in the amount of the current Contract Sum at the request of the University.

11.3.5 Surety companies used by Contractor shall be, on the date the Contract is signed by University, an admitted surety insurer (as defined in the California Code of Civil Procedure Section 995.120).

11.3.6 The premiums for the Payment Bond and Performance Bond shall be paid by Contractor.

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 University's Representative's request or direction, or contrary to the requirements of the Contract Documents, it must, if required in writing by University's Representative, be uncovered for University's Representative's observation and be replaced at Contractor's expense without adjustment of the Contract Time or the Contract Sum.

12.1.2 If a portion of the Work has been covered, which is not required by the Contract Documents to be observed or inspected prior to its being covered and which University's Representative has not specifically requested to observe prior to its being covered, University's Representative may request to see such Work and it shall be uncovered and replaced by Contractor. If such Work is in accordance with the Contract Documents, the costs of uncovering and replacing the Work shall be added to the Contract Sum by Change Order; and if the uncovering and replacing of the Work extends the Contract Time, an appropriate adjustment of the Contract Time shall be made by Change Order. If such Work is not in accordance with the Contract Documents, Contractor shall pay such costs and shall not be entitled to an adjustment of the Contract Time or the Contract Sum.

12.2 CORRECTION OF DEFECTIVE WORK AND GUARANTEE TO REPAIR PERIOD

12.2.1 The term "Guarantee To Repair Period" means a period of 1 year, unless a longer period of time is specified, commencing as follows:

- .1 For any Work not described as incomplete in the Certificate of Substantial Completion, on the date of Substantial Completion.
- .2 For space beneficially occupied or for separate systems fully utilized prior to Substantial Completion pursuant to Article 9.6, from the first date of such Beneficial Occupancy or actual use, as established in a Certificate of Beneficial Occupancy.
- .3 For all Work other than .1 or .2 above, from the date of Final Completion.

12.2.2 Contractor shall (1) correct Defective Work that becomes apparent during the progress of the Work or during the Guarantee To Repair Period and (2) replace, repair, or restore to University's satisfaction any other parts of the Work and any other real or personal property which is damaged or destroyed as a result of Defective Work or the correction of Defective Work. Contractor shall promptly commence such correction, replacement, repair, or restoration upon notice from University's Representative or University, but in no case later than 10 days after receipt of such notice; and Contractor shall diligently and continuously prosecute such correction to completion. Contractor shall bear all costs of such correction, replacement, repair, or restoration, and all losses resulting from such Defective Work, including additional testing, inspection, and compensation for University's Representative's services and expenses. Contractor shall perform corrective Work at such times that are acceptable to University and in such a manner as to avoid, to the extent practicable, disruption to University's activities.

12.2.3 If immediate correction of Defective Work is required for life safety or the protection of property and is performed by University or Separate Contractors, Contractor shall pay to University all reasonable costs of correcting such Defective Work. Contractor shall replace, repair, or restore to University's satisfaction any other parts of the Work and any other real or personal property which is damaged or destroyed as a result of

such Defective Work or the correction of such Defective Work.

12.2.4 Contractor shall remove from the Project site portions of the Work and materials which are not in accordance with the Contract Documents and which are neither corrected by Contractor nor accepted by University.

12.2.5 If Contractor fails to commence correction of Defective Work within 10 days after notice from University or University's Representative or fails to diligently prosecute such correction to completion, University may correct the Defective Work in accordance with Article 2.4; and, in addition, University may remove the Defective Work and store salvageable materials and equipment at Contractor's expense.

12.2.6 If Contractor fails to pay the costs of such removal and storage as required by Articles 12.2.4 and 12.2.5 within 10 days after written demand, University may, without prejudice to other remedies, sell such materials at auction or at private sale, or otherwise dispose of such material. Contractor shall be entitled to the proceeds of such sale, if any, in excess of the costs and damages for which Contractor is liable to University, including compensation for University's Representative's services and expenses. If such proceeds of sale do not cover costs and damages for which Contractor is liable to University, the Contract Sum shall be reduced by such deficiency. If there are no remaining payments due Contractor or the remaining payments are insufficient to cover such deficiency, Contractor shall promptly pay the difference to University.

12.2.7 Contractor's obligations under this Article 12 are in addition to and not in limitation of its warranty under Article 3.4 or any other obligation of Contractor under the Contract Documents. Enforcement of Contractor's express warranties and guarantees to repair contained in the Contract Documents shall be in addition to and not in limitation of any other rights or remedies University may have under the Contract Documents or at law or in equity for Defective Work. Nothing contained in this Article 12 shall be construed to establish a period of limitation with respect to other obligations of Contractor under the Contract Documents. Establishment of the Guarantee To Repair Period relates only to the specific obligation of Contractor to correct the Work and in no way limits either Contractor's liability for Defective Work or the time within which proceedings may be commenced to enforce Contractor's obligations under the Contract Documents.

ARTICLE 13 TERMINATION OR SUSPENSION OF THE CONTRACT

13.1 TERMINATION BY CONTRACTOR

13.1.1 Subject to Article 13.1.2, Contractor shall have the right to terminate the Contract only upon the occurrence of one of the following:

- .1 Provided that University has not commenced reasonable action to remove any order of a court within the 90 day period, the Work is stopped for 90 consecutive days, through no act or fault of Contractor, any Subcontractor, or any employee or agent of Contractor or any Subcontractor, due to an issuance of an order of a court or other public authority having jurisdiction or due to an act of government, such as a declaration of a national emergency making material unavailable.
- .2 University fails to perform any material obligation under the Contract and fails to cure such default within 30 days, or University has not commenced to cure such default within 30 days where such cure will require a reasonable period beyond 30 days and diligently prosecutes the same to completion, after receipt of notice from Contractor stating the nature of such default(s).
- .3 Repeated suspensions by University, other than such suspensions as are agreed to by Contractor under Article 13.3, which constitute in the aggregate more than 20% of the Contract Time.

13.1.2 Upon the occurrence of one of the events listed in Article 13.1.1, Contractor may, upon 10 days additional notice to University and University's Representative, and provided that the condition giving rise to Contractor's right to terminate is continuing, terminate the Contract.

13.1.3 Upon termination by Contractor, University will pay to Contractor the sum determined by Article 13.4.4. Such payment will be the sole and exclusive remedy to which Contractor is entitled in the event of

termination of the Contract by Contractor pursuant to Article 13.1; and Contractor will be entitled to no other compensation or damages and expressly waives the same.

13.2 TERMINATION BY UNIVERSITY FOR CAUSE

13.2.1 University will have the right to terminate the Contract for cause at any time after the occurrence of any of the following events:

- .1 Contractor becomes insolvent or files for relief under the bankruptcy laws of the United States.
- .2 Contractor makes a general assignment for the benefit of its creditors or fails to pay its debts as the same become due.
- .3 A receiver is appointed to take charge of Contractor's property.
- .4 The commencement or completion of any Work activity on the critical path is more than 30 days behind the date set forth in the Contract Schedule for such Work activity, as a result of an Unexcusable Delay. For a Contract with a Contract Time of less than 300 days, the 30-day period shall be reduced to the number of days commensurate with 10% of the Contract Time.
- .5 Contractor abandons the Work.

13.2.2 Upon the occurrence of any of the following events, University will have the right to terminate the Contract for cause if Contractor fails to promptly commence to cure such default and diligently prosecute such cure within 5 days after notice from University, or within such longer period of time as is reasonably necessary to complete such cure:

- .1 Contractor persistently or repeatedly refuses or fails to supply skilled supervisory personnel, an adequate number of properly skilled workers, proper materials, or necessary equipment to prosecute the Work in accordance with the Contract Documents.
- .2 Contractor fails to make prompt payment of amounts properly due Subcontractors after receiving payment from University.
- .3 Contractor disregards Applicable Code Requirements.
- .4 Contractor persistently or materially fails to execute the Work in accordance with the Contract Documents.
- .5 Contractor is in default of any other material obligation under the Contract Documents.
- .6 Contractor persistently or materially fails to comply with applicable safety requirements.

13.2.3 Upon any of the occurrences referred to in Articles 13.2.1 and 13.2.2, University may, at its election and by notice to Contractor, terminate the Contract and take possession of the Project site and all materials, supplies, equipment, tools, and construction equipment and machinery thereon owned by Contractor; accept the assignment of any or all of the subcontracts; and then complete the Work by any method University may deem expedient. If requested by University, Contractor shall remove any part or all of Contractor's materials, supplies, equipment, tools, and construction equipment and machinery from the Project site within 7 days of such request; and if Contractor fails to do so, University may remove or store, and after 90 days sell, any of the same at Contractor's expense.

13.2.4 If the Contract is terminated by University as provided in this Article 13.2, Contractor shall not be entitled to receive any further payment until the expiration of 35 days after Final Completion and acceptance of all Work by University.

13.2.5 If the unpaid balance of the Contract Sum exceeds the cost of completing the Work, including all additional costs and expenses made necessary thereby, including costs for University staff time, plus all losses sustained, including any liquidated damages provided under the Contract Documents, such excess shall be paid to Contractor. If such costs, expenses, losses, and liquidated damages exceed the unpaid balance of the Contract Sum, Contractor shall pay such excess to University.

13.2.6 No termination or action taken by University after termination shall prejudice any other rights or remedies of University provided by law or by the Contract Documents upon such termination; and University may proceed against Contractor to recover all losses suffered by University.

13.3 SUSPENSION BY UNIVERSITY FOR CONVENIENCE

13.3.1 University may, at any time and from time to time, without cause, order Contractor, in writing, to suspend, delay, or interrupt the Work in whole or in part for such period of time, up to 90 days, as University may determine, with such period of suspension to be computed from the date of delivery of the written order. Such order shall be specifically identified as a "Suspension Order" under this Article 13.3. The Work may be stopped for such further period as the parties may agree. Upon receipt of a Suspension Order, Contractor shall, at University's expense, comply with its terms and take all reasonable steps to minimize costs allocable to the Work covered by the Suspension Order during the period of Work stoppage. Within 90 days after the issuance of the Suspension Order, or such extension to that period as is agreed upon by Contractor and University, University shall either cancel the Suspension Order or delete the Work covered by such Suspension Order by issuing a Change Order.

13.3.2 If a Suspension Order is canceled or expires, Contractor shall continue with the Work. A Change Order will be issued to cover any adjustments of the Contract Sum or the Contract Time necessarily caused by such suspension. Any Claim by Contractor for an adjustment of the Contract Sum or the Contract Time shall be made within 21 days after the end of the Work suspension. Contractor agrees that submission of its claim within said 21 days is an express condition precedent to its right to Arbitrate or Litigate such a claim.

13.3.3 The provisions of this Article 13.3 shall not apply if a Suspension Order is not issued by University. A Suspension Order shall not be required to stop the Work as permitted or required under any other provision of the Contract Documents.

13.4 TERMINATION BY UNIVERSITY FOR CONVENIENCE

13.4.1 University may, at its option, terminate this Contract, in whole or from time to time in part, at any time by giving notice to Contractor. Upon such termination, Contractor agrees to waive any claims for damages, including loss of anticipated profits, on account thereof; and, as the sole right and remedy of Contractor, University shall pay Contractor in accordance with Article 13.4.4.

13.4.2 Upon receipt of notice of termination under this Article 13.4, Contractor shall, unless the notice directs otherwise, do the following:

- .1 Immediately discontinue the Work to the extent specified in the notice.
- .2 Place no further orders or subcontracts for materials, equipment, services, or facilities, except as may be necessary for completion of such portion of the Work as is not discontinued.
- .3 Promptly cancel, on the most favorable terms reasonably possible, all subcontracts to the extent they relate to the performance of the discontinued portion of the Work.
- .4 Thereafter do only such Work as may be necessary to preserve and protect Work already in progress and to protect materials, plants, and equipment on the Project site or in transit thereto.

13.4.3 Upon such termination, the obligations of the Contract shall continue as to portions of the Work already performed and, subject to Contractor's obligations under Article 13.4.2, as to bona fide obligations assumed by Contractor prior to the date of termination.

13.4.4 Upon such termination, University shall pay to Contractor the sum of the following:

- .1 The amount of the Contract Sum allocable to the portion of the Work properly performed by Contractor as of the date of termination, less sums previously paid to Contractor.
- .2 Plus an amount equal to the lesser of \$50,000 or 5% of the difference between the Contract Sum and the amount of the Contract Sum allocable to the portion of the Work properly performed by Contractor as of the date of termination.
- .3 Plus previously unpaid costs of any items delivered to the Project site which were fabricated for subsequent incorporation in the Work.
- .4 Plus any proven losses with respect to materials and equipment directly resulting from such termination.
- .5 Plus reasonable demobilization costs.

- .6 Plus reasonable costs of preparing a statement of the aforesaid costs, expenses, and losses in connection with such termination.

The above payment shall be the sole and exclusive remedy to which Contractor is entitled in the event of termination of the Contract by University pursuant to Article 13.4; and Contractor will be entitled to no other compensation or damages and expressly waives same.

ARTICLE 14 STATUTORY AND OTHER REQUIREMENTS

14.1 PATIENT HEALTH INFORMATION

Contractor acknowledges that its employees, agents, subcontractors, consultants and others acting on its behalf may come into contact with Patient Health Information ("PHI") while performing work at the Project Site. This contact is most likely rare and brief (e.g. walking through a clinic where patient files may be visible, overhearing conversations between physicians while working or touring a hospital, noticing a relative or acquaintance receiving treatment in a University facility, etc.). Contractor shall immediately notify University Representative of any such contact. Any and all forms of PHI should not be examined closer, copied, photographed, recorded in any manner, distributed or shared. Contractor will adopt procedures to ensure that its employees, agents and subcontractors refrain from such activity. If Contractor, its employees, agents or subcontractors do further examine, copy, photograph, record in any manner, distribute or share this information, Contractor will report such actions immediately to the University Representative. Contractor will immediately take all steps necessary to stop any such actions and will ensure that no further violations of this contractual responsibility will occur. Contractor will report to University Representative within five (5) days after Contractor gives University Representative notice of the event/action of the steps taken to prevent future occurrences.

14.2 NONDISCRIMINATION

14.2.1 For purposes of this Article 14.2, the term Subcontractor shall not include suppliers, manufacturers, or distributors.

14.2.2 Contractor shall comply and shall ensure that all Subcontractors comply with Section 12900 through 12996, of the State of California Government Code.

14.2.3 Contractor agrees as follows during the performance of the Work:

- .1 Contractor shall provide equal treatment to, and shall not willfully discriminate against or allow harassment of any employee or applicant for employment on the basis of: race; color; religion; sex; age; ancestry; national origin; sexual orientation; physical or mental disability; veteran's status; medical condition (as defined in Section 12926 of the State of California Government Code and including cancer-related medical conditions and or genetic characteristics); genetic information (as defined in the Genetic Information Nondiscrimination Act of 2008 and including family medical history); marital status; gender identity, pregnancy, or citizenship (within the limits imposed by law or University's policy) or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994). Contractor will also take affirmative action to ensure that any such employee or applicant for employment is not discriminated against on any of the bases identified above. Such equal treatment shall apply, but not be limited to the following: employment; upgrade; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor also agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that qualified applicants will receive consideration for employment without regard to: race; color; religion; sex; age; ancestry; national origin; sexual orientation; physical or mental disability; veteran's status; medical condition (as defined in Section 12926 of the State of California Government Code and including cancer-related medical conditions and or genetic characteristics); genetic information (as defined in the Genetic Information Nondiscrimination Act of 2008

and including family medical history); marital status; gender identity, pregnancy, or citizenship (within the limits imposed by law or University's policy) or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994). For purposes of this provision: (1) "Pregnancy" includes pregnancy, childbirth, and medical conditions related to pregnancy and childbirth; and (2) "Service in the uniformed services" includes membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services.

- .2 Contractor and all Subcontractors will permit access to their records of employment, employment advertisements, application forms, and other pertinent data and records by University or any appropriate agency of the State of California designated by University for the purposes of investigation to ascertain compliance with this Article 14.2. The outcome of the investigation may result in the following:
 - .1 A finding of willful violation of the provisions of this Contract or of the Fair Employment Practices Act may be regarded by University as (1) a basis for determining that Contractor is not a "responsible bidder" as to future contracts for which such Contractor may submit bids or (2) a basis for refusing to accept or consider the bids of Contractor for future contracts.
 - .2 University may deem a finding of willful violation of the Fair Employment Practices Act to have occurred upon receipt of written notice from the Fair Employment Practices Commission that it has (1) investigated and determined that Contractor has violated the Fair Employment Practices Act and (2) issued an order under the State of California Government Code Section 12970 or obtained an injunction under Government Code Section 12973.
 - .3 Upon receipt of such written notice from the Fair Employment Practices Commission, University may notify Contractor that, unless it demonstrates to the satisfaction of University within a stated period that the violation has been corrected, Contractor's bids on future projects will not be considered.
 - .4 Contractor agrees that, should University determine that Contractor has not complied with this Article 14.2, Contractor shall forfeit to University, as a penalty, for each day or portion thereof, for each person who was denied employment as a result of such non-compliance, the penalties provided in Article 14.3 for violation of prevailing wage rates. Such penalty amounts may be recovered from Contractor; and University may deduct any such penalty amounts from the Contract Sum.
 - .5 Nothing contained in this Article 14.2 shall be construed in any manner so as to prevent University from pursuing any other remedies that may be available at law.
 - .6 Contractor shall meet the following standards for compliance and provide University with satisfactory evidence of such compliance upon University's request, which shall be evaluated in each case by University:
 - .1 Contractor shall notify its Superintendent and other supervisory personnel of the nondiscrimination requirements of the Contract Documents and their responsibilities thereto.
 - .2 Contractor shall notify all sources of employee referrals (including unions, employment agencies, and the State of California Department of Employment) of the nondiscrimination requirements of the Contract Documents by sending to such sources and by posting the Notice of Equal Employment Opportunity (EEO).
 - .3 Contractor or its representative shall, through all unions with whom it may have agreements, develop agreements that (1) define responsibilities for nondiscrimination in hiring, referrals, upgrading, and training and (2) implement an affirmative nondiscrimination program, in terms of the unions' specific areas of skill and geography, such that qualified minority women, nonminority women, and minority men shall be available and given an equal opportunity for employment.
 - .4 Contractor shall notify University of opposition to the nondiscrimination requirements of the Contract Documents by individuals, firms, or organizations during the term of the Contract.

- .7 Contractor shall include the provisions of the foregoing Articles 14.2.3.2.1 through 14.2.3.2.6 in all subcontracts with Subcontractors, so that such provisions will be binding upon each such Subcontractor.

14.3 PREVAILING WAGE RATES

14.3.1 For purposes of this Article 14.3, the term Subcontractor shall not include suppliers, manufacturers, or distributors.

14.3.2 Contractor shall comply and shall ensure that all Subcontractors comply with prevailing wage law pursuant to the State of California Labor Code, including but not limited to Section 1720 et seq. of the State of California Labor Code. Compliance with these sections is required by this Contract. The Work under this Contract is subject to compliance monitoring and enforcement by the State of California Department of Industrial Relations.

14.3.3 The State of California Department of Industrial Relations has ascertained the general prevailing per diem wage rates in the locality in which the Work is to be performed for each craft, classification, or type of worker required to perform the Work. A copy of the general prevailing per diem wage rates will be on file at University's principal facility office and will be made available to any interested party upon request. Contractor shall post a copy of the general prevailing per diem wage rates as well as job site notices as prescribed by regulation at the job site. By this reference, such schedule is made part of the Contract Documents. Contractor shall pay not less than the prevailing wage rates, as specified in the schedule and any amendments thereto, to all workers employed by Contractor in the execution of the Work. Contractor shall cause all subcontracts to include the provision that all Subcontractors shall pay not less than the prevailing rates to all workers employed by such Subcontractors in the execution of the Work. Contractor shall forfeit to University, as a penalty, not more than \$200 for each calendar day or portion thereof for each worker that is paid less than the prevailing rates as determined by the Director of Industrial Relations for the work or craft in which the worker is employed for any portion of the Work done by Contractor or any Subcontractor. The amount of this penalty shall be determined pursuant to applicable law. Such forfeiture amounts may be deducted from the Contract Sum or sought directly from the surety under its Performance Bond if there are insufficient funds remaining in the Contract Sum. Contractor shall also pay to any worker who was paid less than the prevailing wage rate for the work or craft for which the worker was employed for any portion of the Work, for each day, or portion thereof, for which the worker was paid less than the specified prevailing per diem wage rate, an amount equal to the difference between the specified prevailing per diem wage rate and the amount which was paid to the worker. Review of any civil wage and penalty assessment shall be made pursuant to section 1742 of the California Labor Code.

14.4 PAYROLL RECORDS

14.4.1 For purposes of this Article 14.4, the term Subcontractor shall not include suppliers, manufacturers, or distributors.

14.4.2 Contractor and all Subcontractors shall keep an accurate payroll record, showing the name, address, social security number, job classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyworker, apprentice, worker, or other employee employed in connection with the Work. All payroll records shall be certified as being true and correct by Contractor or Subcontractors keeping such records; and the payroll records shall be available for inspection at all reasonable hours at the principal office of Contractor on the following basis:

- .1 A certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or the employee's authorized representative on request.
- .2 A certified copy of all payroll records shall be made available for inspection upon request to University, the State of California Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the State of California Division of Industrial Relations.
- .3 A certified copy of all payroll records shall be made available upon request by the public for inspection or copies thereof made; provided, however, that the request by the public shall be made to either University, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. The public shall not be given access to such records at the principal offices of Contractor or

Subcontractors. Any copy of the records made available for inspection as copies and furnished upon request to the public or any public agency by University shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of Contractor awarded the Contract or performing the Contract shall not be marked or obliterated.

14.4.3 Contractor shall file a certified copy of the payroll records with the entity that requested the records within 10 days after receipt of a written request. Contractor shall inform University of the location of such payroll records for the Project, including the street address, city, and county; and Contractor shall, within 5 working days, provide notice of change of location of such records. In the event of noncompliance with the requirements of this Article 14.4 or with the State of California Labor Code Section 1776, Contractor shall have 10 days in which to comply following receipt of notice specifying in what respects Contractor must comply. Should noncompliance still be evident after the 10 day period, Contractor shall forfeit to University, as a penalty, \$100 for each day, or portion thereof, for each worker, until strict compliance is accomplished. Such forfeiture amounts may be deducted from the Contract Sum.

14.5 APPRENTICES

14.5.1 For purposes of this Article 14.5, the term Subcontractor shall not include suppliers, manufacturers, and distributors.

14.5.2 Only apprentices, as defined in the State of California Labor Code Section 3077, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4, Division 3, of the State of California Labor Code, are eligible to be employed by Contractor and Subcontractors as apprentices. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and written apprentice agreements under which the apprentice is training and in accordance with prevailing wage law pursuant to the Labor Code, including but not limited to Section 1777.5. The Contractor bears responsibility for compliance with this section for all apprenticeable occupations.

14.5.3 Every apprentice shall be paid the standard wage to apprentices, under the regulations of the craft or trade at which the apprentice is employed, and shall be employed only at the Work in the craft or trade to which the apprentice is indentured.

14.5.4 When Contractor or Subcontractors employ workers in any apprenticeship craft or trade on the Work, Contractor or Subcontractors shall 1) send contract award information to the applicable joint apprenticeship committee that can supply apprentices to the site of the public work and 2) apply to the joint apprenticeship committee, which administers the apprenticeship standards of the craft or trade in the area of the Project site, for a certificate approving Contractor or Subcontractors under the apprenticeship standards for the employment and training of apprentices in the area of the Project site. The committee will issue a certificate fixing the number of apprentices or the ratio of apprentices to journeypersons who shall be employed in the craft or trade on the Work. The ratio will not exceed that stipulated in the apprenticeship standards under which the joint apprenticeship committee operates; but in no case shall the ratio be less than 1 hour of apprentice work for every 5 hours of journeyperson work, except as permitted by law. Contractor or Subcontractors shall, upon the issuance of the approval certificate in each such craft or trade, employ the number of apprentices or the ratio of apprentices to journeypersons fixed in the certificate issued by the joint apprenticeship committee or present an exemption certificate issued by the Division of Apprenticeship Standards.

14.5.5 "Apprenticeship craft or trade," as used in this Article 14.5, shall mean a craft or trade determined as an apprenticeship occupation in accordance with rules and regulations prescribed by the Apprenticeship Council.

14.5.6 If Contractor or Subcontractors employ journeymen or apprentices in any apprenticeship craft or trade in the area of the Project site, and there exists a fund for assisting to allay the cost of the apprenticeship program in the trade or craft, to which fund or funds other contractors in the area of the Project site are contributing, Contractor and Subcontractors shall contribute to the fund or funds in each craft or trade in which they employ journeymen or apprentices on the Work in the same amount or upon the same basis and in the same manner done by the other contractors. Contractor may include the amount of such contributions in computing its bid for the Contract; but if Contractor fails to do so, it shall not be entitled to any additional

compensation therefor from University.

14.5.7 In the event Contractor willfully fails to comply with this Article 14.5, it will be considered in violation of the requirements of the Contract.

14.5.8 Nothing contained herein shall be considered or interpreted as prohibiting or preventing the hiring by Contractor or Subcontractors of journeyworker trainees who may receive on-the-job training to enable them to achieve journeyworker status in any craft or trade under standards other than those set forth for apprentices.

14.6 WORK DAY

14.6.1 Contractor shall not permit any worker to labor more than 8 hours during any 1 day or more than 40 hours during any 1 calendar week, except as permitted by law and in such cases only upon such conditions as are provided by law. Contractor shall forfeit to University, as a penalty, \$25 for each worker employed in the execution of this Contract by Contractor, or any Subcontractor, for each day during which such worker is required or permitted to work more than 8 hours in any 1 day and 40 hours in any 1 calendar week in violation of the terms of this Article 14.6 or in violation of the provisions of any law of the State of California. Such forfeiture amounts may be deducted from the Contract Sum. Contractor and each Subcontractor shall keep, or cause to be kept, an accurate record showing the actual hours worked each day and each calendar week by each worker employed on the Project, which record shall be kept open at all reasonable hours to the inspection of University, its officers and agents, and to the inspection of the appropriate enforcement agency of the State of California.

ARTICLE 15 MISCELLANEOUS PROVISIONS

15.1 GOVERNING LAW

15.1.1 The Contract shall be governed by the law of the State of California.

15.2 SUCCESSORS AND ASSIGNS

15.2.1 University and Contractor respectively bind themselves and their successors, permitted assigns, and legal representatives to the other party and to the successors, permitted assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract, in whole or in part, without prior written consent of the other party. Notwithstanding any such assignment, each of the original contracting parties shall remain legally responsible for all of its obligations under the Contract.

15.3 RIGHTS AND REMEDIES

15.3.1 All University's rights and remedies under the Contract Documents will be cumulative and in addition to and not in limitation of all other rights and remedies of University under the Contract Documents or otherwise available at law or in equity.

15.3.2 No action or failure to act by University or University's Representative will constitute a waiver of a right afforded them under the Contract, nor will such action or failure to act constitute approval of or acquiescence in a condition or breach thereunder, except as may be specifically agreed in writing. No waiver by University or University's Representative of any condition, breach or default will constitute a waiver of any other condition, breach or default; nor will any such waiver constitute a continuing waiver.

15.3.3 No provision contained in the Contract Documents shall create or give to third parties any claim or right of action against University, University's Representative, or Contractor.

15.4 SURVIVAL

15.4.1 The provisions of the Contract which by their nature survive termination of the Contract or Final Completion, including all warranties, indemnities, payment obligations, and University's right to audit Contractor's books and records, shall remain in full force and effect after Final Completion or any termination of the Contract.

15.5 COMPLETE AGREEMENT

15.5.1 The Contract Documents constitute the full and complete understanding of the parties and supersede any previous agreements or understandings, oral or written, with respect to the subject matter hereof. The Contract may be modified only by a written instrument signed by both parties or as provided in Article 7.

15.6 SEVERABILITY OF PROVISIONS

15.6.1 If any one or more of the provisions contained in the Contract Documents should be invalid, illegal, or unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

15.7 UNIVERSITY'S RIGHT TO AUDIT

15.7.1 University and entities and agencies designated by University will have access to and the right to audit and the right to copy at University's cost all of Contractor's books, records, contracts, correspondence, instructions, drawings, receipts, vouchers, purchase orders, and memoranda relating to the Work. Contractor shall preserve all such records and other items during the performance of the Contract and for a period of at least 3 years after Final Completion.

15.8 METHODS OF DELIVERY FOR SPECIFIED DOCUMENTS

15.8.1 The following documents must be delivered in a manner specified in Article 15.8.2:

- .1 Contractor Notices of election to litigate or arbitrate;
- .2 Written demand for an informal conference to meet and confer pursuant to Article 4.5;
- .3 University's written statement identifying remaining disputes following informal conference pursuant to Article 4.6;
- .4 Written demand for non-binding mediation pursuant to Article 4.6;
- .5 Contractor claims pursuant to Article 4.3;
- .6 Contractor notices of conditions pursuant to Articles 3.17, 3.18, or 3.19;
- .7 University's notices of Contractor's failure to perform and/or correct defective work pursuant to Articles 4.1.6, 12.2 and 13.2.3;
- .8 University's notice to stop work pursuant to Article 2.3.1;
- .9 Notices of termination or suspension pursuant to Article 13.

15.8.2 Delivery methods for documents specified in Article 15.8.1:

- .1 By personal delivery.
- .2 Sent by facsimile copy where receipt is confirmed.
- .3 Sent by Express Mail, or another method of delivery providing for overnight delivery where receipt is confirmed.
- .4 Sent by registered or certified mail, postage prepaid, return receipt requested.

15.8.3 The documents identified in Article 15.8.1 shall only be effective if delivered in the manner specified in Article 15.8.2. Subject to the forgoing, such documents shall be deemed given and received upon actual receipt in the case of all except registered or certified mail; and in the case of registered or certified mail, on the date shown on the return receipt or the date delivery during normal business hours was attempted. Delivery of the specified documents shall be made at the respective street addresses set forth in the Agreement. Such street addresses may be changed by notice given in accordance with this Article 15.8.

15.9 TIME OF THE ESSENCE

15.9.1 Time limits stated in the Contract Documents are of the essence of the Contract.

15.10 MUTUAL DUTY TO MITIGATE

15.10.1 University and Contractor shall use all reasonable and economically practicable efforts to mitigate delays and damages to the Project and to one another with respect to the Project, regardless of the cause of such delay or damage.

15.11 UC FAIR WAGE

Contractor shall pay all persons providing construction services and/or any labor on site, including any University location, no less than the UC Fair Wage (defined as \$13 per hour as of 10/1/15, \$14 per hour as of 10/1/16, and \$15 per hour as of 10/1/17) and shall comply with all applicable federal, state and local working condition requirements.

SUPPLEMENTARY CONDITIONS

1. MODIFICATION OF GENERAL CONDITIONS, ARTICLE 11 – INSURANCE AND BONDS

Contractor shall furnish and maintain insurance in the amounts below.

The insurance required by 11.1.2.1 and 11.1.2.2 shall be (i) issued by companies with a Best rating of A- or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's) or (ii) guaranteed, under terms consented to by the University (such consent to not be unreasonably withheld), by companies with a Best rating of A- or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's). Such insurance shall be written for not less than the following:

Minimum Requirement

11.1.2.1	Commercial General Liability Insurance-Limits of Liability	
	Each Occurrence-Combined Single Limit for Bodily Injury and Property	<u>\$ 1,000,000.00</u>
	Products-Completed Operations Aggregate	<u>\$ 1,000,000.00</u>
	Personal and Advertising Injury	<u>\$ 1,000,000.00</u>
	General Aggregate	<u>\$ 2,000,000.00</u>
11.1.2.2	Business Automobile Liability Insurance-Limits of Liability	
	Each Accident-Combined Single Limit for Bodily Injury and Property Damage	<u>\$ 1,000,000.00</u>

Insurance required by Paragraph 11.1.2.3 shall be issued by companies (i) that have a Best rating of B+ or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's); or (ii) that are acceptable to the University. Such insurance shall be written for not less than the following:

11.1.2.3	WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY –	Minimum Requirement
	Worker's Compensation:	(as required by Federal and State of California law)
	Employer's Liability:	
	Each Employee	\$1,000,000
	Each Accident	\$1,000,000
	Policy Limit	\$1,000,000

2. MODIFICATION OF ARTICLE 8 – CONTRACT TIME

Rainy weather in excess of the following number of days will be granted a Contract Time extension pursuant to Article 8.4 of the General Conditions:

Total Number of days – 0 days

3. MODIFICATION OF GENERAL CONDITIONS ARTICLE 15 – MISCELLANEOUS PROVISIONS

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same Agreement. The counterparts of this Agreement may be executed via a University approved digital signature process and shall have the same force and effect as the use of a manual signature. The University reserves the right to reject any digital signature that cannot be positively verified by the University system as an authentic digital signature.

EXHIBITS

TABLE OF CONTENTS

Application for Payment

Certificate of Insurance

Certificate of Substantial Completion

Change Order

Change Order Request (with Cost Proposal Summary)

Claim Certification - General Contractor

Claim Certification - Subcontractor

Conditional Waiver and Release on Final Payment

Conditional Waiver and Release on Progress Payment

Escrow Agreement for Deposit of Securities In Lieu of Retention and Deposit of Retention

Field Order

Final Distribution of Contract Dollars

Final Inspection Acceptance

Payment Bond

Performance Bond

Report of Subcontractor Information

Selection of Retention Options

Self-Certification Form

Submittal Schedule

Substitution of Subcontractor – Indemnity Agreement and Consent

Summary of Builder’s Risk Insurance Policy

Unconditional Waiver and Release on Final Payment

Unconditional Waiver and Release on Progress Payment

APPLICATION FOR PAYMENT

Application No. _____ Period From: _____ To: _____

Application Date: _____ Contract Date: _____

To **University:** THE REGENTS OF THE UNIVERSITY OF CALIFORNIA,
 University of California, Riverside, and University's Representative

From Contractor: _____

Address: _____

CHANGE ORDER SUMMARY:

	<u>Additions</u>	<u>Deductions</u>
Change Orders approved in previous months:	Total: _____	_____
Change Orders approved this month:		
Number: Date Approved:		
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
	Total: _____	_____
	\$-	\$-

NET CHANGE BY CHANGE ORDERS: \$-

Application is made for payment under the Contract as shown below and in Schedule 1 attached hereto:

1. ORIGINAL CONTRACT SUM	
2. NET CHANGE BY CHANGE ORDERS	\$-
3. CONTRACT SUM TO DATE (Line 1 ± Line 2)	\$-
4. TOTAL AMOUNT COMPLETED TO DATE (Column E on Schedule 1)	_____
5. RETENTION: _____ % of Completed Work (Column H on Schedule 1)*	_____
a. Current Value of Securities Deposited in Escrow	_____
b. Current Value of Retention Deposited in Escrow	_____
c. Retention Held by University	_____
Current Retention Value (a + b + c)	\$-
6. TOTAL EARNED LESS RETENTION (Line 4 less Line 5)	\$-
7. TOTAL AMOUNT PREVIOUSLY PAID	_____
8. CURRENT PAYMENT DUE (Line 6 less Line 7)	\$-
9. BALANCE TO FINISH, PLUS RETENTION (Line 3 less Line 6)	\$-

*Pursuant to Article 9.2.2 of the General Conditions.

The undersigned Contractor hereby represents and warrants to University that all Work, for which Certificates For Payment have previously been issued and payment received from University, is free and clear of all claims, stop notices, security interests, and encumbrances in favor of Contractor, any Subcontractor, and any other persons or firms entitled to make claims by reason of having provided labor, materials, or equipment related to the Work.

The following Schedules are attached and incorporated herein, and made a part of this Application For Payment:

- Schedule 1 Cost Breakdown Schedule
- Schedule 2 Certification of Current Market Value of Securities in Escrow in Lieu of Retention
- Schedule 3 List of Subcontractors
- Schedule 4 Declaration of Releases of Claims

Contractor: _____

By: _____
(Signature & Date)

(Print Name & Title)

DECLARATION

I, _____, hereby declare that I am the
(Print Name)

_____ of Contractor submitting this Application For
(Title)

Payment; that I am duly authorized to execute and deliver this Application For Payment on behalf of Contractor; and that all information set forth in this Application For Payment and all Schedules attached hereto are true, accurate, and complete as of its date.

I declare, under penalty of perjury, that the foregoing is true and correct and that this declaration was subscribed at _____, _____,
(City) (County)

State of _____ on _____.
(Date)

(Signature & Date)

(Print Name & Title)



CERTIFICATE OF LIABILITY INSURANCE

(for non-UCIP Construction Projects and Consultant/Design Contracts)

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
INSURED	INSURER A :	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

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

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR <hr/> <small>GENL</small> AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS						
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> <small>Y/N</small> (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						<input type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTH-ER
	<input type="checkbox"/> PROFESSIONAL LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE						

Special Provisions:

- The Regents of the University of California, The University of California, University, and each of their Representatives, consultants, officers, agents, employees, and each of their Representative's consultants, are included as additional insureds on the general liability policy as required by contract and pursuant to additional insured endorsement CG2010 (11/85) or a combination of both CG 2010 (10/01 or 07/04) and CG 2037 (10/01 or 07/04) but only in connection with Fine Arts Performance Lab Exterior, Project No. 957450, Contract No. 957450-LF-2022-75.
- The General Liability coverage contains a Severability of Interest provision and shall be primary insurance as respects The Regents of the University of California, its officers, agents and employees. Any insurance or self-insurance maintained by The Regents of the University of California shall be excess of and non-contributory with this insurance.

CERTIFICATE HOLDER: The Regents of the University of California

Forward to: UCR CAPITAL PROGRAMS PLANNING, DESIGN & CONSTRUCTION, ATTN: CONTRACTS 1223 UNIVERSITY AVENUE, SUITE 240 RIVERSIDE, CA 92521	<p>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.</p> <p><i>AUTHORIZED REPRESENTATIVE</i></p>
--	--

CERTIFICATE OF SUBSTANTIAL COMPLETION

Contractor: _____

Date of Issuance: _____

The Work has been reviewed and the date of Substantial Completion is hereby established as of the date of issuance above.

A Certificate of Occupancy has been issued by the University's Building Official **Name, Title on Date**.

A punch list of items to be completed or corrected is included herein. The failure to include any items on such list does not alter the responsibility of Contractor to complete all of the Work in accordance with the Contract Documents.

In accordance with the Contract Documents, Contractor is notified as follows:

1. Without limitation of Contractor's obligation to fully complete the Work within the Contract Time, Contractor shall complete or correct the Work on the list of items ("Punch List") attached hereto within _____ days from the date of Substantial Completion.
2. University will be responsible for **INSERT "NONE" OR STATE ANY UNIVERSITY RESPONSIBILITIES AFTER SUBSTANTIAL COMPLETION: security, maintenance, utilities (e.g. water, sewer, electrical, gas, etc.)**
3. Contractor shall be responsible for all Contract requirements except items or responsibilities of University set forth in Paragraph 2 above.
4. List of items to be completed or corrected: **INSERT "NONE" or "SEE ATTACHMENT: LIST OF ITEMS TO BE COMPLETED OR CORRECTED."**

UNIVERSITY'S REPRESENTATIVE

UNIVERSITY:

By: The Regents of the University of California
University of California, Riverside

(Signature & Date)

Tameesha Hayes
Project Manager
Planning, Design & Construction

(Print Name & Title)

(Signature & Date)

Drew Hecht, Architect
Director of Project Management
Planning, Design & Construction

(Print Name & Title)

cc: Office of Risk Management

PUNCH LIST OF ITEMS TO BE COMPLETED OR CORRECTED

ATTACHMENT TO CERTIFICATE OF SUBSTANTIAL COMPLETION ISSUED

Contractor:

CHANGE ORDER REQUEST

Date: _____

Change Order Request (COR) No. _____

Scope of Change:

Instructions:

1. Complete this form by providing (a) all information required above, (b) the amount and justification based upon the Contract Schedule for any proposed adjustment of Contract Time, (c) the proposed adjustment of Contract Sum, (d) the attached "Cost Proposal Summary," and (e) the attached form entitled, "Supporting Documentation for the Cost Proposal Summary."
2. Attach the form entitled "Supporting Documentation for the Cost Proposal Summary" for Contractor and each Subcontractor involved in the Extra Work. Each such form shall be completed and signed by Contractor or Subcontractor actually performing the Work Activity identified on the form. Attach supporting data to each such form to substantiate the individually listed costs. The costs provided on these forms shall be used to substantiate additional costs shown on the Cost Proposal Summary.
3. The Contractor Fee shall be computed on the Cost of Extra Work of Contractor and each Subcontractor involved in the Extra Work; and shall constitute full compensation for all costs and expenses related to the subject change and not listed in the "Supporting Documentation for the Cost Proposal Summary," including overhead and profit.
4. Refer to Article 7.3 of the General Conditions for the method of computing the Contractor Fee.

Adjustment of the Contract Time (Include justification based upon the Contract Schedule): _____
 Refer to Article 8 of the General Conditions. (Days)

Adjustment of the Contract Sum (Total from Line 18, Col. 4 of Cost Proposal Summary): \$ _____
 Refer to Article 7 of the General Conditions.

Submitted: CONTRACTOR

Received: UNIVERSITY'S REPRESENTATIVE

 (Company Name)

 (Signature & Date)

 (Print Name & Title)

 (Signature & Date)

Tameesha Hayes
Project Manager
Planning, Design & Construction

 (Print Name & Title)

cc: Executive Director, Architects & Engineers, Capital Programs

COST PROPOSAL SUMMARY

Contractor: _____ COR No. _____

		(1) Contractor	(2) 1st Tier Subs	(3) 2nd & Lower Tier Subs	(4) Total
ACTUAL COSTS	1. Straight Time Wages/Salaries-Labor				-
	2. Fringe Benefits and Payroll Taxes-Labor				-
	3. Overtime Wages/Salaries-Labor				-
	4. Fringe Benefits & Payroll Taxes-Overtime				-
	5. Materials & Cnsumable Items				-
	6. Sales Taxes (On Line 5)				-
	7. Rental Charges				-
	8. Royalties				-
	9. Permits				-
	10. Total Direct Expense (Sum of Lines 1-9)	\$-	\$-	\$-	\$-
	11. Insurance & Bonds (up to 2% of Line 10)	-	-	-	-
CONTRACTOR FEE	12. Sub-Sub (15% of Line 10, Col. 3)			-	-
	13. Subcontractor (5% of Line 10, Col. 3)		-		-
	14. Subcontractor (15% of Line 10, Col. 2)		-		-
	15. Contractor (5% of Line 10, Col. 2 & 3)	-			-
	16. Contractor (15% of Line 10, Col. 1)	-			-
	17. Contractor Fee (Sum of Lines 12-16)	\$-	\$-	\$-	\$-
TOTAL	18. Sum of Lines 10, 11, & 17	\$-	\$-	\$-	\$-

Actual Costs are taken from Line 12 of the attached forms entitled, "Supporting Documentation For the Cost Proposal Summary" for Contractor and each Subcontractor involved in the Extra Work.

SUPPORTING DOCUMENTATION FOR THE COST PROPOSAL SUMMARY

Supporting Documentation

From: _____ COR No. _____
 (Contractor/Subcontractor Name)

Work Activity: _____

COST ITEM	DESCRIPTION	COST ⁽¹⁾
ACTUAL COSTS	1. Straight Time Wages/Salaries-Labor	
	2. Fringe Benefits & Payroll Taxes-Labor: ___% of Line 1	
	3. Overtime Wages/Salaries-Labor (Attach University's Representative's written authorization.)	
	4. Fringe Benefits & Payroll Taxes-Overtime: ___% of Line 3	
	5. Materials & Consumable Items	
	6. Sales Taxes: ___% of Line 5	
	7. Rental Charges (Attach CalTrans' Schedule.)	
	8. Royalties	
	9. Permits	
	10. Total Direct Expense (Sum of Lines 1-9)	\$-
	11. Insurance & Bonds ___% of Line 10 (up to 2% of Line 10)	-
TOTAL	12. Sum of Lines 10 & 11	\$-

Prepared By:⁽²⁾

CONTRACTOR:⁽³⁾

 (Company Name)

 (Company Name)

 (Signature & Date)

 (Signature & Date)

 (Print Name & Title)

 (Print Name & Title)

Notes:

- (1) This form shall be prepared and signed by Contractor or Subcontractor actually performing the Work Activity indicated above.
- (2) If this form is signed by a Subcontractor, it shall be reviewed and signed by Contractor certifying the accuracy of the information.

CHANGE ORDER

Contract Date: _____

Change Order No.: _____

Date Issued: _____

To Contractor: _____

Attn: _____

Address: _____

DESCRIPTION OF CHANGE: (Reference attachments)	Contract Sum Adjustment	Contract Time Adjustment
1. _____		
2. _____		

<input type="checkbox"/> Description of Change continued on Page 2. Subtotal from Page 2:	\$0.00	0
---	---------------	----------

Adjustment of Contract Sum:

Original Contract Sum:	_____
Prior Adjustments:	_____
Contract Sum before this Change:	\$-
Adjustment for this Change:	\$-
Revised Contract Sum:	\$-

Adjustment of Contract Time:

Original Contract Time:	0	(Days)
Prior Adjustments:	0	(Days)
Contract Time before this Change:	0	(Days)
Adjustment for this Change:	0	(Days)
Revised Contract Time:	0	(Days)

Start Date:	_____
Original Final Completion Date:	#####
Revised Final Completion Date:	#####

Contractor waives any claim for further adjustments of the Contract Sum and the Contract Time related to the above described change in the Work.

Accepted:

By: Contractor

(Signature & Date)

(Print Name & Title)

Recommended:

By: University's Representative

(Signature & Date)
Tameesha Hayes
project Manager
Planning, Design & Construction

(Print Name & Title)

Funds Sufficient:

By: Financial Administrative Officer

(Signature & Date)
Susan McFadden
Senior Financial Analyst
Planning, Design & Construction

(Print Name & Title)

Approved:

University: The Regents of the University of California

(Signature & Date)
Drew Hecht, Architect
Director of Project Management
Planning, Design & Construction

(Print Name & Title)

Account No.: _____ Activity Code: _____
Fund: _____ Function: _____
Cost Center: _____ Project Code: _____

CHANGE ORDER

Contract Date: _____

Change Order No.: _____

(Page 2)

DESCRIPTION OF CHANGE - CONTINUED

	Contract Sum Adjustment	Contract Time Adjustment
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Subtotals: \$0.00 0

CLAIM CERTIFICATION - GENERAL CONTRACTOR

Pursuant to Article 4.3.3 of the General Conditions, I certify as follows:

1. The Claim to which this certification is attached is made in good faith.
2. Amounts claimed for costs, expenses and damages incurred by Contractor are accurate and complete. Supporting data for amounts incurred by Contractor is accurate and complete. Any such supporting data, including any such new amounts, submitted after the execution of this certification, will be accurate and complete.
3. To the best of my knowledge and belief, amounts claimed, and supporting data submitted by Contractor on behalf of any and all subcontractors or suppliers, of all tiers, or any person or entity under Contractor, are accurate and complete. Contractor will not submit, after the date of execution of this certification, any such supporting data, including any such new amounts that, to the best of my knowledge and belief, is not accurate and complete.
4. The amount requested accurately reflects the adjustment of the Contract Sum for which the Contractor believes the University is liable.
5. Attached hereto is a certification that has been executed by each Subcontractor claiming not less than 5% of the total monetary amount sought by the claim to which this certification is attached.
6. I am duly authorized to certify the Claim on behalf of the Contractor.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed at _____ ,
(Name of City if within a City, otherwise, Name of County)

in the State of _____ , on _____ .
(Name of State) (Date)

(Name of Contractor)

By: _____
(Signature)

(Print Name & Title)

CLAIM CERTIFICATION - SUBCONTRACTOR

Pursuant to Article 4.3.3 of the General Conditions, I certify as follows:

1. The portion of the Claim made on behalf of the Subcontractor to which this certification is attached is made in good faith.
2. Amounts claimed for costs, expenses and damages incurred by the Subcontractor are accurate and complete. Supporting data for amounts incurred by the Subcontractor is accurate and complete. Any such supporting data, including any such new amounts, submitted to Contractor after the execution of this certification, will be accurate and complete.
3. To the best of my knowledge and belief, amounts claimed, and supporting data submitted to Contractor by the Subcontractor on behalf of any and all subcontractors or suppliers to Subcontractor, of all tiers, or any person or entity under Subcontractor, are accurate and complete. Subcontractor will not submit, after the date of execution of this certification, any such supporting data, including any such new amounts that, to the best of my knowledge and belief, is not accurate and complete.
4. The amount requested accurately reflects the amount for which the Subcontractor believes the University is liable to Contractor.
5. I am duly authorized to certify the Claim on behalf of the Subcontractor.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed at _____ ,
(Name of City if within a City, otherwise, Name of County)
in the State of _____ , on _____ .
(Name of State) (Date)

(Name of Subcontractor)

By: _____
(Signature)

(Print Name & Title)

**CONDITIONAL WAIVER AND RELEASE ON
FINAL PAYMENT**

NOTICE:

THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Identifying Information:

Name of Claimant: _____
Name of Customer: _____
Job Location: Fine Arts Performance Lab Exterior, Project No. 957450
University of California, Riverside, City of Riverside, County of Riverside
Owner: The Regents of the University of California

Conditional Waiver and Release:

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is

Maker of Check: _____
Amount of Check: \$ _____
Check Payable to: _____

Exceptions:

This document does not affect any of the following: Disputed claims for extras in the amount of:

\$ _____ .

Signature:

Claimant's Signature & Date: _____

Claimant's Name & Title: _____

Prime Contractor's Application for Payment # _____

**CONDITIONAL WAIVER AND RELEASE ON
PROGRESS PAYMENT**

NOTICE:

THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Identifying Information:

Name of Claimant: _____

Name of Customer: _____

Job Location: **Fine Arts Performance Lab Exterior, Project No. 957450**

University of California, Riverside, City of Riverside, County of Riverside

Owner: **The Regents of the University of California**

Through Date: _____

Conditional Waiver and Release:

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job through the Through Date of this document. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check: _____

Amount of Check: \$ _____

Check Payable to: _____

Exceptions:

This document does not affect any of the following:

- (1) Retentions.
- (2) Extras for which the claimant has not received payment.
- (3) The following progress payments for which the claimant has previously given a conditional waiver and release but has not received payment:

Date(s) of Waiver and Release: _____

Amount(s) of Unpaid Progress Payment(s): \$ _____

- (4) Contract rights, including (A) a right based on rescission, abandonment, or breach of contract, and (B) the right to recover compensation for work not compensated by the payment.

Signature:

Claimant's Signature & Date: _____

Claimant's Name & Title: _____

Prime Contractor's Application for Payment # _____

RETURN THIS AGREEMENT SIGNED BY CONTRACTOR AND ESCROW AGENT TO:
UNIVERSITY OF CALIFORNIA, RIVERSIDE
Planning, Design & Construction
1223 University Ave, Suite 240
Riverside, CA 92521
USE THIS ADDRESS FOR ALL CORRESPONDENCE

Escrow Account No.: _____

**ESCROW AGREEMENT FOR
DEPOSIT OF SECURITIES IN LIEU OF RETENTION
AND
DEPOSIT OF RETENTION**

This Escrow Agreement is made as of _____, and entered into by and between
(Date)
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, hereinafter called "University," and

_____ ,

whose address is _____ ,

hereinafter called "Contractor," and _____ ,

a state or federally chartered bank in the state of California, whose address is

_____ ,

hereinafter called "Escrow Agent."

For consideration hereinafter set forth, University, Contractor, and Escrow Agent agree as follows:

(1) Contractor has the option to deposit securities with Escrow Agent as a substitute for retention required to be withheld by University pursuant to the Contract Documents, hereinafter referred to as "Contract," entered into between University and Contractor for the Project titled

_____ ,

Project Number _____ , in the amount of \$ _____ ,

dated _____. Alternatively, on written request of Contractor, University shall deposit retention directly with Escrow Agent. Contractor and its surety shall be at risk for failure of the Escrow Agent selected. When Contractor deposits the securities as a substitute for retention, Escrow Agent shall notify University within 5 days after the deposit. At all times, Contractor shall have on deposit securities the market value of which is at least equal to the cash amount then required to be withheld as retention under the terms of the Contract. Securities shall be held in the name of The Regents of the University of California, Riverside; and Contractor shall be designated as the beneficial owner.

(2) Escrow Agent shall review the market value of securities deposited in escrow under this Escrow Agreement as often as conditions of the securities market warrant, but in no case less than once per month. Escrow Agent shall promptly notify University and Contractor of the market value of the deposited securities if such market value is less than the total amount of retention required to be withheld under the terms of the

Contract. Contractor shall promptly deposit additional securities so that the current market value of the total of all deposited securities shall be at least equal to the total required amount of retention. Escrow Agent shall, within 5 days after University's request, provide a statement to University of the current market value of all securities deposited under this Escrow Agreement as of a date not earlier than 5 days prior to such request. The provisions of this Paragraph 2 shall not apply to securities consisting of monetary deposits as allowed by Paragraph 7 held by a bank as Escrow Agent, provided the bank provides monthly statements reflecting the status of the monetary deposits held by the bank to University and Contractor.

(3) Contractor shall not use any or all of the securities deposited in lieu of retention under this Escrow Agreement for any other obligations, including deposits in lieu of retention for other contracts. Contractor represents, covenants and warrants that all deposited securities shall be lien free when tendered to the Escrow Agents and shall remain lien free during their retention by the Escrow Agent.

(4) University shall make progress payments to Contractor for those funds which otherwise would be withheld from progress payments pursuant to the Contract provision, provided that Escrow Agent holds securities in the form and amount specified herein.

(5) Prior to Contractor's submission of each Application For Payment, Escrow Agent shall issue a current statement of (a) the value of the securities currently being deposited in lieu of retention and (b) the current value of all securities being held in escrow pursuant to this Escrow Agreement. Such statement shall be no more than 5 days old at the time of submission, shall be notarized or have a guarantee of signature, and shall be submitted to Contractor with a copy to University under separate cover. Contractor shall attach such original statement to each Application For Payment. The provisions of this Paragraph 5 shall not apply to securities consisting of monetary deposits as allowed by Paragraph 7 held by a bank as Escrow Agent, provided the bank provides monthly statements reflecting the status of the monetary deposits held by the bank to University and Contractor.

(6) If, at the request of Contractor, University deposits retention directly with Escrow Agent, Escrow Agent shall hold such retention for the benefit of Contractor until such time as the escrow created under the Contract is terminated. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when University deposits retention directly with Escrow Agent.

(7) University will allow Contractor to deposit the following securities in lieu of retention and direct the investment of the retention deposits into any of the following which at the time of payment are legal investments under the laws of the State of California:

- a. Direct obligations of the United States of America (including obligations issued or held in book-entry form on the books of the Department of the Treasury of the United States of America or any Federal Reserve Bank), or obligations the timely payment of the principal of and interest on which are fully guaranteed by the United States of America, or tax-exempt obligations which are rated in the highest rating category of a nationally recognized bond rating agency.
- b. Obligations, debentures, notes or other evidence of indebtedness issued or guaranteed by any of the following: Banks for Cooperatives, Federal Intermediate Credit Banks, Federal Home Loan Bank System, Export-Import Bank of the United States, Federal Financing Bank, Federal Land Banks, Federal Farm Credits, Government National Mortgage Association, Farmer's Home Administration, Federal Home Loan Mortgage Corporation, or Federal Housing Administration.
- c. Bonds of the State of California or those for which the faith and credit of the State of California are pledged for the payment of principal and interest.
- d. Interest-bearing bankers acceptances and demand or time deposits (including certificates of deposit) in banks, provided such deposits are either (1) secured at all times, in the manner and to the extent provided by law, by collateral security described in clauses a or b of this Paragraph 7 continuously having a market value at least equal to the amount so invested so long as such

underlying obligations or securities are in the possession of the Securities Investors Protection Corporation, (2) in banks having a combined capital and surplus of at least One Hundred Million Dollars, or (3) fully insured by the Federal Deposit Insurance Corporation.

- e. Taxable government money market portfolios restricted to obligations with maturities of one (1) year or less, issued or guaranteed as to payment of principal and interest by the full faith and credit of the United States of America.
- f. Commercial paper rated in the highest rating category of a nationally recognized rating agency, and issued by corporations organized and operating within the United States of America and having total assets in excess of Five Hundred Million Dollars.

(8) Contractor shall be responsible for paying all fees, costs, and expenses incurred by Escrow Agent in administering the escrow account. These expenses and payment terms shall be determined by Contractor and Escrow Agent. All fees, costs, and expenses of this Escrow Agreement and any transactions carried out hereunder shall be billed by Escrow Agent to Contractor. In the event that any fees, costs, or expenses shall remain unpaid in excess of 30 days from the date due, Escrow Agent may withhold such unpaid amount from any income distributable to Contractor, but shall not withhold such unpaid amount from any income distributable to University.

(9) Interest earned on the securities or the money market accounts held in escrow and all interest earned on the interest shall be for the sole account of Contractor and shall be held in escrow. Interest may be withdrawn by Contractor from time to time, without notice to University, only to the extent that the total amount held in escrow meets or exceeds the required amount of retention.

(10) Except as provided in Paragraph 9, Contractor shall have the right to withdraw all or any part of the escrow account only by written notice to Escrow Agent accompanied by written authorization from University to Escrow Agent stating that University consents to the withdrawal of the amount sought to be withdrawn by Contractor. University shall not be obligated to consent to any withdrawal to the extent of stop notice claims which cannot be satisfied from other funds then due and payable to Contractor.

(11) University shall have the right to draw upon the securities, any interest earned on the securities, and any interest earned on the interest in the event of default by Contractor. Upon 7 days written notice to Escrow Agent from University, with a copy to Contractor, Escrow Agent shall immediately convert the securities, any interest earned on the securities, and all interest earned on the interest to cash and shall distribute the cash as instructed by University. Escrow Agent shall have no duty to determine whether a default has occurred and may rely solely upon the written notice of such default from University.

(12) Upon receipt of written notification from University certifying that final payment is due under the Contract, Escrow Agent shall release to Contractor the amount, if any, by which the value of all securities and interest on deposit less escrow fees and charges of the escrow account exceeds 125% of all stop notice claims on file. Escrow Agent shall pay the remaining amount to University or as directed by University. The escrow shall be closed immediately upon disbursement of all monies and securities on deposit and payment of fees and charges.

(13) Escrow Agent shall rely upon the written notifications from University and Contractor pursuant to this Escrow Agreement; and University and Contractor shall hold Escrow Agent harmless from Escrow Agent's release, conversion, and disbursement of the securities and interest as set forth herein.

(14) Escrow Agent shall have the right to terminate this Escrow Agreement upon 30 days notice to all parties hereunder. Upon receipt of such notice, University and Contractor shall appoint a successor Escrow Agent in writing and deliver written notice of such appointment to Escrow Agent. Thereupon, Escrow Agent shall deliver all assets in its custody to such successor Escrow Agent and all responsibility of Escrow Agent under this Escrow Agreement shall terminate; provided, however, if Contractor and University fail to appoint a successor Escrow Agent on or before the end of the 30 day notice period, then Escrow Agent is authorized and instructed to return all assets, documents, and other items in its custody to University and this Escrow Agreement shall be terminated without further instruction.

(15) The duties and responsibilities of Escrow Agent shall be limited to those expressly set forth in this Escrow Agreement; provided, however, that, with Escrow Agent's written consent, the duties and responsibilities in this Escrow Agreement may be amended at any time or times by an instrument in writing signed by all parties.

(16) Whenever Contractor tenders securities to be deposited in lieu of retention, an authorized representative of the Contractor shall declare under penalty of perjury that the securities are lien free and shall remain lien free during their retention by the Escrow Agent. The declaration shall be in the following form:

"The undersigned, on behalf of _____ whose address is _____,
(Name of Contractor)

(Street Address, City, State & Zip Code)

represents, covenants and warrants that the securities tendered herewith are lien free and shall remain lien free during their retention by the Escrow Agent.

I, _____, hereby declare that I am the
(Name)

(Title) of _____,
(Name of Contractor)

that I am duly authorized to make this representation, and that I declare under perjury under the laws of the State of California that the foregoing is true and correct."

(Signature) _____
(Date)

(17) The names of the persons authorized to give written notice or to receive written notice on behalf of University and on behalf of Contractor in connection with this Escrow Agreement, and exemplars of their respective signatures, are as set forth below. Such names may be changed by written notice to the other parties.

On behalf of University:

On behalf of Contractor:

1. _____
(Signature)
Drew Hecht, Architect
Director of Project Management
Planning, Design & Construction

(Print Name & Title)

951.827.1485
(Telephone Number)

2. _____
(Signature)
Bobbi McCracken
Associate Vice Chancellor and Controller
Business and Financial Services

(Print Name & Title)

951.827.3303
(Telephone Number)

1. _____
(Signature)

(Print Name & Title)

(Telephone Number)

2. _____
(Signature)

(Print Name & Title)

(Telephone Number)

Contractor, Escrow Agent, and University hereby agree to the covenants contained herein.

IN WITNESS WHEREOF, Contractor, Escrow Agent, and University have executed this Escrow Agreement, the day and year first written above.

University:

Contractor:

By: _____
(Signature)
Blythe R. Wilson, Architect
Director of Project Management
Planning, Design & Construction

(Print Name & Title)

By: _____
(Signature)

(Print Name & Title)

951.827.1485
(Telephone Number)

(Telephone Number)

By: _____
(Signature)
Bobbi McCracken
Associate Vice Chancellor and Controller
Business and Financial Services

(Print Name & Title)

By: _____
(Signature)

(Print Name & Title)

951.827.3303
(Telephone Number)

(Telephone Number)

Escrow Agent:

By: _____
(Signature)

(Print Name & Title)

(Telephone Number)

FIELD ORDER

Contract Date: _____

Field Order No. _____

To Contractor: _____

Attn: _____

Address: _____

Description of Work

**Estimated
Adjustment,
Contract
Sum**

**Estimated
Adjustment,
Contract
Time**

1.			
2.			
3.			

By University's Representative:

(Signature & Date)
Tameesha Hayes
 Project Manager
 Planning, Design & Construction

(Print Name & Title)

NOTE: If the work described above constitutes a change, this Field Order will be superseded by a Change Order that will include the scope of the change in the Work and any actual adjustments of the Contract Sum and the Contract Time.

cc: Director of Project Management, Planning, Design & Construction



FINAL DISTRIBUTION OF CONTRACT DOLLARS

Completed By: _____ Date: _____
 (Signature) (Printed Name) (Title)

Provide the following information for each contracting party including the prime Contractor and each subcontractor/subconsultant regardless of tier.* Attach additional sheets if necessary. Sheet No. _____ of _____

1	2	3	4	5	6					7a	7b	7c
Full Name of Business	Street Address City, State & Zip Code	Telephone # & Fax #	Contact Name	Type of Owner- ship	Business Categories (Check all that apply [X])					Portion of the Work	Amount \$	Percent %
					SBE	DVBE	DBE	WBE	N/A			
Prime:												
Sub:												
Sub:												
Sub:												
Total Contract Amount: \$ _____			Column 5 – Type of		Column 6 – Business Categories					Subtotals		
			C = Corporation		SBE = Small Business Enterprise							
			JV = Joint Venture		DVBE = Disabled Veteran Business Enterprise							
			P = Partnership		DBE = Disadvantaged Business Enterprise							
			SP = Sole Proprietorship		WBE = Women-Owned Business Enterprise							
O = Other		N/A = Not Applicable										

*Regardless of tier, a completed Self-Certification form must be submitted for the prime Contractor and each subcontractor/subconsultant shown on this Exhibit.

**If a prime Contractor, refer to the Report of Subcontractor Information for license and other information.

FINAL INSPECTION ACCEPTANCE

Contract Date: _____ Final Inspection Date: _____

To Contractor: _____

Attn: _____

Address: _____

The above Project was inspected and accepted as of the above Final Inspection Date. No outstanding work remains to be performed. All required submittals have been received. All training has been performed pursuant to the Contract.

The following Change Orders for time and/or money ONLY remain unexecuted:

Upon receipt of this executed document for Final Inspection Acceptance, Contracts Administration will file a Notice of Completion with the county recorder's office. This action terminates the construction contract for this Project.

By: Inspector

By: Design Professional

 (Signature & Date)
 Name
 Senior Construction Inspector
 Planning, Design & Construction

 (Print Name & Title)

 N/A
 (Signature & Date)

 (Print Name & Title)

By: University's Representative

By: University's Responsible Administrator

 (Signature & Date)
 Tameesha Hayes
 Project Manager
 Planning, Design & Construction

 (Print Name & Title)

 (Signature & Date)
 Drew Hecht, Architect
 Director of Project Management
 Planning, Design & Construction

 (Print Name & Title)

Bond No. _____

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, The Regents of the University of California ("The Regents") has awarded to

_____ as Principal

a contract dated the _____ day of _____, 20____, (the "Contract") for the work described as follows:

Project Name: Fine Arts Performance Lab Exterior
Project No. 957450, Contract No. 957450-LF-2022-75

AND WHEREAS, the Principal is required to furnish a bond in connection with the Contract, to secure the payment of claims of laborers, mechanics, material suppliers, and other persons as provided by law;

NOW, THEREFORE, we, the undersigned Principal and _____ as Surety, are held and firmly bound unto The Regents in the sum of _____ Dollars (\$ _____), for which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, or its heirs, executors, administrators, successors, or assigns approved by The Regents, or its subcontractors shall fail to pay any of the persons named in State of California Civil Code Section 9100, or amounts due under the State of California Unemployment Insurance Code with respect to work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the State of California Employment Development Department from the wages of employees of Principal and subcontractors pursuant to Section 13020 of the State of California Unemployment Insurance Code with respect to such work and labor, that Surety will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall become and be null and void.

This bond shall inure to the benefit of any of the persons named in State of California Civil Code Section 9100 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

Surety, for value received, hereby expressly agrees that no extension of time, change, modification, alteration, or addition to the undertakings, covenants, terms, conditions, and agreements of the Contract, or to the work to be performed thereunder, shall in any way affect the obligation of this bond; and it does hereby waive notice of any such extension of time, change, modification, alteration, or addition to the undertakings, covenants, terms, conditions, and agreements of the Contract, or to the work to be performed thereunder.

Surety's obligations hereunder are independent of the obligations of any other surety for the payment of claims of laborers, mechanics, material suppliers, and other persons in connection with the Contract; and suit may be brought against Surety and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing The Regents' rights against the other.

In the event suit is brought upon this bond, the parties not prevailing in such suit shall pay reasonable attorneys' fees and costs incurred by the prevailing parties in such suit.

Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20_____.

PRINCIPAL:

SURETY:

(Name of Company)

(Name of Company)

By: _____
(Signature)

By: _____
(Signature)

(Print Name)

(Print Name)

(Title)

(Title)

Address for Notices:

(Street Address)

(City, State & Zip Code)

NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.

Bond No. _____

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, The Regents of the University of California ("The Regents") has awarded to _____ as Principal a contract dated the _____ day of _____, 20 _____, (the "Contract"), which Contract is by this reference made a part hereof, for the work described as follows:

Project Name: Fine Arts Performance Lab Exterior
Project No. 957450, Contract No. 957450-LF-2022-75

AND WHEREAS, Principal is required to furnish a bond in connection with the Contract, guaranteeing the faithful performance thereof;

NOW, THEREFORE, we, the undersigned Principal and _____ as Surety are held and firmly bound unto The Regents in the sum of _____ Dollars (\$ _____), to be paid to The Regents or its successors and assigns; for which payment, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, or its heirs, executors, administrators, successors, or assigns approved by The Regents, shall promptly and faithfully perform the covenants, conditions, and agreements of the Contract during the original term and any extensions thereof as may be granted by The Regents, with or without notice to Surety, and during the period of any guarantees or warranties required under the Contract, and shall also promptly and faithfully perform all the covenants, conditions, and agreements of any alteration of the Contract made as therein provided, notice of which alterations to Surety being hereby waived, on Principal's part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify, defend, protect, and hold harmless The Regents as stipulated in the Contract, then this obligation shall become and be null and void; otherwise it shall be and remain in full force and effect.

No extension of time, change, alteration, modification, or addition to the Contract, or of the work required thereunder, shall release or exonerate Surety on this bond or in any way affect the obligation of this bond; and Surety does hereby waive notice of any such extension of time, change, alteration, modification, or addition.

Whenever Principal shall be and declared by The Regents to be in default under the Contract, Surety shall promptly remedy the default, or shall promptly:

1. Undertake through its agents or independent contractors, reasonably acceptable to The Regents, to complete the Contract in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract, including without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages, or, at Surety's election, or, if required by The Regents,

2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and, upon determination by The Regents of the lowest responsible bidder, arrange for a contract between such bidder and The Regents and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Sum, and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages; but, in any event, Surety's total obligations hereunder shall not exceed the amount set forth in the third paragraph hereof. The term "balance of the Contract Sum," as used in this paragraph, shall mean the total amount payable by The Regents to the Principal under the Contract and any amendments thereto, less the amount paid by The Regents to Principal.

Surety's obligations hereunder are independent of the obligations of any other surety for the performance of the Contract, and suit may be brought against Surety and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing The Regents' rights against the others.

No right of action shall accrue on this bond to or for the use of any person or corporation other than The Regents or its successors or assigns.

Surety may join in any arbitration proceedings brought under the Contract and shall be bound by any arbitration award.

In the event suit is brought upon this bond by The Regents, Surety shall pay reasonable attorney's fees and costs incurred by The Regents in such suit.

Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

IN WITNESS WHEREOF, we have hereunto set our hands this _____ day of _____, 20____.

PRINCIPAL:

SURETY:

 (Name of Company)

 (Name of Company)

By: _____
 (Signature)

By: _____
 (Signature)

 (Print Name)

 (Print Name)

 (Title)

 (Title)

Address for Notices:

 (Street Address)

 (City, State & Zip Code)

NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.



REPORT OF SUBCONTRACTOR/SUBCONSULTANT INFORMATION

(NOTE: THIS EXHIBIT IS NOT TO BE SUBMITTED WITH BID)

Completed By: _____ (Signature) _____ (Print Name) _____ (Title) Date: _____

Provide the following information for each contracting party including the prime Contractor and each subcontractor regardless of tier*.

Sheet No. _____ of _____

Attach additional sheets if necessary.

1	2	3	4	5	6					7a	7b	8		
Full Name of Business	Street Address City, State & Zip Code	Telephone # & Fax #	Contact Name	Type of Owner- ship	Business Categories* (Check all that apply [X])					Portion of the Work	Amount \$	License Information**		
					SBE	DVBE	DBE	WBE	N/A			License Classification	License #	
Prime:														
Sub:														
Sub:														
Sub:														
					Column 5 – Type of Ownership					Column 6 – Business Categories				
					C = Corporation					SBE = Small Business Enterprise				
					JV = Joint Venture					DVBE = Disabled Veteran Business Enterprise				
					P = Partnership					DBE = Disadvantaged Business Enterprise				
					SP = Sole Proprietorship					WBE = Women-Owned Business Enterprise				
					O = Other					N/A = Not Applicable				

*Regardless of tier, a completed Self-Certification form must be submitted for the prime Contractor and each subcontractor shown on this Exhibit.

**List only those license classifications and numbers relevant to this Project.

SELECTION OF RETENTION OPTIONS

I (we): _____
(Contractor)

SELECT OPTION 1 _____ Initial and date here
 University will withhold retention. for OPTION 1

OR SELECT OPTION 2 _____ Initial and date here
 herewith elect to substitute securities in the form of: for OPTION 2

(Type of Security)
 in lieu of retention being withheld by University for the
 above-referenced project.

OR SELECT OPTION 3 _____ Initial and date here
 herewith elect to have retention on the above-
 referenced project paid directly into the Escrow
 Account. for OPTION 3

(Type of Security to be Purchased)

An Escrow Account will be opened with: _____
(Name of state or federally chartered bank in California)

whose address is: _____
(Street)

(City, County)

(State, Zip Code)

On Behalf of Contractor*:

On Behalf of University:
 Acknowledged and Approved

By: _____
(Signature)

By: _____
(Signature)

(Print Name & Title)

Drew Hecht, Architect
 Director of Project Management
 Planning, Design & Construction

(Print Name & Title)

* Signature shall be by the authorized party who signs the Escrow Agreement for Deposit of Securities in Lieu of Retention and Deposit of Retention ("Escrow Agreement").

Note: If a completed and signed Escrow Agreement is not submitted with this form, University will not allow deposit of securities in lieu of retention.

SELF-CERTIFICATION

For the Contractor and each subcontractor/subconsultant, the following must be completed.

Indicate all Business category(ies) that apply by initialing next to the applicable category(ies):

(Initial, if applicable) **Small Business Enterprise (SBE)** - an independently owned and operated concern certified, or certifiable, as small business by the Federal Small Business Administration (SBA). (Size standards by Standard Industrial Classification codes required by the Federal Acquisition Regulations, Section 19.102, may be found at <http://www.sba.gov/content/table-small-business-size-standards>.) The eligibility requirements for California contracting purposes is on the [Department of General Services website](http://www.dgs.ca.gov/pd/Programs/OSDS/SBEeligibilityBenefits.aspx) at <http://www.dgs.ca.gov/pd/Programs/OSDS/SBEeligibilityBenefits.aspx>. The University may rely on written representation by the vendors regarding their status.

(Initial, if applicable) **Disabled Veteran Business Enterprise (DVBE)** - a business that is at least 51% owned by one or more disabled veterans or, in the case of any publicly owned business, at least 51% of the stock of which is owned by such individuals and whose management and daily business operations are controlled by one or more of such individuals. A Disabled Veteran is a veteran of the military, naval, or air service of the United States with a service connected disability who is a resident of the State of California. To qualify as a veteran with a service connected disability, the person must be currently declared by the United States Veterans Administration to be 10% or more disabled as a result of service in the armed forces.

(Initial, if applicable) **Disadvantaged Business Enterprise (DBE)** - a business concern that is at least 51% owned by one or more socially and economically disadvantaged individuals or, in the case of any publicly owned business, at least 51% of the stock of which is owned by such individuals and whose management and daily business operations are controlled by one or more of such individuals. Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as members of a group without regard to their individual qualities. Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free private enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged. Business owners who certify that they are members of named groups (Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asian-Indian Americans) are to be considered socially and economically disadvantaged.

(Initial, if applicable) **Women-Owned Business Enterprise (WBE)** - a business that is at least 51% owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" in this context means being actively involved in the day-to-day management.

(Initial, if applicable) **None of the above categories apply.**

I hereby certify under penalty of perjury under the laws of the State of California that I have read this certification and know the contents thereof, and that the business category indicated above reflects the true and correct status of the business in accordance with Federal Small Business Administration criteria and Federal Acquisition Regulations, FAR 19 pertaining to small, disadvantaged, women-owned, and disabled veteran business enterprises. I understand that falsely certifying the status of this business, obstructing, impeding or otherwise inhibiting any University of California official who is attempting to verify the information on this form may result in suspension from participation in University of California business contracts for a period up to five (5) years and the imposition of any civil penalties allowed by law.

INFORMATION FURNISHED BY: _____
(Print Name of Owner and/or Principal)

(Name of Business or Firm)

a _____
(Insert type of business e.g. corporation, sole proprietorship, partnership, etc.)

By: _____
(Print Name) (Title)

(Signature) (Date)

PRIVACY NOTICE

The State of California Information Practices Act of 1977 (effective July 1, 1978) requires the University of California to provide the following information to individuals who are asked to supply personal information about themselves. Information furnished on the Self-Certification form may, in some cases, identify personal information of an individual.

- The University of California, Riverside, is requesting the information contained in this form and the accompanying Report of Subcontractor Information.
- The Small Business Outreach Program Manager at the University of California, Riverside, is responsible for maintaining the requested information. The contact information for the Small Business Outreach Program Manager may be found at: <http://www.ucop.edu/procurement-services/files/sbdrmgr.xlsx>.
- The maintenance of information is authorized in part by Public Contract Code section 10500.5.
- Furnishing the information requested on this form is mandatory. If SBE, DBE, WBE and/or DVBE status is applicable, furnishing such information is mandatory.
- Failure to provide the information may be a violation of bidding procedures and/or breach of the contract and the University may pursue any and all remedies permitted by the provisions of the Contract Documents.
- The information on this form is collected for monitoring and reporting purposes in accordance with state law and University policy.
- The individual may access information contained in this form and related forms by contacting the Small Business Outreach Program Manager(s).

SUBMITTAL SCHEDULE

Contract Date: _____

Subcontractor: _____

Specification Section: _____

Work Activity: _____

Event	Scheduled Completion Date	Actual Completion Date	Calendar Days Required to Complete
1. Received by Contractor and Time for Checking			
2. First Delivered to University's Representative and Time for Checking			
3. Return to Contractor			
4. Corrections Completed and Time for Corrections			
5. Next Delivered (1 st Resubmission) to University's Representative and Time for Checking			
6. Return to Contractor			
7. Approval for Job Information			
8. Approval for Fabrication and Time for Fabrication			
9. Fabrication Completed			
10. Shipping Date and Time In Route			
11. Delivery to Job			

*Contractor must revise Submittal Schedule to reflect number of resubmissions.

SUBSTITUTION OF SUBCONTRACTOR - INDEMNITY AGREEMENT and CONSENT

WHEREAS, on **Date**, **The Regents of the University of California** (University) and _____ (Contractor)

(Full Company Name & Address of Prime Contractor)
entered into an Agreement (Contract Number **957450-LF-2022-75**) for the construction of **Fine Arts Performance Lab Exterior, Project No. 957450**, University of California, Riverside (Project); and

WHEREAS, Contractor's Bid, which was accepted by University for said Project, listed **Name of Listed Sub** as Subcontractor for the **work activity** work called for by the Bidding Documents and Contract Documents; and

WHEREAS, Contractor has represented and does hereby represent to University that **Name of Listed Sub** has **reasons for substitution**;

In consideration of the consent of University to the substitution of:

_____, for
(Full Company Name & Address of Substitute Subcontractor)

Name of Listed Sub, as
(Full Company Name of Listed Subcontractor)

Subcontractor to provide the **work activity** work called for in the Bidding Documents and Contract Documents for the Project, Contractor does hereby agree to indemnify the University and hold it harmless from any and all claims, expenses, losses or liabilities arising out of said substitution of subcontractor or said consent thereto, and to defend at Contractor's expense any and all claims, protests, suits, actions or other proceedings in connection therewith; provided, however, that the University shall be given prompt notice of all such proceedings and it shall be entitled, if it so desires, to participate in the response to or defense of any such proceedings. If any such proceedings causes or results in a delay in the completion of said Project, the loss to the University for such delay shall be deemed to be the amount determined by applying the liquidated damages provisions of said Agreement for the period of such delay.

IN WITNESS WHEREOF, this Indemnity Agreement has been executed on _____, *(Date)*
at _____, California.
(Location: City & County)

CONTRACTOR:

By: _____
(Signature)

(Typed or Printed Name & Title)

CONSENT TO SUBSTITUTION OF SUBCONTRACTOR

In consideration of the indemnification of University by Contractor, above, University agrees and does hereby consent to the substitution of:

_____, for
(Full Company Name & Address of Substitute Subcontractor)

Name of Listed Sub, as
(Full Company Name of Listed Subcontractor)

Subcontractor to provide the **work activity** work called for in the Bidding Documents and Contract Documents for the above named Project.

IN WITNESS WHEREOF, University and Contractor have executed this Consent to Substitution of Subcontractor as of the above date.

CONTRACTOR:

By: _____
(Signature)

(Typed or Printed Name & Title)

UNIVERSITY:

By: _____
(Signature)

(Typed or Printed Name & Title)

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

This document summarizes the Builder's Risk policy and is not intended to reflect all the terms, conditions, or exclusions of such policy as of the effective date of coverage. This document is not an insurance policy and does not amend, alter or extend the coverage afforded by the listed policy. The actual insurance policy defines all the terms, exclusions and conditions of coverage, and not this summary. Should any ambiguities or conflicts between the summary and policy exist, the policy terms and conditions will apply.

*Some projects may be excluded and/or must be underwritten separately and may be subject to different rates, deductibles, and terms and conditions (see end of summary). **Therefore, this document should be used as a guideline only.***

INSURANCE COMPANY: Liberty Mutual Fire Insurance Company

BEST'S RATING: A XV

NAMED INSURED: Regents of the University of California

INSURING AGREEMENT

This Policy, subject to the Limit of Liability and the terms, conditions, and limitations contained herein or endorsed hereon, insures against all risks of direct physical loss or damage to Covered Property while at the construction site, stored off-site, or in the course of transit within this policy's territory and occurring during the period of insurance of this policy.

LIMITS OF LIABILITY

SCHEDULE OF LIMITS

This Company shall not be liable for more than the Limit of Liability, as stated in Confirmation of Coverage, in any one Occurrence for any one Insured Project, subject to the following limits and sublimits:

MASTER POLICY LIMITS, BY CONSTRUCTION CLASS

\$150,000,000 per project, per occurrence; except,
\$ 25,000,000 per project, Joisted Masonry construction
\$ 10,000,000 per project, Wood Frame construction

NOTE: *The total estimated construction cost is estimated through project completion and reported on the original Builder's Risk Insurance Application. This Limit of Liability will correspond with the total estimated construction cost as shown on the original Builder's Risk Insurance Application. If the construction costs should increase, the Limit of Liability should be subsequently increased, once advance notice has been given to Willis Towers Watson by the University's representative.*

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

KEY SUBLIMITS (Per Occurrence unless otherwise stated):

1. \$10,000,000 for **Wood Frame Construction**
2. \$25,000,000 for **Joisted Masonry Construction**
3. \$25,000,000 as respects **Demolition and Increased Cost of Construction**
4. \$5,000,000 as respects **Expediting Expense, Contractor's Extra Expense**, General Conditions Expense / \$500,000 Owner's Extra Expense / \$100,000 Infrastructure Extra Expense
5. \$10,000,000 as respects **Temporary Offsite Location** (per location)
6. \$10,000,000 as respects **Transit** (Inland only)
7. \$15,000,000 as respects **Debris Removal**
8. \$1,000,000 as respects **Construction Documentation, Valuable Papers and Records**
9. \$5,000,000 as respects **Design Professional Fees**
10. \$1,000,000 as respects **Claims Preparation Expenses**
11. \$1,000,000 as respects **Crane Re-Erection Expense**
12. \$500,000 as respects **Scaffolding, Forms and Falsework Re-Erection Expense**
13. \$500,000 as respects **Pollution Cleanup and Decontamination** (Per project aggregate)
14. \$750,000 as respects **Fire Protection Equipment Refills**
15. \$500,000 as respects **Governmental Authority Protection Services**
16. \$500,000 as respects **Fungus, Wet Rot, Dry Rot or Bacteria**
17. \$2,000,000 as respects **Preservation of Property Protection Expense – 30 Days**
18. \$50,000 as respects **Reward Payment**
19. Included for 30 Days as respects **Hot Testing**
20. No sublimit as respects **Off Premises Service Interruption – Direct Damage**
21. No Sublimit as respects **Green/LEED Rating System**
22. No Sublimit for **Landscaping Materials**
23. No Sublimit as respects **Water Damage (Includes Frost, Freeze, Falling of Ice)**

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

TERMS AND CONDITIONS

NAMED INSURED

The Regents of the University of California and all affiliated and subsidiary companies, corporations, ventures, partnerships or other organizations, all owned, controlled or managed by the Named Insured and all as now exist or may hereafter be constituted or acquired.

ADDITIONAL INSUREDS

Except noted above, this Policy recognizes owners, contractors, subcontractors of any tier, architects, engineers, and any other individual or entity, all as required by contract documents or subcontract documents executed with respect to the insured project prior to the date of loss or damage to covered property as an Additional Insured, and then only as to their respective financial interest in the coverage property.

Notwithstanding the foregoing sentence, architects, engineers, manufacturers and suppliers shall only be Additional Insureds with respect to their activities at the insured project location.

ATTACHMENT/TERMINATION

Insurance hereunder applies to all projects specifically declared under the Master Policy in a Quarterly Report Endorsement, where the project is scheduled to begin during the term of the Master Policy. The Master Policy term commences on September 1, 2020 at 12:01AM and ends on September 1, 2023 at 12:01AM.

Coverage for each Insured Project declared under the Master Policy will go into effect and continue in full force and effect during the Coverage Period specified in the Confirmation of Coverage.

NOTIFICATION OF COVERAGE/TERMINATION: *The Confirmation of Coverage period will correspond with the earliest estimated Notice to Proceed date for any construction phase and estimated Notice of Final Completion date as indicated on the original Builder's Risk Insurance Application. If construction is not completed on time and coverage beyond the previously reported estimated Notice of Final Completion date is required, prior notification must be given to Willis Towers Watson by the University Representative in order to ensure that coverage remains in force for the project.*

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

DEDUCTIBLES

(Basis for determining deductible is the total project contract value for all construction phases, estimated through project completion.)

Deductible	All Other Perils	Water Damage
\$10,000	<ul style="list-style-type: none"> • All ≤\$1,000,000 projects • >\$1,000,000 and ≤\$25,000,000 Fire Resistive, Non-Combustible, Masonry Non- Combustible and Joisted Masonry projects • All Job Order Contracts (JOCs) • All Site Work Only (Outdoor Infrastructure / Utility / Hardscape / Landscape) projects 	<ul style="list-style-type: none"> • All ≤\$1,000,000 projects • All Job Order Contracts (JOCs) • All Site Work Only (Outdoor Infrastructure / Utility / Hardscape / Landscape) projects
\$25,000	<ul style="list-style-type: none"> • All projects >\$25,000,000 	<ul style="list-style-type: none"> • >\$1,000,000 and ≤\$25,000,000 Fire Resistive, Non-Combustible, Masonry Non-Combustible and Joisted Masonry projects
\$50,000	<ul style="list-style-type: none"> • Wood Frame projects >\$1,000,000 and ≤\$10,000,000 	<ul style="list-style-type: none"> • All projects >\$25,000,000 and ≤\$50,000,000
\$75,000		<ul style="list-style-type: none"> • All projects >\$50,000,000 and ≤\$150,000,000
\$100,000		<ul style="list-style-type: none"> • Wood Frame projects >\$1,000,000 and ≤\$10,000,000

NOTE: The contractor shall be responsible for the deductibles.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

KEY EXCLUSIONS

KEY PROPERTY NOT COVERED

Covered property does not include:

1. Land and land values and the value of cut, fill and backfill materials existing at the location of the insured project prior to project commencement. However, the following are covered to the extent identified in the contract documents and included in the Total Project Value:
 - Fill and backfill materials purchased for use in the completion of the insured project; and
 - Labor and material charges incurred to excavate land and to move, remove, place or otherwise handle cut, fill and backfill materials, whether such materials are insured or uninsured.
2. Any part of contractor's equipment including, tools, machinery, hoists, jacks, lifts, cranes or property of similar kind not intended to become a permanent part of the insured project;
3. Vehicles and equipment licensed for highway use, rolling stock, aircraft or watercraft;
4. Water, other than water that is contained within any enclosed tank, piping system, or any other processing equipment; standing timber including undisturbed natural wooded areas; growing crops; or animals;
5. Accounts, bills, currency, stamps, evidence of debts, checks, money, securities, precious metals, precious stones or other property of a similar nature;
6. Existing real property;
7. Property at a project site that stores, processes, handles or makes use of radioactive materials; however, this does not apply to project site making use of radioactive isotopes contained within equipment used for diagnostic or testing purposes;
8. Roadways, sidewalks or other paved or concrete surfaces at the project site that existed prior to the beginning of the Insured project;
9. Contraband or property in the course of illegal transportation or trade; or
10. Overhead transmission, distribution or communications lines, and their supporting structures, except to the extent identified in the contract documents and included in the total estimated construction cost.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

KEY EXCLUDED CAUSES OF LOSS

1. This policy will not pay for loss or damage caused directly or indirectly by any of the following. Such loss or damage is excluded regardless of any other cause or event that contributes concurrently or in any sequence to the loss or damage, even if such other cause or event would otherwise be covered. These exclusions apply whether or not the loss event results in widespread damage or affects a substantial area:

a. Governmental Action

Seizure, confiscation, expropriation, nationalization or destruction of property by order of governmental authority.

This exclusion does not apply to seizure or destruction of property by order of governmental authority taken at the time of a fire to prevent its spread.

b. Nuclear Hazard

Nuclear reaction or radiation, or radioactive contamination, however caused, except as provided under Section E., Coverage Extensions, Radioactive Contamination. But if Nuclear reaction or radiation, or radioactive contamination results in fire, this policy will pay for the direct loss or damage caused by that fire.

c. Ordinance or Law

(1) The enforcement of or compliance with any ordinance or law:

- (a) Regulating the construction, use or repair of any property; or
- (b) Requiring the tearing down of any property, including the cost of removing its debris.

(2) This exclusion applies whether the loss or damage results from:

- (a) An ordinance or law that is enforced even if the property has not been damage; or
- (b) The increased costs incurred to comply with an ordinance or law in the course of construction, repair, renovation, remodeling or demolition of property, or removal of its debris, following a physical loss to that property.

This exclusion applies, except as provided under Section E., Coverage Extension, Ordinance or Law.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

d. War and Military Action

War and military action, meaning:

- (1) War, including undeclared or civil war;
- (2) Warlike action by a military force, including action in hindering or defending against an actual or expected attack, by any government, sovereign, or other authority using military personnel or other agents; or
- (3) Insurrection, rebellion, revolution, usurped power, or action taken by governmental authority by hindering or defending against any of these.

2. We will not pay for:

a. Consequential Loss

Loss, damage, cost or expense caused by, resulting from, or attributable to any of the following:

- (1) Loss of market or loss of use;
- (2) Liquidated damages, performances penalties or penalties for non-completion, except as provided under Section E., Coverage Extensions, Contract Penalties;
- (3) Non-Compliance with contract conditions;
- (4) Delay in completion of construction, except as provided under Time Element coverage, if endorsed to this Policy; or
- (5) Re-Sequencing or inefficiencies of construction activities.

b. Cracking and Settling

Loss or damage caused by, resulting from or attributable to normal or expected subsidence, settling, cracking, expansion, contraction or shrinkage of walls, floors, ceilings, buildings, foundations, patios, walkways, driveways or pavements.

But if loss or damage caused by a covered cause of loss results, we will pay for the resulting loss or damage caused by that covered cause of loss.

c. Disappearance or Shortage

Missing property when the only proof of loss is unexplained or mysterious disappearance of covered property, or shortage of property discovered on taking inventory, or any other instance where there is no physical evidence to show what happened to the covered property. This exclusion does not apply to covered property in the custody of a carrier for hire.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

d. Dishonest Acts

Loss or damage caused by or resulting from fraudulent, dishonest or criminal acts of any Insured or any of the Insured's partners, officers, directors, trustees, managers, employees (including leased or temporary employees) or others to whom the property is entrusted, except as provided under Section E., Coverage Extensions, Dishonest Acts.

This exclusion does not apply to:

- (1) Acts of destruction committed by the Insured's employees (including leased or temporary employees); or
- (2) Covered property in the custody of any carrier for hire or anyone claiming to be a carrier for hire at the time the property is entrusted to them.

This exclusion applies whether or not such persons are acting alone or in collusion with other persons, or whether such acts occur during the hours of employment.

e. Electronic Vandalism, Defects or Errors

Loss or damage to electronic hardware, software, programs or data caused by or resulting from:

- (1) Computer virus;
- (2) Willful or malicious electronic alteration, manipulation, tampering, or destruction by authorized or unauthorized users;
- (3) Failure, malfunction, deficiency, deletion, errors, or omissions in:
 - (a) Programming;
 - (b) Instructions to a machine; or
 - (c) Installation or maintenance of electronic hardware; or
- (4) Mysterious disappearance of code;

Except as provided by Section E. Coverage Extensions, Electronic Vandalism.

But if loss or damage caused by a specified cause of loss results, this policy will pay for the resulting loss or damage caused by that specified cause of loss.

f. Expected, Preventable or Accumulated Losses

Loss or damage caused by or resulting from wear and tear, deterioration, inherent vice, hidden or latent defect, corrosion, rust or dampness or dryness of the atmosphere.

But if loss or damage caused by a covered cause of loss results, this policy will pay for the resulting loss or damage caused by that covered cause of loss.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

g. Faulty, Inadequate or Defective Workmanship or Design

Loss, damage, cost or expense caused by or resulting from faulty, inadequate or defective:

- (1) Planning, zoning, development, surveying, siting;
- (2) Design, specifications, workmanship, repair, construction, renovation, remodeling, grading or compaction;
- (3) Materials used in repair, construction, renovation, remodeling, grading or compaction;
or
- (4) Maintenance;

Of part or all of any property on or off the project site described in the Declarations.

But if loss or damage caused by a covered cause of loss results, this policy will pay for the resulting loss or damage caused by that covered cause of loss. However, in no event this policy will pay for the covered property that was faulty or defective; the costs or expense to improve or redesign the original materials; supplies, designs, plans or specifications; or to improve workmanship.

The mere existence of any faulty, inadequate or defective conditions listed in paragraphs g. (1). Through g. (4)., above is not direct physical loss or damage.

h. Fines or Penalties

Fines or penalties imposed on the Insured at the order of any government agency, court or other authority.

i. Fungus, Wet Rot, Dry Rot or Bacteria

Loss or damage consisting of, directly or indirectly caused by, contributed to or aggravated by the presence, growth, proliferation, spread or any activity of fungus, wet rot, dry rot or bacteria, including any expense to remediate the presence or effects of any of the foregoing.

But if Fungus, wet or dry or bacteria result in a covered cause of loss, this policy will pay for the loss or damage caused by that covered cause of loss.

This exclusion does not apply:

- (1) When fungus, wet or dry rot or bacteria result from fire or lightning; or
- (2) To the extent that coverage is provided under Section E., Coverage Extensions, Fungus, Wet Rot, Dry Rot or Bacteria, with respect to loss or damage by a cause of loss other than fire or lightning.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

j. Pollutants

Loss, damage, cost or expense caused by or resulting from the actual, alleged or threatened discharge, dispersal, seepage, migration, release, or escape of pollutants, unless the discharge, dispersal, seepage, migration, release, or escape is directly caused by a specified cause of loss.

But if the discharge, dispersal, seepage, migration, release, or escape of pollutants results in a specified cause of loss, this policy will pay for the loss or damage caused by that specified cause of loss.

This policy will also not pay for loss, damage, cost or expense arising out of any request, demand, order or statutory or regulatory requirement that requires any Insured or others to test for, monitor, cleanup, remove, contain, treat, detoxify, or neutralize, or in any way respond to, or assess the effects of pollutants.

k. Landscaping Materials

Insurance Company will not pay for direct physical loss or damage to landscaping materials caused by or resulting from:

- a. Infestation, disease, freezing, drought, lack of moisture, hail or weight of ice or snow; or
- b. Insects, vermin, rodents or animals.

l. Terrorism: Coverage has not been endorsed to this policy.

m. Damage to Existing Property: Coverage has not been endorsed to this policy.

n. Delay in Completion: Coverage has not been endorsed to this policy.

o. Earth Movement – Coverage has not been endorsed to this policy.

p. Flood – Coverage has not been endorsed to this policy.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

SELECT EXTENSIONS OF COVERAGE

1. Expediting and Contractor's Extra Expense

a. In the event of direct physical loss or damage to covered property caused by or resulting from a covered cause of loss, this Company will pay for the reasonable and necessary:

(1) Expediting expenses, including:

(a) Wages for overtime, night work, and work on public holidays;

(b) Extra costs of express freight or other rapid means of transportation; and

(c) Extra costs of rental equipment;

Which are necessary to make temporary repairs or to expedite the permanent repair or replacement of the covered property sustaining such loss or damage;

(2) Owner's Extra Expense; and

(3) Contractor's extra expense and general conditions expense in excess of the total expense that would normally have been incurred during the period of time required to repair or replace covered property with reasonable speed and similar quality for the purpose of continuing the scheduled progress of undamaged work, and only to the extent such expenses are necessary to continue as nearly as practicable the normal operation of the work in progress.

2. Demolition and Increased Cost of Construction

a. In the event of direct physical loss or damage caused by a covered cause of loss to a building or structure that is covered property, the Company will pay for the:

(1) Cost to demolish and clear the project site of the undamaged portion of the constructed, erected or installed covered property as a consequence of a requirement to comply with an ordinance or law that required demolition of such undamaged property;

(2) Cost for recycling debris from the undamaged portion of the constructed, erected or installed covered property at a recycling facility, including the associated transportation costs, when those costs are incurred as a result of the demolition of the undamaged portion of the constructed, erected or installed covered property as a consequence of a requirement to comply with an ordinance or law that requires demolition of such undamaged property;

(3) Increase costs incurred by the Insured to repair, rebuild or replace the damaged and undamaged portions of that covered property for the same intended use as per the written contract in place at the time of direct physical loss or damage when the increased cost is a consequence of a requirement to comply with the minimum standards of an ordinance or law; and

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

- (4) Loss to the undamaged portion of the constructed, erected or installed covered property as a consequence of a requirement to comply with an ordinance or law that requires demolition of undamaged parts of the same building.

Any income generated from debris recycling will reduce the Company loss payment.

- b. We will not pay under this Ordinance or Law Coverage Extension for:

- (1) Costs associated with the enforcement of any ordinance or law which required any Insured or others to test for, monitor, clean up, remove, contain, treat, detoxify, or neutralize, or in any way respond to, or assess the effects of, pollutants, fungus, wet rot, dry rot or bacteria;
- (2) Enforcement of any ordinance or law which required the demolition, repair, replacement, reconstruction, remodeling, or remediation of property due to contamination by pollutants or due to the presence, growth, proliferation, spread or any activity of fungus, wet rot, dry rot or bacteria; or
- (3) Costs to comply with any ordinance or law that was required to be complied with in the absence of the loss or damage.

3. Preservation of Property Protection Expense

- a. If in the event of actual or imminent physical loss or damage to covered property caused by a covered cause of loss, this policy will pay for the reasonable and necessary expenses incurred by the Insured to protect the covered property by:
- (1) Removing it from the project site or a temporary offsite location;
- (2) Storing it away from the project site or a temporary offsite location for up to the number of days shown in the Builder's Risk Coverage Extensions Supplemental Declarations from the date it was first moved; and
- (3) Returning it to the project site or temporary offsite location after the threat of actual or imminent loss or damage has passed.
- b. This policy will reimburse the Insured for the reasonable and necessary expenses to protect covered property at the project site or temporary offsite location from actual or imminent physical loss or damage from fire, named storm or flood that has been forecast by the National Weather Service or the U.S. Army Corps of Engineers, but only if coverage is provided under this Policy for that cause of loss.

The Insured must keep a record of the expenses incurred.

No Deductible applies to this Coverage Extension.

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Master Builder's Risk Program
Coverage Summary

4. Construction Documentation, Valuable Papers and Records

Subject to the stated sublimit, this Policy is extended to cover direct physical loss or damage to construction documentation, valuable papers, and records caused by a covered cause of loss.

This Company will value construction documentation, valuable papers, and records at the full cost necessary to research and reproduce the lost construction documentation, valuable papers, and records, plus the cost of the blank materials on which it resides. However, this company will only pay for costs of research and reproduction if the Insured reproduces the construction documentation, valuable papers, and records.

5. Crane Re-Erection Expense

If a tower or pole crane is lost or damaged by a covered cause of loss at the project site, this policy will pay the reasonable and necessary costs incurred by the Insured to re-erect a tower or pole crane necessary to complete the insured project. However, this policy will not cover any loss or damage to the tower or pole crane itself, unless such tower or pole crane is scheduled on a Contractor's Equipment Coverage endorsement, attached to this Policy.

6. Scaffolding, Forms or Falsework Re-Erection Expense

If scaffolding, forms or falsework covered under this policy is lost or damaged by a covered cause of loss at the project site, the Insurance Company will pay the reasonable and necessary costs incurred by the insured to re-erect scaffolding, forms or falsework necessary to complete the insured project.

7. Debris Removal

Subject to the Sublimit of Liability, in the event of direct physical loss or damage by a covered cause of loss occurs to covered property, this policy will pay:

- a. The cost the Insured incurs to demolish, clear and remove debris of covered property, including such property while in transit or at a temporary offsite location; and
- b. The reasonable and necessary expense incurred by the Insured for:
 - (1) Recycling debris of covered property at a recycling facility, including the associated transportation costs; and
 - (2) Removing debris of uncovered property from the project site.

The expenses will be paid only if reported to the Company in writing within three hundred sixty-five (365) days of the date of loss or damage.

Any income generated from debris recycling will reduce the Company loss payment

In no event will there be coverage under this Debris Removal Coverage Extension for any costs to:

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
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- (1) Extract pollutants from land, water or debris;
- (2) Remove, restore, or replace polluted land or water; or
- (3) Transport, store, decontaminate or recycle contaminated debris.

8. Design Professional Fees

Subject to the stated sublimit, this policy will reimburse the first Named Insured for reasonable and necessary expenses incurred for design professional services to repair, rebuild or replace the lost or damaged covered property to the original design, if it has been damaged by a covered cause of loss.

9. Claims Preparation Expense

This Company will reimburse you for the reasonable and necessary claim preparation expenses you incur in preparing claim information, when it's required, for the purpose of determining the amount of loss or damage prior to finalizing a claim adjustment.

- a. Claim preparation expense means the expenses incurred by the Insured for only the following:
 - (1) The Insured's employees to produce or certify any particulars or details contained within the Insured's books or documents, or such other proofs, information or evidence required by us;
 - (2) Taking inventory, conducting independent appraisals, or gathering and preparing other data to substantiate the amount of loss or damage; and
 - (3) Services provided by accountants, auditors, contractors, architects and engineers or other professionals solely for the purpose of determining the amount of loss or damage.
- b. Claim preparation expense does not mean the expenses incurred for:
 - (1) Negotiating or presenting any claim that we have disputed or denied;
 - (2) Attorneys, public adjusters, loss appraisers or loss consultants or their affiliates;
 - (3) Examinations under oath, even if requested by this Company
 - (4) Travel; or
 - (5) Insurance brokers or insurance agents, or their affiliates, without our written consent prior to such expenses being incurred.

This Coverage extension does not apply until a claim for covered loss or damage to covered property has been submitted to and accepted by the Insurance Company. In the event that the amount of covered loss or damage does not exceed the applicable Deductible, no coverage will apply under this Coverage Extension.

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10. Fungus, Wet Rot, Dry Rot or Bacteria

If fungus, wet rot, dry rot or bacteria is caused by or results from a covered cause of loss, other than fire or lightning, this Company will pay for:

- a. Direct physical loss or damage to covered property at the project site or a temporary offsite location caused by or resulting from fungus, wet rot, dry rot or bacteria, including the cost of removal of the fungus, wet rot, dry rot or bacteria; and
- b. The reasonable and necessary expenses to:
 - (1) Test for, monitor or assess the existence, concentration or effects of fungus, wet rot, dry rot or bacteria;
 - (2) Tear out and replace any part of covered property needed to gain access to the fungus, wet rot, dry rot or bacteria; and
 - (3) Clean up, remove or remediate fungus, wet rot, dry rot or bacteria.

The coverage described in paragraphs 9.a and 9.b, of this Coverage Extension only applies if the Insured takes all reasonable steps to save and preserve property from further loss or damage at the time of, and after the discovery of the fungus, wet rot, dry rot or bacteria.

If there is covered loss or damage to covered property, not caused by fungus, wet rot, dry rot or bacteria loss payment will not be limited by the terms of this Coverage Extension, except to the extent that fungus, wet rot, dry rot or bacteria, causes an increase in the loss. Any such increase in the loss will be subject to the terms of this Coverage Extension. The most this Company will pay under this Coverage Extension is the Sub-Limit of Liability shown for Fungus, Wet Rot, Dry Rot or Bacteria. This is the most we will pay for the total of all loss or damage under this Coverage Extension, even if the fungus, wet rot, dry rot or bacteria continues to be present or active, or recurs, in a later Policy Term.

11. Governmental Authority Protection Service Charges

When the fire department, policy department or other governmental authority is called to save or protect covered property from a covered cause of loss at the project site or a temporary offsite location, this policy will pay the Insured's liability for service charges assessed that are:

- A. Assumed by written contract or written agreement prior to loss or damage; or
- B. Required by local ordinance, law or statute.

This policy will also pay for those costs incurred by the Insured's fire brigade to save or protect covered property from fire, but not including the costs to refill fire protective equipment.

The most this policy will pay for this Coverage Extension in any one occurrence, regardless of the number of responding departments or authorities or number of services performed, is the Sub-Limit of Liability shown for Government Authority Protection Service Charges.

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Coverage Summary

No Deductible applies to this Coverage Extension.

12. Fire Protection Equipment Refills

Insurance Company will pay the reasonable and necessary costs the Insured incurs to refill fire protection equipment which has been discharged accidentally or in the course of saving or protecting covered property from a covered cause of loss.

13. Pollutant Clean-Up and Decontamination

- a. This policy will pay the reasonable and necessary costs incurred by you to extract pollutants from land or water at the project site or a temporary offsite location if the discharge, dispersal, seepage, migration, release or escape of pollutants is directly caused by a covered cause of loss.
- b. When required by ordinance, law or regulation in effect at the time of loss or damage, this policy will pay the reasonable and necessary costs incurred by you to extract pollutants from debris at the project site or a temporary offsite location if the discharge, dispersal, seepage, migration, release or escape of pollutants is directly caused by a covered cause of loss.
- c. When paragraph a. above applies, this policy will also pay the Insured's reasonable and necessary costs incurred for:
 - (1) Restoring or replacing that contaminated land or water; and
 - (2) Testing performed in the course of extracting those pollutants from the land or water.
- d. When paragraph b. above applies, this policy will also pay the Insured's reasonable and necessary costs incurred for transporting that contaminated debris to a temporary storage or decontamination facility.

These costs will be paid only if they are reported to the Insurance Company in writing within one hundred eighty (180) days of the date on which the covered cause of loss occurs.

This Coverage Extension does not apply to any other costs to test for, monitor or assess the existence, concentration or effects of pollutants.

14. Prevention of Access

Civil Authority / Ingress or Egress

The Insurance Company will pay for the reasonable and necessary contractor's extra expense, owner's extra expense and general conditions expense incurred by the insured, in excess of the total expense that would normally have been incurred during the same period of time had no loss or damage occurred, for the purpose of continuing the scheduled progress of undamaged work, but only to the extent such expenses are necessary to continue as nearly as practicable the normal operation of the work in progress.

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Coverage Summary

Civil Authority

When an order of civil authority restricts or prohibits access to the project site in response to direct physical loss or damage caused by a covered cause of loss to property not insured under this policy and located within 2-miles of the project site. Coverage begins 72-hours after the time of direct physical loss or damaged caused by a covered cause of loss.

Ingress or Egress Coverage

When ingress or egress to the project site by suppliers, contractors, or employees is physically obstructed due to direct physical loss or damage caused by a covered cause of loss to property not insured under this policy and located within 2-miles of the project site. Coverage begins 72-hours after the time of direct physical loss or damaged caused by a covered cause of loss.

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SELECTED GENERAL CONDITIONS

1. REQUIREMENTS IN CASE OF LOSS

In the event of loss or damage to Insured Property the Insured shall:

- A. Notify the police if a law may have been broken
- B. Give Insurance Company prompt notice of the loss or damage. Include a description of the property involved.
- C. As soon as possible, give the Insurance Company a description of how, when and where the loss or damage occurred.
- D. Take all reasonable steps to protect the Covered Property from further damage.
- E. Not voluntarily make a payment, assume any obligation, or incur any expense without our consent.
- F. Permit the Insurance Company to inspect the property.
- G. Submit to examinations under oath about any matter relating to this insurance of the claim.
- H. Send the Insurance Company a signed, sworn proof of loss containing the information they request to settle the claim, within 60-days after the Insurance Company's request.
- I. Immediately send the Insurance Company copies of any demands, notices, summonses or legal papers received in connection with the claim or suit.
- J. Cooperate with the Insurance Company in the investigation or settlement of the claim.

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Master Builder's Risk Program
Coverage Summary

2. VALUATION

1. Except as provided in paragraphs 2., 3., and 4., below, the cost to repair, rebuild or replace covered property by the Insured as the time of direct physical loss or damage will be based on the following:
 - A. Direct payroll cost for labor directly chargeable and related to the repair, rebuild or replacement of the damaged covered property;
 - B. Contractors' profit, overhead charges and construction management fees as included in the original contract, or in any subsequent change order contract, as applicable;
 - C. Expenses for the dismantling, transportation and reassembly of damaged covered property;
 - D. General conditions expense; and
 - E. Property under construction at the Insured's cost.

For a green building, the valuation will include applicable green standards in force at the time of loss or damage in the cost to repair, rebuild or replace the lost or damaged green building. If applicable green standards, or equivalent standards, are not available, this policy will replace the lost or damaged green building with construction materials and equipment of like kind and quality.

2. Property under construction owned by others at the lesser of the following:
 - a. The cost to repair, rebuild or replace property under construction at the time of direct physical loss or damage with materials of like kind and quality; or
 - b. The amount the Insured is legally obligated to pay for direct physical loss or damage by reason of the Insured's assumption of liability for such loss or damage in written agreement executed prior to the loss or damage of that property.
3. Property under construction owned by the Insured that was refurbished, reconditioned or recertified, at the lesser of the cost to repair or replace the property under construction or the price which that property might be expected to realize if offered for sale in a fair market on the date of loss or damage.
4. Landscaping materials at the cost to repair or replace landscaping materials at the time of direct physical loss or damage with readily available commercial nursery stock.
5. Office contents, other than the contents of construction trailers, at a temporary offsite location, at the cost to repair or replace the covered property at the time of direct physical loss or damage with similar property intended to perform the same function. Office contents not replaced will be valued at actual cash value, at the time and place of loss or damage.

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Coverage Summary

Insurance provided for office contents while at a temporary offsite location, is excess over any other valid and collectible insurance available to the owner of such property.

6. Property in transit at the invoice cost of the lost or damage covered property plus accrued shipping charges less shipper's liability, if any.

3. INCREASED HAZARD

If the circumstances in which this insurance was entered into are altered, or if the risk materially increases, the Insured shall give notice in writing to the Insurance Company within thirty (30) days of the Insured's knowledge of the same.

4. OTHER INSURANCE

1. This insurance is primary, except when paragraphs 2., 3., or 4, below apply.
2. This insurance is excess over any underlying insurance, including any insurance that you purchased for all or any part of a Deductible in this Policy. The existence of underlying insurance shall not prejudice the Insured's rights under this Policy. The Deductible and any amount paid under such underlying insurance will apply to the applicable Deductible under this policy.
3. To the extent others are responsible for loss of or damage to covered property while in transit under terms Free on Board, this insurance will be excess insurance and will not contribute with such other insurance.
4. If there is other insurance, whether purchased by the Insured or others, subject to the same plan, terms, conditions and provisions as the insurance provided under this Policy, the Company will pay their share of the covered loss or damage. The company share is the proportion that the applicable Limit of Liability or Sub-Limit of Liability under this Policy bears to the sum of all the Limits of Liability or Sub-Limits of Liability covering on the same basis.

Insured can purchase excess insurance commencing on or after the inception of this Policy that is specifically excess over the Limit of Liability or Sub-Limits of Liability under this policy without prejudice to this Policy. The existence of such insurance shall not reduce any liability under this policy.

5. PERMISSION TO OCCUPY IS GRANTED

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Master Builder's Risk Program
Coverage Summary

SELECTED DEFINITIONS

The following terms have been defined in the policy – the policy definitions will be applied in the event of a loss.

1. FLOOD:

Flood means:

- (1) Surface waters; rising waters; storm surge; wave wash; waves; tsunami; tide or tidal water; the release of water, the rising, overflowing or breaking of boundaries of natural or man-made bodies of water; or the spray therefrom; all whether driven by wind or not;
- (2) Water or other material that backs up or overflows from any sewer, septic tank, sump or drain resulting *from any of the foregoing*; or
- (3) Mudslide or mudflow caused by or resulting from surface water, runoff or accumulation of water on or under the ground;

Regardless of any other cause or event, whether natural or man-made, contributing concurrently or in any other sequence of loss.

Loss or damage from flood associated with a storm or weather disturbance whether or not identified by name by any meteorological authority is considered to be flood within the terms of this Policy. However, physical loss or damage, from fire, explosion, theft or sprinkler leakage caused by flood will not be considered to be loss by flood within the terms and conditions of this Policy.

2. POLLUTANTS:

Pollutants means any solid, liquid, gaseous or thermal irritant or contaminant, including but not limited to, lead, asbestos, PCB's, petroleum products, silica, smoke, vapor, soot, fumes, acids, alkalis, chemicals, and waste. Waste includes materials to be recycled, reconditioned or reclaimed.

3. EARTH MOVEMENT:

- a. Earth movement means earthquake, landslide, subsidence or earth sinking (other than sinkhole collapse), rising or shifting of the earth, avalanche, whether natural or man-made, or volcanic eruption; regardless of any other cause or event contributing concurrently or in any other sequence of loss.

However, physical loss or damage, from fire, explosion, theft, sprinkler leakage, or flood caused by earth movement will not be considered to be loss by earth movement within the terms and conditions of this Policy.

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Coverage Summary

4. OCCURRENCE:

Means all loss or damage attributable directly or indirectly to one (1) cause or series of similar causes. All such loss or damage will be added together and the total loss or damage will be treated as one (1) occurrence.

Unless otherwise amended by an endorsement attached to this Policy:

- a. All loss or damage resulting from a continuous flood event, irrespective of the amount of time or area over which such loss or damage occurs, will be considered a single occurrence.

All loss or damage from earth movement or named storm within the time period specified in the Occurrence Time Specifications shown on the Declarations will be considered a single occurrence. The first Named Insured may elect the point in time when the time period specified in the Occurrence Time Specifications begins.

An occurrence that commences during the Policy term will not be limited by the expiration of this Policy.

5. WATER DAMAGE:

All water damage excluding flood, however caused, whether by natural event or manmade, including but not limited to interior water damage, damage due to water from pipe breakage or sprinkler leakage, damage from rainfall and/or resulting runoff; all whether wind driven or not.

6. TESTING:

COLD TESTING - means testing, exclusive of Hot Testing as defined in this Policy, including but not limited to electrical, mechanical, hydraulic, hydrostatic and pneumatic testing and includes the testing of systems and equipment that are intended to service a building, such as boilers, chillers, pumps and similar equipment.

HOT TESTING – means the testing of machinery or equipment that will be used in manufacturing, processing or power generation operations, when such machinery or equipment involves the use of feedstock, fuel, catalysts or similar materials, for the purpose of simulating load, operating or production conditions to train personnel or to verify the machinery or equipment functions according to the design specifications. Hot testing does not mean electrical, mechanical, hydraulic, hydrostatic or pneumatic testing, including the startup and testing of systems and equipment that are intended to service a building, including boilers, chillers, pumps, and similar equipment.

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Master Builder's Risk Program
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EXCLUDED PROJECT TYPES

Examples of projects that may require separate underwriting, including (but not limited to):

<ul style="list-style-type: none">• Wood Frame construction where the values are estimated to exceed \$10,000,000 by project completion date
<ul style="list-style-type: none">• Joisted Masonry construction where values are estimated to exceed \$25,000,000 by project completion date
<ul style="list-style-type: none">• Any Fire Resistive; Non-Combustible; or Masonry Non-Combustible construction where the values are estimated to exceed \$100,000,000 by project completion date
<ul style="list-style-type: none">• Structural / Seismic Renovation construction where the values are estimated to exceed \$50,000,000 by project completion date
<ul style="list-style-type: none">• Power generation, Utility plants, Co-Generation facilities, Waste water and Waste treatment facilities, etc.
<ul style="list-style-type: none">• Stadiums
<ul style="list-style-type: none">• Bridges
<ul style="list-style-type: none">• Cleanroom construction (both new and renovation) of any size
<ul style="list-style-type: none">• Directional drilling
<ul style="list-style-type: none">• Gas turbines
<ul style="list-style-type: none">• Any project involving prototypical design or the use of unproven technology
<ul style="list-style-type: none">• Any project with hot-testing where the values are estimated to exceed \$100,000,000 by project completion date
<ul style="list-style-type: none">• Projects with any other Construction Type, beyond Fire Resistive; Non-Combustible; Masonry Non-Combustible; Joisted Masonry; or Wood Frame, that are constructed of non-combustible materials or fire-resistive materials having a fire resistant rating of less than two hours

**UNCONDITIONAL WAIVER AND RELEASE ON
FINAL PAYMENT**

NOTICE TO CLAIMANT:

THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Identifying Information:

Name of Claimant: _____
Name of Customer: _____
Job Location: Fine Arts Performance Lab Exterior, Project No. 957450
University of California, Riverside, City of Riverside, County of Riverside
Owner: The Regents of the University of California

Unconditional Waiver and Release:

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for all labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. The claimant has been paid in full.

Exceptions:

This document does not affect the following: Disputed claims for extras in the amount of:
\$ _____ .

Signature:

Claimant's Signature & Date: _____

Claimant's Name & Title: _____

Prime Contractor's Application for Payment # _____

**UNCONDITIONAL WAIVER AND RELEASE ON
PROGRESS PAYMENT**

NOTICE TO CLAIMANT:

UNCONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Identifying Information:

Name of Claimant: _____
Name of Customer: _____
Job Location: Fine Arts Performance Lab Exterior, Project No. 957450
University of California, Riverside, City of Riverside, County of Riverside
Owner: The Regents of the University of California
Through Date: _____

Unconditional Waiver and Release:

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job through the Through Date of this document. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. The claimant has received the following progress payment: \$ _____

Exceptions:

This document does not affect any of the following:

- (1) Retentions.
- (2) Extras for which the claimant has not received payment.
- (3) Contract rights, including (A) a right based on rescission, abandonment, or breach of contract, and (B) the right to recover compensation for work not compensated by the payment.

Signature:

Claimant's Signature & Date: _____

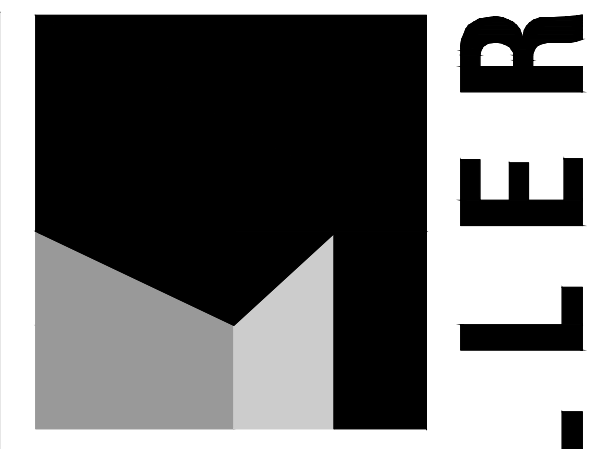
Claimant's Name & Title: _____

Prime Contractor's Application for Payment # _____

LIST OF DRAWINGS

SHEET NO.	TITLE	DATE
G-001	GERNERAL INFORMATION	12/22/21
A-101	1 ST FLOOR PLAN	12/22/21
A-102	2 ND FLOOR PLAN	12/22/21
A-105	ROOF PLAN	12/22/21
A-201	BUILDING ELEVATIONS NORTH-SOUTH	12/22/21
A-202	BUILDING ELEVATIONS EAST-WEST	12/22/21
A-501	DETAILS	12/22/21

END OF LIST OF DRAWINGS



architecture
interiors
planning

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Redlands, CA 92374
Phone: (909) 335-7400
Fax: (909) 335-7299
info@miller-aip.com



owner approval
initials date phase
00/00/00 --

Table with 3 columns: mark, date, comment. Includes revision symbols and dates like 12/22/21.



UCR ARTS BUILDING PERFORMANCE LAB REPAIRS
900 UNIVERSITY AVE RIVERSIDE, CA 92521
UNIVERSITY OF CALIFORNIA, RIVERSIDE
1223 UNIVERSITY AVE SUITE 240 RIVERSIDE, CA 92507
CONTACT: TAMEESHA D. HAYES PHONE: 951.827.1412

project information
PROJECT NO: 2100069.RA
DWG FILE: G-001 TITLE SHEET.DWG
DRAWN BY: MLB
CHECKED BY: GWM
DRAWING SCALE: AS NOTED
DATE: 11/5/2021

sheet name
TITLE SHEET
sheet number
G-001

SHEET OF XX SHEETS

PROJECT OWNER

UCR - PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY VILLAGE, SUITE 240
RIVERSIDE, CA 92521
CONTACT: TAMEESHA HAYES - PM
PHONE: (951) 827-1412
FAX: (951) 827-2402
E-MAIL: tameesha.hoyes@ucr.edu

ARCHITECT

MILLER, ARCHITECTURE - INTERIORS - PLANNING
1177 IDAHO STREET, SUITE 200
REDLANDS, CA 92374
CONTACT: MIKE BEDELL
PHONE: 909-335-7400
FAX: 909-335-7299
E-MAIL: mbedell@miller-aip.com
MOBILE: (909) 647-7981

CONSULTANT

NATIONAL ROOFING CONSULTANTS
118 LINCOLN AVENUE
POMONA, CA 91767
CONTACT: EDMUND D HADVINA
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DIRECTORY



UCR ARTS BUILDING PERFORMANCE LAB REPAIRS

900 UNIVERSITY AVE
RIVERSIDE, CA 92521
Project Number: 957450

TITLE / OWNER

BUILDING DATA:

EXISTING BUILDING AREA:
FIRST FLOOR - 5,557 SF
TOTAL BUILDING AREA - 5,557 SF

TYPE OF CONSTRUCTION:
OCCUPANCY CLASSIFICATION:
AUTOMATIC FIRE SPRINKLERS:
ROOF & FLOOR RATING FOR II-A, PER CH. 6 TABLE 601:
ROOF: 1 HR.
FLOOR: 1 HR.

CODE DATA:

- ALL CONSTRUCTION SHALL MEET THE MINIMUM REQUIREMENTS OF THE:
• 2019 CALIFORNIA BUILDING CODE, VOLUMES 1 AND 2
• 2019 CALIFORNIA PLUMBING CODE
• 2019 CALIFORNIA MECHANICAL CODE
• 2019 CALIFORNIA ELECTRICAL CODE
• 2019 CALIFORNIA ENERGY CODE
• 2019 CALIFORNIA GREEN BUILDING CODE
• 2019 CALIFORNIA FIRE CODE
• 2019 CALIFORNIA REFERENCED STANDARDS CODE

GENERAL NOTES:

- 1. QUANTITIES LISTED IN THESE DOCUMENTS ARE FOR APPROVAL ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES FOR BIDDING PURPOSES.

PROVIDE ADD ALT-BID PRICE FOR:

A UNIT SQUARE FOOT PRICE FOR A 'STUCCO CRACK REDUCTION SYSTEM' (MESH), ALKALI RESISTANT, MINIMUM 4.0 OZ., WOVEN GLASS FIBER FABRICS. ONLY AT ANGLED FRAMED WALLS. AS AN ALTERNATE OPTION INSTEAD OF REINFORCEMENT FIBER ADMIXTURE. BASE COAT AND OTHER ADMIXES MUST BE COMPATIBLE WITH MESH AND FINISH COATS.

COST PER LINEAR FOOT TO REPAINT EXISTING METAL GUARDS & HANDRAILS - SEE FLOOR PLANS FOR LOCATIONS

PROJECT DESCRIPTION:

THE FINE ARTS BUILDING AT THE UNIVERSITY OF CALIFORNIA, RIVERSIDE, WAS CONSTRUCTED IN 2002. THE 98,000 SQ. FT. FINE ARTS BUILDING CONSISTS OF SEVERAL INTERCONNECTED BUILDINGS.

THE PERFORMANCE LAB BUILDING IS A ONE-STORY MULTI-PURPOSE PERFORMING ARTS BUILDING WITH VERTICAL CMU & SLOPED FRAMED PLASTER WALLS WITH A LOW SLOPED ROOF. THE BUILDING IS A DOUBLE HEIGHT VOLUME STRUCTURE CONNECTED TO AN ELEVATED OUTDOOR STAGE AND PLANTER STRUCTURE TO THE NORTH, WITH PRIMARY ENTRANCES VIA THE GROUND LEVEL FINE ARTS DECK (PLAZA) TO THE EAST AND WEST, AND ABUTTING THE AMPHITHEATER STAIR, WITH SECOND LEVEL LANDING AND BRIDGE CONNECTION.

THE EXISTING BUILDING HAS BEEN SUBJECT TO WATER INFILTRATION, INTRUSION AND SUBSEQUENT DAMAGE. THE EXTERIOR PLASTER HAS NUMEROUS CRACKS, SPALLING, DELAMINATION, EFFLORESCENCE, AND STAINING. THE ROOF HAS FAILED ROOF COATING AND DELAMINATION. MATERIAL SEPARATION AT PARAPET FROM POOR WATERPROOFING, ZERO SLOPE OR SLOPING INTO EXTERIOR WALLS.

THIS SET OF DRAWINGS & SPECIFICATIONS ARE PROVIDED FOR PARTIAL DEMOLITION & REPAIR TO CORRECT DEFICIENT DETAILING AND APPLICATION PERFORMANCE THAT ALLOWED THE WATER INTRUSION FROM OCCURRING AFTER ORIGINAL CONSTRUCTION.

TOP DOWN CONDENSED SCOPE OF WORK:

REMOVE ALL EXISTING SPRAY FOAM ROOFING TEAR DOWN TO CONCRETE TOPPING. PROVIDE NEW ROOF WITH A FULLY ADHERED 60 MIL, FLEECE-BACKED SINGLE-PLY PVC ROOFING MEMBRANE PER SPECIFICATIONS. CORRECT PARAPET SLOPES PER DETAILING AND ADD LOW-PROFILE SHEET METAL COPINGS.

AT ANGLED WALLS (METAL STUD FRAMING): REMOVE STUCCO, ASPHALT IMPREGATED BOARD DOWN TO BARE STUDS. PROVIDE NEW STUCCO SYSTEM PER DETAILING AND SPECIFICATIONS. ADD 2-PIECE EXPANSION AT MATERIAL CHANGE AND PROVIDE ADDITIONAL CONTROL JOINTS PER ELEVATIONS. SEAL PLASTER JOINTS WITH SILICONE SEALANT TO PROVIDE A SMOOTH SUBSTRATE PRIOR TO COATING APPLICATION. FINISH COAT TO BE ELECTROMETRIC COATING PER SPECIFICATION.

AT VERTICAL WALLS (CMU): CLEAN & REMOVE ALL LOOSE AND DE-BONDED PLASTER, ROUGHEN EXTERIOR TO RECEIVE NEW STUCCO FINISH COAT TO MATCH FINISH AT ANGLED WALLS.

AT WALL/DECK TRANSITIONS (LEVEL 2 BRIDGE & PLAZA): PREPARE SURFACE AND LAP NEW WATERPROOF COATINGS PER DETAILING AND PROVIDE SLOPE AWAY FROM BUILDING.

PROJECT INFORMATION



VICINITY MAP

LOCATION MAP

Table of abbreviations and symbols including: anchor bolt, asphaltic concrete, air conditioning, addendum, aggregate, alternate, aluminum, approximate, architect(ural), automatic, board, below, between, bituminous, building, block, blocking, bench mark, bottom, bearing, bronze, built up roofing, both ways, hose bibb, hollow core, heavy duty, header, hardware, height, hollow metal, horizontal, heating, heating / ventilating air conditioning, hardwood, inside diameter, include(include), insulate(ion), interior, invert, joint, kitchen, knockout, laboratory, laminate(d), lavatory, label, left hand, live load, light, lintel, lightweight, masonry, maximum, machine bolt, member, medicine cabinet, mechanic, medium, metal, manufacture(er), member, minimum, mirror, miscellaneous, molding, millimeter, mount(ed, ing), carpet(ed), material(s), north, natural, not in contract, diagonal, nominal, not to scale, overall, obscure, on center, outside diameter, overhead, opening, opposite, parallel, panic bar, precast concrete, pounds per cubic foot, pedestal, perforate(d), prefabricate(d), pounds per linear foot, poured in place, property line, plate, plaster, plywood, panel, point(ed), pounds per square foot, pounds per square inch, point, polyvinyl chloride, return air, radius, reinforced concrete pipe, roof drain, refrigerator, register, remove, return, roofing, right hand, room, rough opening, right of way, south, solid core, schedule, storm drain, section, shelf, shelving, sheet, similar, specification(s), speaker, square, stainless steel, steel, station, standard, storage, structural, suspended, symmetry(ical), system, telephone, tongue & groove, thick(ness), television, typical, west, with, without, water closet, wood, water heater, wrought iron, window, working point, water repellent, welded wire fabric, ANGLE, CENTER LINE, PENNY, PERPENDICULAR, PROPERTY LINE, DIAMETER, DEGREES (ANGLE), PLUS OR MINUS, AT.

ABBREVIATIONS

Table of symbols including: SECTION SHEET NUMBER, DETAIL SHEET NUMBER, EXTERIOR ELEVATION SHEET NUMBER, WALL LETTER, INTERIOR ELEVATION SHEET NUMBER, HEIGHT ABOVE FINISH FLOOR (I.N.O.), ROOM - ROOM NAME, ROOM NUMBER, KEYNOTE NUMBER, DOOR LETTER, ROOM NUMBER, DOOR NUMBER (ALTERNATE SYMBOL), WINDOW TYPE, DRAWING REVISION.

SYMBOLS

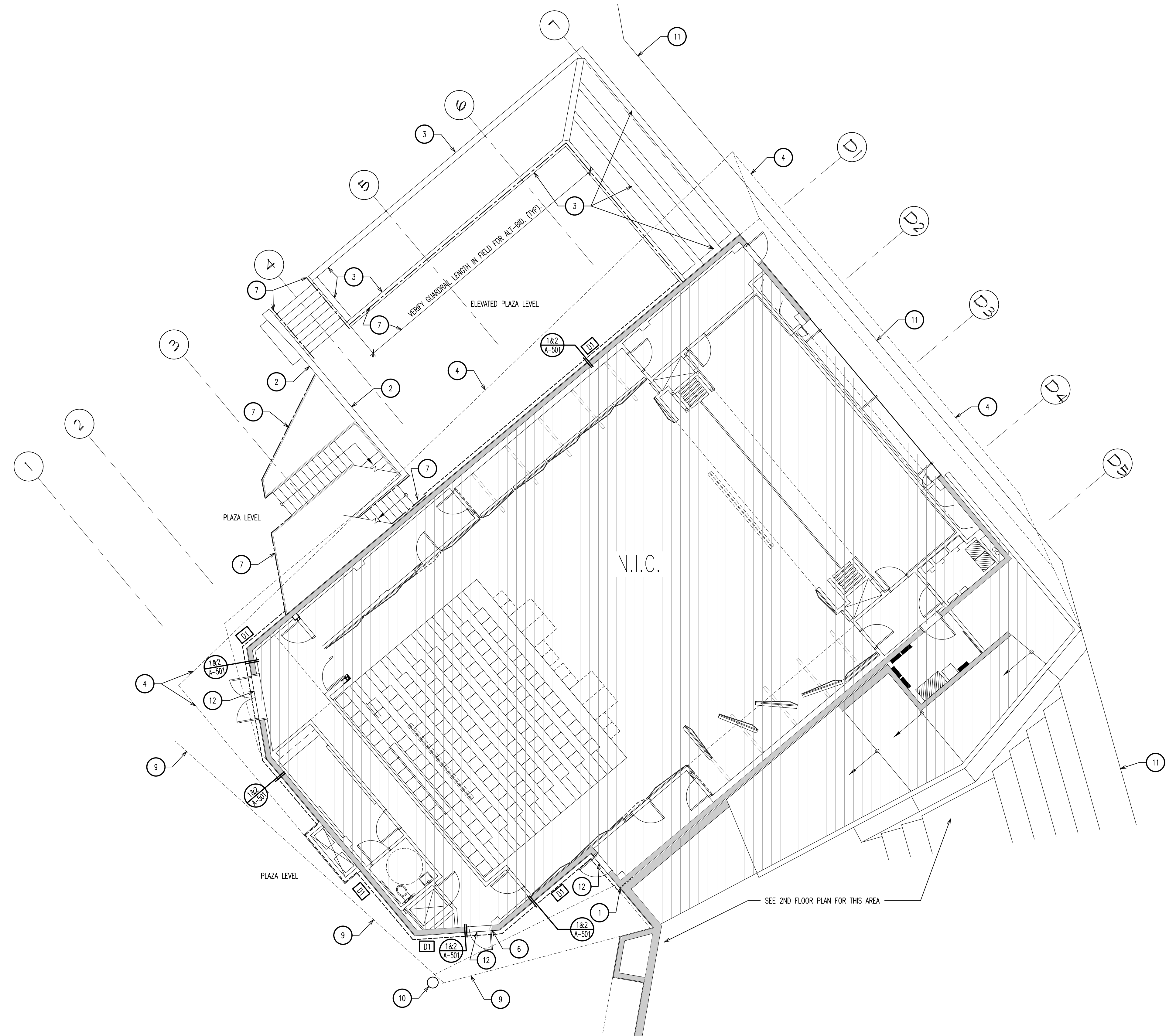
SHEET INDEX table with columns: SHEET NUMBER, SHEET NAME. Lists sheets G-001 through A-501.

SHEET INDEX

STANDARD CITY NOTES

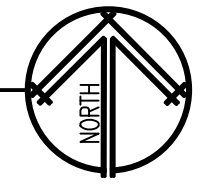
DRAWING NAME: 21\PROJECTS\2021\PROJECTS\UCR_RIVERSIDE\PERFORMANCE LAB 2100069.RA\DRAWINGS\CONSTRUCTION DOCUMENTS\G-001 TITLE SHEET.DWG | PLOT DATE: 1/24/2022 8:59 AM | PLOTTED BY: MICHAEL BEDELL | COPYRIGHT ©2021 MILLER ARCHITECTURAL CORPORATION. ALL RIGHTS RESERVED.

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0 4' 8' 16'
SCALE: 1/8" = 1'-0"

1ST FLOOR PLAN - PLAZA LEVEL AND RAISED
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

- A. SEE ELEVATIONS FOR SPECIFIC DEMOLITION NOTES.
- B. SOLID WALLS SHOWN ARE CMU UNLESS OTHERWISE NOTED.
- C. EXTERIOR WORK ONLY - INTERIOR IS NOT IN CONTRACT.
- D. FLOOR PLANS SHOW PRIMARILY PLAZA OR DECK/WALL TRANSITIONS

DEMO KEYNOTES: [DX]

- D1: SEE DETAIL 1 FOR WALL/PLAZA TRANSITION DEMOLITION AND PREPARATION
- D2: SEE DETAIL 3 FOR DEMOLITION AT CMU/FRAMED WALL TRANSITION

KEYNOTES: [A]

KEYNOTES APPLY TO EITHER SHEET 101 OR 102

- 1. SEISMIC JOINT (VERTICAL) - EXTENT OF REPAIR TO THE LEFT
- 2. THIS CMU WALL IS PART OF THE REPAIR PROJECT
- 3. NO REPAIR AT PLANTER WALLS, ONLY CLEAN & PAINT
- 4. LINE OF ANGLED WALLS AND ROOF ABOVE
- 5. TERMINATE REPAIR WORK ON BRIDGE HERE
- 6. PROVIDE MISSING DRIP EDGE ABOVE DOOR
- 7. PROVIDE ALT. BID PRICE TO REPAINT MTL GUARDS & HANDRAILS
- 8. SEISMIC JOINT - METAL PANEL COVER (SHEET 102)
- 9. LINE OF LEVEL 2 BRIDGE ABOVE
- 10. COLUMN (N.I.C.)
- 11. EDGE OF CONCRETE SIDEWALK
- 12. AT DOOR LOCATIONS, REMOVE EXISTING THRESHOLDS AND TERMINATE TRAFFIC COATING UNDER THRESHOLD, SEALED TO ADJACENT DOOR FRAMES WITH SILICONE SEALANT. TERMINATE THE COATING REINFORCING AT THE LEADING EDGE OF THE THRESHOLD, ONLY EXTENDING THE COATING RESIN UNDER THE THRESHOLD, TO PREVENT DOOR MIS-ALIGNMENT DUE TO MATERIAL BUILD-UP. REINSTALL THRESHOLDS SET IN SILICONE SEALANT.

LEGEND:

[Hatched Box] NOT IN CONTRACT (N.I.C.) - NOT IN SCOPE



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revisions/addenda

mark	date	comment
[A]	12/22/21	PLAN CHECK COMMENTS
[B]		
[C]		
[D]		
[E]		
[F]		
[G]		



**UCR ARTS BUILDING
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**UNIVERSITY OF CALIFORNIA,
RIVERSIDE**
1223 UNIVERSITY AVE SUITE 240
RIVERSIDE, CA 92507
CONTACT: TAMEESHA D. HAYES PHONE: 951.827.1412

project information

PROJECT NO: 2100069.RA
DWG FILE: A-101 & 102.DWG
DRAWN BY: -
CHECKED BY: GWM
DRAWING SCALE: X" = 1'-0"
DATE: 11/5/2021

sheet name

1ST LEVEL
FLOOR PLAN

sheet number

A-101

SHEET ##### OF XX SHEETS



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project information

PROJECT NO: 2100069.RA
DWG FILE: A-101 & 102.DWG
DRAWN BY: -
CHECKED BY: GWM
DRAWING SCALE: X" = 1'-0"
DATE: 11/5/2021

sheet name

2ND LEVEL FLOOR PLAN

sheet number

A-102

SHEET ##### OF XX SHEETS

GENERAL NOTES:

- A. SEE ELEVATIONS FOR SPECIFIC DEMOLITION NOTES.
- B. SOLID WALLS SHOWN ARE CMU UNLESS OTHERWISE NOTED.
- C. EXTERIOR WORK ONLY - INTERIOR IS NOT IN CONTRACT.
- D. FLOOR PLANS SHOW PRIMARILY PLAZA OR DECK/WALL TRANSITIONS

DEMO KEYNOTES: [DX]

- D1: SEE DETAIL 1 FOR WALL/PLAZA TRANSITION DEMOLITION AND PREPARATION
- D2: SEE DETAIL 3 FOR DEMOLITION AT CMU/FRAMED WALL TRANSITION

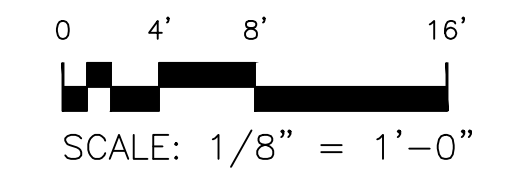
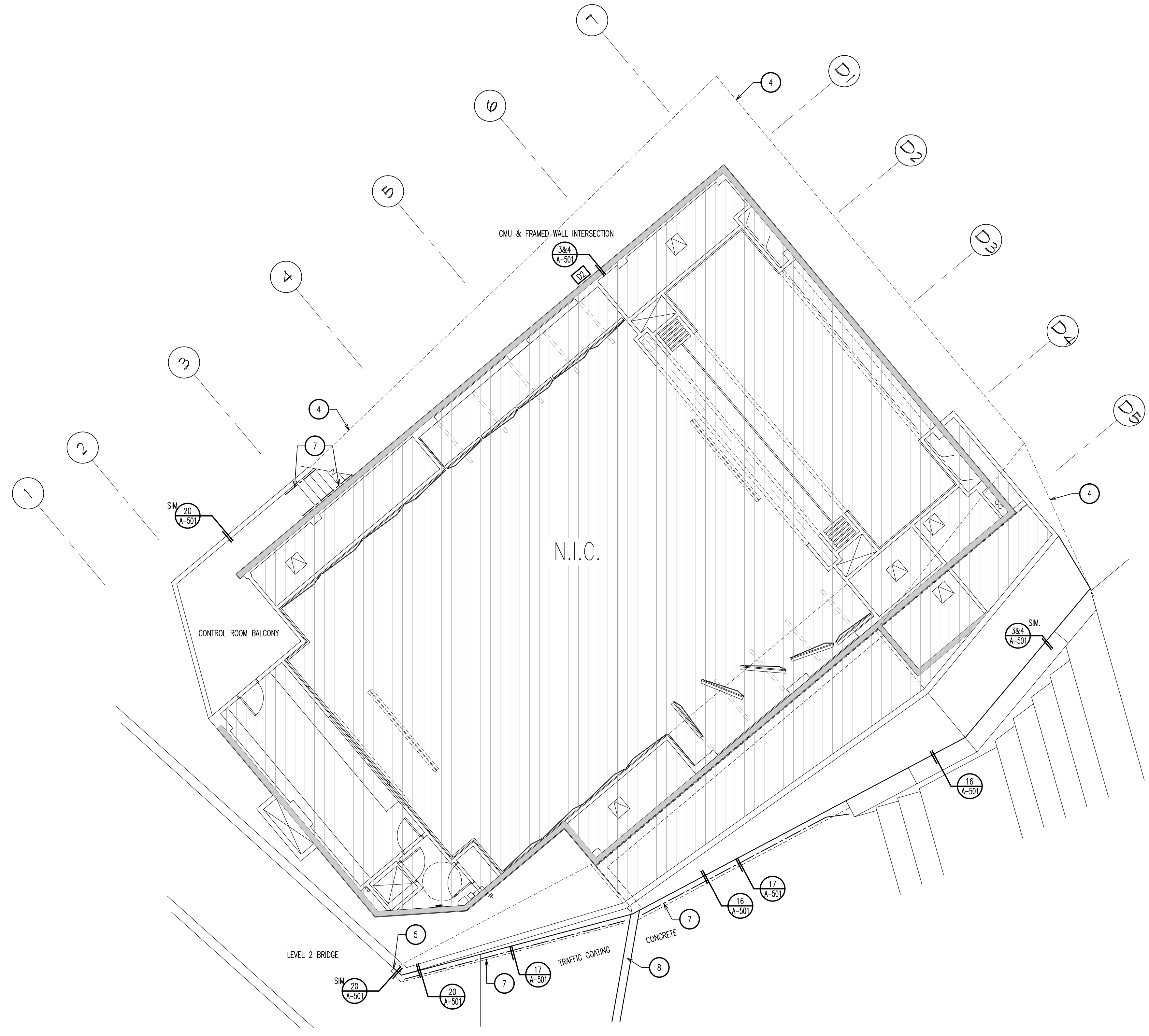
KEYNOTES:

KEYNOTES APPLY TO BOTH SHEETS 101 & 102

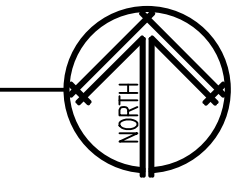
- 1. SEISMIC JOINT - EXTENT OF REPAIR TO THE LEFT
- 2. THIS CMU WALL IS PART OF THE REPAIR PROJECT
- 3. NO REPAIR AT PLANTER WALLS, ONLY CLEAN A PAINT
- 4. LINE OF ANGLED WALLS AND ROOF ABOVE
- 5. TERMINATE REPAIR WORK ON BRIDGE HERE
- 6. PROVIDE MISSING DRIP EDGE ABOVE DOOR
- 7. PROVIDE ALT. BID PRICE TO REPAINT MTL GUARDS & HANDRAILS
- 8. SEISMIC JOINT - METAL PANEL COVER
- 9. LINE OF LEVEL 2 BRIDGE ABOVE
- 10. COLUMN (N.I.C.)
- 11. EDGE OF CONCRETE SIDEWALK

LEGEND:

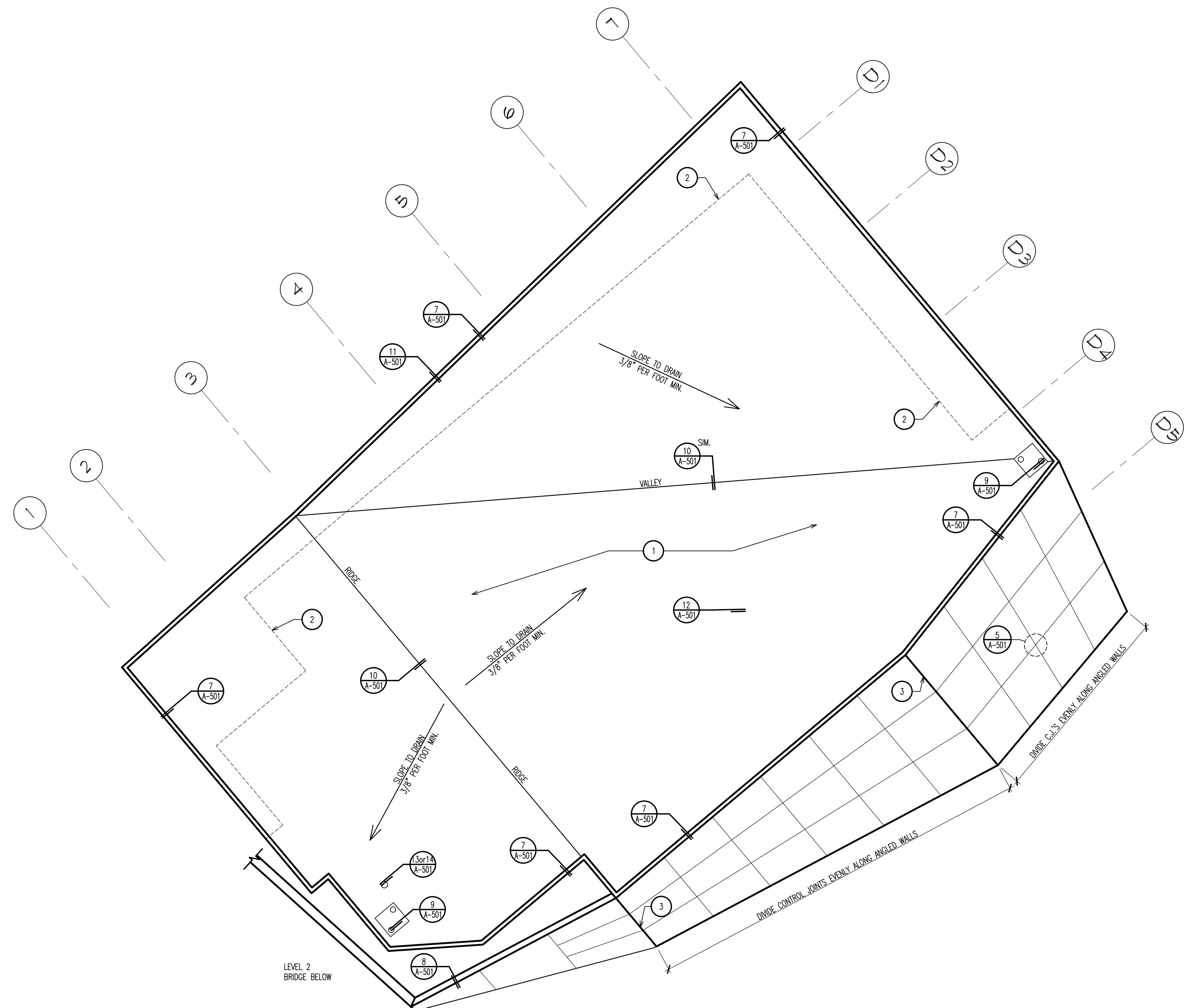
[Hatched Box] NOT IN CONTRACT (N.I.C.) - NOT IN SCOPE



2ND FLOOR PLAN - LEVEL 2 BRIDGE & CONTROL ROOM BALCONY
SCALE: 1/8" = 1'-0"



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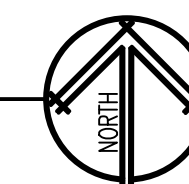


0 4' 8' 16'

SCALE: 1/8" = 1'-0"

ROOF PLAN

SCALE: 1/8" = 1'-0"



GENERAL NOTES:

- A. DEMOLISH (E) SPRAY FOAM ROOFING AND APPLY NEW PVC ROOF.
- B. THE SOUTH WALL SHOWS CONTROL JOINT LAYOUT, BECAUSE THAT WALL IS ANGLED OUT AND ELEVATIONS DO NOT SHOW THE TRUE SHAPE OF THIS WALL.
- C. PROVIDE SLOPES WITH TAPERED INSULATION AS REQUIRED TO ACHIEVE POSITIVE DRAINAGE.

KEYNOTES:

KEYNOTES APPLY THIS SHEET ONLY

- 1. DEMOLISH EXISTING SPRAY FOAM ROOFING & PROVIDE NEW PVC ROOF
- 2. WALL OR FRAMING BELOW
- 3. USE CONTROL JOINT NOT CORNER BEAD AT WALL ANGLES



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revisions/addenda

mark	date	comment
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**UCR ARTS BUILDING
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**UNIVERSITY OF CALIFORNIA,
 RIVERSIDE**
 1223 UNIVERSITY AVE SUITE 240
 RIVERSIDE, CA 92507

CONTACT: TAMEESHA D. HAYES PHONE: 951.827.1412

project information

PROJECT NO: 2100069.RA
 DWG FILE: A-101 & 102.DWG
 DRAWN BY: -
 CHECKED BY: GWM
 DRAWING SCALE: X" = 1'-0"
 DATE: 11/5/2021

sheet name

ROOF PLAN

sheet number

A-105

SHEET ##### OF XX SHEETS

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project information

PROJECT NO: 2100069.RA
DWG FILE: A-201.DWG
DRAWN BY: MLB
CHECKED BY: GWM
DRAWING SCALE: AS NOTED
DATE: 11/5/2021

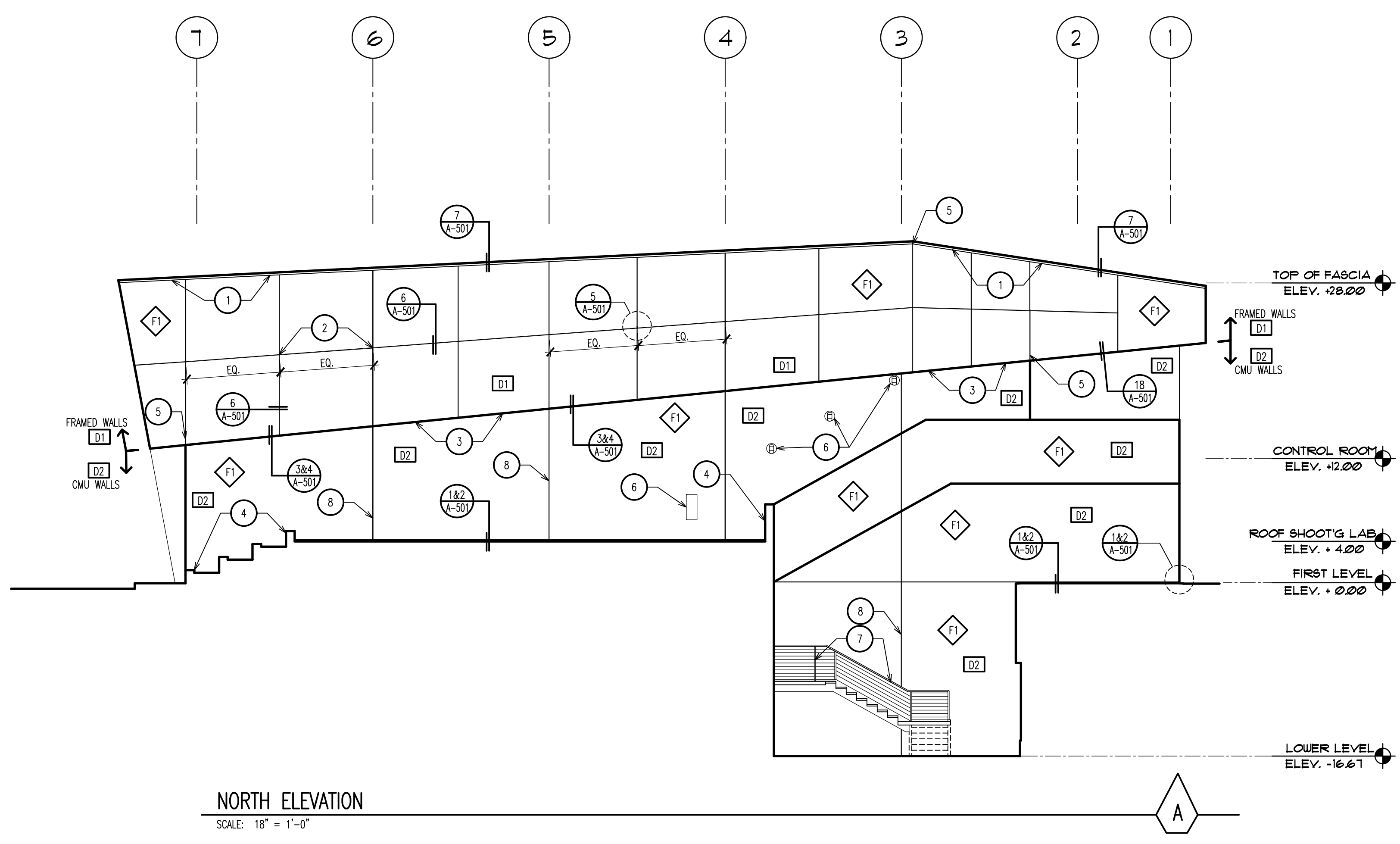
sheet name

**BUILDING
ELEVATIONS
NORTH-SOUTH**

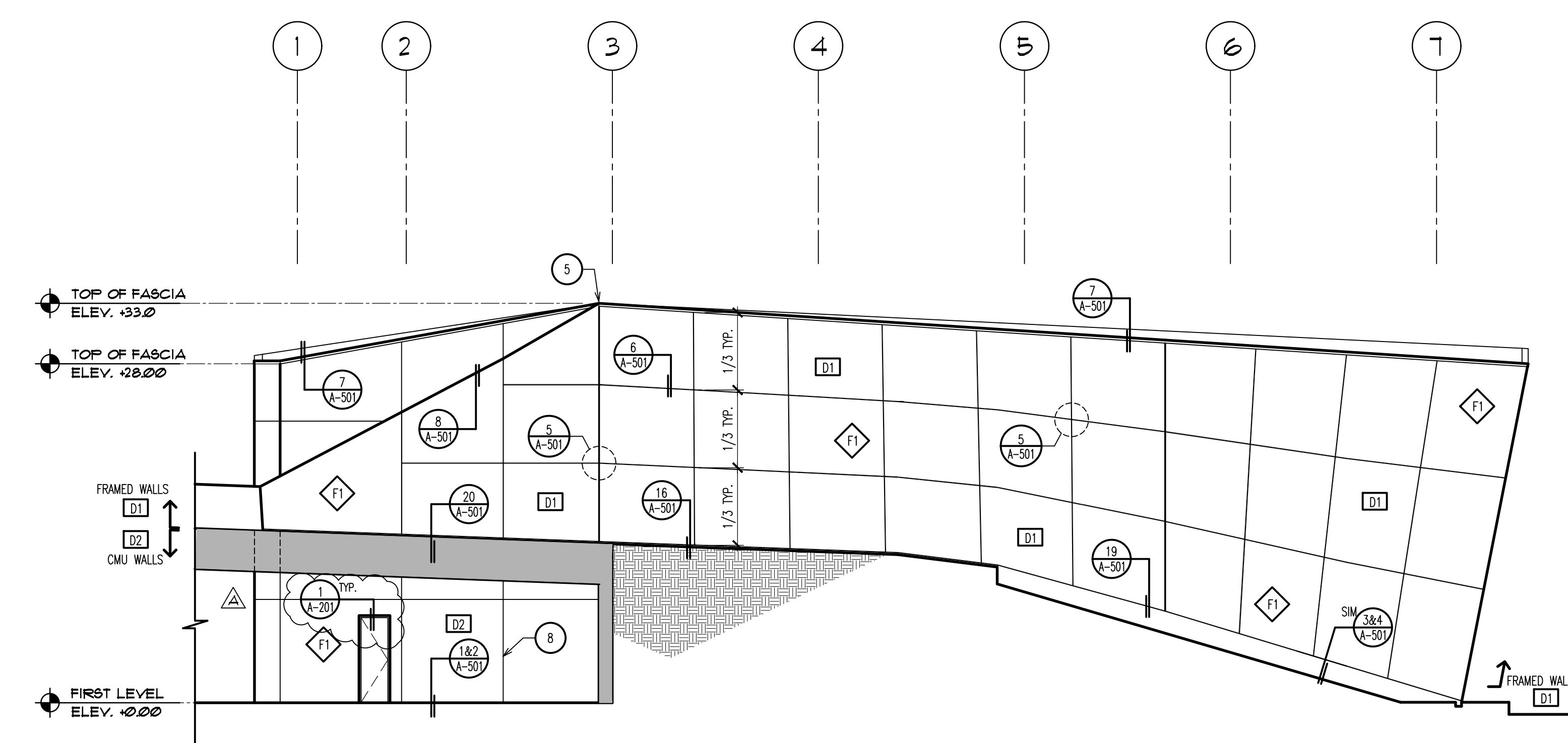
sheet number

A-201

SHEET ##### OF XX SHEETS



NORTH ELEVATION
SCALE: 1/8" = 1'-0"



SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- A. CONTROL JOINTS SHALL BE INSTALLED PER ELEVATIONS. SOME ANGLED WALLS ARE NOT SHOWN ON A TRUE VERTICAL PLANE. SEE ROOF PLAN FOR MORE INFORMATION.
- B. LATHING, ACCESSORIES AND CEMENT PLASTER INSTALLATION SHALL COMPLY WITH THE 2019 CBC, SECTIONS 2507, 2510 & 2512.
- C. THE WRB AND LATH SHALL ENTIRELY COVER AND LAP OVER THE VERTICAL FLANGE OF THE WEEP SCREED AND TERMINATE AT THE TOP EDGE OF THE NOSE.
- D. THE WRB SHALL BE CONTINUOUS BEHIND CONTROL JOINTS.
- E. VERTICAL CONTROL JOINTS SHALL BE CONTINUOUS THROUGH HORIZONTAL CONTROL JOINTS AND SHALL BE TERMINATED AT HORIZONTAL EXPANSION JOINTS.
- F. LATH SHALL NOT BE CONTINUOUS THROUGH EXPANSION JOINTS.
- G. TERMINATIONS, JOINTS, AND MITERS SHALL BE SEALED WITH WATERPROOF SEALANT.

CONTROL JOINT SPACING NOTES:

- JOINT SPACING REQUIREMENTS MAY DECREASE IF CLIENT INCORPORATES 'CRACK REDUCTION SYSTEM' OR MESH.
- MAX. CONTROL JOINT SPACING NOT TO EXCEED 90 S.F. ON ANGLED (FRAMED) WALLS.
- THE MAX. SPACING ON VERTICAL (CMU) WALLS PER ASTM 1063 STANDARD, WHICH REQUIRES CONTROL JOINTS AT A MAXIMUM SPACING IN WALLS OF 18 FT 0"/C BOTH HORIZONTALLY AND VERTICALLY ENCLOSING AN AREA OF NO MORE THAN 144 S.F.

DEMO KEYNOTES: [D1, D2]

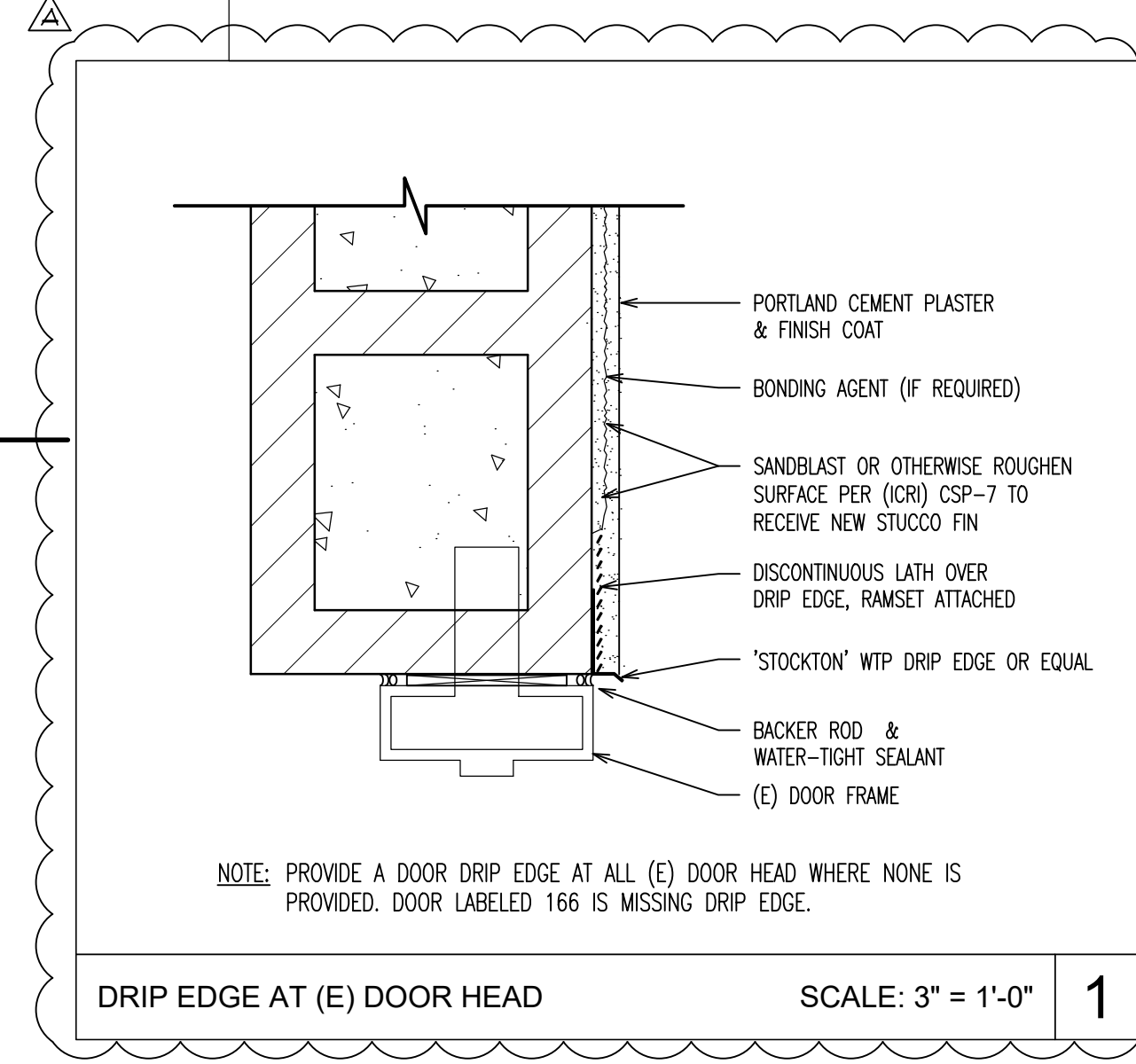
- D1: REMOVE (E) STUCCO SYSTEM TO STUDS AT (E) FRAMED WALLS
- D2: CLEAN AND ROUGHEN CMU SURFACE FOR NEW FINISH STUCCO COAT

REMODEL KEYNOTES: [X]

- 1. LOW PROFILE METAL COPING CAP. COLOR TO MATCH STUCCO.
- 2. ALIGN HORIZONTAL CONTROL JOINTS TO MIDPOINT OR 1/3 OF VERTICAL (TYP.)
- 3. EXPANSION JOINT AT DISSIMILAR MATERIALS (TYP.)
- 4. CLEAN & PAINT LOW WALLS AT PLANTER
- 5. ALIGN CONTROL JOINT WITH BUILDING CORNER, OPENING, SLOPE CHANGE.
- 6. REMOVE & RE-INSTALL (E) FIXTURES FOR STUCCO REPAIR. PROVIDE SEALANT AROUND ALL REPLACED FIXTURES.
- 7. PROVIDE ALT. BID PRICE TO REPAINT MTL GUARDS & HANDRAILS
- 8. CONTROL JOINTS AT CMU WALLS MAY REMAIN UNLESS DAMAGED BY SURFACE PREPARATION.

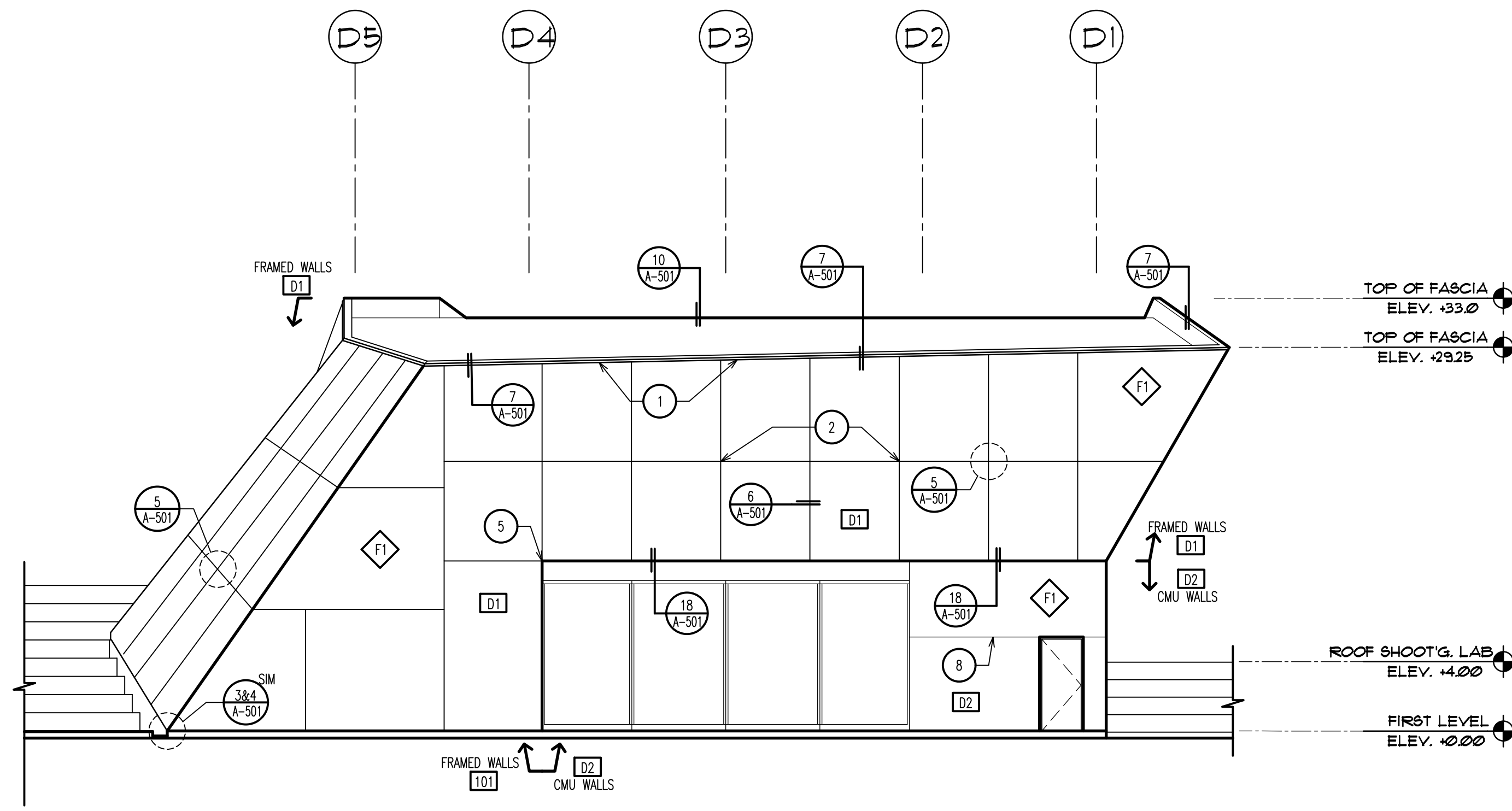
FINISH LEGEND:

- F1 THE PROPOSED STUCCO FINISH COLOR IS SILVER GREY.
- THE PROPOSED PAINT IS SHERWIN WILLIAMS COMPLEX SHERLASTIC ELASTOMERIC COLOR: SLATE VIOLET (SW9155) OR AUTUMN ORCHID (SW9157)
- CONTRACTOR TO PROVIDE 12"x12" SAMPLES PER SPECIFICATIONS. THE FINAL COLOR SELECTIONS & DECISION TO BE APPROVED BY THE CAMPUS ARCHITECT.

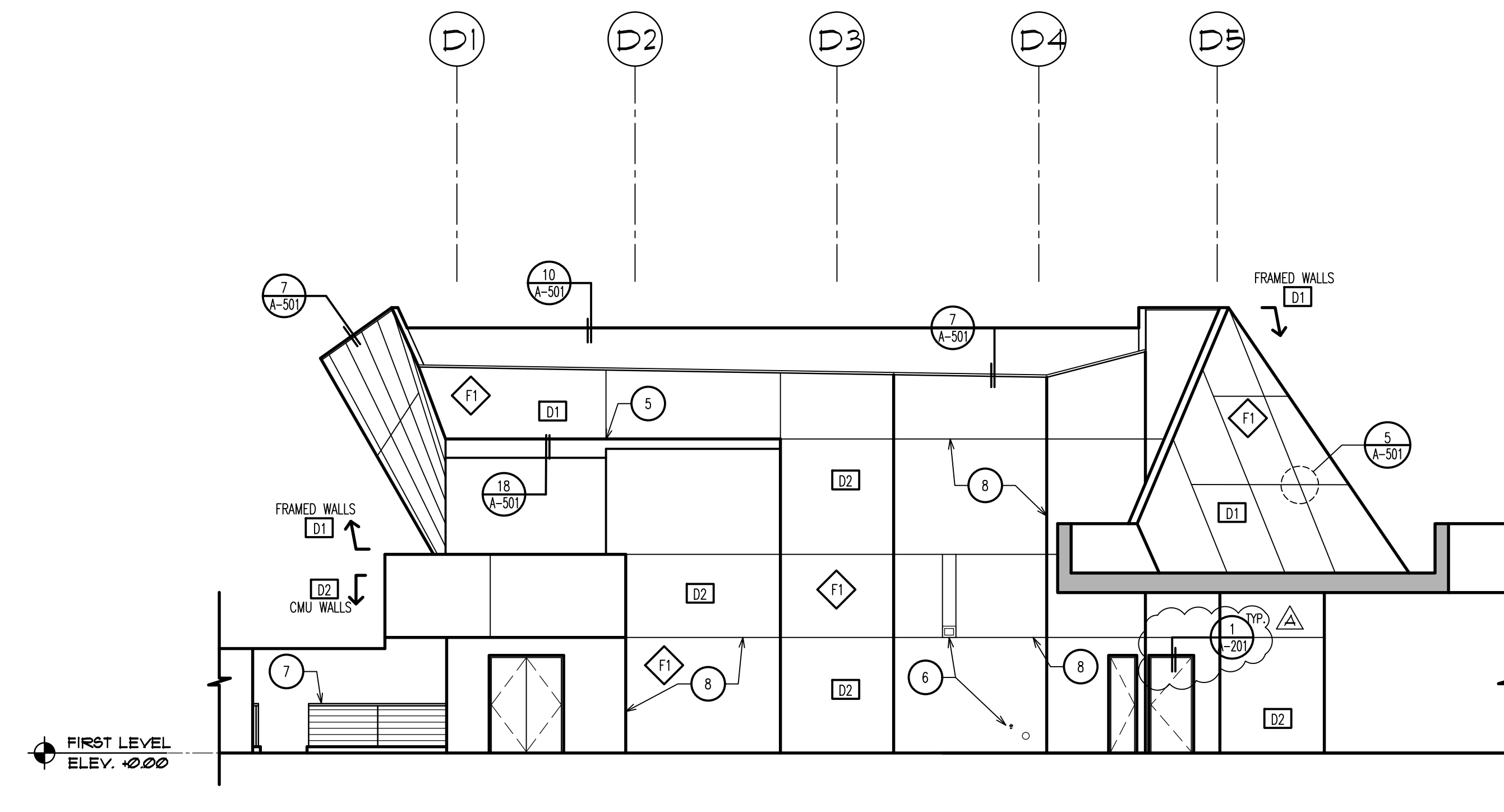


DRIP EDGE AT (E) DOOR HEAD SCALE: 3" = 1'-0" 1

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EAST ELEVATION
SCALE: 1/8" = 1'-0"



WEST ELEVATION
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- A. CONTROL JOINTS SHALL BE INSTALLED PER ELEVATIONS. SOME ANGLED WALLS ARE NOT SHOWN ON A TRUE VERTICAL PLANE. SEE ROOF PLAN FOR MORE INFORMATION.
- B. LATHING, ACCESSORIES AND CEMENT PLASTER INSTALLATION SHALL COMPLY WITH THE 2019 CBC, SECTIONS 2507, 2510 & 2512.
- C. THE WRB AND LATH SHALL ENTIRELY COVER AND LAP OVER THE VERTICAL FLANGE OF THE WEEP SCREED AND TERMINATE AT THE TOP EDGE OF THE NOSE.
- D. THE WRB SHALL BE CONTINUOUS BEHIND CONTROL JOINTS.
- E. VERTICAL CONTROL JOINTS SHALL BE CONTINUOUS THROUGH HORIZONTAL CONTROL JOINTS AND SHALL BE TERMINATED AT HORIZONTAL EXPANSION JOINTS.
- F. LATH SHALL NOT BE CONTINUOUS THROUGH EXPANSION JOINTS
- G. TERMINATIONS, JOINTS, AND MITERS SHALL BE SEALED WITH WATERPROOF SEALANT

CONTROL JOINT SPACING NOTES:

- J. JOINT SPACING REQUIREMENTS MAY DECREASE IF CLIENT INCORPORATES 'CRACK REDUCTION SYSTEM' OR MESH
- K. MAX. CONTROL JOINT SPACING NOT TO EXCEED 90 S.F. ON ANGLED (FRAMED) WALLS. THE MAX. SPACING ON VERTICAL (CMU) WALLS PER ASTM 1063 STANDARD, WHICH REQUIRES CONTROL JOINTS AT A MAXIMUM SPACING IN WALLS OF 18 FT 0"/C BOTH HORIZONTALLY AND VERTICALLY ENCLOSING AN AREA OF NO MORE THAN 144 S.F.

DEMO KEYNOTES:

- D1: REMOVE (E) STUCCO SYSTEM TO STUDS AT (E) FRAMED WALLS
- D2: CLEAN AND ROUGHEN CMU SURFACE FOR NEW FINISH STUCCO COAT

REMODEL KEYNOTES:

1. LOW PROFILE METAL COPING CAP. COLOR TO MATCH STUCCO.
2. ALIGN HORIZONTAL CONTROL JOINTS TO MIDPOINT OR 1/3 OF VERTICAL (TYP.)
3. EXPANSION JOINT AT DISSIMILAR MATERIALS (TYP.)
4. CLEAN & PAINT LOW WALLS AT PLANTER
5. ALIGN CONTROL JOINT WITH BUILDING CORNER, OPENING, SLOPE CHANGE.
6. REMOVE & RE-INSTALL (E) FIXTURES FOR STUCCO REPAIR. PROVIDE SEALANT AROUND ALL REPLACED FIXTURES.
7. PROVIDE ALT. BID PRICE TO REPAINT MTL GUARDS & HANDRAILS
8. CONTROL JOINTS AT CMU WALLS MAY REMAIN UNLESS DAMAGED BY SURFACE PREPARATION.

FINISH LEGEND:

- F1 THE PROPOSED STUCCO FINISH COLOR IS DOVE GREY. THE PROPOSED PAINT IS SHERWIN WILLIAMS COMPLEX SHERLASTIC ELASTOMERIC COATING COLOR: SLATE VIOLET (SW9155), COQUINA (SW9156)
- CONTRACTOR TO PROVIDE 12"x12" SAMPLES PER SPECIFICATIONS. THE FINAL COLOR SELECTIONS & DECISION TO BE APPROVED BY THE CAMPUS ARCHITECT.



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mark	date	comment
△	12/22/21	PLAN CHECK COMMENTS



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 1223 UNIVERSITY AVE SUITE 240
 RIVERSIDE, CA 92507
 CONTACT: TAMEESHA D. HAYES PHONE: 951.827.1412

project information

PROJECT NO: 2100069.RA
 DWG FILE: A-201.DWG
 DRAWN BY: MLB
 CHECKED BY: GWM
 DRAWING SCALE: AS NOTED
 DATE: 11/5/2021

sheet name

BUILDING ELEVATIONS EAST-WEST

sheet number

A-202



owner approval
initials date phase

00/00/00 --

revisions/addenda
mark date comment

12/22/21 PLAN CHECK COMMENTS



**UCR ARTS BUILDING
PERFORMANCE LAB REPAIRS**
900 UNIVERSITY AVE
RIVERSIDE, CA 92521
**UNIVERSITY OF CALIFORNIA,
RIVERSIDE**
1223 UNIVERSITY AVE SUITE 240
RIVERSIDE, CA 92507
CONTACT: TAMEESHA D. HAYES PHONE: 951.827.1412

project information
PROJECT NO: 2100069.RA
DWG FILE: A-501.DWG
DRAWN BY:
CHECKED BY: GWM
DRAWING SCALE: AS INDICATED
DATE: 11/5/2021

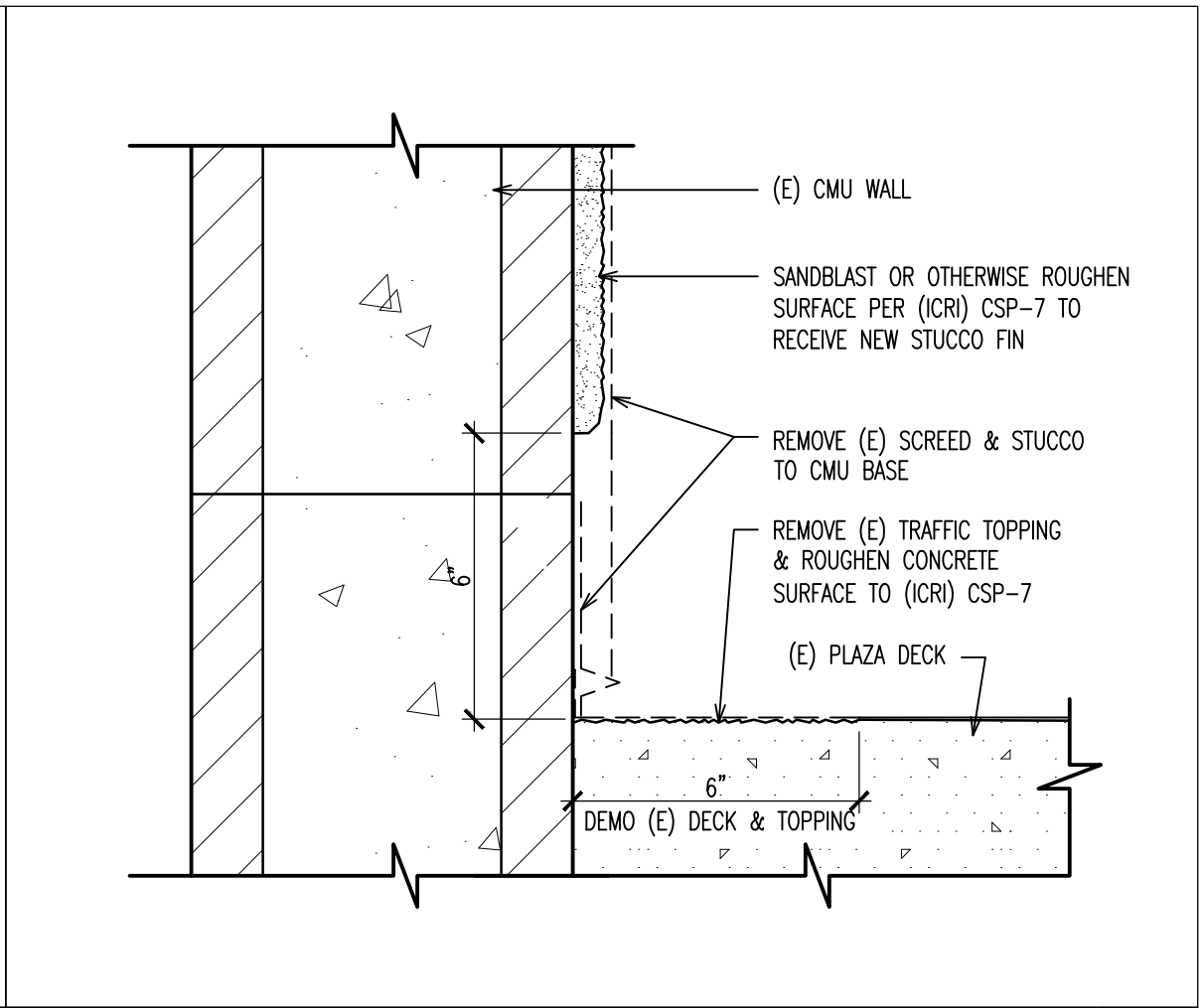
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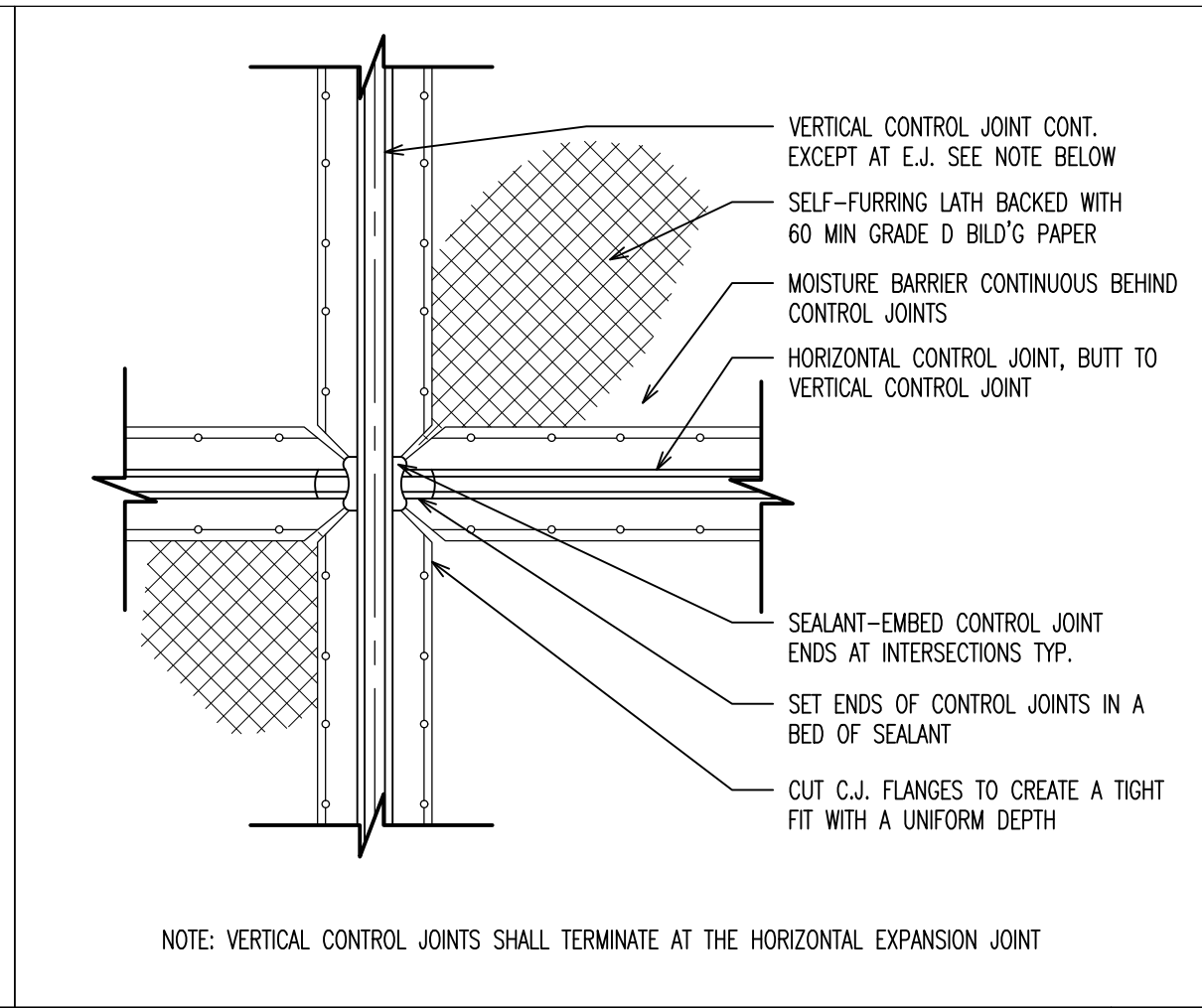
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A-501

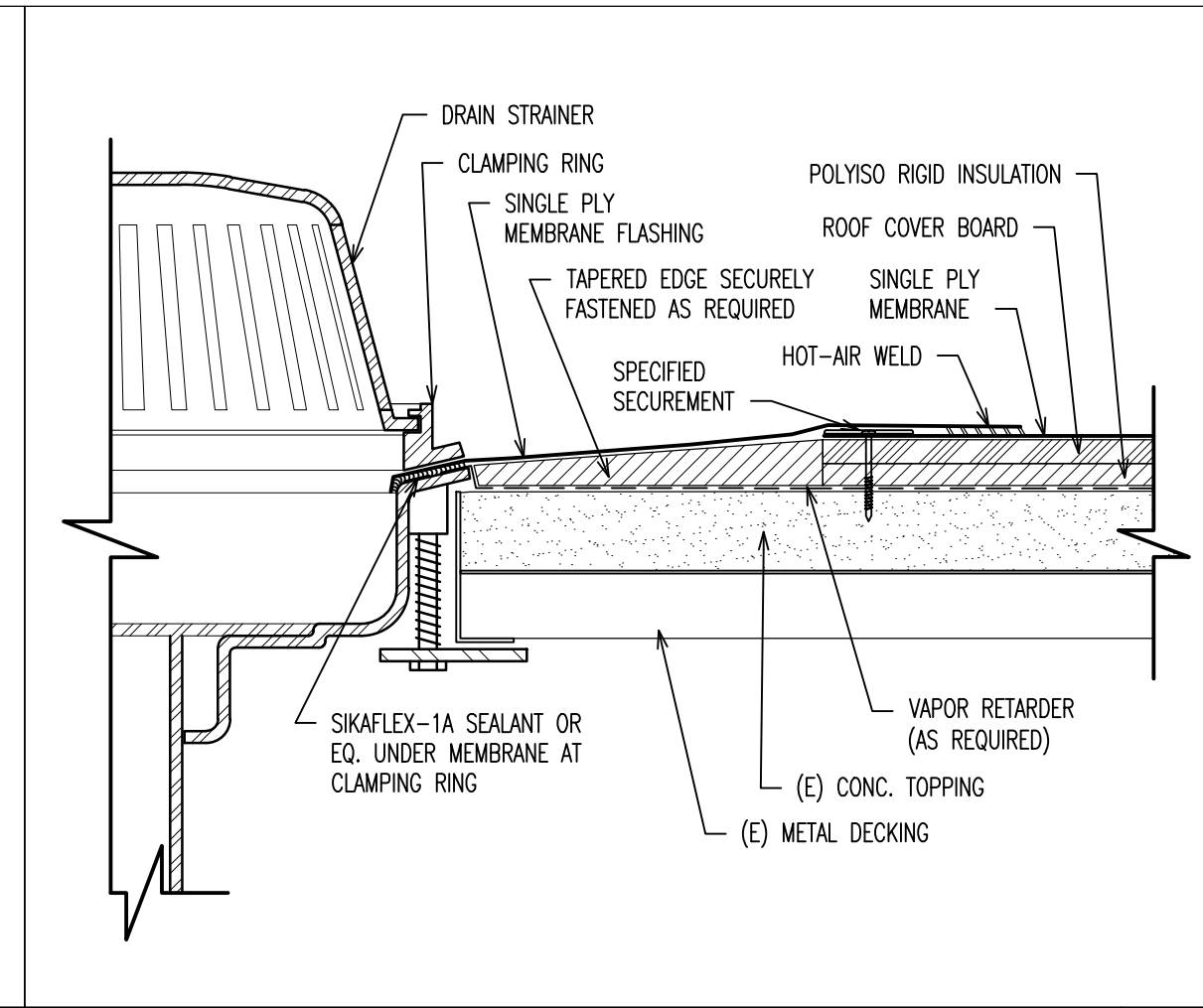
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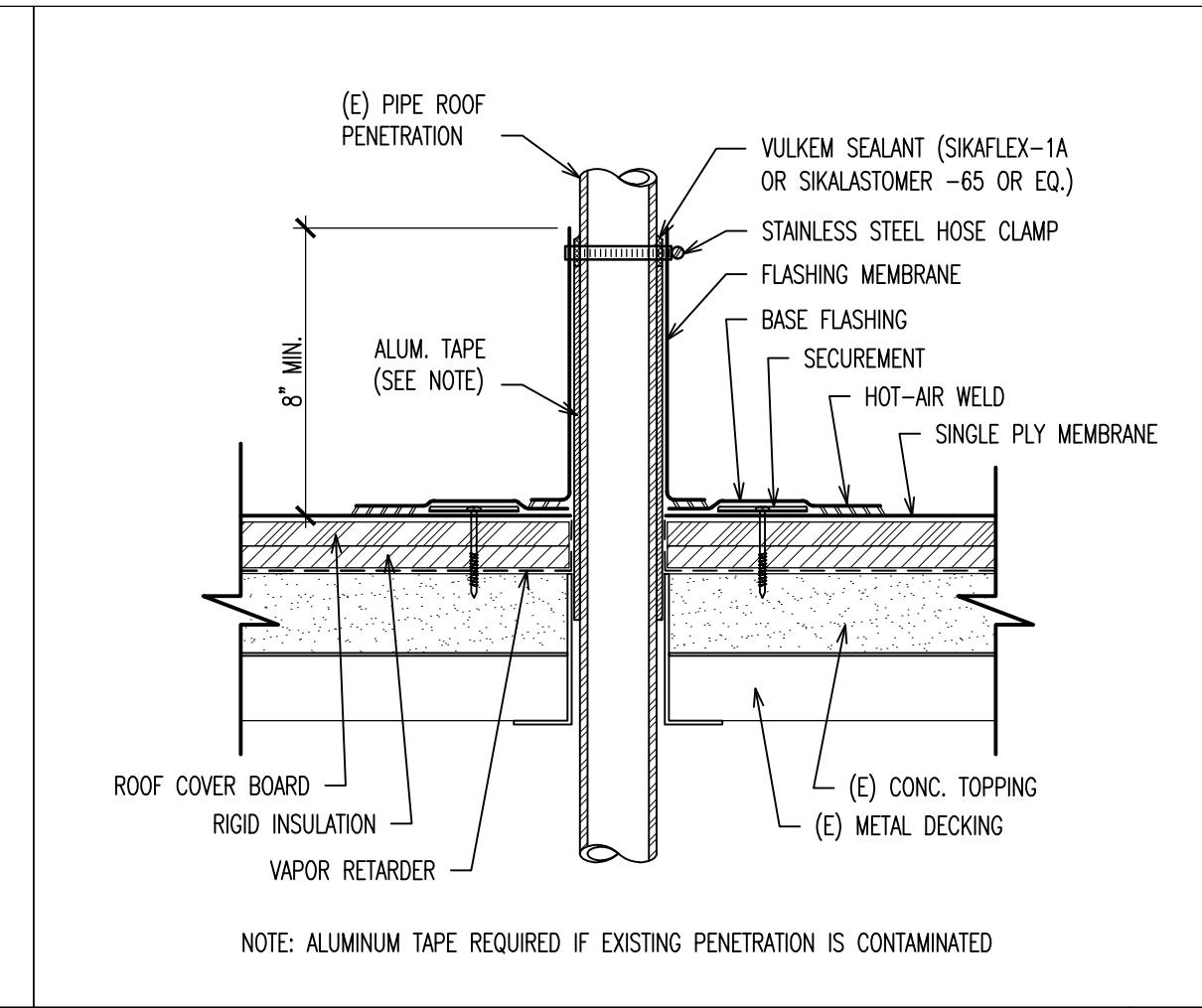
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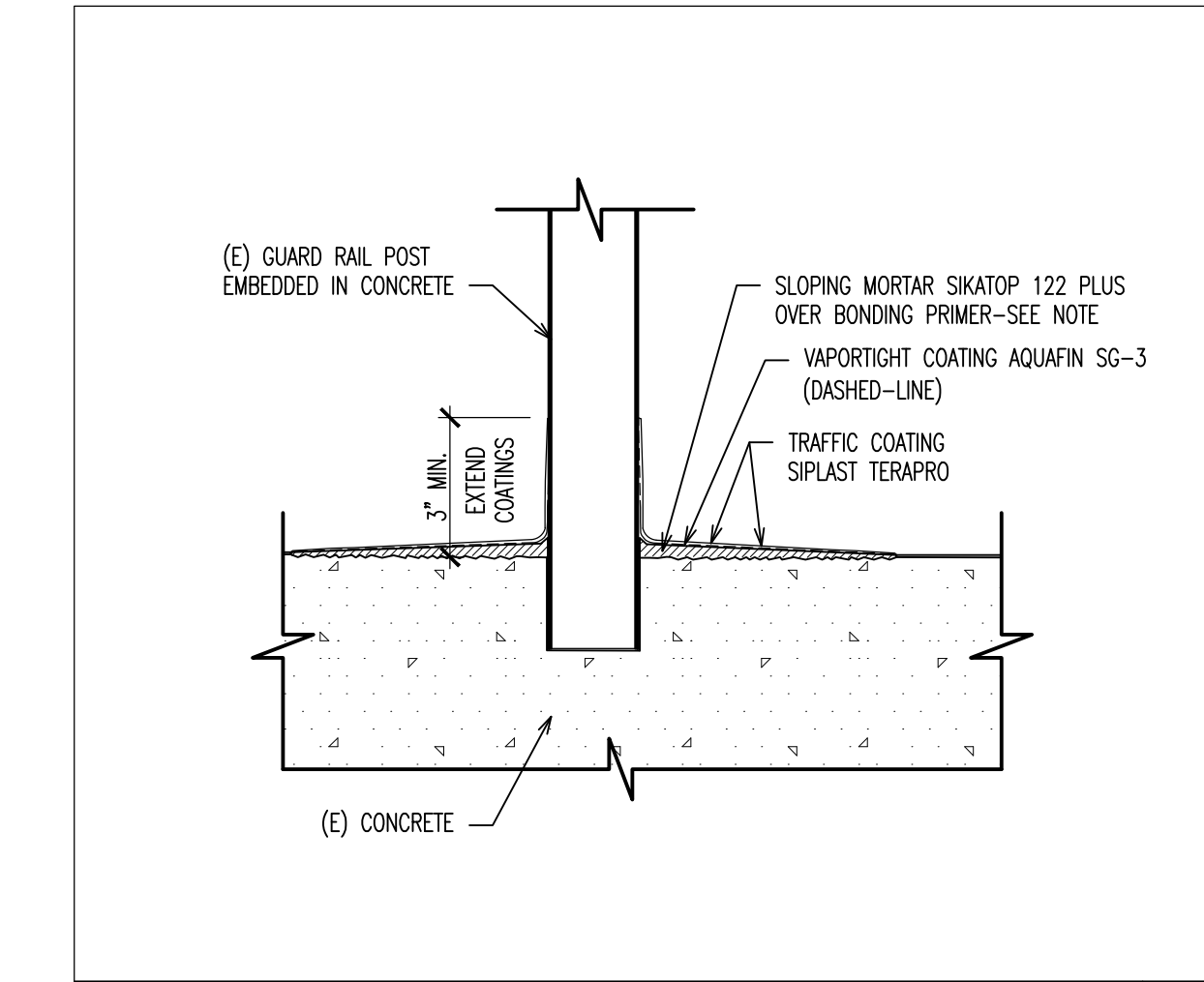
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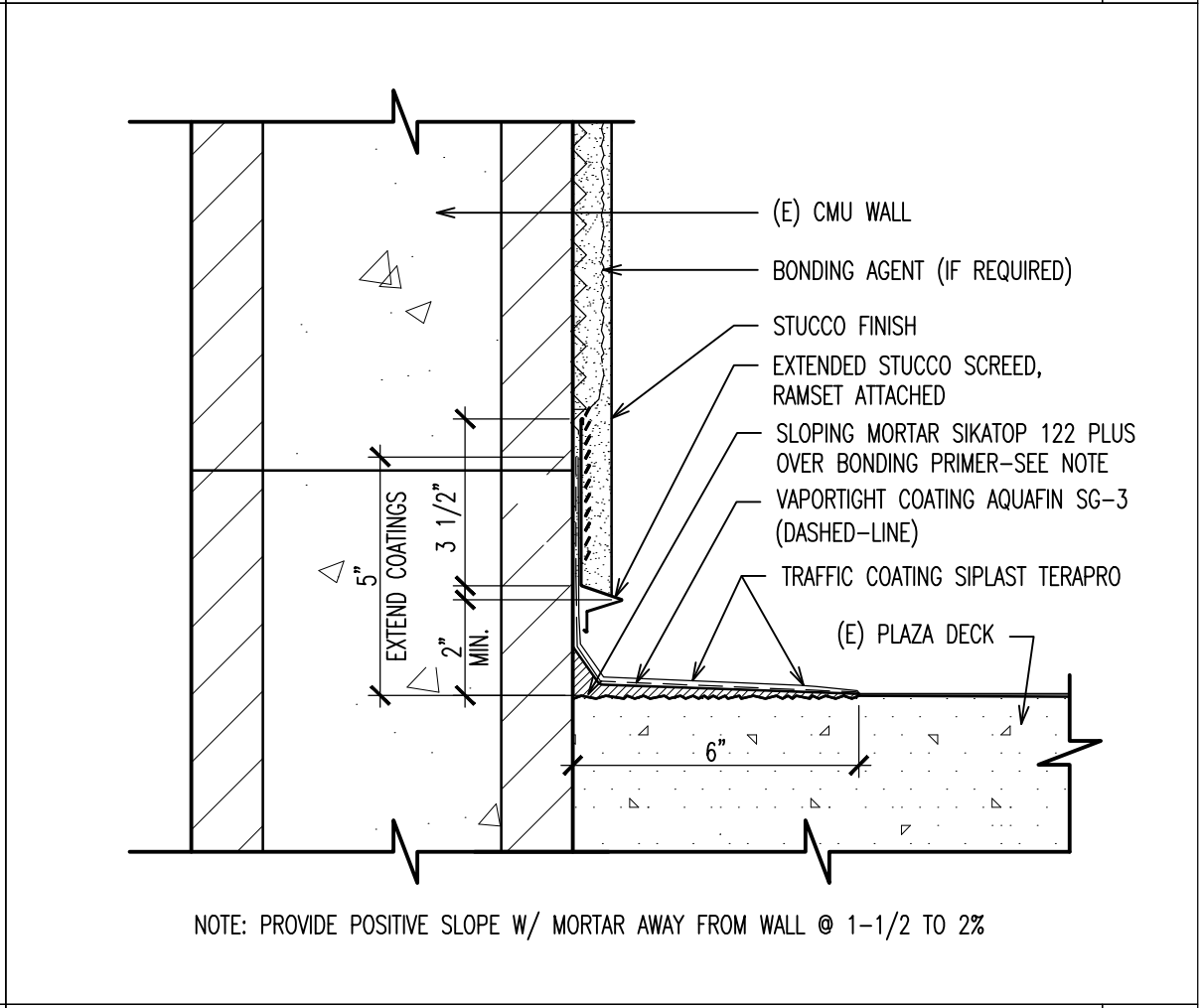
ROOF & CLAMPING RING DRAIN SCALE: 3" = 1'-0" 9



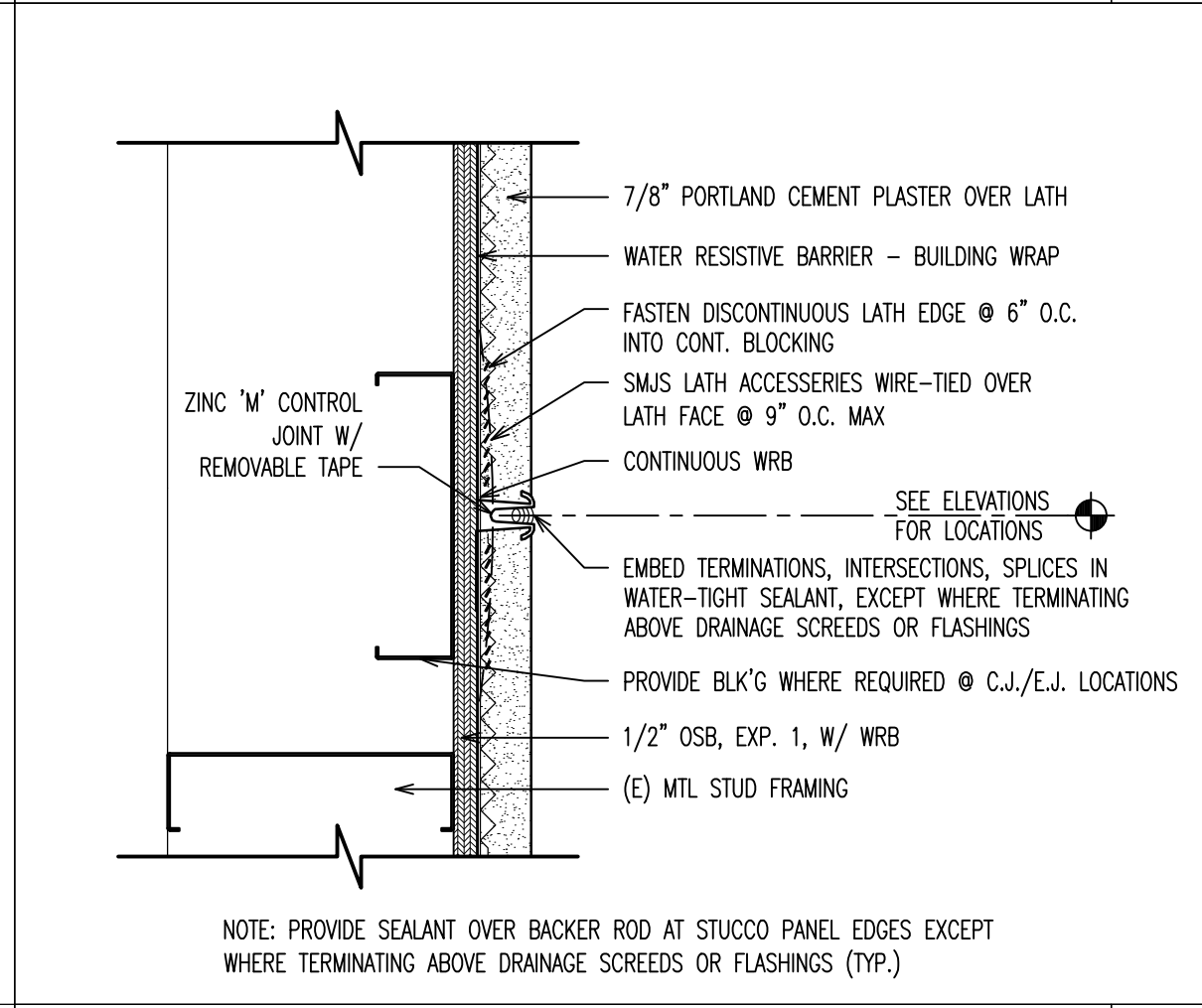
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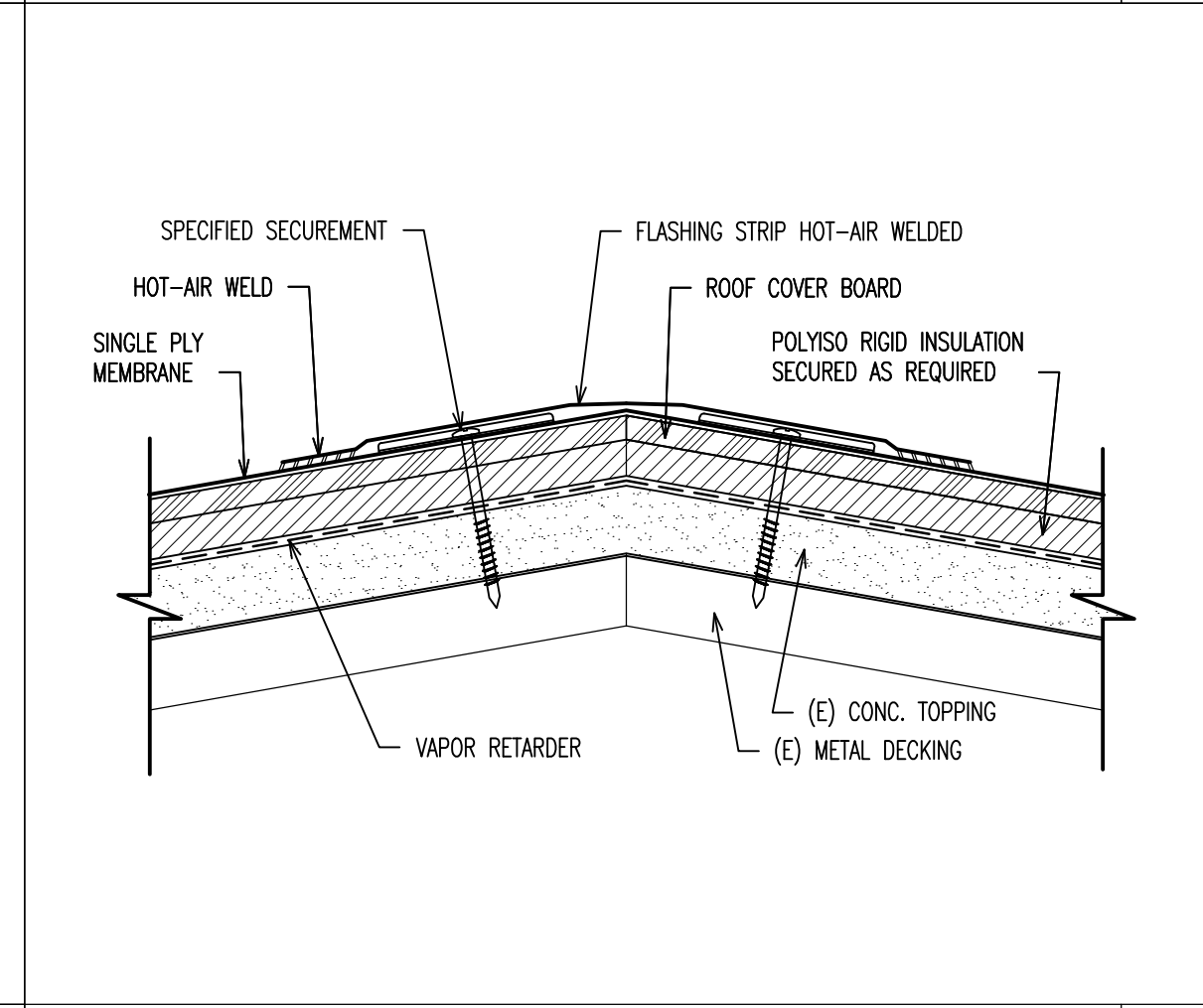
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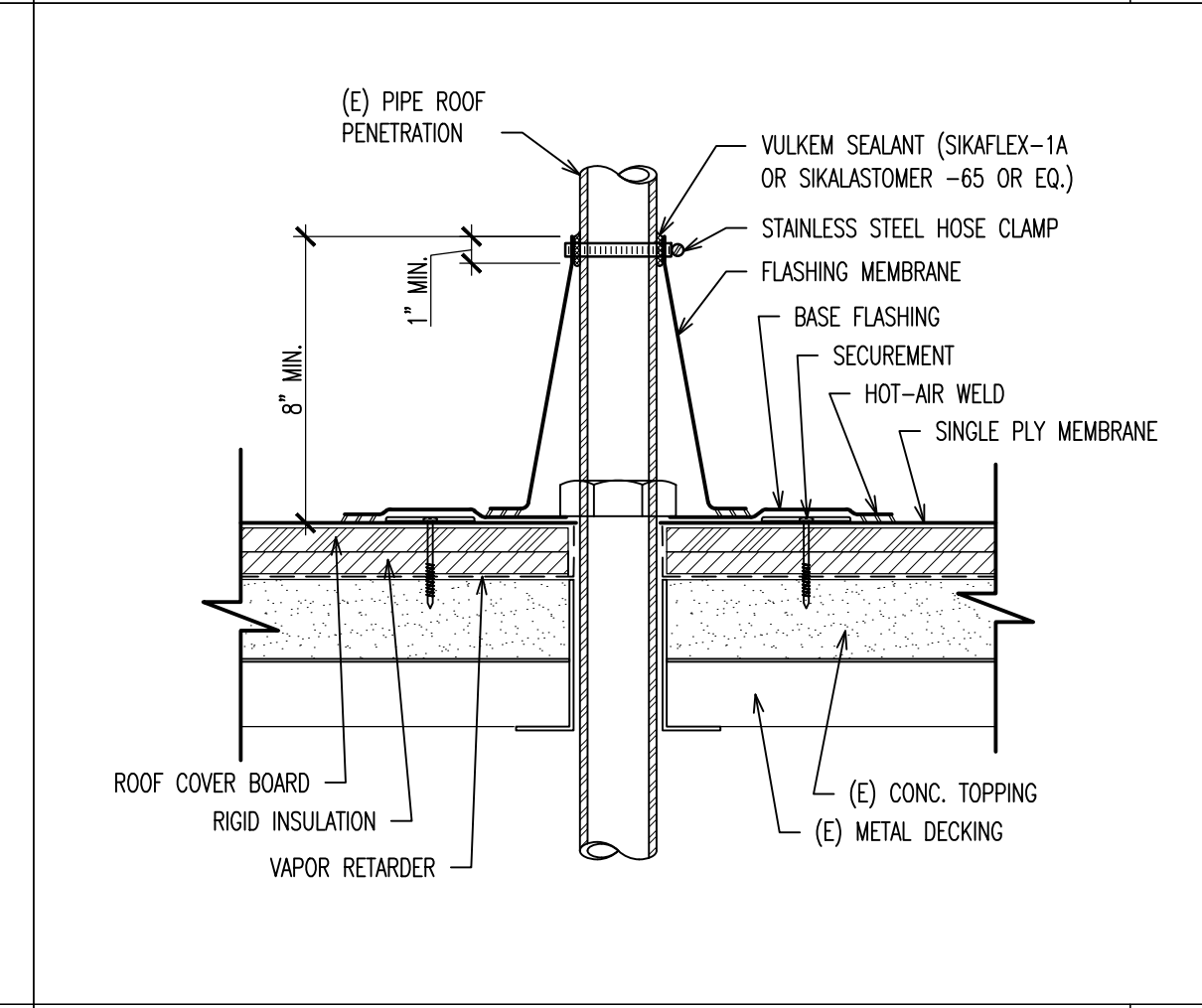
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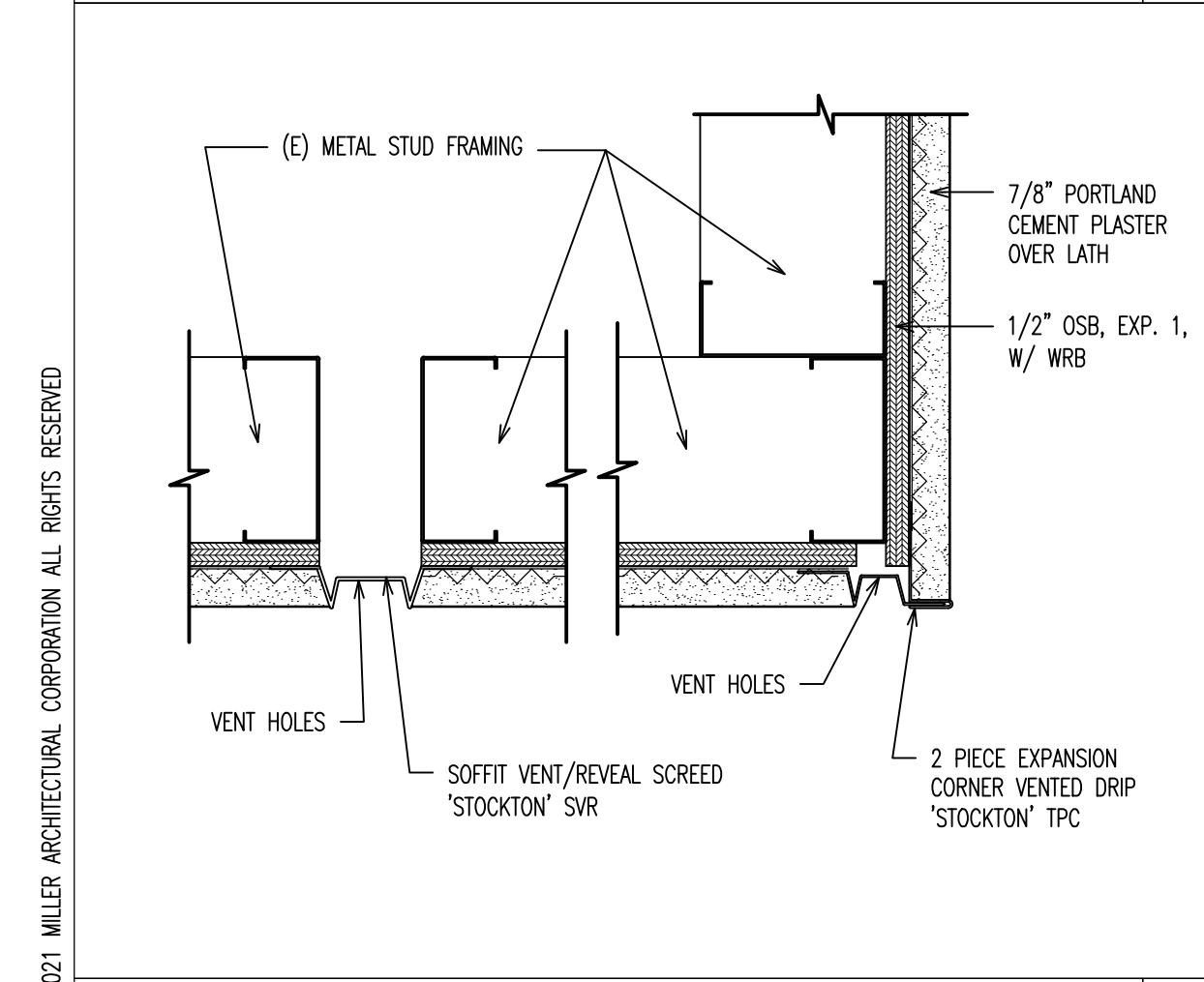
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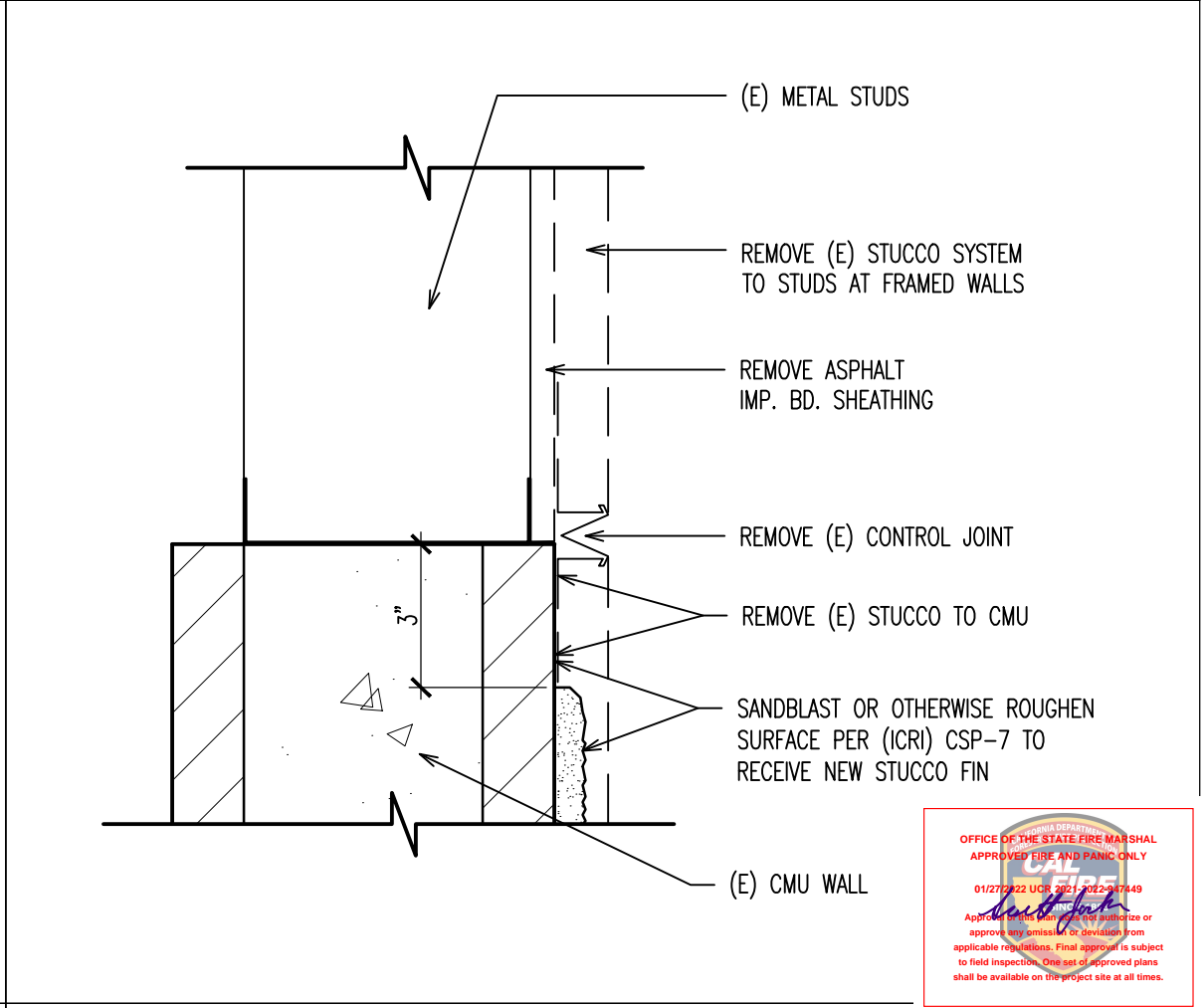
PVC ROOF SLOPE TRANSITION (RIDGE) SCALE: 3" = 1'-0" 10



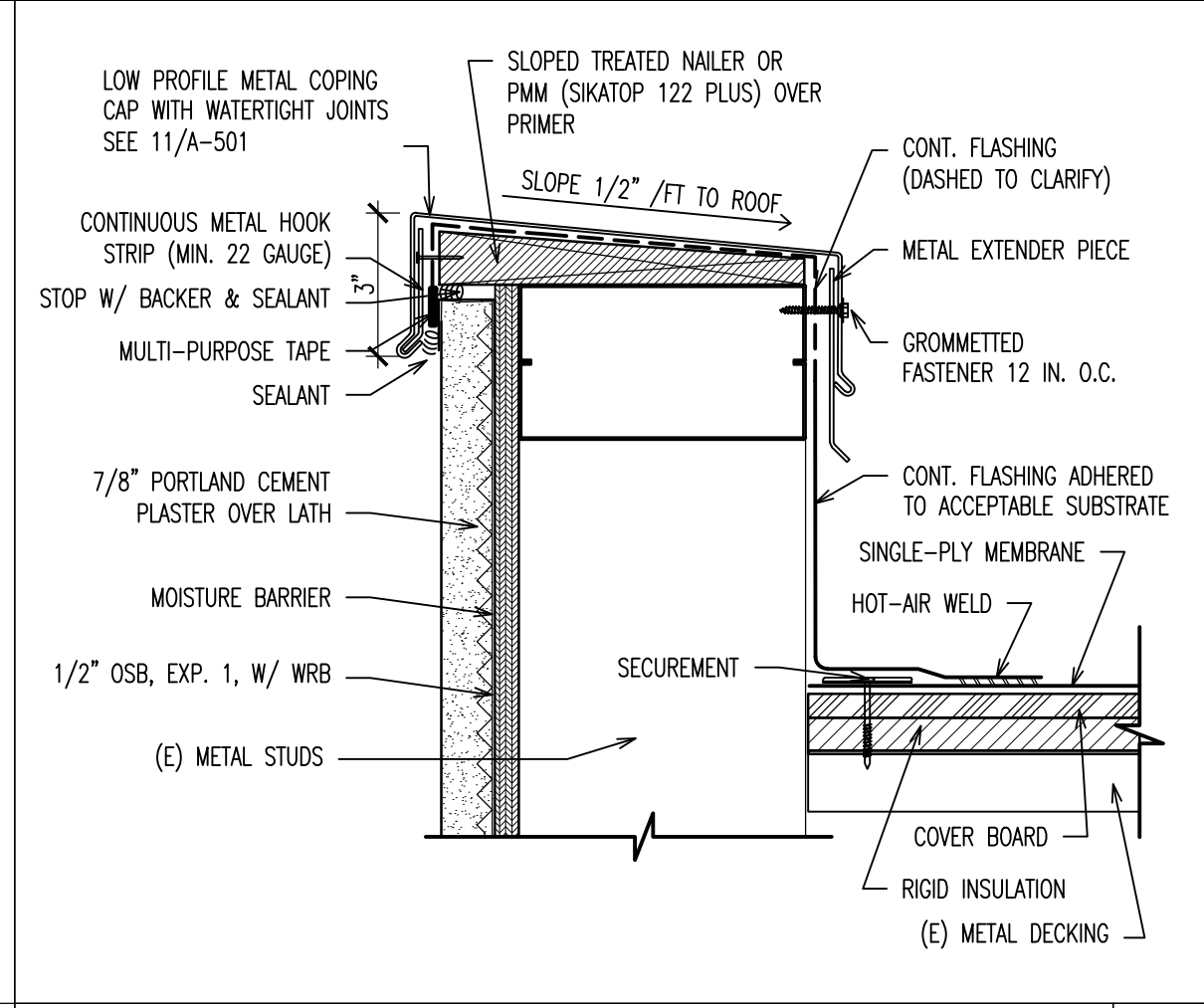
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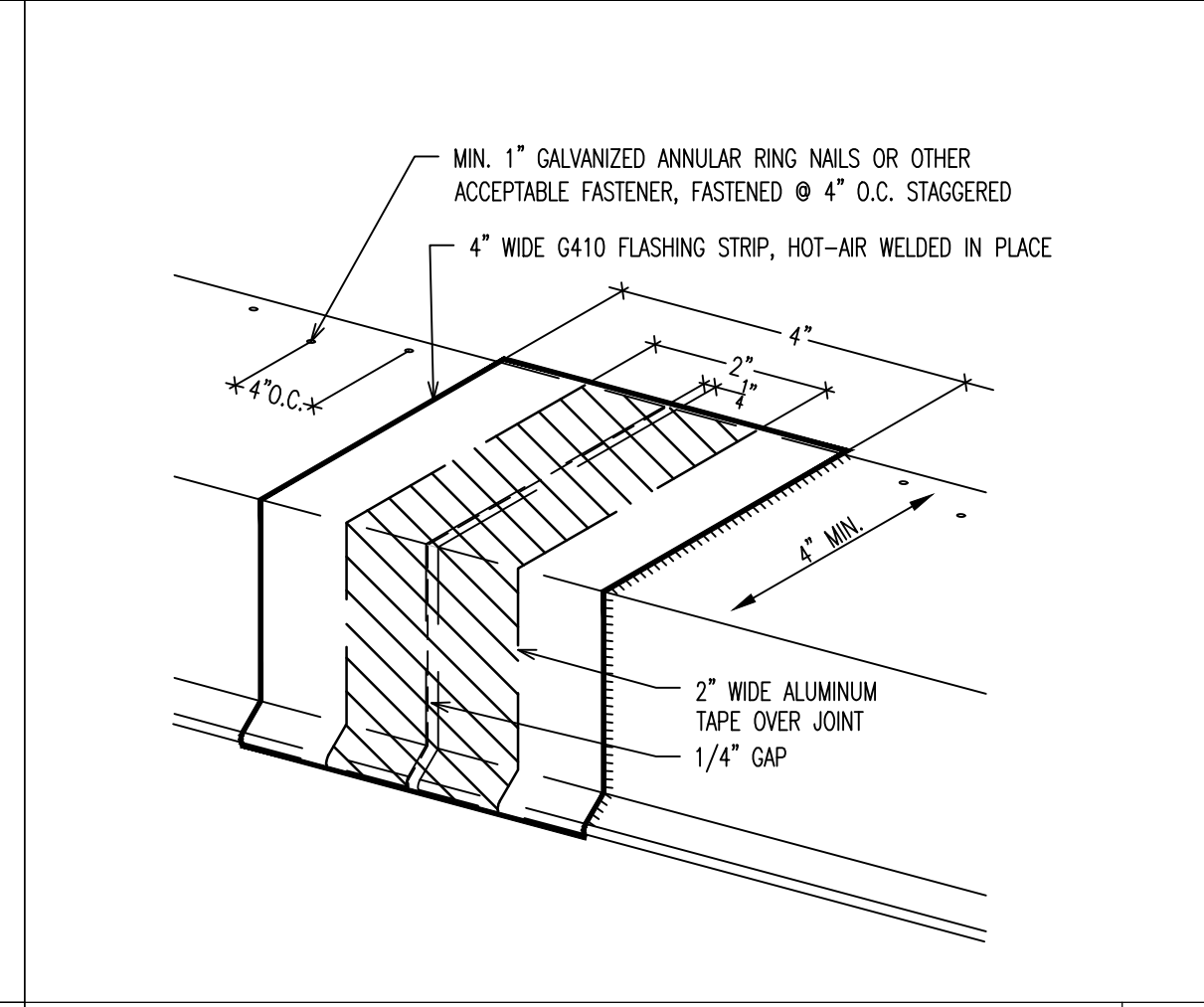
SOFFIT DRIP/VENT & VENT AT PANEL JOINT SCALE: 3" = 1'-0" 18



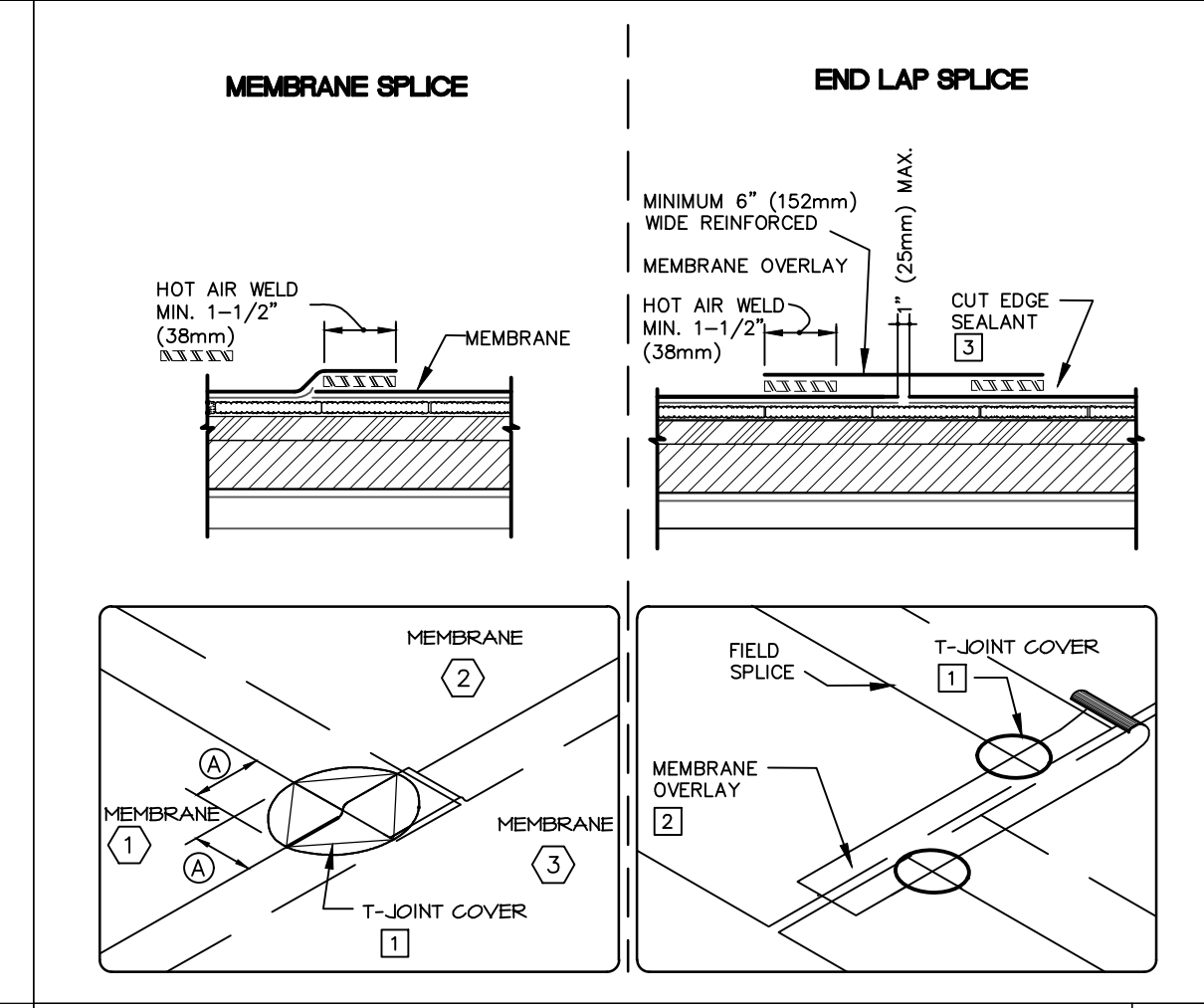
DEMO @ DISSIMILAR MATERIALS SCALE: 3" = 1'-0" 3



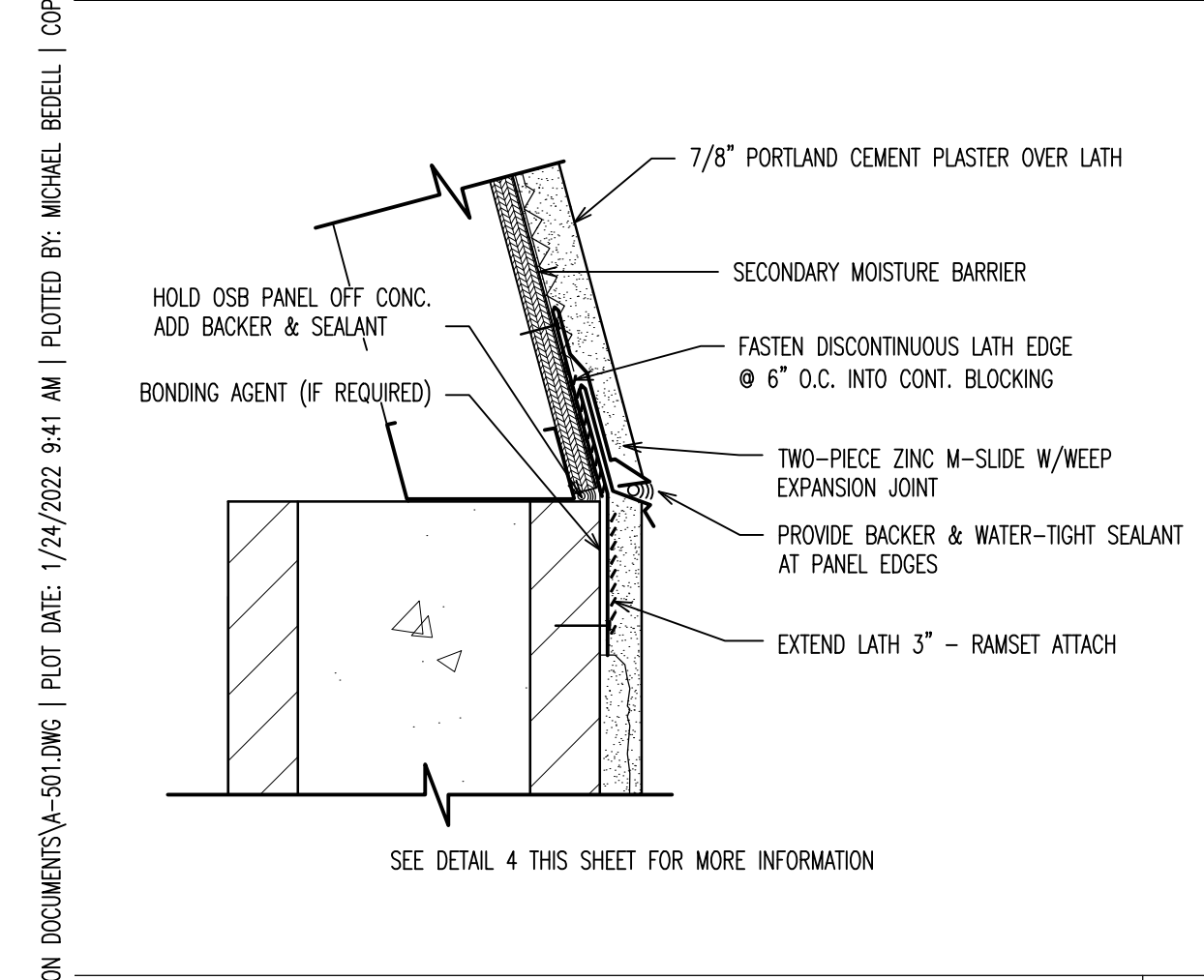
PARAPET WITH METAL COPING CAP SCALE: 3" = 1'-0" 7



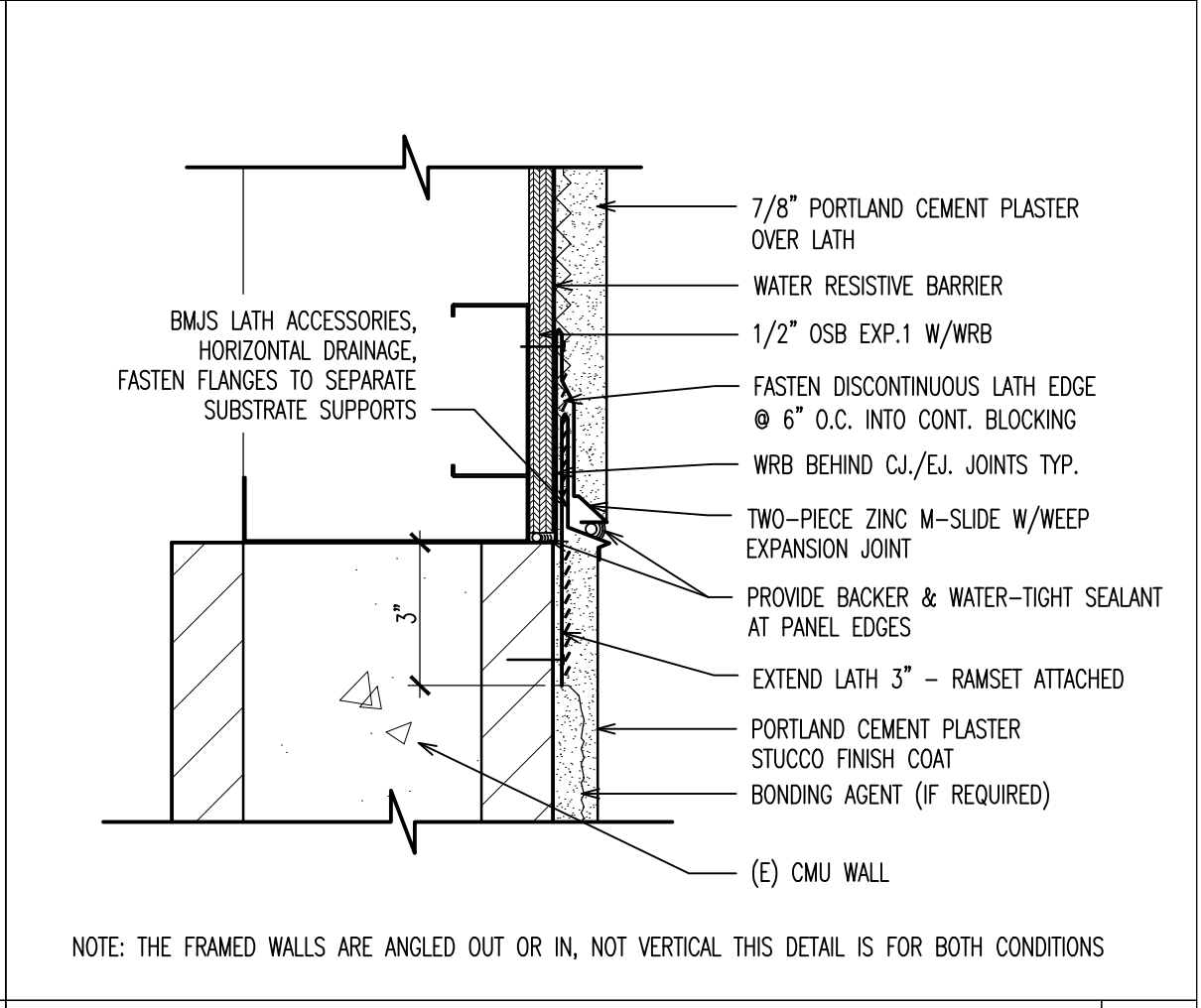
FLASHING AT METAL COPING JOINTS SCALE: N.T.S. 11



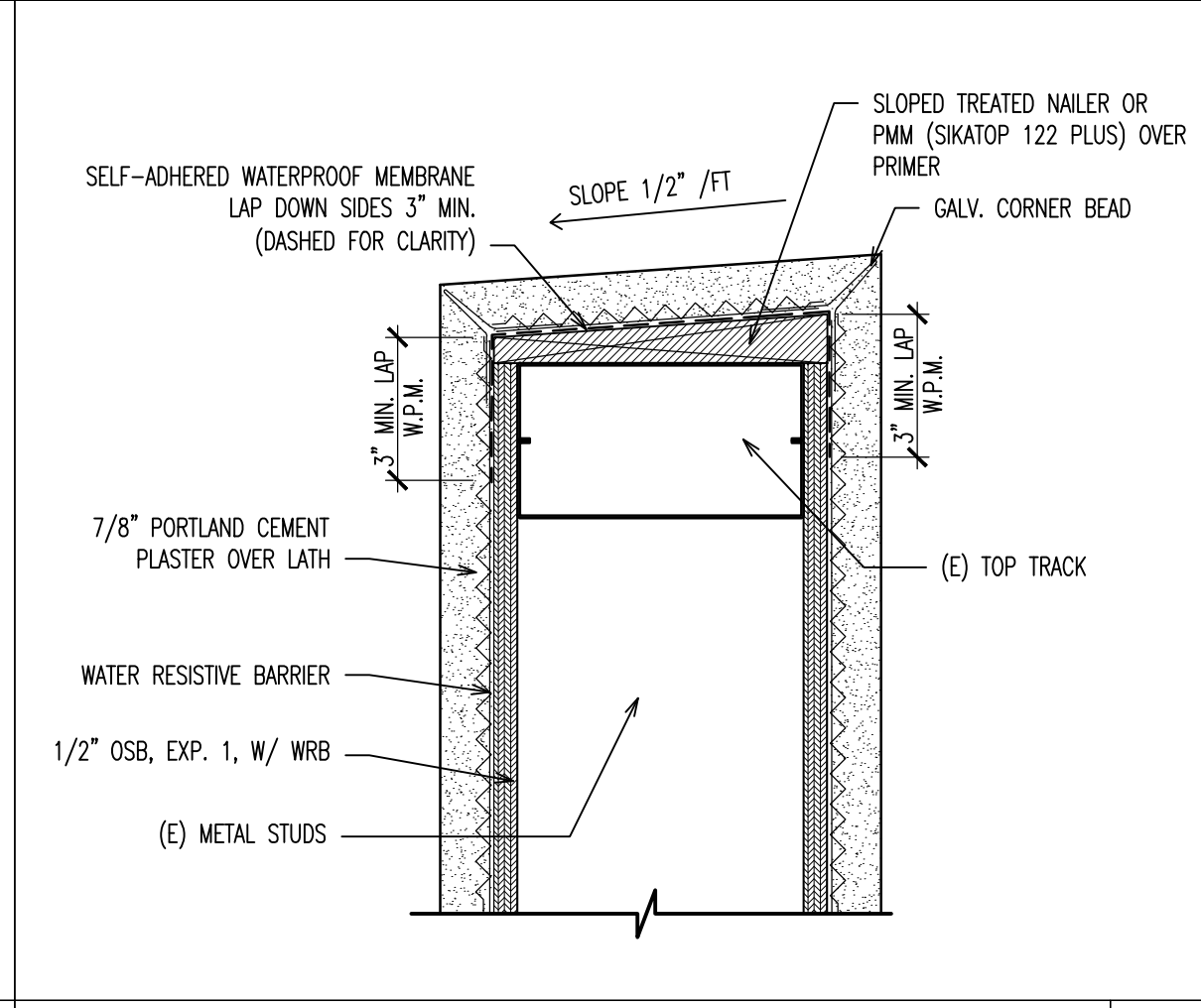
PVC MEMBRANE SPLICES SCALE: 3" = 1'-0" 15



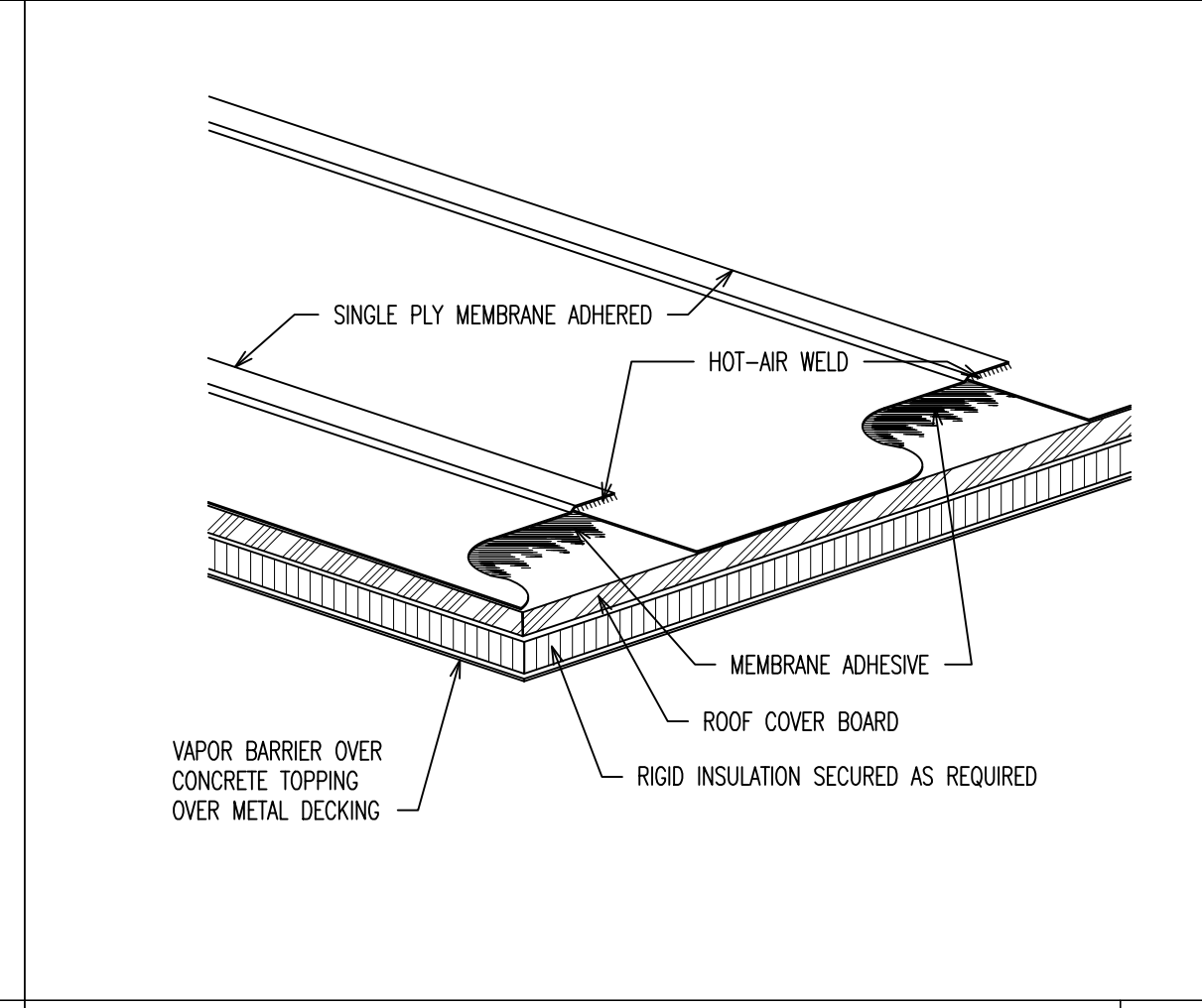
ANGLED WALL @ CMU STEM WALL SCALE: 3" = 1'-0" 19



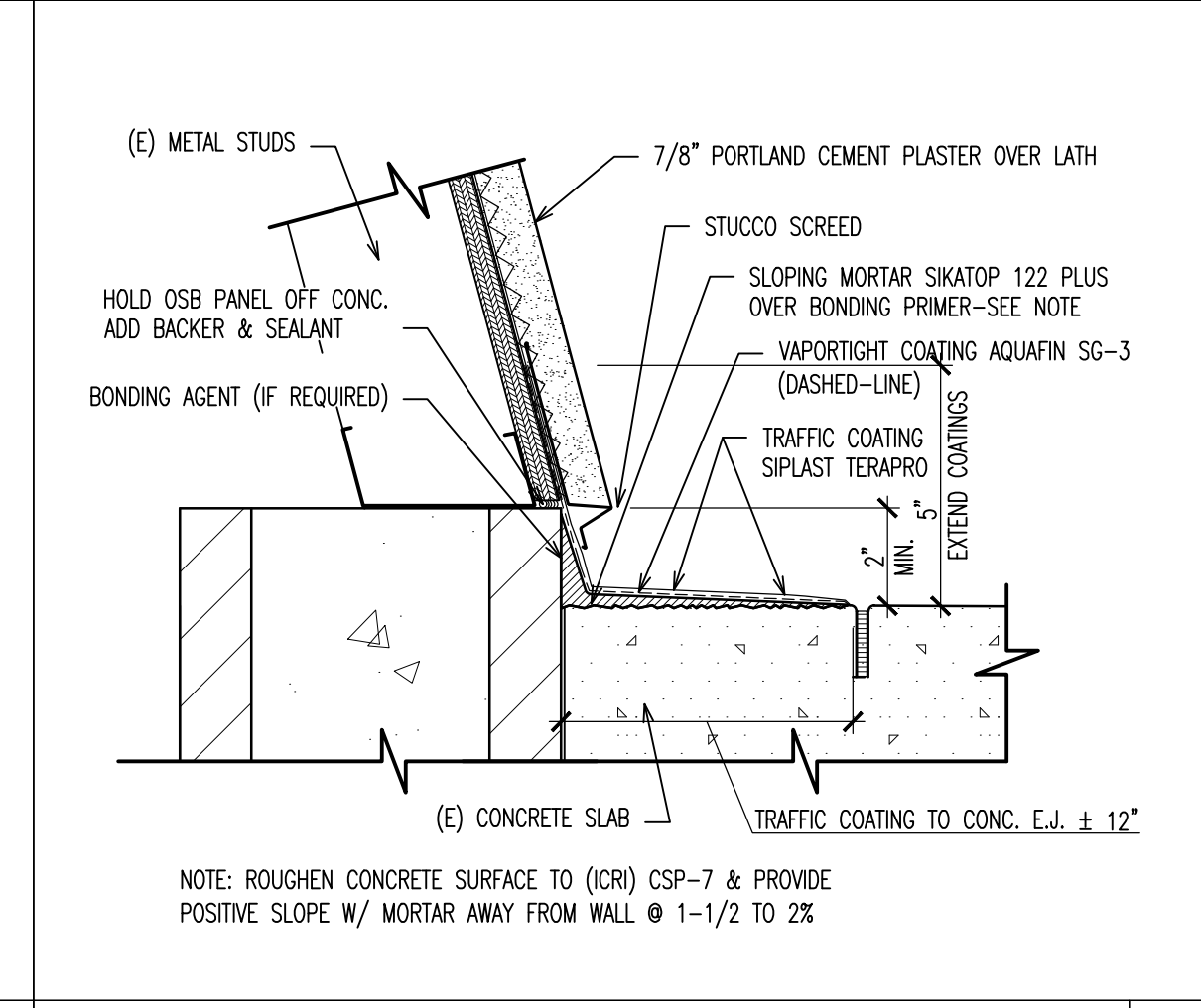
2 PIECE EXP. JOINT @ DISSIMILAR MATERIALS SCALE: 3" = 1'-0" 4



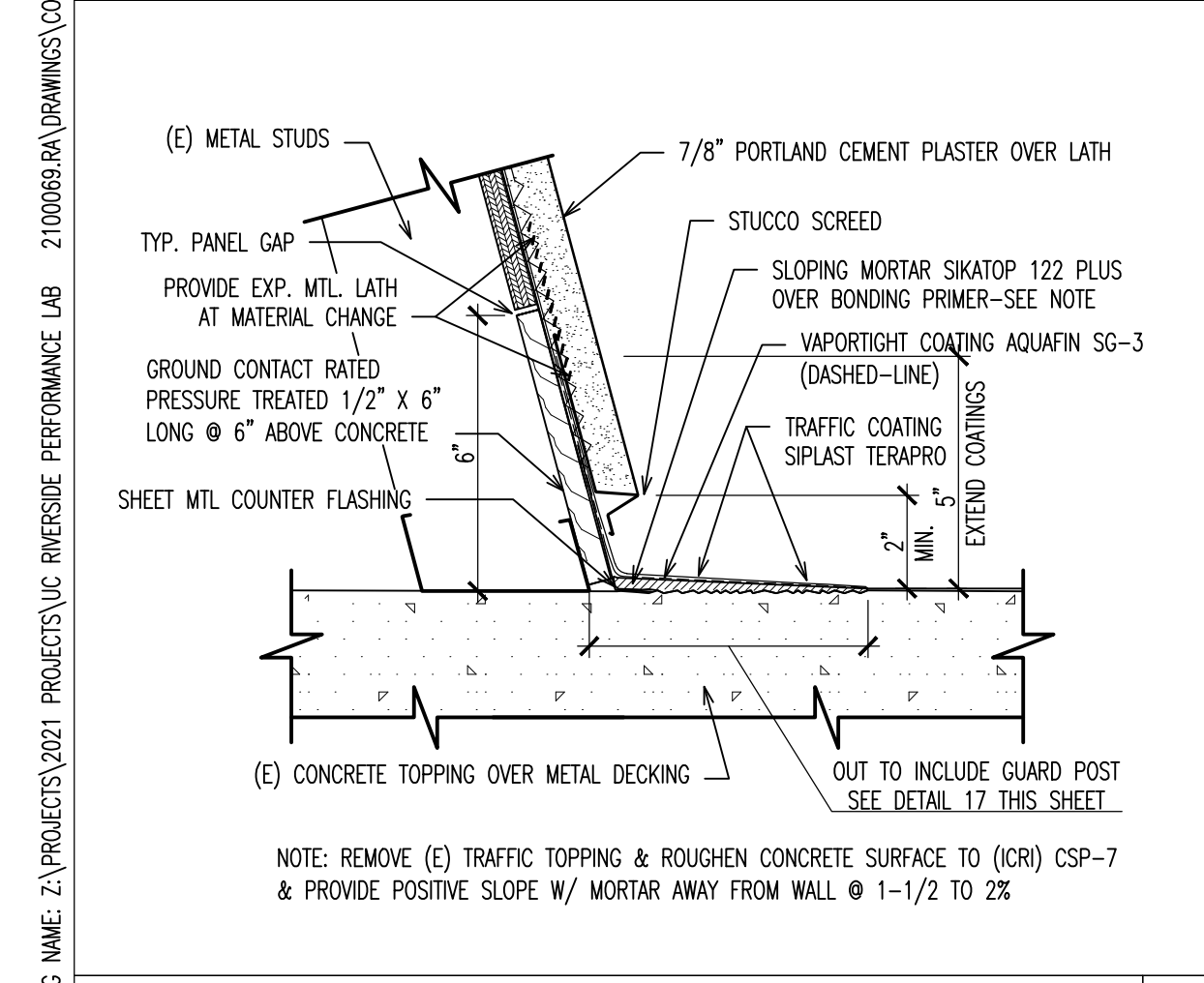
STUCCO SLOPING WALL SCALE: 3" = 1'-0" 8



ADHERED PVC ROOF SYSTEM SCALE: N.T.S. 12



ANGLED WALL @ CMU STEM & SLAB SCALE: 3" = 1'-0" 16



ANGLED WALL @ LEVEL 2 DECK SCALE: 3" = 1'-0" 20

DRAWING NAME: 21-PROJECTS/UCR RIVERSIDE PERFORMANCE LAB 2100069.RA DRAWINGS CONSTRUCTION DOCUMENTS/A-501.DWG | PLOT DATE: 1/24/2022 9:41 AM | PLOTTED BY: MICHAEL BEDELL | COPYRIGHT 2021 MILLER ARCHITECTURAL CORPORATION ALL RIGHTS RESERVED

SPECIFICATIONS

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		01 2200	Unit Prices
		01 2500	Product Options, Requirements & Substitution Procedures
		01 2613	Requests for Information & Instructions (RFI) Procedures
		01 3113	Coordination
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<u>Initial Issue</u>	<u>Revision</u>	<u>Section #</u>	<u>Title</u>
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		01 5700	Temporary Controls
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		01 9113	General Commissioning Requirements

END OF SPECIFICATIONS
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**SECTION 01 1100
SUMMARY OF WORK**

PART 1 – GENERAL

1.1. SUMMARY

A. Section includes:

1. Work Covered by Contract Documents

B. In case any Sections contain conflicting requirements, refer to General Conditions, Paragraph 4.1.8.

1.2. WORK COVERED BY CONTRACT DOCUMENTS

A. The University of California, Riverside (UCR) intends to procure the services of a General Contractor (Contractor) to repair and replace damaged exterior walls that would include sheathing, waterproofing and stucco. Remove and replace roof.

B. The Contract Time to complete the Work of this Contract is specified in the Supplemental Instructions to Bidders.

C. Project Location: 900 University Avenue, Riverside, CA. 92521, Fine Arts Building

D. The University has specified that the requirements and procedures for compliance with certain U.S. Green Building Council's (USGBC) LEED (Leadership in Energy and Environment Design) New Construction (NC) Version 3 (v3) prerequisites and credits will be used to target the Project to obtain the goal of LEED Gold certification. See Section 01 8113 "Sustainability Design Requirements" for additional information.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

SECTION 01 1400 WORK RESTRICTIONS

PART 1 – GENERAL

1.1. SUMMARY

A. Section includes:

1. Access to Site
2. Coordination with Occupants
3. Use of Site
4. Scheduling of Work and Work Hours
5. ~~Neighbor Complaint Hotline~~
6. Site Decorum

1.2. ACCESS TO SITE

A. Special Requirements

1. Existing Site Conditions and Restrictions:
 - a. Maintain access and code required exiting to and from surrounding buildings during construction. This shall include all accessibility requirements for the buildings and site.
2. Contractor shall be responsible for safely securing the work areas, with at a minimum, trench plates, fencing, signage, safety lighting, traffic and pedestrian coordinators.
3. Trench plates shall be provided and safely secured at all roadway, parking lots, and walkways.
4. Trenches shall be protected from vehicles by utilizing trench plates, and from pedestrians by utilizing fully installed galvanized fencing. Excavations and holes shall be protected by utilizing fully installed galvanized fencing, safety lighting, and other methods to safely secure the site. Establishment of the work area in any space requiring the University's vacating shall not commence before notification to University's Representative. Refer to Section 01 1400 - CONTRACTOR'S USE OF THE PROJECT SITE, Notifications.
5. Individual work areas shall not be established until Contractor has labor, materials and equipment ready to commence and complete the Work in that area.
6. Work shall not commence in any area until barriers and other protections are in place.

B. Use of Public Thoroughfares and University Roads

1. Contractor shall make its own investigation of the condition of available public thoroughfares and University roads, and of the clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress at the Project site.
2. Where materials are transported in the prosecution of the Work, do not load vehicles beyond the capacity recommended by manufacturer of the vehicles or prescribed by any applicable state or local law or regulation.
3. Use only established roads on the campus; provided, however, that such temporary haul roads as may be required in the work shall be constructed and maintained by Contractor, subject to the approval of University's Representative. Refer to Section 01 3540 Environmental Mitigation for description of the approved haul route to and from

the campus.

4. Provide protection against damage whenever it is necessary to cross existing sidewalks, curbs, and gutters in entering upon the University roads and public thoroughfares. Repair and make good immediately at the expense of Contractor all damages thereto, including damage to existing utilities and paving, arising from the operations under the Contract.
5. Contractor shall maintain all existing campus roads, streets, sidewalks, curbs, gutters, and any other infrastructure items that are affected by campus construction activities, clear, clean and maintained while construction is ongoing on campus.
6. Truck staging is not allowed on campus or on any residential street surrounding the campus.

C. See also Section 01 5500, Vehicular Access and Parking.

1.3. COORDINATION WITH OCCUPANTS

- A. The University reserves the right to occupy and to place and install equipment in completed areas of the Work prior to Notice of Completion, provided such occupancy does not interfere with completion of the Work and subject to the General Conditions. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.
 1. Partial occupancy of the Work may occur upon University's approval, in which case the University's Representative will prepare a Certificate of Beneficial Occupancy for each specific portion of the Work and specific area of the building to be occupied prior to Final Completion of the entire Work.
 2. Refer to Article 9.6 of the General Conditions.

1.4. USE OF SITE

- A. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
 1. Driveways and Entrances: Keep driveways and entrances serving adjacent buildings clear and available to the University, and its employees, students, faculty, visitors, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for use of these areas.
 2. Contractor's use of the Project site for the work, staging, deliveries, and storage is restricted to the project limits on the Drawings, or as directed by the University's Representative.
 3. All material for construction operations shall be brought in and the work conducted so as to avoid any interference with existing University facilities or their normal operations.
 4. Noise from job equipment shall be kept to a minimum by use of adequate mufflers and other appropriate means.
 5. Delivery of Materials: Arrange for delivery of materials and equipment to minimize length of on-site storage prior to installation. Delivery route shall be from South Campus Circle Drive to Big Springs Road to the project site, or as designated by the University's Representative.
 6. The Contractor shall take appropriate steps throughout the term of the project to prevent airborne dust due to work under this contract. Water shall be applied wherever practical to settle and hold dust to a minimum, particularly during excavation and moving of materials. No chemical palliatives shall be used.

1.5. SCHEDULING OF WORK AND WORK HOURS

- A. Restrict Construction Hours: All contractors, and overseen by the General Contractor, shall ensure that all construction contracts will limit exterior construction activities to occurring between 7:00 a.m. and 7:00 p.m. Monday through Friday, and 8 a.m. and 5 p.m. on Saturday. Construction will not be allowed on Sunday or federal holidays.
- B. Overtime work requests must be submitted to the University's Representative and the Inspection Request Software System used for the project. Three working days in advance. All Overtime requested for the Inspector of Record (IOR) shall be first authorized by the Campus Building Official t before the work is to commence.
 - 1. Acceptable overtime hours are no earlier than 7:00 a.m. and no later than 7:00 p.m., Monday through Friday; and from 8:00 a.m. to 5:00 p.m. on Saturday. Work will not be allowed on Sunday and Holidays.
 - 2. Work at other times may be permitted if it takes place within the enclosed building and the University's Representative determines that it is unlikely to affect University personnel, students, operations and the surrounding neighborhood.
 - 3. Additional overtime operating hours may be approved at the University's Representative sole discretion and only without change to the contract sum.
 - 4. Contractor shall pay all the inspectors (in-house inspectors and University's testing laboratory inspectors) and University's Representative's costs if the overtime request is approved by University's Representative.

1.6. NEIGHBOR COMPLAINT HOTLINE

- ~~A. Contractor to provide a phone number monitored 24 hours a day for the public to use to lodge complaints about construction activities that may harm or degrade their quality of life. Refer to Section 01 5000 "Construction Controls and Temporary Facilities" for more detailed specifications.~~
- ~~B. Neighbor Complaint Hotline Phone Number: Contractor shall provide signage described elsewhere in this section with the telephone number for the off campus neighbors to use to notify the contractor and University about construction related issues affecting their persons and properties such as, but not limited to excessive noise, dust and construction vehicle traffic along Valencia Hill Drive which is not allowed under any circumstances.~~
 - ~~1. The contractor shall contact a security service which shall provide an answering service for any calls, 24 hours a day and relay the call to a list of designated construction personnel on site for response. The contractor can contact Knight Security at (760) 745-3604 which provided service for the Phase 1 portion of the project for terms and conditions but is not obligated to use this firm and can choose to any service of a similar type.~~

1.7. SITE DECORUM

- A. Contractor shall control the conduct of its employees (including subcontractor's employees) so as to prevent unwanted interaction initiated by Contractor's employees with University of California Riverside (UCR) students, UCR staff, UCR Faculty or other individuals (except those associated with the Project), adjacent to the Project site. Without limitation, unwanted interaction by Contractor employees would include whistling at or initiating conversations with passersby. In the event that any Contractor employee initiates such unwanted interaction, or utilized profanity, Contractor shall, either upon request of University's Representative or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to the University. No radios, other than two-way communication type, will be allowed on the Project site. No smoking is allowed in any University Building.
- B. Contractor shall control the conduct of its employees (including subcontractor's employees) to prevent unwanted interaction initiated by Contractor's employees with UCR students, staff, Faculty or other individuals, adjacent to the Project site. Unwanted interaction by Contractor employees includes whistling at, or initiating conversations with, passersby. If any contractor employee initiates such unwanted interaction, or utilizes profanity, Contractor shall, upon request of University's Representative or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to University. No radios, other than two-way communication type, will be allowed on the Project site. No smoking is allowed in any existing University Building or University Building under Construction.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

**SECTION 01_2200
UNIT PRICES**

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes:
 - 1. Unit Price Descriptions
 - 2. Advanced Coordination
- B. Insert unit price quotations in the appropriate spaces in the Bid Form for each unit price item of Work described herein.
- C. Unit prices stated in the Agreement shall be used to compute adjustments of the Contract Sum for approved unit price items of Work. Such adjustments shall be made by Change Order.
- D. Unit prices shall include all labor, materials, tools, and equipment; all other direct and indirect costs necessary to complete the item of Work and to coordinate the unit price Work with adjacent work; and shall include all overhead and profit. Contractor shall accept compensation computed in accordance with the unit prices as full compensation for furnishing such Work.
- E. Compensation will be paid for those items of Work described herein.

1.2. UNIT PRICE DESCRIPTIONS

- A. Applicable Sections of the Specifications describe the materials and methods required under the various unit price items of Work.
- B. List of Unit Price Items and Descriptions:
 - 1. Unit Price No. 1: At the angled walls only, provide unit sq. ft. price for 'Stucco Crack Reduction System' (mesh) that is Alkali resistant, minimum 4.0 oz., & woven glass fiber fabrics ILO reinforcement fiber admixture. Base coat and other admixes must be compatible with mesh & finish coats, as specified in Specification Section 01 2200.
 - 2. Unit Price No. 2: Provide lineal foot pricing for metal guards & handrails, as specified in Specification Section 01 2200. .
 - 3. Unit Price No. 3: Provide a square foot pricing for mold remediation, if required, based on information from the survey report furnished by the university., as specified in Specification Section 01 2200.

1.3. ADVANCED COORDINATION

- A. Contractor shall use advanced coordination, and shall immediately notify University's Representative when conditions require the use of unit price items of Work.
- B. The applicability of, measurement methods for, documentation of, and the final adjustment of the Contract Sum for unit price items of Work shall be determined by University's Representative.

- C. After performing unit price items of Work as directed by University's Representative, Contractor shall take necessary measurements in the presence of University's Representative and shall submit calculations of quantities to University's Representative for approval. Contractor shall notify University's Representative **one (1)** working day in advance of taking measurements.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

MATERIAL/PRODUCT SUBSTITUTION REQUEST FORM

Date: _____ **Material/Product Substitution Request No.** _____

TO: University's Representative **FROM:**

A. We hereby submit for your consideration the following product instead of the specified item:

1. Section: _____ Sub-Article: _____
2. Specified Item: _____
3. Proposed Substitution: (Mfg., Type, Model, etc. Attach a separate sheet if necessary.)

B. Complete all of the following:

1. Does this Substitution offer The Regents a cost credit (including costs for changes by other trades)? Yes No
 If "Yes," state how much and attach an itemized breakdown of all costs: \$ _____
2. Does this Substitution offer earlier delivery or less construction time? Yes No
 If "Yes," state the effect on the Contract Time: (Attach a separate sheet if necessary.)
3. Does this substitution affect any dimensions, layout, or details of other trades as shown on the drawings? Yes No
 If "Yes," explain in the space below: (Attach a separate sheet if necessary.)
4. Describe the specific differences between this Substitution and the specified item in the space below: (Attach a separate sheet if necessary.)

C. Attach the following items as applicable: (Check if attached.)

1. Manufacturer's technical data.
2. Laboratory test or performance results.
3. Drawings and wiring diagrams of the proposed product.
4. Drawings and description of changes required by other trades.
5. Samples.
6. Manufacturer's guarantee and maintenance instructions.
7. Documentation of code compliance for all specific uses.

D. The undersigned agrees to pay for all additional review, design, testing, changes in the contract documents, and construction as a result of the acceptance of this substitution, at no cost to The Regents.

E. Submitted by Contractor: _____
(Signed)

(Printed Name & Title)

UNIVERSITY'S REPRESENTATIVE'S USE ONLY:

Accepted Revise and Resubmit Rejected See attachment dated _____

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**SECTION 01 2500
PRODUCT OPTIONS AND SUBSTITUTIONS**

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes:
 - 1. General Provisions
 - 2. Special Requirements for Other Than First-Named Product, Material or Equipment
 - 3. Special Requirements for Substitutions
 - 4. Material/Product Substitution Request Form

1.2. GENERAL PROVISIONS

- A. This subsection includes the general provisions regarding specification of products, material and equipment by brand or trade name.
- B. Products, material or equipment specified by both brand or trade name and model number are approved for use, provided that Contractor complies with all Contract requirements. Specification of a product, material or equipment by brand or trade name and model number is not a representation or warranty that the product, material or equipment can be used without modification, to meet the requirements of the plans and specifications; Contractor shall, at its sole cost, modify such products, material, or equipment so that they comply with all requirements of the plans and specifications.
- C. The **first-named** product, material or equipment specified by brand or trade name and model number is the **basis for the Project design** and the use of any item other than the first-named one may require modifications of that design. If Contractor uses any product, material or equipment other than the first-named one, Contractor shall, at its sole cost:
 - 1. Make all revisions and modifications to the design and construction of the Work necessitated by the use of the product, material or equipment.
 - 2. Be responsible for all costs of any changes resulting from the use of the product, material or equipment including without limitation, costs or changes which affect other parts of the Work, the work of Separate Contractors, or any other property or operations of the University.
- D. When a product, material or equipment specified by brand or trade name is followed by the words “**or equal,**” a **substitution** may be permitted if the substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and if the substitution complies with all other requirements of the plans and specifications.
- E. A product, material or equipment specified by brand or trade name followed by the words “**or equal, no known equal,**” signifies that University does not have sufficient knowledge to specify a product, material or equipment, other than the one specified by brand or trade name, that is suitable for use on the Project. The use of the words “no known equal” is not intended to discourage substitution requests in accordance with the requirements specified herein.
- F. When catalog numbers and specific brands or trade names not followed by the designation “or equal” are used in conjunction with a product, material or equipment required by the specifications, **substitutions will NOT be allowed** and the named product, material or equipment must be used.

- G. Specification of a product, material or equipment by brand or trade name and model number is not a representation or warranty that the product, material or equipment is available; Contractor should confirm, prior to submitting its Bid, the availability of any product, material or equipment specified by brand or trade name and model number.
- 1.3. SPECIAL REQUIREMENTS FOR OTHER THAN FIRST-NAMED PRODUCT, MATERIAL OR EQUIPMENT
- A. This subsection includes special requirements for named products, material and equipment, other than the first-named product, material or equipment, specified by both brand or trade name and model number.
- B. In addition to complying with all other submittal requirements of the Contract, **submit within 70 days after the date of commencement specified in the Notice to Proceed**, for review and approval by the University's Representative, Contractor prepared specifications and drawings, including design and engineering calculations, prepared by an appropriate licensed professional, depicting all revisions and modifications to the design and construction of the Work necessitated by the use of the product, material or equipment. **If no revisions or modifications are necessary, submit within 70 days after the date of commencement specified in the Notice to Proceed**, a written representation that no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment. Contractor shall utilize the first-named product, material or equipment if Contractor fails to make the appropriate required submittal pursuant to this paragraph within the 70-day period.
- C. A product, material or equipment, other than the first-named product, material or equipment, specified by both brand or trade name and model number may be used if no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment. If such revisions or modifications are necessary, the product, material or equipment may be used only if the revisions or modifications are approved in writing by the University's Representative. Contractor has the burden of demonstrating, through the procedures specified herein, that any such revisions or modifications will not be detrimental to the quality, utility or appearance of the Project or any portion of the Project. The University's Representative may refuse to approve any such proposed revisions or modifications where, in the reasonable opinion of the University's Representative, Contractor has failed to demonstrate, through the procedures specified herein, that the revisions or modifications are not detrimental to the quality, utility or appearance of the Project or any portion of the Project.
- 1.4. SPECIAL REQUIREMENTS FOR SUBSTITUTIONS
- A. In addition to complying with all other submittal requirements of the Contract, submit written data demonstrating that the proposed substitution is equal to or superior to the first-named product, material or equipment in quality, utility, appearance, environmental performance criteria, and otherwise complies with all requirements of the plans and specifications, including:
1. Complete technical data including drawings, performance specifications, samples, and test reports of the article proposed for substitution.
 2. Statement by Contractor that the proposed substitution is in full compliance with the requirements of the Contract Documents and Applicable Code Requirements.
 3. List of Subcontractors, if any, that may be affected by the substitution.
 4. Contractor prepared specifications and drawings, including design and engineering calculations, prepared by an appropriately licensed professional, depicting all revisions and modifications to the design and construction of the Work necessitated by the use of the substitution. If no revisions or modifications are necessary, submit a written representation that no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment.

- B. Requests for substitutions will only be considered if Contractor completes and submits Material/Product Substitution Request Form and the above supporting data.
- C. At the request of and within the timeframes specified by the University's Representative:
1. Submit samples as deemed necessary by the University's Representative to evaluate the proposed substitution.
 2. Submit proposed substitution to tests deemed necessary by the University's Representative to evaluate the proposed substitution. Such tests shall be made by an independent Testing Laboratory and at the sole expense of Contractor, after review and approval of the test procedures by University's Representative. If re-testing is deemed necessary by the University's Representative to evaluate the proposed substitution, such re-testing shall be made by an independent Testing Laboratory at the sole expense of the Contractor.
 3. Provide any additional information deemed necessary by the University's Representative to evaluate the proposed substitution.
- D. If University's Representative, in reviewing a proposed substitution, requires revisions or corrections to be made to previously accepted shop drawings and supplemental supporting data to be resubmitted, Contractor shall do so within the time period specified by the University's Representative. A proposed substitution may be rejected if Contractor fails to submit such revisions, corrections, or supplemental supporting data within the specified time period.
- E. Except for products, material or equipment designated in the Bidding Documents for evaluation of substitutions prior to award, **requests for substitution, including the data required by Paragraph 1.4.A., must be submitted to the University's Representative not later than 35 days after the date of commencement specified in the Notice to Proceed.** No requests for substitutions of products, material or equipment subject to the 35-day deadline shall be considered unless the request and supporting data is submitted on or before the deadline, except those deemed, in University's Representative's sole opinion, to be necessary because (i) previously specified or approved manufactured products, material or equipment are no longer manufactured, (ii) of University initiated change orders, or (iii) it is in the best interest of University to accept such substitution.
- F. If a product, material or equipment is designated in the Bidding Documents for evaluation of substitutions prior to award, then a request for substitution of the product, material or equipment, including the data required by Paragraph 1.4.A., must be submitted by the deadline specified in the Bidding Documents. Because of time constraints, only one submittal will be allowed for each such substitution request. Requests for substitutions of products, material or equipment designated for evaluation prior to award may not be made after the deadline specified in the Bidding Documents, and such requests be shall not be considered unless the request and supporting data is submitted on or before the deadline specified in the Bidding Documents. Notwithstanding the forgoing, the University may consider, after award of the Contract, requests for substitution of a product, material or equipment designated for evaluation prior to award where, in University's Representative's sole opinion, a substitution is necessary because (i) previously specified or approved manufactured products, material or equipment are no longer manufactured, (ii) of University initiated change orders, or (iii) it is in the best interest of University to accept such substitution.
- G. In reviewing the supporting data submitted for substitutions, University's Representative will use, for purposes of comparison, all the characteristics of the specified material or equipment as they appear in the manufacturer's published data even though all the characteristics may not have been particularly mentioned in the Specifications. If more than 2 submissions of supporting data are required, the cost of reviewing the additional supporting data shall be at Contractor's expense.

- H. Contractor has the burden of demonstrating, through the procedures specified herein, that its proposed substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and complies with all other requirements of the plans and specifications. If revisions or modifications to the design or construction of the work are necessitated by the use of the substitution, Contractor also has the burden of demonstrating, through the procedures specified herein, that the use of the substitution will not be detrimental to the quality, utility or appearance of the Project or any portion of the Project.
- I. The University's Representative may refuse to approve any requested substitution where, in the reasonable opinion of the University's Representative, Contractor has failed to demonstrate, through the procedures specified herein, that the proposed substitution is equal to, or superior to, the first-named product, material or equipment, in quality, utility and appearance and that the proposed substitution complies with all other requirements of the plans and specifications.
- J. University's Representative may reject any substitution not proposed in the manner and within the time limits prescribed herein.
- K. Substitutions are not allowed unless approved in writing by the University's Representative. Any such approval shall not relieve Contractor from the requirements of the Contract Documents.
- L. The 35-day and 70-day submittal periods do not excuse Contractor from completing the Work within the Contract Time or excuse Contractor from paying liquidated damages if Final Completion is delayed.
- M. If revisions or modifications to the design or construction of the Work are necessitated by the use of a substitution, the substitution may be used only if the revisions and modifications are approved in writing by the University's Representative. The University's Representative may refuse to approve any such proposed revisions or modifications where, in the reasonable opinion of the University's Representative, Contractor has failed to demonstrate, through the procedures specified herein, that the revisions or modifications are not detrimental to the quality, utility and appearance of the Project or any portion of the Project.
- N. If a substitution request is finally rejected by the University's Representative, Contractor shall furnish and install:
 - 1. The first-named product, material or equipment; or
 - 2. A product, material, or equipment, other than the first-named product, material or equipment, specified by both brand or trade name and model number, provided Contractor complies with the submittal requirements (including deadlines) of this specification section 01 2500.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

(MATERIAL/PRODUCT SUBSTITUTION REQUEST FORM ON FOLLOWING PAGE)

REQUEST FOR INFORMATION

DATE: mm/dd/yy

RFI #:

TO:

Cc:

FROM:

Subject/Title:

- Architectural
 Civil
 Mechanical
 Electrical
 Plumbing
 Structural
 Fire Protection
 Landscape
 Other:

Reason(s) for RFI:

<input type="checkbox"/> Clarification/Interpretation	<input type="checkbox"/> Conflict in CD's
<input type="checkbox"/> Coordination Issue	<input type="checkbox"/> Information Not Shown on CD's
<input type="checkbox"/> Cost Impact: <u> </u>	<input type="checkbox"/> Safety
	<input type="checkbox"/> Work/Time Impact: <u> </u>

Issue/Question:
 (Reference Attachments)

Specification #: Paragraph #: Sheet #: Detail #:
 Other Reference: Schedule Activity:

Proposed Solution:
 (Reference Attachments)

Signed by Contractor: **Response Required by Date:** mm/dd/yy

RESPONSE TO CONTRACTOR:

From Design Professional:
 (Reference Attachments)

Date Received RFI: mm/dd/yy **Response Date:** mm/dd/yy **Signed:**

From University's Rep.:
 (Reference Attachments)

Date Received RFI: mm/dd/yy **Response Date:** mm/dd/yy **Signed:**

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**SECTION 01 2613
REQUESTS FOR INFORMATION & INSTRUCTIONS (RFI) PROCEDURES**

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section contains the procedures to be followed by Contractor upon discovery of any apparent conflicts, omissions, or errors in the Contract Documents or upon having any question concerning interpretation.

1.2. PROCEDURES

A. Notification by Contractor:

1. Submit all requests for clarification or additional information in writing to Design Professional and University's Representative concurrently using the **Request for Information (RFI) form attached to this Section.**
 - a. All RFI's, and any attachments thereto, must be submitted in PDF format with Optical Character Recognition (OCR) Text.
 - b. For any RFI for which Contractor has indicated a Cost Impact or Work/Time Impact, Contractor must also send a copy of the RFI to University's Responsible Administrator at Richard.Racicot@ucr.edu.
2. Limit each RFI to one subject and number RFI's sequentially. For each resubmission, follow the RFI number with suffix "R" sequentially numbered as necessary. For example, the first RFI would be "1." The second RFI would be "2." The first resubmittal of RFI "2" would be "2R1."
3. Submit a RFI if one of the following conditions occurs:
 - a. Contractor discovers an unforeseen condition or circumstance that is not described in the Contract Documents.
 - b. Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents.
 - c. Contractor discovers what appears to be an omission from the Contract Documents that cannot be reasonably inferred from the intent of the Contract Documents.
4. Contractor shall not submit a RFI:
 - a. As a request for substitution.
 - b. As a submittal.
 - c. Under the pretense of a Contract Documents discrepancy or omission without thorough review of the Contract Documents.
 - d. In a manner that suggests that specific portions of the Contract Documents are assumed to be excluded or by taking an isolated portion of the Contract Documents in part rather than whole.

- e. In an untimely manner without proper coordination and scheduling of Work of related trades.
 - f. As a request for approval of Contractor's means and methods.
- 5. If Contractor submits a RFI contrary to 1.2. A.4. above, Contractor shall pay the cost of any review, which cost shall be deducted from the Contract Sum.
 - 6. Contractor shall submit a RFI immediately upon discovery. Contractor shall submit RFI's within a reasonable time frame so as not to delay the Contract Schedule while allowing the full response time described below.
- B. Response Time:
- 1. Design Professional shall send its RFI response to University's Representative within a reasonable time so that University's Representative can send a final RFI response to Contractor within the time frames in 1.2. B.2. below.
 - 2. University's Representative, or his/her designee, whose decision will be final and conclusive, shall resolve such questions and issue instructions or issue approval of instructions or information from Design Professional, to Contractor within a reasonable time frame. In most cases, RFI's will receive a response within **7 days for architectural issues and within 14 days for issues that require review and response from Design Professional's consultants**. In some cases, the response time may be lengthened for complex issues or shortened for emergencies as approved by University's Representative in writing. If in the opinion of University's Representative more than **14 days** is required to prepare a response to a RFI, Contractor will be notified in writing.
 - 3. Should Contractor proceed with the Work affected before receipt of a response from University's Representative within the response time described above, any portion of the Work which is not done in accordance with University's Representative's interpretations, clarifications, instructions, or decisions is subject to removal or replacement and Contractor shall be responsible for all resultant losses.
 - 4. Failure to Agree: In the event of failure to agree as to the scope of the Contract requirements, Contractor shall follow procedures set forth in Article 4 of the General Conditions.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

SECTION 01 3113 COORDINATION

PART 1 – GENERAL

1.1. SUMMARY

A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:

1. Administrative Requirements
2. Facilities Services Coordination and Service Continuity

1.2. ADMINISTRATIVE REQUIREMENTS

A. Coordinate construction operations including, but not limited to, the following:

1. Coordinate the Work and do not delegate responsibility for coordination to any Subcontractor.
2. Anticipate the interrelationship of all Subcontractors and their relationship with the Work.
3. Resolve differences or disputes between Subcontractors and their relationship with the Work.
4. Coordinate the Work of Subcontractors so that portions of the Work are performed in a manner that minimizes interference with the progress of the Work.
5. Do not obstruct spaces and installations that are required to be clear by Applicable Code Requirements.
6. Do not cover any piping, wiring, ducts, or other installations until they have been inspected and approved and required certificates of inspection issued.
7. Remove and replace all Work, which does not comply with the Contract Documents. Repair or replace any other Work or property damaged by these operations with no adjustment of Contract Sum.

B. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation. Coordinate all portions of the Work requiring careful coordination in order to fit in space available. Before commencing such portions of the Work, prepare supplementary Drawings for review by University's Representative and Design Professional. Non-conformance of this task will result in the delay of applications for payment and the contractor responsibility for any remedial works requested by University Representative.

1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
3. Make provisions to accommodate items scheduled for later installation, including, but not limited to, coordination of furnishing and placing embedded items, sleeves, and block-outs with formwork and reinforcing steel for cast-in-place concrete.
4. Resolve conflicts and coordinate access to, and utilization of, spaces available for construction activities on the site and within structures, and delivery, storage, and installation of materials and equipment.
5. Implement a quality assurance program designed to ensure completion of the Work in accordance with requirements of the Contract Documents.

- C. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
 - 1. Prepare similar memoranda for the University and separate contractors where coordination of their work is required.

- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of schedules.
 - 2. Installation and removal of temporary facilities.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.
 - 5. Project closeout activities.
 - 6. Obtaining required permits and approvals from authorities having jurisdiction.
 - 7. Utility company approvals and installations.

- E. Conservation: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water, and materials.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work.

- F. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.

- G. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.

1.3. FACILITIES SERVICES COORDINATION AND SERVICE CONTINUITY

- A. Maintain continuous services to all existing facilities during the period of construction except for the following conditions:
 - 1. Perform Work that involves "shut-down" of existing facilities at such times as will cause the least inconvenience to the University activities, performing at night, on Saturdays, Sundays, holidays and at the discretion of University's Representative. Furnish University's Representative written notice of exact date and time of "shut-down" at least **thirty (30) working days** in advance, unless a longer period is specified or shown on the Drawings. On jobs with short performance time, Contractor shall verify with University's Representative the number of days required in advance for shut-down.
 - 2. The University's preference would be for the contractor to try to coordinate the high voltage utility shut down simultaneously with the Student Recreation Center's shut down to avoid unnecessary inconvenience to the campus. However this preference is not a mandatory requirement if it doesn't fit in with the contractor's schedule.
 - 3. The Contractor's bid shall include the cost of overtime necessary for the Work. No extra payment will be allowed for overtime to meet this requirement or the Contract Schedule.

B. Service Continuity:

1. Within the areas of the Work, investigate and uncover all drainage lines, sewers, electrical ducts, and other piping in use or forming continuations or utility systems required for other buildings or improvements upon the campus, and maintain such services in operation during performance of the Work of the Contract.

- C. Notify University's Representative at least 30 days in advance of all utility shutdowns including date, time and expected duration.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

SECTION 01 3119 PROJECT MEETINGS

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes administrative and procedural requirements for the following project meetings:
1. reconstruction Meeting
 2. Pre-Installation Meetings
 3. Progress Meetings
 4. Billing Meetings
 5. 11-Month Warranty Meeting

1.2. PRECONSTRUCTION MEETING

- A. The University's Representative will schedule a preconstruction conference before starting construction, at a time convenient to the University and the University's Representative, but no later than 10 days after execution of the Agreement. The conference will be held at the Project Site or another convenient location. The meeting will review responsibilities and personnel assignments.
1. Distribute written notice of agenda, meeting time, and location a minimum of five calendar days in advance.
- B. Attendees: The University's Representative and authorized representatives of the Architect, and its consultants; the Contractor and its superintendent; major subcontractors; manufacturers; suppliers; Contractor's designated safety manager; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
- C. Agenda: Items of significance that could affect progress, including the following:
1. Tentative construction schedule.
 2. Critical work sequencing.
 3. Designation of responsible personnel.
 4. Procedures for processing field decisions and Change Orders.
 5. Procedures for processing Applications for Payment.
 6. Distribution of Contract Documents.
 7. Submittal of Shop Drawings, Product Data, and Samples.
 8. Preparation of record documents.
 9. Use of the premises.
 10. Parking availability.
 11. Office, work, and storage areas.
 12. Equipment deliveries and priorities.
 13. Safety procedures, including emergency notification procedures.
 14. First Aid.
 15. Security.
 16. Housekeeping.
 17. Working hours.
 18. Sustainability requirements, including Contractor staffing.

1.3. PRE-INSTALLATION MEETINGS

- A. The Contractor shall conduct a pre-installation conference at the Project Site before each construction activity that requires coordination with other construction, and as required by other sections of the specifications.
 - 1. The Contractor shall distribute written notice of agenda, meeting time, and location a minimum of five calendar days in advance.

- B. Attendees: The 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 the University's Representative of scheduled meeting dates.
 - 1. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for the following:
 - a. Contract Documents
 - b. Options
 - c. Related Change Orders
 - d. Purchases
 - e. Deliveries
 - f. Shop Drawings, Product Data, and quality-control samples
 - g. Possible conflicts
 - h. Compatibility problems
 - i. Time schedules
 - j. Weather limitations.
 - k. Manufacturer's recommendations
 - l. Warranty requirements
 - m. Compatibility of materials
 - n. Acceptability of substrates
 - o. Temporary facilities
 - p. Space and access limitations
 - q. Governing regulations
 - r. Safety
 - s. Inspecting and testing requirements
 - t. Required performance results
 - u. Recording requirements
 - v. Protection.
 - 2. Record significant discussions and agreements and disagreements of each conference, and the approved schedule. Promptly distribute the record of the meeting to everyone concerned, including the University and the University's Representative.
 - 3. Do not proceed with the installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene the conference at the earliest feasible date.

1.4. PROGRESS MEETINGS

- A. The Contractor shall conduct progress meetings at the Project Site at regular intervals. Notify the University's Representative and the Design Professional of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request. Document meetings with meeting minutes to be distributed to the University's Representative, the Design Professional and all other attendees.

- B. Attendees: In addition to representatives of the University and the Architect, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these

meetings. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

- C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.
 - 1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to insure that current and subsequent activities will be completed within the Contract Time.
 - 2. Review the present and future needs of each entity present, including the following:
 - a. Interface requirements
 - b. Time
 - c. Sequences
 - d. Status of submittals
 - e. Status of RFI's
 - f. Deliveries
 - g. Off-site fabrication problems
 - h. Access
 - i. Site utilization
 - j. Temporary facilities and services
 - k. Hours of work
 - l. Contractor's Safety Program (including any special hazards and risks)
 - m. Housekeeping
 - n. Quality and work standards
 - o. Contractor's two week "look ahead" schedule and issues
 - p. Change Orders
 - q. Documentation of information for payment requests
 - r. Sustainability review, including tracking and status.
- D. Schedule Updating: Revise the Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

1.5. BILLING MEETINGS

- A. Attend a meeting monthly 5 days prior to submittal of the Application for Payment, at a location acceptable to University's Representative.
- B. Attendees:
 - 1. University's Representative.
 - 2. Design Professional and Consultants, as appropriate.
 - 3. Contractor's Project Manager.
 - 4. Superintendent.
 - 5. Others as directed by University's Representative.
- C. Agenda:
 - 1. Determination of current schedule progress.
 - 2. Review of work completed based on the cost loaded schedule to be billed in the Application for Payment.

- D. Schedule Updating: Revise the Contract Schedule prior to the meeting based on information determined at prior progress meetings. Review schedule revisions and prepare a final revised schedule for submission 10 days prior to the application for payment.
- 1.6. 11-MONTH WARRANTY MEETING
- A. Attend a meeting eleven months following the date of Notice of Completion.
 - B. Attendees:
 - 1. University's Representative
 - 2. Design Professional and Consultants, as appropriate
 - 3. Contractor's Project Manager
 - 4. Subcontractors, as appropriate
 - 5. Others as directed by Responsible Administrator.
 - C. Agenda: Review of guarantees, bonds, service and maintenance contracts for materials and equipment.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

SECTION 01 3216 SCHEDULES

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes administrative and procedural requirements for the Critical Path Method (CPM) of scheduling and reporting progress of the Work:
1. Preliminary Contract Schedule
 2. Contract Schedule
 3. Summary Schedule
 4. Narrative Report
 5. Variance Report
 6. Cash Flow Curve
 7. Manpower Curve
 8. Look-Ahead Schedule
 9. Final As-Built Schedule
 10. Responsibility for Completion
 11. Adjustment of Time for Completion
- B. Refer to the Agreement, General Conditions, and Notice to Proceed for definitions and specific dates of Contract Time.
1. Contractor shall develop a network plan and schedule for the Project demonstrating complete fulfillment of all contract requirements, shall keep the network plans up-to-date and in accordance with the requirements of this Section and shall utilize the CPM in planning, coordination, performing and reporting the Work under this Contract, including all activities of subcontractors, equipment vendors, and suppliers and in assisting University's Representative in monitoring the progress of the Work.
 2. The Precedence Diagramming Method (PDM) shall be utilized in preparing the CPM Schedule network diagrams utilizing MS Project (latest version for Windows.
 3. Contractor shall use Microsoft Project as a computerized critical path scheduling system for producing computer generated reports with the following minimum information:
 - a. Activity identification code keyed to summary and Contract Schedule activities.
 - b. Activity description.
 - c. Status date and remaining duration.
 - d. Activity percentage complete.
 - e. Activity duration.
 - f. Early start/finish and late start/finish.
 - g. Total float.
 - h. Free float.
 - i. The predecessor and successor activities for each individual activity.
 - j. A comparison between the current updated Contract Schedule and the Baseline Schedule.
 - k. Designation of the planned work day/work week for each activity.
 - l. A critical item list of activities with ten (10) working days or less total float.
 - m. Scheduled and actual manpower loading for each activity.
 - n. Scheduled and actual progress payment for each activity.

C. Definitions:

1. Critical Path activities are defined as Work activities that, if delayed or extended, will cause a critical delay as defined in Article 8 of the General Conditions. All other Work activities are defined as non-critical Work activities and are considered to have float.
2. Float is defined as the time that a non-critical Work activity can be delayed or extended without causing a critical delay as defined in Article 8 of the General Conditions. Neither Contractor nor University shall have an exclusive right to the use of float. Float is a shared resource available to Contractor and University.
 - a. Float for any Work Activity shall be calculated as the difference in days between the Latest Finish and its Earliest Finish. Any such calculated float that results in a negative number is considered Negative Float.

D. Submittals:

1. Preliminary Contract Schedule
2. Contract Schedule
3. Summary Schedule
4. Narrative Report
5. Variance Report
6. Cash Flow Curve
7. Manpower Curve
8. Look-Ahead Schedule
9. Final As-Built Schedule

1.2. PRELIMINARY CONTRACT SCHEDULE

A. Submittal

1. Submit the Preliminary Contract Schedule to University's Representative within the time specified in the Instructions to Bidders and Supplementary Instructions to Bidders.
2. Submit to University's Representative **1 hardcopy, 1 electronic copy** in PDF, and **1 electronic copy** in the computerized critical path scheduling system software per 1.1.A.2. above approved by University's Representative.
3. Use the form of a bar chart, GANT chart, or other system approved by University's Representative showing the Work from the construction start date through the final completion date, with the work activities involved and other information relative to the progress of the Work, in a continuous flow from left to right.
4. Show sufficient detail to demonstrate adequate planning for the Work and to show a practical plan to complete the Work within the Contract Time, and suitable for monitoring progress of the Work.

B. Approval

1. Within **5 days** after receipt of the Contract Schedule, University's Representative will notify Contractor of its acceptance or return with comments for resubmittal.

C. Activities and Milestones

1. Identify all Work activities which constitute the Critical Path.
2. Include submittals and lead times.

3. Identify the milestone for completion of the Project. At a minimum, identify the following milestones:

Commencement Date
Substantial Completion
Final Completion

4. Identify all holidays and non-working days. Contractor shall perform no work that requires the University's observation or inspection on the following University holidays and campus closure days:

- a. Regular University Holidays and Campus Closure Days:

New Year's Day
Martin Luther King, Jr. Day (3rd Monday in January)
Presidents' Day (3rd Monday in February)
Cesar Chavez Day (Last Friday in March)
Memorial Day (Last Monday in May)
Independence Day (July 4)
Labor Day (1st Monday in September)
Veterans' Day (November 11)
Thanksgiving Day (4th Thursday in November)
Friday following Thanksgiving Day
Christmas Eve
Christmas Day
Campus Closure: business days between Christmas Day and New Year's Eve
New Year's Eve

Exception: A University Holiday that falls on a Saturday is observed on the preceding Friday, and a University Holiday that falls on a Sunday is observed on the following Monday, unless an alternate day to observe the University Holiday is designated by the University.

- b. Other Campus Closure Days: None

1.3. CONTRACT SCHEDULE

A. Submittal

1. Submit the Contract Schedule, or updated Contract Schedule as applicable, within **7 days** prior to submitting an Application For Payment.
 - a. The initial Contract Schedule submitted to and approved by University's Representative shall be known as the Baseline Schedule, and shall be used by Contractor to execute the Work of the Contract, including planning, organizing and directing the Work, and reporting its progress until subsequently updated.
 - b. In no event shall Contractor submit an updated Contract Schedule less than monthly.
 - c. If the commencement or completion of any Work activity on the critical path is more than 30 days behind the date set forth in the Contract Schedule for such Work activity, at University's Representative's sole discretion, University's Representative may require Contractor to submit an updated Contract Schedule at a more frequent interval without additional cost to the University.

If the Contract Time is less than 300 days, and if the commencement or completion of any Work activity on the critical path is more than 10% of the Contract Time behind the date set forth in the Contract Schedule for such Work activity, at University's

Representative's sole discretion, University's Representative may require Contractor to submit an updated Contract Schedule at a more frequent interval without additional cost to the University.

2. Submit to University's Representative **1 hardcopy, 1 electronic copy** in PDF, and **1 electronic copy** in the computerized critical path scheduling system software per 1.1.A.2. above approved by University's Representative.
3. Submit the Contract Schedule or updated Contract Schedule in the same form as required in 1.2.A. above.
4. The presentation of each Work activity on the Contract Schedule or updated Contract Schedule shall include a brief description of the Work activity, the duration of the Work activity in days, and a responsibility code identifying the organization or trades performing the Work activity.
5. The Contract Schedule or updated Contract Schedule shall be a computerized, detailed, task level CPM diagram in PDM format. A clear delineation of construction activities shall be shown. This schedule shall be manpower and cost loaded and not extending beyond the Contract Time.
6. The work activities comprising the Contract Schedule shall be of sufficient detail to ensure adequate planning and execution of the Work to provide an appropriate basis for monitoring and evaluating the progress of the Work. A work activity is defined as an activity which requires time and resource (manpower, equipment, and/or material) to complete in a continuous operation. No activity shall be less than 1 day, no more than 14 days duration for any onsite operation.
7. Failure by Contractor to include any element of the Work required for the performance of this Contract and completion of the Project shall not excuse Contractor from completing all work required within the Contract Time, regardless of University's Representative's acceptance of the Contract Schedule or any updated Contract Schedule.
8. No more than 30% of the total number of activities shown shall be critical or near critical. Near critical is defined as float less than 10 days.
9. These schedules shall indicate the sequence and interdependency of work activities and shall be coordinated with all submittal, review and approval requirements.
10. Each approved Change Order and Field Order shall be listed and plotted as a separate and independent activity. Schedule components shall be organized into logical groupings by location, responsibility, Specification Section, etc.

B. Approval

1. Within **5 days** after receipt of the Contract Schedule or updated Contract Schedule, University's Representative will notify Contractor of its acceptance or return with comments for resubmittal.
 - a. Contractor shall participate in a review of the proposed Contract Schedule or updated Contract Schedule by University's Representative when requested.
 - b. Contractor shall resubmit any revisions within **3 days**.
2. The accepted Contract Schedule or updated Contract Schedule shall be the Contract Schedule of record for the period it is current and shall be the basis for payment during that period. Contractor shall perform the Work in accordance with the Contract Schedule or updated Contract Schedule as accepted.

3. No Application For Payment will be processed nor shall any progress payment become due for work performed until the Contract Schedule or updated Contract Schedule is accepted by University's Representative. University's Representative's acceptance of the Contract Schedule or updated Contract Schedule is a condition precedent to University making any progress payment for work performed.
4. Updating
 - a. Contractor shall meet with University's Representative at least **once per month**, or as directed by University's Representative, to review the latest approved Contract Schedule for actual progress made to date, activities started and completed to date, and the percentage of work completed to date on each activity started but not completed, and to incorporate in the Contract Schedule all changes in the progress, sequences, and scope of Work activities.
 - (1) The updated Contract Schedule shall accurately represent the as-built condition of all completed and in-progress Work activities as of the date of the updated Contract Schedule.
 - (2) The updated Contract Schedule shall incorporate all changes mutually agreed upon by Contractor and University during preceding periodic reviews and all changes resulting from Change Orders and Field Orders.
 - (3) Contractor shall document the effect on the updated Contract Schedule whenever float has been used.

C. Activities and Milestones

1. Identify all Work activities which constitute the critical path.
2. Identify all Work activities in correct sequence for the completion of the Work. Work activities shall include the following:
 - a. Major Contractor-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or University's prior approval.
 - b. Show dates for the submission, review, and approval of each submittal. Dates shall be shown for the procurement, fabrication, delivery, and installation of major equipment, materials, and building elements, and for scheduled activities designated by University.
 - c. System test dates.
 - d. Scheduled overtime Work if required by Contract Documents.
 - e. Dates of Contractor requests for designated working spaces, storage areas, access, and other facilities to be provided by University.
 - f. Dates of Contractor requests for approvals and decisions from University on designated items.
 - g. Dates of Contractor requests for University-furnished equipment.
 - h. Dates of Contractor requests for University-furnished utilities.
 - i. Connection and relocation of existing utilities.
 - j. Connecting to or penetrating existing structures.

- k. Inspections and testing.
- l. Commissioning Sequence and activities for all building systems.

- 3. Include the milestones per 1.2.C.
- 4. Include all holidays and non-working days per 1.2.C.

1.4. SUMMARY SCHEDULE

- A. All activities in the Contract Schedule shall be grouped to enable “rollup” of the activities in the form of a Summary Schedule which shall be submitted along with the updated Contract Schedule within **7 days** prior to submitting Contractor’s next Application For Payment. A clear delineation of construction activities shall be shown on the summary schedule. The summary schedule shall be manpower and cost loaded.
- B. Review and approval by University’s Representative of the Summary Schedule is a condition precedent to University making any progress payments for work performed.

1.5. NARRATIVE REPORT

- A. With each updated Contract Schedule, Contractor shall provide an accompanying Narrative Report within **7 days** prior to submitting its next Application For Payment.
- B. The Narrative Report shall describe the progress achieved over the past period since the prior update, the progress anticipated during the upcoming period, critical activities, delays encountered during the prior period, delays anticipated during the upcoming period, and an audit of the Contract Time. The narrative shall also discuss the status of major project milestones. The audit shall show current days allowed by Contract, days used through the end of the period, days remaining, percent of time used to date, and percent complete as measured by a cost loaded schedule, and days ahead of or behind schedule. In the event that the Contractor was delayed by any occurrence during the prior period, the narrative report shall include a listing of all delays that affected the critical path and shall clearly explain the impact the claimed delay(s) had on the critical path and shall include an accounting of days lost or gained.
- C. In the event the monthly update shows the Contractor to be behind schedule (negative float), the narrative shall include a description of actions needed to bring the project back on schedule.
- D. Review and approval by University’s Representative of the Narrative Report is a condition precedent to University making any progress payments for work performed.

1.6. VARIANCE REPORT

- A. A variance report shall be submitted along with the updated Contract Schedule within **7 days** prior to submitting Contractor’s next Application For Payment.
- B. The variance report shall compare the approved Baseline Schedule and the latest updated Contract Schedule. The report shall include a description of all activities completed during the preceding period (last approved updated Contract Schedule), a description of progress made and planned for activities listed as started but not completed on the updated Contract Schedule, and shall report noncritical activities which have been delayed 10 or more days and critical (8 days or less total float) activities that have incurred any delay. The format of this report shall include:
 - 1. Activity code and description.
 - 2. Baseline scheduled early start/finish dates.
 - 3. Current anticipated early start/finish dates.
 - 4. Days remaining to complete the activity.

5. Percentage complete of the activity.
6. Total float of the activity.

C. Review and approval by University's Representative of the Variance Report is a condition precedent to University making any progress payments for work performed.

1.7. CASH FLOW CURVE

- A. Contractor shall submit its Cash Flow Curve of expected progress payments over the time of the Project along with its Contract Schedule within **7 days** prior to submitting its first Application For Payment. The curve shall be plotted against the Contract Schedule using the Cost Breakdown approved by University's Representative.
- B. Contractor shall furnish costs for each Work activity that cumulatively equal the total Contract Sum. Mobilization costs may be shown separately; however, other costs, such as profit and bonds, shall be pro-rated throughout all activities.
- C. Contractor shall update the Cash Flow Curve with actuals from the approved progress payments and forecasted progress payments and submit it to University's Representative along with Contractor's updated Contract Schedule per 1.3. The total of approved progress payments and forecasted progress payments shall equal the Contract Sum plus approved Change Orders. The updated curve shall be plotted against the Baseline Schedule and updated Contract Schedule.
- D. Review and approval by University's Representative of the Cash Flow Curve is a condition precedent to University making any progress payments for work performed.

1.8. MANPOWER CURVE

- A. Contractor shall submit a Manpower Curve of the labor requirements per calendar week over the time of the Project along with its Contract Schedule within **7 days** prior to submitting its first Application For Payment. The curve shall be plotted against the Baseline Schedule. The curve shall show the number of persons in each craft for each week.
- B. Contractor shall update the Manpower Curve with actual labor employed and forecasted labor requirements necessary to complete the Project within the Contract Time, and shall submit it to University's Representative along with Contractor's updated Contract Schedule per 1.3. The updated curve shall be plotted against the Baseline Schedule and updated Contract Schedule.
- C. Review and approval by University's Representative of the Manpower Curve is a condition precedent to University making any progress payments for work performed.

1.9. LOOK-AHEAD SCHEDULE

- A. The Look-Ahead Schedule is a schedule derived from the Contract Schedule or updated Contract Schedule that indicates in detail all activities scheduled for work for the next 2 weeks and all activities scheduled to occur during the next 4 weeks.
- B. Submit in 11" x 17" Gantt chart format. Provide as many copies as requested by University's Representative.
- C. The Look-Ahead Schedule shall be generated from the then current Preliminary Contract Schedule, Contract Schedule, or updated Contract Schedule.

1.10. FINAL AS-BUILT SCHEDULE

- A. A combined 2-week Look-Ahead Schedule with a 2-week As-Built Schedule for previous two weeks shall be submitted by Contractor for review and approval as often as requested by the University's Representative, at no additional cost.

- B. As a condition precedent to final acceptance of the Project, Contractor shall submit a final As-Built Schedule and all final reports which accurately reflect the manner in which the Project was constructed and includes actual start and completion dates for all work activities on the last updated Contract Schedule.
- C. As a condition precedent to the release of retention, the last update of the Contract Schedule submitted shall be identified by the Contractor as the "As Built Schedule". The As-Built Schedule shall be submitted when all activities are 100 percent complete. The As-Built Schedule shall reflect the exact manner in which the Project was actually constructed (including start and completion dates, activities, sequences, and logic) and shall include a statement signed by the Contractor that the As Built Schedule accurately reflects the actual sequence and timing of the construction of the Project.

1.11. RESPONSIBILITY FOR COMPLETION

- A. Delays of any non-critical Work activity shall not be the basis for an extension of Contract Time until the delays consume the float associated with that non-critical Work activity and cause the Work activity to become critical.
- B. Contractor shall not sequester float through strategies including extending activity duration estimates to consume available float, using preferential logic, using extensive or insufficient crew/resource loading, use of float suppression techniques, special lead/lag logic restraints or imposed dates. Use of float time disclosed or implied by the use of alternate float suppression techniques shall be shared for the benefit of both the University and contractor.
- C. It is acknowledged that University generated time savings (critical path submittal reviews returned in less time than allowed by the Contract Documents, approval of substitution requests which result in a savings of time for contractor) create shared float. Accordingly, University caused delays may be offset by University generated time savings.
- D. Contractor agrees that whenever it becomes apparent from the current updated Contract Schedule that the Contract completion date will not be met, it will take some or all of the following actions, with prior approval of University's Representative, at no additional cost.
 - 1. Increase construction manpower in such quantities and crafts as will eliminate, in the judgment of University's Representative, any delay.
 - 2. Increase the number of working hours per shift, shifts per working day, working days per week, or the amount of construction equipment, or any combination of the foregoing, sufficiently to eliminate, in the judgment of University's Representative, any delay. This paragraph shall not be construed to permit Contractor to violate the work hour restrictions specified in the Contract Documents.
 - 3. Reschedule activities to achieve maximum practical concurrent completion activities within the requirements of the specifications.

1.12. ADJUSTMENT OF TIME FOR COMPLETION

- A. Contractor shall submit a detailed time impact analysis of the Contract Schedule to support an adjustment of the Contract Time for delay under Article 8 of the General Conditions or an adjustment of the Contract Sum for delay under Article 7 of the General Conditions.
- B. Each time impact analysis shall provide information justifying the request and stating the extent of the adjustment requested for each specific change or alleged delay. Each time impact analysis shall be in form and content acceptable to University's Representative, and shall include, but not be limited to the following:

1. A fragmentary CPM type network (Fragnet) illustrating how Contractor proposes to incorporate the change or alleged delay into the current updated Contract Schedule.
 2. Identification of activities in the current updated Contract Schedule which are proposed to be amended due to the change or alleged delay, together with engineering estimates and other appropriate data justifying the proposal.
- C. The time impact analysis shall be determined on the basis of the date when the change was issued, or the date when the alleged delay began. The status of completion of the Work and time impact analysis shall include event time computations for all affected activities.
- D. Contractor shall provide time impact analysis at no additional cost to demonstrate the time impact upon the Contract Time.
- E. If University's Representative finds, after review of the time impact analysis, that Contractor is entitled to any extension of time, the Contract Time will be adjusted per the General Conditions, and Contractor shall revise the updated Contract Schedule accordingly.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

SECTION 01 3280 ELECTRONIC DATA TRANSFER

PART 1 – GENERAL

1.1. SUMMARY

- A. Section includes Terms and Conditions for the transfer of Electronic Data to Contractor for use in preparation of Submittals, Record Documents, coordination drawings, and related documents to be produced by Contractor and submitted to University:

1. CONTRACTOR'S ACCEPTANCE OF ELECTRONIC DATA IN ANY FORM SHALL CONSTITUTE ACCEPTANCE OF THE TERMS AND CONDITIONS OF THIS SECTION, INCLUDING PAYMENT OF INDICATED FEES.

- B. The University and the Contractor acknowledge that established administrative procedures for management of construction Projects anticipate paper documentation and methods for the exchange of such documents. To the extent the administrative and procedural requirements of the Contract Documents are predicated on established practices the University and the Contractor agree to accept reasonable modifications to certain procedural requirements to facilitate electronic exchange of information and the use of digital media.
- C. Submittals: Only a material original stamped and signed by the University's Representative shall be acceptable as an official record of the processed submittal. When directed, quantities of document submittals specified in the Contract Documents may be adjusted as permitted to facilitate utilization of electronic transfer of information.

1.2. TERMS AND CONDITIONS

- A. In consideration of Contractor's request to the University to deliver certain Electronic Data for use on the Project, Contractor agrees to the following:
1. Electronic Data includes but is not limited to, computer-aided design (CAD) files including native file formats (DWG) and drawing exchange formats (DXF), and files produced by word processing, spread sheet, scheduling, data base and other software programs. The Electronic Data may be provided in an original format produced by Design Professional or other University consultant, or an alternate, "translated" format as requested by other parties to this Agreement.
 2. The means by which the Electronic Data is transferred may include but are not limited to, electronic mail, File Transfer Protocol (FTP) sites, project websites, and disk copies transmitted between the parties to this Agreement. Contractor acknowledges that Electronic Data transferred in any manner or translated from the system and format used by Design Professional or other University consultant, to an alternate system or format is subject to errors that may affect the accuracy and reliability of the data and that the data may be altered, whether inadvertently or otherwise. Accordingly, the University and Design Professional make no warranty, express or implied, as to the accuracy of the information transferred. The Electronic Data are not the Bidding Documents and differences may exist between these electronic files and corresponding hard-copy Bidding Documents. University reserves the right to retain hard copy originals in addition to electronic copies of the Electronic Data transferred, which originals shall be referred to and shall govern.
 3. As consideration to University for the transfer of the Electronic Data, Contractor agrees that the University, University's Design Professional, and University's agents and consultants shall not be liable for and hereby waives all claims and agrees to indemnify and hold University harmless from all liabilities, losses, damages or expenses (including attorneys' fees) arising out of, or connected with: (1) the transfer of Electronic

Data by any means; (2) the use, modification or misuse by parties other than University and Design Professional of the Electronic Data; (3) the limited life expectancy and decline of accuracy or readability of the Electronic Data due to storage; (4) any use of the Electronic Data by any third parties receiving the data from other parties to this Agreement; or (5) the incompatibility of software or hardware used by University and Design Professional and the other parties participating in the Work.

4. The Electronic Data provided under the terms of this Agreement are the proprietary information of University. All Electronic Data shall be treated as confidential and shall not be disclosed to or shared with others without express, written consent from the University's.
5. The University shall issue the most current information available, but does not undertake the responsibility for providing updated information as the Project proceeds. Contractor may make a specific written request for such updated information as Contractor deems necessary, which University will then provide subject to the Terms and Conditions hereof.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

SUBMITTAL SCHEDULE									
Section	Shop Dwgs	Prod. Data/List	Samples Mock-ups	Extend. Guarantee	Op/Maint. Manuals	Tests	Extra Mat'l	Certs.	Other
01 1100									
01 1400									
01 2300									
01 2500									
01 2613									
01 3100									
01 3119									
01 3200									
01 3300									
01 3520									
01 3540									
01 4100									
01 4200									
01 4300									
01 4339									
01 4500									
01 4520									
01 5000									
01 5739									
01 6000									
01 7123									
01 7329									
01 7419									
01 7423									
01 7700									
01 7836									
01 7839									
01 8113									
01 9113									
02 4000									
03 3000									
03 3600									
03 3816									
03 4816									
03 4819									
03 4830									
03 4900									
03 5415									

SUBMITTAL SCHEDULE									
Section	Shop Dwgs	Prod. Data/List	Samples Mock-ups	Extend. Guarantee	Op/Maint. Manuals	Tests	Extra Mat'l	Certs.	Other
03 5600									
04 2113									
04 2200									
05 1200									
05 1213									
05 3100									
05 4000									
05 5000									
05 5010									
05 5100									
05 5813									
05 7000									
06 1643									
06 2013									
06 4023									
06 4100									
06 6420									
07 1416									
07 1716									
07 1900									
07 2114									
07 2129									
07 2616									
07 2620									
07 4646									
07 5300									
07 5400									
07 5565									
07 6113									
07 6200									
07 6500									
07 7723									
07 8400									
07 8720									
07 9200									
07 9513									
08 1113									
08 1216									
08 1316									

SUBMITTAL SCHEDULE									
Section	Shop Dwgs	Prod. Data/List	Samples Mock-ups	Extend. Guarantee	Op/Maint. Manuals	Tests	Extra Mat'l	Certs.	Other
08 1400									
08 3100									
08 3213									
08 3323									
08 3816									
08 4213									
08 4313									
08 4330									
08 4413									
08 4500									
08 5113									
08 6200									
08 7100									
08 7113									
08 8000									
08 9110									
09 2116									
09 2216									
09 2400									
09 2900									
09 3000									
09 5113									
09 5426									
09 6453									
09 6500									
09 6813									
09 6816									
09 7200									
09 8200									
09 9000									
10 1400									
10 2213									
10 2226									
10 2813									
10 4400									
10 5113									
10 5500									
10 7113									
10 8214									

SUBMITTAL SCHEDULE									
Section	Shop Dwgs	Prod. Data/List	Samples Mock-ups	Extend. Guarantee	Op/Maint. Manuals	Tests	Extra Mat'l	Certs.	Other
11 1200									
11 1300									
11 1630									
11 3100									
11 4000									
11 5200									
11 8226									
12 2116									
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12 3623									
12 3661									
12 5219									
12 9300									
12 9313									
13 1101									
13 1102									
13 1103									
13 1104									
13 1105									
13 1106									
13 1107									
13 1108									
14 2100									
14 2400									
14 9182									
20 0548									
21 0517									
21 0518									
21 0548									
21 1313									
22 0553									
22 0719									
22 0800									
22 1116									
22 1119									
22 1123									
22 1316									
22 1319									
22 1323									

SUBMITTAL SCHEDULE									
Section	Shop Dwgs	Prod. Data/List	Samples Mock-ups	Extend. Guarantee	Op/Maint. Manuals	Tests	Extra Mat'l	Certs.	Other
22 1413									
22 1423									
22 3400									
22 3450									
22 4000									
22 4613									
23 0500									
23 0513									
23 0514									
23 0516									
23 0519									
23 0523									
23 0529									
23 0548									
23 0553									
23 0593									
23 0713									
23 0719									
23 0800									
23 0900									
23 0993									
23 2113									
23 2123									
23 2300									
23 2500									
23 2516									
23 3113									
23 3300									
23 3416									
23 3423									
23 3433									
23 3713									
23 3723									
23 4100									
23 5100									
23 5216									
23 6500									
23 8119									
23 8126									

SUBMITTAL SCHEDULE									
Section	Shop Dwgs	Prod. Data/List	Samples Mock-ups	Extend. Guarantee	Op/Maint. Manuals	Tests	Extra Mat'l	Certs.	Other
23 8127									
23 8128									
23 8146									
26 0501									
26 0519									
26 0524									
26 0526									
26 0529									
26 0533									
26 0543									
26 0553									
26 0570									
26 0573									
26 0800									
26 1219									
26 2213									
26 2413									
26 2416									
26 2716									
26 2726									
26 2811									
26 2816									
26 3100									
26 3214									
26 3623									
26 5110									
26 5610									
27 0000									
28 3100									
31 1000									
31 2000									
31 2333									
32 0513									
32 1100									
32 1216									
32 1300									
32 1316									
32 1413									
32 1723									

**SECTION 01 3300
SUBMITTALS****PART 1 – GENERAL****1.1. SUMMARY****A. Section includes:**

1. Certificates
2. Shop Drawings, Product Data, and Samples
3. LEED Documentation
4. Refrigerant Management Documentation
5. Contractor Certification Form
6. Subcontractor Certification Form
7. Submittal Schedule

B. Definitions:

1. Mockups are full-size assemblies for review of construction, coordination, testing, or operation, appearance, and finish by which the Work will be judged; they are not Samples.
2. The terms “Shop Drawings” and Product Data” are defined in Article 3.12 of the General Conditions.
3. As used herein, the term “manufactured” applies to standard units usually mass-produced. The term “fabricated” means items specifically assembled or made out of selected materials to meet individual design requirements. Shop drawings shall establish the actual detail of all manufactured or fabricated items, indicate proper relation to adjoining Work, and amplify design details of mechanical and electrical equipment in proper relation to physical spaces in the structure.
4. The terms "Shop Drawings" and "Product Data" are defined in Article 3.12 of the General Conditions.

C. Manufacturers' Instructions: Where any item of Work is required by the Contract Documents to be furnished, installed, or performed in accordance with a specified product manufacturer's instruction, Contractor shall procure and distribute the necessary copies of such instructions to University's Representative and all other concerned parties, and Contractor shall furnish, install, or perform the Work in strict accordance therewith.

D. The University's Representative or its Design Professional reserves the right to review and request the removal or redesign of manufacturers' trade marks and names on items of materials and equipment which will be exposed to view in the completed Work. Such removal or redesign shall be at no increase in Contract Sum.

E. Materials and equipment, for which Underwriters' Laboratories, Inc. standards have been established and their label service is available, shall bear the appropriate UL label.

1.2. CERTIFICATES

- A. Certifications of Review and Coordination: Within 10 days of Notice to Proceed, submit completed Contractor Certification of Review and Coordination and all Subcontractor Certifications of Review and Coordination.
- B. Certifications of Review and Coordination: As required by the General Conditions, perform a thorough review of the Contract Documents prior to commencing the Work. If there are no exceptions, write "NO EXCEPTIONS" in the space provided.
 - 1. Complete a copy of the Contractor Certification of Review and Coordination Form following this Section.
 - 2. Require all subcontractors to perform a thorough review of the Contract Documents and complete a copy of the Subcontractor Certification of Review and Coordination Form following this Section.
 - 3. Review all completed Forms and resolve conflicting comments, if any, among the various parties so as to present a clear, concise view of items noted.
 - 4. Submitting the required certifications does not relieve the Contractor from responsibility to continue to immediately report new discrepancies, errors, omissions, conflicts, code violations, and improper use of materials discovered in the Contract Documents during the course of construction.
 - 5. Applications for Payment will not be processed by the University's Representative until all certificates have been received.

1.3. SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- A. Shop drawings, product data, and samples, other than in connection with proposed substitutions, shall be submitted to University's Representative only when specifically required; and University's Representative will not review any other such submittals. Product data and samples for proposed substitutions shall be submitted to University's Representative in accordance with Section 01 2500. Contractor shall be responsible for obtaining such copies of shop drawings, product data, and samples as it may require for its own use. Submittals Not Required: No shop drawings of supplemental data are required unless specifically requested by the University or specified herein. No shop drawings shall be submitted unless specifically requested.
 - 1. Submittal Schedule:
 - a. Refer to Specific Specification Sections for the list of submittals required under each section and indicate the required submittals on the attached Submittal Schedule for review by University's Design Professional. A schedule of submission of shop drawings, product data, and samples by Contractor ("Submittal Schedule"), and their processing and return by the University's Design Professional shall be agreed upon by both parties in order that the items covered by these submittals will be available when needed by the construction process and so that each party can plan its workload in an orderly manner. Submit Submittal Schedule no later than 30 days after Award of Contract.
 - b. Contractor shall prepare the Submittal Schedule in the form as attached or similar form acceptable to the University's Representative, and coordinate it with the Contract Schedule. No submittals will be processed before the Submittal Schedule has been submitted to and accepted by University's Representative, except in such cases where the processing of submittals is required to maintain job progress before the acceptance of the Submittal Schedule.
 - c. In preparing the Submittal Schedule, Contractor must first determine from the Contract Schedule the date a particular item is needed for the Work. Working backwards, Contractor will establish the number of days required for fabrication, shipment, placement, and similar activities to determine the date required for the first submittal.

- d. Allow 14-28 day duration for the University's Design Professional's initial review of submittals depending on the submittal/shop drawing and specification section. Allow 7 days for Design Professional to re-review revised or unapproved submittal/shop drawings.
 - e. Contractor to indicate whether the submittal is a "Full" or "Partial" submittal on the schedule and on the submittal.
2. Material List: Provide complete material list of products proposed for use. Submit Material Safety Data Sheets (MSDS) for Owner's use. Neither the University Representative nor its Design Professional will review MSDS.
 3. Contractor's Review:
 - a. Contractor Review: The shop drawings and supplemental data, when called for, shall be submitted as the instruments of the Contractor, even though they may have been prepared by a subcontractor, supplier, dealer, manufacturer, or by any other person, firm or organization. Prior to submission, the Contractor shall undertake his/her own review and stamp with his/her acceptance those shop drawings and supplemental data he/she is requested to submit to the University's Architect/Design Professional for his/her review. By accepting and submitting shop drawings and supplemental data, the Contractor represents that the Contractor has determined and verified all field measurements, the physical construction, the quality of materials, the applicability of catalog numbers, and similar data, or will do so, and that the Contractor has checked and coordinated each shop drawing with the requirements of the work and of the Contract Documents. Conflicts with other trades shall be resolved by the Contractor in the shop drawings, if possible, but in any event prior to the actual construction. Drawings submitted in response to a request of the University's Architect shall show rearrangements, if any, made necessary by the use of materials or equipment other than those specified. Review, mark-up as appropriate, and stamp show drawings, product data, and samples prior to submission. Submittals shall clearly show that they have been reviewed and approved by Contractor for conformance with the requirements of the Contract Documents and for coordination with other Sections.
 - b. Submittals not stamped and signed by Contractor will be returned without review.
 - c. Determine and verify:
 - (1) Field measurements.
 - (2) Field construction criteria.
 - (3) Catalog numbers and similar data.
 - (4) Conformance with Contract Documents.
 - d. Coordinate each submittal with requirements of the Work and of the Contract Documents.
 - e. Notify University's Representative and its Design Professional in writing, at time of submission, of any changes in the submittals from requirements of the Contract Documents. Contractor is responsible to correct the deficiencies from the requirements of the contract documents when any changes are not made in writing to the University Representative or its Design Professional at the time of submission. The approval of submittals will be deemed null and void.
 - f. Begin no fabrication or Work which requires submittals until the return of the University's Design Professional's final reviewed submittals.

4. Coordination Drawings: Prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities as specified in Section 01 3300. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components.
 - a. Show the relationship of components shown on separate Shop Drawings.
 - b. Indicate required installation sequences.
 - c. Comply with requirements contained in this Section.

5. BIM Procedures:
 - a. Contractor shall establish procedures for coordinating work using BIM methods and protocols.

 - b. Format and Development: Prepare coordination drawings according to the following requirements:
 - (1) Prepare BIM files for the project based on original hard copy documents as received from the University.
 - (2) Prepare all files using BIM software program, version, and operating system as approved by University.
 - (3) Prepare BIM Execution Plan establishing BIM protocols for project, including standards, responsibilities of Contractor and sub-contractors, schedules, clash detection, and quality control.
 - (4) Designate a specific staff person as Contractor's BIM Coordinator.
 - (5) Submit or post coordination drawing files using format same as file preparation format or Portable Data File (PDF) format.

 - c. Clash Detection:
 - (1) Using BIM procedures perform clash detection as part of preparation of coordination drawings.
 - (2) Include clash detection protocol in the BIM execution plan.
 - (3) BIM Coordinator will review and assemble the various design and trade models, create clash reports and conduct coordination meetings with University's Representative as defined by the BIM execution plan.
 - (4) Run Parameters: Clash detection, at minimum, shall be set to report any hard clashes within a 1 /4 inch tolerance. Clearance tolerances shall be used to account for additional material applied to modeled elements, such as fire proofing or required clearances.
 - (5) At a minimum, review Clash Detection documents on a weekly basis. Identify conflicts requiring document modifications and review with University's Representative.
 - (6) Update model elements based on field verification of dimensions and orientation.

 - d. Following resolution of conflicts and clash detection, prepare coordination drawings for review as follows:
 - (1) Comply with shop drawing requirements for sheet size and submittal methods specified in Section 01 3300 "Submittals".
 - (2) Refer to Specifications in Divisions 2-33 technical specification sections for specific Coordination Drawing requirements.
 - (3) Provide composite coordination drawings for equipment and system installations in mechanical and electrical rooms and spaces where two or more entities will provide the work.
 - (4) Provide composite coordination drawings showing planned locations of core cuts, sleeves, and other penetrations intended for placement in

- concrete decks, slabs, and structural components. Indicate intended use such as openings for conduit, piping, ducts, and utility services.
- (5) Provide composite coordination drawings showing planned locations of fire and sound rated wall penetrations, including dampers. Indicate intended use such as openings for conduit, piping, ducts, and utility services.
- (6) Prepare above-ceiling coordination drawings showing all above-ceiling work including structural members and required clearances and dimensions.
- e. At the end of the project as part of the close out submittals the Contractor shall provide an “as-built” BIM model to be given to the University in addition to the hard copy as built drawings.
6. Submission Requirements:
- a. Make submittals promptly in accordance with the Specifications and in such sequence as to cause no delay in the Work.
- (1) Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
- (a) Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
- (b) Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.
- (c) The University's Representative reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- (2) Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.
- (a) Allow sufficient time from receipt by University's Representative, for initial review and comment. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The University's Representative will promptly advise the Contractor when a submittal being processing must be delayed for coordination.
- (b) If an intermediate submittal is necessary, process the same as the initial submittal.
- (c) Allow additional time for reprocessing each submittal.
- (d) No extension of Contract Time will be authorized because of failure to transmit submittals to the University's Representative sufficiently in advance of the Work to permit processing.
- b. Number of Submittals Required: Refer to Specification Section 01 3500 “Document Control” for distribution of Shop Drawings and Product Data submittals. After each submittal has been reviewed by the Design Professional and returned to the Contractor. The Contractor shall make (two) 2 hard copies of all approved submittals and shall submit the hard copies to the University's Representative for project record filing.
- (1) Samples: Contractor to submit a minimum of (five) 5 physical samples each of products and or samples for Design Professional's review and approval. After review and approval one sample will be retained by the architect, two (2) for

the contractor and its subcontractor and two (2) for the University's Representative.

- (2) Shop drawings and supplemental data, where called for, shall be prepared and submitted as per General Conditions. Final corrected copies of schedules and shop drawings or supplemental data to University's Design Professional for review shall be such as to provide one (1) for University's Architect's files, two (2) for the University and two (2) to the Contractor's job files and for distribution by the Contractor to subcontractors or vendors. Exceptions shall be as noted in Specifications sections.

c. Submittals shall contain:

- (1) Identification data number assigned by the Contractor, consisting of the specification section number followed with the number 001 and continuing in sequence.

- (a) Resubmittals: Add a letter to the previous identification, for instance 01 3400/005/R1 would be a first resubmittal.
- (b) Use a separate number for each product, assembly, or system. Similar or related items may be grouped only if compatible with review process as approved.

- (2) Date of submission and dates of any previous submissions.
- (3) Project name and number, and contract identification.
- (4) Names of Contractor, Subcontractor, Supplier and Manufacturer.
- (5) Identification of item, with Specification Section number and article/paragraph references.
- (6) Field dimensions, clearly identified as such.
- (7) Relation to adjacent or critical features of the Work or materials.
- (8) Reference standards, such as ASTM or Federal Specification numbers.
- (9) Identification of changes from requirements of the Contract Documents.
- (10) Identification of revisions on resubmittals.
- (11) An 8-inch x 3 inch blank space for review stamps, as necessary.
- (12) Contractor's stamp, initialed or signed, certifying to the review of the submittal; verification of materials and field measurements and conditions; and compliance of the information within the submittal with requirements of the Work and of the Contract Documents.

d. Interpretation of Terms:

- (1) "As directed", "as required", "as permitted", "acceptable", "satisfactory", means by or to the University's Architect. The term "equal" means "equal in the opinion of the University's Architect after submittal data is reviewed". The term "favorable review" means that the submittals for material list, shop drawings, material substitutions, schedules, etc., will be reviewed by the University's Architect and copies returned to the Contractor marked as "Review Completed", "No Exceptions Taken" or "Make Corrections Noted" in which case no further submittals are needed.
- (2) Submittals returned marked "Resubmit", "Amend and Resubmit" or "Rejected - Resubmit" shall be corrected to comply with project requirements and shall be resubmitted for review

7. Resubmission Requirements:

a. Shop Drawings and Product Data:

- (1) Revise shop drawings or product data, and resubmit as specified for the initial submittal, only if required by University's Design Professional.
- (2) Identify any changes which have been made other than those requested.

- (3) Note any departures from the Contract Documents or changes in previously reviewed submittals which were not commented upon by University's Design Professional.
 - b. Samples: Submit new samples as required for initial submittal.
 - c. University's Design Professional's Review: The University's Design Professional will review shop drawings and supplemental data submitted by the Contractor only for general design conformance with the concept of the Project and compliance with the information given in the Contract Documents. 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 Contractor as required by the Contract Documents.
8. Distribution:
 - a. Reproduce and distribute copies of Submittals including Shop Drawings and Product Data, which carry the University's Design Professional's review stamp, to the following locations:
 - (3) Contractor's Project site file.
 - (4) Record documents file maintained by Contractor.
 - (5) Separate Contractors.
 - (6) Subcontractors.
 - (7) Supplier or manufacturer.
 - (8) Other involved parties as directed by University's Representative.
9. Design Professional's or Design Professional's designee's or University Representative's Review will be under the following conditions.
 - a. Review of submittals is only for general conformance with the design concept of the Project and general compliance with the information given in the Contract Documents. 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 instruction for installation for performance or equipment or systems, all of which remain the responsibility of contractor as required by the Contract Documents.
 - b. The review does not affect the Contractor's responsibility to perform all Contract requirements with no change in Contract Sum or Contract Time. Any actions shown are subject to the requirements of the Drawings, Specifications and other Contract Documents. The Contractor is responsible to confirm and correlate dimensions at the site, for information that pertains to the fabrication processes, for the means, methods, techniques, procedures, sequences and quantities necessary to complete the Contract and for coordination of the work of all trades and satisfactory performance of his work. The review is undertaken solely to satisfy Consultant's obligations, if any to the University and shall not give rise to any claim by the Contractor or other parties against the University's Representative, his/her Consultants or University.

B. Shop Drawings

1. Present information required on shop drawings in a clear and thorough manner. Identify details by reference to drawings and detail, schedule, or room numbers shown and specified.
2. Shop drawings shall be original drawings by the Contractor. Direct reproductions of the Contract Drawings will not be acceptable as shop drawings.

3. Shop Drawings Delineation: The Shop Drawings shall be drawn to scale and shall be completely dimensioned, giving the plan together with such sections as are necessary to clearly show construction detail.
4. Responsibility: These Shop Drawings and all supporting data, catalogs, etc., shall be prepared by the Contractor or his/her suppliers, but shall be submitted as the instruments of the Contractor. Therefore, the Contractor shall review and approve the drawings of his/her suppliers as well as his/her own drawings before submitting them to the University's Representative. In particular, the Contractor shall ascertain that the drawings meet all requirements of the Drawings and Specifications and also conform to the structural and space conditions. Each Shop Drawing submitted for review shall bear a stamp certifying that it has been reviewed and approved by the Contractor in accordance with the Contract Documents. If such Shop Drawings show variations from Contract Documents, whether because of standard shop practice or other reasons, the Contractor shall make special mention thereof in his/her letter of transmittal. The Contractor shall be fully responsible for observing the need for and making any changes in the arrangement of piping, connections, wiring, manner of installation, etc., which may be required by the equipment he/she proposes to supply both as pertains to his/her own work and any work affected under other parts, heading or divisions of Drawings and Specifications.
5. Identification: Shop Drawings shall be entitled with the name of the project on each sheet and shall otherwise be identified by listing the particular division, section, article or reference of the work pertaining. Submit different items on separate sheets. All submittals shall be numbered sequentially.
6. Manner: Furnish for University's Design Professional's approval separate sheets of submittal of each specialty item in the following manner:
 - a. Catalog cuts shall be photocopied or reproduced in some other acceptable manner and submitted on one (1) side only of an 8-1/2" x 11" sheet, noting only the items in question, together with the descriptive (specification) data complete. Once the Design Professional has reviewed the submittal provide two (2) hard copies of each approved, stamped shop drawing and other supporting data to the on-site University's Representative.
 - b. Each sheet shall be identified with the division, section, article or reference in the Contract Documents which covers the item submitted for approval.
 - c. Each sheet shall be identified with the project name, the University's Representative and the project's Design Professional.
 - d. Each sheet shall bear the Contractor's stamp and signature of approval.
7. All shop drawings shall be drawn accurately suitable for duplicate copying by black line, blue line printing processes or photocopy.
8. Supplemental Data: Supplemental data shall include information as noted in the specification paragraphs requiring them, or as requested by the University.
9. Review Required: Shop drawings, if requested, must be submitted to and favorably reviewed by the University's Architect/Design Professional before being used by the Contractor on the job.

C. Product Data

1. Clearly mark each copy to identify pertinent Products or models.
2. Show performance data consisting of capabilities, rpm, kw pressure drops, design and operating pressures, temperatures, performance curves, noise level curves, power characteristics and consumption; conforming as closely as possible to the test methods referenced in the plan and specifications.

3. Show dimensions, weights and clearances required.
4. Show wiring or piping diagrams and controls.
5. Modify the standard schematic drawings and other diagrams to delete information, which is not applicable to the Work.
6. Supplement standard information to provide information specifically applicable to the Work.

D. Samples

1. Office samples shall be of sufficient size and quality to clearly illustrate the following:
 - a. Functional characteristics of the products, with integrally related parts and attachment devices.
 - b. Full ranges of color, texture, and pattern.
 - c. Provide a minimum of 5 samples plus any additional number for Contractor needs.
2. Samples herein referred to shall include all materials, equipment, surface textures, colors, fabrics, etc., as required by Drawings and Specifications or as requested by the University's Design Representative. They shall be submitted as required by the Specifications or requested by the University's Representative or its Design Professional.
3. Submittal: Samples, properly identified and described, shall be submitted as noted herein, or as may be required by the University's Representative. They shall be submitted and resubmitted until approved. No approval of a sample shall be taken in itself to change or modify any contract requirement. Finishes, materials, or workmanship in the completed building shall match the approved samples.
4. Manner: Contractor shall forward all samples under cover letter in five (5) copies, including a complete listing of such samples designated for use on the project, with complete identification on each sample by project name, ultimate destination of material, manufacturer, brand, lot, style, model, etc., Contract Document reference as well as the names of the Contractor, Supplier, Project, Design Professional and University's Representative. All submittals shall be numbered sequentially.
5. Return: Samples of value will be returned to the Contractor for use in the project after review, analysis, comparison and/or testing as may be required by the University's Architect.
6. Test Sample: Test samples, as the University's Representative designates, will be selected from the materials or equipment delivered by the Contractor for use in the work. If any test sample fails to meet the specification requirements, all previous approvals will be withdrawn and such materials or equipment which fail the testing shall be subject to removal and replacement by the Contractor with materials or equipment meeting the specification requirements.

E. Mockups

1. Provide mock-ups as described in Specification Section 01 4339 and on the following drawings:
2. Material List: Provide complete material list of products proposed for use. Submit Material Safety Data Sheets (MSDS) for Owner's use. Neither the University Representative nor its Design Professional will review MSDS.
3. Contractor's Review: Review, mark-up as appropriate, and stamp show drawings, product data, and samples prior to submission. Submittals shall clearly show that they have been reviewed and approved by Contractor for conformance with the requirements of the Contract Documents and for coordination with other Sections.

1.4. LEED DOCUMENTATION

- A. Sustainable Design and LEED submittals are in addition to other submittals. If submittal item is identical to that submitted to comply with other requirements, submit duplicate electronic copies as a separate submittal to verify compliance. Any discrepancies shall be referred to the Universities Representative for clarification.
- B. LEED documentation submittals shall be prepared and submitted using the LEED-Online credit website.
- C. Refer to Section 01 8113 "Sustainability Design Requirements" item 1.5 Submittals; for the complete listing of all LEED documentation and submittals required for the project.

1.5. REFRIGERANT MANAGEMENT DOCUMENTATION

- A. UCR has instituted a requirement to comply with end-of-year refrigerant inventory for reporting to UCOP and with the South Coast Air Quality Management District's policies to account for the use of refrigerant gas delivery, recovery and charging installed with new HVAC and any other equipment using gas refrigerant on UCR projects.
- B. To provide accurate accounting for the reporting of the refrigerant charge in a mechanical system and/or equipment, the actual quantity must be known in order to document gas lost from leaks etc. when repairs are done.
- C. HVAC and other equipment utilizing gas refrigerant that are delivered to the site intact with the factory charge quantity listed on the nameplate or in literature submitted for the design professional's review, can sometimes be charged in the field according to various indications. Therefore the contractor who delivers and installs any system and/or equipment which uses refrigerant shall provide startup reports that list the exact quantity of gas charged into each system and submit these reports to the University's Representative who will provide to UCR EH&S.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

CONTRACTOR CERTIFICATION

COMPLETE THIS CERTIFICATE, INCLUDING SIGNATURE BY PERSON DIRECTLY RESPONSIBLE FOR WORK ON THIS PROJECT. REVIEW EACH SUBCONTRACTOR CERTIFICATION FOR COMPLETENESS AND COORDINATION WITH COMMENTS MADE ON THIS CERTIFICATE AND OTHER SUBCONTRACTOR CERTIFICATES. SUBMIT THIS CERTIFICATE AND ALL SUBCONTRACTOR CERTIFICATES TO THE UNIVERSITY'S REPRESENTATIVE WITHIN 10 DAYS OF RECEIVING NOTICE TO PROCEED.

1. As required by the General Conditions of the Contract for Construction, the undersigned certifies that a thorough review has been made of all of the Contract Documents, including, but not limited to the Agreement, General and Supplementary conditions, Drawings, specifications, and Addenda (if any) for the Work. The undersigned also acknowledges each subcontractor has been required to perform a similar thorough review and that Contractor and subcontractors have related and coordinated requirements of individual units of Work to requirements for the entire Work.
2. The undersigned acknowledges his/her obligation to identify below discrepancies, errors, omissions, conflicts, code violations, and improper use of materials discovered in the Contract Documents. Except as noted below and on subcontractor certificates, the undersigned certifies, to the best of his/her knowledge, information, and belief that the Work can be completed in a workmanlike manner without extensive modifications or additional expense.

EXCEPTIONS: _____

NAME, ADDRESS, TELEPHONE OF
CONTRACTOR: _____

AUTHORIZED
SIGNATURE: _____ DATE: _____

NAME (PRINTED CLEARLY OR TYPED): _____

TITLE: _____

END OF CONTRACTOR CERTIFICATION

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INTENTIONALLY**

SUBCONTRACTOR CERTIFICATION

COMPLETE THIS CERTIFICATE, INCLUDING SIGNATURE BY PERSON DIRECTLY RESPONSIBLE FOR WORK ON THIS PROJECT, AND SUBMIT TO THE GENERAL CONTRACTOR WITHIN 5 DAYS OF RECEIVING NOTICE TO PROCEED FROM GENERAL CONTRACTOR.

1. As required by the General Conditions of the Contract FOR construction, the undersigned certifies that a thorough review has been made of all of the Contract Documents, including, but not limited to the Agreement, General and Supplementary Conditions, Drawings, Specifications, and Addenda (if any) for the Work. The undersigned also certifies that Contractor and subcontractor have related and coordinated requirements for the entire Work.
2. The undersigned acknowledges his/her obligation to identify below discrepancies, errors, omissions, conflicts, code violations, and improper use of materials discovered in the Contract Documents. Except as noted below, the undersigned certifies, to the best of his/her knowledge, information, and belief that no such discrepancies, errors, omissions, conflicts, code violations, or improper use of materials occur in the Contract Documents.
3. Except as noted below, the undersigned has no objection to, or reservation about, the materials to be furnished or the conditions under which they will be installed, and is satisfied that contractual responsibilities for units of Work for which undersigned is responsible can be completed in a workmanlike manner without extensive modifications or additional expense.

EXCEPTIONS: _____

UNITS OF WORK FOR WHICH UNDERSIGNED IS RESPONSIBLE:

NAME, ADDRESS, TELEPHONE OF
SUBCONTRACTOR: _____

AUTHORIZED
SIGNATURE: _____ DATE _____

NAME (PRINTED CLEARLY OR TYPED) _____

TITLE: _____

END OF SUBCONTRACTOR CERTIFICATION

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Standard Specification

SECTION 01 33 29.08 BUY CLEAN CALIFORNIA REPORTING

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Section includes general requirements and procedures for compliance with Buy Clean California Act per California Public Contract Code, Sections 3500-3505.
- B. Contractor is requested to submit current facility-specific environmental product declaration for each eligible material proposed to be used on the Project.

1.2 DEFINITIONS

- A. Environmental Product Declaration (EPD): Type III environmental impact label, as defined by the International Organization for Standardization (ISO) standard 14025, or similarly robust life cycle assessment methods that have uniform standards in data collection consistent with ISO standard 14025, industry acceptance, and integrity.
- B. Eligible Materials: Any of the following:
 - 1. Carbon steel rebar.
 - 2. Flat glass.
 - 3. Mineral wool board insulation.
 - 4. Structural steel.

1.3 SUBMITTALS

- A. General: Buy Clean California submittals are requested to be submitted along with other required submittal items for eligible materials as described in the Specifications.
- B. Facility-specific Environmental Product Declaration: For each eligible material proposed to be used on the Project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 33 29.08

SECTION 01 3520 DESIGN ASSIST PROCEDURES

1.1 SUMMARY

A. Section includes requirements of Contractor for design-assist work including, but not necessarily limited to, those identified in the various Sections of the Specifications and the following:

1. Contractor's Responsibility
2. Coordination with Architectural Design Intent

B. The following require design assistance:

1. Pre-Fabricated metal stairs including guardrails and the application of concrete filled metal pans and precast treads.
2. Pedestrian Bridges.
3. Other railing and guardrails.
4. Fixed sunshades.
5. Fiber reinforced cementitious wall siding and furring rain screen system.
6. Translucent canopy system.
7. Storefronts and curtain walls.
8. Fire sprinkler system.
9. Fire alarm system.

B. Design-assist procedures are specified to assist Contractor in coordinating design-assist work.

1.2 CONTRACTOR'S RESPONSIBILITY

A. Contractor acknowledges that it shall be responsible for the design, method of construction, and coordination and integration with other trades to achieve the architectural design intent of the Contract Documents, of those portions of the design-assist work including sizing, sequence, placement and details of construction.

B. Contractor guarantees the following:

1. Design-assist work shall be constructed in compliance with building codes and ordinances in effect and shall be fit and proper for its intended use.
2. Where relevant, design and method of construction of the design-assist work shall not incorporate or employ the use of any product, process or technique which may be protected by common law or statutory patent, copyright or trade secret rights unless Contractor or subcontractor shall be the lawful owner or licensee of same.

C. Contractor shall indemnify and hold harmless University, University's Representative, Architect and its consultants, and agents and employees of any of them from and against claims, damages and expenses resulting from breach or failure by Contractor to perform fully any of the forgoing obligations and specifically agrees to indemnify and hold University harmless from any and all claims of the Contractor's employees, agents, subcontractors, suppliers or third parties and to make good any damages to the Work, and attorneys' fees and costs of additional work by University's Design Professional resulting from the inadequacies of the design, techniques or methods of construction of the design-assist Work.

- D. The design and the drawings and specifications for the techniques and method of construction of the design-assist work shall be prepared and shall result in work which is fit to perform its intended purpose.
- E. For design-assist work, Contractor shall provide plans, specifications, and calculations that are prepared, stamped, and signed by qualified, registered, licensed engineers authorized to practice their professions under the laws of the State of California. The plans, specifications, and calculations shall be acceptable to the University's Representative.
- F. Prior to commencement of the design-assist work at the Project Site, Contractor shall provide the University with copies of current insurance policies covering the errors or omissions of persons designing the design-assist work with maximum deductibles and limits per occurrence as mutually agreed by the University and Contractor, together with an endorsement providing for a 30-day notice to University prior to cancellation or material reduction in coverage.
- G. Maintain insurance at least the period equal to the applicable statute of limitations for claims arising out of latent defects in works of improvement to real property, if such insurance is not written on an "occurrence" basis during the time the design-assist work is designed and constructed.

1.3 COORDINATION WITH ARCHITECTURAL DESIGN INTENT

- A. Ceilings:
 - 1. Coordinate the work of all trades involved to ensure clearances for fixtures, ducts, piping, ceiling suspension systems and other above-ceiling work as necessary to maintain finished ceiling heights.
 - 2. Paint all exposed items at ceilings. Paint air grilles to match adjacent ceiling finish.
 - 3. Locate light fixtures, sprinkler heads, and diffuser grilles in the center of ceiling panels.
- B. Areas Where Structure Is Exposed:
 - 1. Install sprinkler lines, ductwork, conduit, plumbing, process piping, lighting and all other overhead items at regular intervals, parallel to and/or perpendicular with building column grid lines.
 - 2. Align all hangers, wires, braces, struts, chains, junction boxes, etc. in any given line aligned with one another, and install in the same fashion, for a neat, uniform appearance.
- C. Review proposed layouts with University's Representative and other trades in the field prior to commencing work. Layouts which have not been so reviewed will be subject to change at no additional expense to the University if found unsatisfactory. Areas subject to such review include but are not necessarily limited to exposed structure areas.
- D. Do not locate sprinkler lines, piping, ductwork, conduit, access panels, and cleanouts in "Special Feature Areas" and finishes, including walls and ceilings, except as otherwise specifically shown on the Drawings.
 - 1. Engineering design and construction shall be by alternative route and not necessarily direct route method.

2. Special Feature Areas include:
 - a. Open stairways and special building pedestrian circulation routes.

END OF SECTION

SECTION 01 3540 ENVIRONMENTAL MITIGATION

PART 1 – GENERAL

1.1 SUMMARY

- A. The Environmental Mitigation requirement for this project is recorded in this specification Section 01 3540. The mitigation measures may include, but are not limited to, procedures and standards to control:

1. Air Quality
2. Dust Control Measures
3. Asbestos
4. Biological Resources
5. Cultural Resources
6. Hazards and Hazardous Materials
7. Water Quality
8. Noise Attenuation Measures
9. Transportation and Traffic Control
10. Light and Glare

Please note additional project-specific mitigation measure(s) shall be incorporated once the project-specific CEQA analysis has been prepared.

- B. Related Sections

1. Section 01 5639 Tree and Plant Protection
2. Section 01 5700 Temporary Controls
3. Where Sections contain conflicting requirements the more stringent requirement shall apply. Notify University's Representative in writing when conflicts or discrepancies are found. The University's Representative will notify the Contractor/Design Builder where one supersedes.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures:

1. Submittals shall be submitted in accordance with Section 01 3300, "Submittals."
 - a. Submit Traffic Control Plan for Project Construction prior to the start of construction
 - b. Submit Pedestrian Circulation Plan for Project Construction prior to the start of construction.

PART 2 - MITIGATION MEASURES

2.1 AIR QUALITY

- A. Low NOx diesel fuel and construction equipment shall be used to the extent that is readily available at the time of construction. Contractor shall maintain on-going, updated records for University Representatives to review for compliance.
- B. The following Air Quality reduction procedures shall be implemented throughout the construction process:
 - 1. Compliance with all South Coast Air Quality Management District (SCAQMD) rules and regulations.
 - 2. Maintenance programs to assure vehicles remain in good operating condition.
 - 3. Avoid unnecessary idling of construction vehicles and equipment.
 - 4. Use of alternative fuel construction vehicles.
 - 5. Provision of electrical power to the site to eliminate the need for on-site generators.
- C. Post a publicly visible sign with the telephone number and person to contact at the University regarding dust complaints, as well as the SCAQMD telephone number. This University's Representative is required to respond and direct corrective action. The Contractor/Design Builder will take directed correction action within 48 hours.
- D. The Contractor/Design Builder shall prepare a construction emissions control plan that includes a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 hp, that will be used for an aggregate of 40 more hours during any portion of the construction project. All contractors, and overseen by the Contractor/Design Builder, shall utilize California Air Resources Board (CARB) certified equipment or better for all on-site construction equipment to meet the following:
 - 1. All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
 - 2. A copy of each unit's certified specification, BACT documentation and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit or equipment.
 - 3. Contractors are encouraged to apply for AQMD "SOON" funds. Incentives could be provided for those construction contractors who apply for AQMD "SOON" funds. The "SOON" program provides funds to accelerate clean-up of off-road diesel vehicles, such as heavy-duty construction equipment. More

information on this program can be found at the following website:
<http://www.aqmd.gov/home/programs/business/business-detail?title=off-road-diesel-engines&parent=vehicle-engine-upgrades>

- E. The Contractor/Design Builder shall also implement the following measures during construction:
1. Prohibit vehicle and engine idling in excess of 5 minutes and ensure that all off-road equipment is compliant with the CARB in-use off-road diesel vehicle regulation and SCAQMD Rule 2449.
 2. Configure construction parking to minimize traffic interference.
 3. Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
 4. Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.
 5. Schedule construction activities that affect traffic flow on the arterial system to off-peak hour to the extent practicable.
 6. Improve traffic flow by signal synchronization, and ensure that all vehicles and equipment will be properly tuned and maintained according to manufacturers' specifications.
 7. Use diesel-powered construction vehicles and equipment that operate on low-NOx fuel where possible.
 8. Reroute construction trucks away from congested streets or sensitive receptor areas.
 9. Maintain and tune all vehicles and equipment according to manufacturers' specifications.
- F. To minimize VOC emissions from the painting/finishing phase, for each construction project on the campus, the project contractor will implement the following VOC control measures:
1. Construct or build with materials that do not require painting, or use pre-painted construction materials.
 2. If appropriate materials are not available or are cost-prohibitive, use low VOC-content materials more stringent than required under SCAQMD Rule 1113.
- G. Install filters over air handling units of neighboring facilities: Air distribution systems of neighboring facilities shall be aggressively protected from dust during the construction process to ensure that no contamination of the duct system occurs. Special provisions shall be made at no additional cost to the university to provide adequate filtration to protect all air handling equipment of immediately adjacent facilities, distribution and return ductwork from exposure to dust, with filters being changed on a regular and frequent basis during the period of construction.

2.2 DUST CONTROL MEASURES

- A. All contractors, and those overseen by the Contractor/Design Builder, shall implement dust control measures consistent with SCAQMD Rule 403 – Fugitive Dust during the construction phases of the project development.
1. Apply water and/or approved non-toxic chemical soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded areas that have been inactive for 10 or more days).
 2. Replace ground cover in disturbed areas as quickly as possible.
 3. Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content.
 4. Water active grading sites at least twice daily.
 5. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed over 25 mile per hour over a 30-minute period.
 6. All trucks hauling dirt, sand, soil, or other loose material are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and top of the trailer) in accordance with section 23114 of the California Vehicle Code.
 7. Sweep streets at the end of the day if visible soil material is carried over to adjacent roads.
 8. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving project site for each trip.
 9. Apply water three times daily of chemical soil stabilizers according to manufacturer's specifications to all unpaved parking or staging areas or unpaved road surfaces.
- B. Construction Site Speed Limit.
1. All contractors, and those overseen by the Contractor/Design Builder, shall ensure that construction site and access road speed limits be established and enforced during the construction period. Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads.

2.3 ASBESTOS

- A. Compliance with SCAQMD Rule 1403
1. All contractors, and those overseen by the Contractor/Design Builder, shall implement SCAQMD Rule 1403 – Asbestos when demolishing existing buildings on campus.

2.4 BIOLOGICAL RESOURCES

- A. Nesting Bird Surveys
1. Prior to the onset of construction activities that would result in the removal of mature trees that would occur between March and mid-August, surveys for nesting special status avian species and raptors shall be conducted on the affected portion of the campus following the U.S Fish and Wildlife Service

(USFWS) and/or the California Department of Fish and Game (CDFW) guidelines. If no active avian nests are identified on or within 250 feet of the construction site, no further mitigation is necessary.

2. If active nests for avian species of concern or raptor nests are found within the construction footprint or a 250-foot buffer zone, exterior construction activities shall be delayed within the construction footprint and buffer zone until the young have fledged or appropriate mitigation measures responding to the specific situation have been developed and implemented in consultation with USFWS and CDFW.

~~B. Protection of Naturalistic Open Space~~

- ~~1. Unnecessary driving in sensitive or otherwise undisturbed areas shall be avoided. New roads or construction access roads would not be created where adequate access already exists.~~
- ~~2. Removal of native shrub or brush shall be avoided, except where necessary.~~
- ~~3. Drainages shall be avoided, except where required for construction. Limit activity to crossing drainages rather than using the lengths of drainage courses for access.~~
- ~~4. Excess fill or construction waste shall not be dumped in washes.~~
- ~~5. Vehicles or other equipment shall not be parked in washes or other drainages.~~
- ~~6. Overwatering shall be avoided in washes and other drainages.~~
- ~~7. Wildlife including species such as fox, coyote, snakes, etc. shall not be harassed. Harassment includes shooting, throwing rocks, etc.~~

C. Tree Preservation and Replacement Guidelines

1. Preserve and protect mature specimen trees, memorial trees, landmark trees, and historic trees, to the extent feasible. All contractors, and those overseen by the Contractor/Design Builder, shall refer to the Tree Preservation and Replacement Guidelines for information pertaining to tree replacement requirements and ratio. All contractors, and those overseen by the Contractor/Design Builder shall plant any replacement (or relocated) trees to the satisfaction of the University's Representative.

2.5 CULTURAL RESOURCES

A. Protection and Recovery of Buried Artifacts

1. If an archaeological resource is discovered during construction, all soil-disturbing work within 100 feet of the find shall cease and the University's Representative shall contact a qualified archaeologist meeting the Secretary of Interior standards within 24 hours of discovery to inspect the site. If a resource within the project area of potential effect is determined to qualify as a unique archaeological resource (as defined by CEQA), the University shall devote adequate time and funding to determine if it is feasible, through project design measures to preserve the find intact. If it cannot be preserved, the University shall retain a qualified non-University archaeologist to design and implement a treatment plan, prepare a report and salvage the material,

- as appropriate. Any important artifacts recovered during monitoring shall be cleaned, catalogued, and analyzed, with the results presented in a report of finding that meets professional standards.
- a. If significant Native American cultural resources are discovered, as determined by the consulting archaeologist for which a Treatment Plan must be prepared, the Contractor/Design Builder or his archaeologist shall immediately contact the University's Representative. The University's Representative shall contact the appropriate Tribal representatives.
 - b. If requested by Tribal representatives, the University, the Contractor/Design Builder or his project archaeologist shall in good faith, consult on the discovery and its disposition (e.g. avoidance, preservation, return of artifacts to tribe, etc.).
2. Construction specifications shall require that if a paleontological resource is uncovered during construction activities:
- a. A qualified paleontologist shall determine the significance of the find.
 - b. The campus shall make an effort to preserve the find intact through feasible project design measures.
 - c. If it cannot be preserved intact, then the University shall retain a qualified non-University paleontologist to design and implement a treatment plan to document and evaluate the data and/or preserve appropriate scientific samples.
 - d. The paleontologist shall prepare a report of the results of the study, following accepted professional practice.
 - e. Copies of the report shall be submitted to the University and the Riverside County Museum.
3. In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area of the find shall be protected and the University immediately shall notify the Riverside County Coroner of the find and comply with the provisions of State Health & Safety Code § 7050.5 and Public Resource Code Section 5097.

2.6 HAZARDS AND HAZARDOUS MATERIALS

A. Health and Safety

1. All contractors, and those overseen by the Contractor/Design Builder, shall implement the current (or equivalent) health and safety plans, programs, and practices related to the use, storage, disposal, or transportation of hazardous materials, including, but not limited to, the Business Plan, the Broadscope Radioactive Materials License, and the following programs: Biosafety, Emergency Management, Environmental Health, Hazardous Materials, Industrial Hygiene and Safety, Laboratory/Research Safety, Radiation Safety, and Integrated Waste Management. These programs may be subject to modification as more stringent standards are developed or if the programs are

replaced by other programs that incorporate similar health and safety protection measures as determined by the Campus Building Official and Campus Fire Marshal.

B. Remediation

1. If applicable, prior to demolition activities, when remediation is deemed necessary, all contractors, and those overseen by the Contractor/Design Builder, shall identify all potential hazardous materials within the structure to be demolished, and identify handling and disposal practices to ensure construction worker and public safety.

2.7 WATER QUALITY

A. National Pollutant Discharge Elimination System (NPDES)

1. All contractors, and those overseen by the Contractor/Design Builder, shall comply with NPDES requirements and implement Best Management Practices (BMPs) as identified in the UCR Stormwater Management Plan.

2.8 NOISE ATTENUATION MEASURES

A. Construction Hours of Operation

1. Construction activities shall be limited to between the hours of 7:00 AM and 9:00 PM Monday through Friday and 8:00 AM to 6:00 PM on Saturdays when necessary and no construction on Sunday and national holidays in order to minimize disruption to area residences surrounding the campus and to on-campus uses that are sensitive to noise. Construction traffic shall follow transportation routes prescribed for all construction traffic to minimize the impact of traffic (including noise impacts) on the surrounding community.

B. Construction Noticing

1. All contractors, and those overseen by the Contractor/Design Builder shall notify the University's Representative when notice shall be given to all academic and residential facilities within 300 feet of approved construction sites of the planned schedule of vibration causing activities so that the occupants and/or researchers can take necessary precautionary measures to avoid negative effects to their activities and/or research.
2. All contractors, and those overseen by the Contractor/Design Builder shall notify the University's Representative when to conduct regular meetings, as needed, with on-campus constituents to provide advance notice of construction activities in order to coordinate these activities with the academic calendar, scheduled events, and other situations, as needed.
3. All contractors, and those overseen by the Contractor/Design Builder shall notify the University's Representative when to conduct meetings, as needed, with off-campus constituents that are affected by campus

construction to provide advance notice of construction activities and ensure that the mutual needs of the particular construction project and of those impacted by construction noise are met, to the extent feasible.

C. Vibration

1. If applicable, all contractors, and overseen by the Contractor/Design Builder, shall require that large bulldozer; large, heavy trucks; vibratory rollers; and other similar equipment not be used within 50 feet of occupied academic buildings. The work shall be done with medium-sized equipment or smaller within these preserved distances. Vibratory rollers operated in the static mode would be allowed.

D. Require Mufflers and Other Noise Attenuators on Project Construction Equipment.

1. All contractors, and overseen by the Contractor/Design Builder, shall ensure that noise-producing construction equipment and vehicles using internal combustion engines will be equipped with mufflers; air-inlet silencers where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed “package” equipment (e.g., arc-welders, air compressors) will be equipped with shrouds and noise-control features that are readily available for that type of equipment.
2. Stationary construction equipment, material and vehicle staging shall be placed to direct noise away from sensitive receptors.

E. Require Use of Electrically Powered Equipment.

1. All contractors, and overseen by the Contractor/Design Builder, shall ensure that work use electrically powered equipment instead of pneumatic or internal combustion-powered equipment, where feasible.

~~F. New Construction of Residence Halls~~

- ~~1. Ensure that the construction residence halls incorporate adequate acoustic insulation such that interior Ldn would not exceed 45 dB(A) during the daytime and 40 dB(A) during the nighttime (10 PM to 7 AM) in rooms facing major streets.~~

2.9 TRANSPORTATION AND TRAFFIC CONTROL

A. Traffic Control Plan for Project Construction.

1. All contractors shall comply with a University reviewed and approved Traffic Control Plan for project construction prepared by the Contractor/Design Builder prior to the commencement of construction.

2. To the extent feasible, all contractors, and those overseen by the Contractor/Design Builder, shall restrict vehicle traffic not associated with parking personal vehicles in permitted parking lots to the Contractor/Design Builder provided temporary construction service road and North Campus Drive.
3. To the extent feasible, all contractors, and those overseen by the Contractor/Design Builder, shall maintain at least one unobstructed lane in both directions on existing campus roadways while performing the Work. At any time only a single lane is available, all contractors, and those overseen by the Contractor/Design Builder, shall provide a temporary traffic signal, signal carriers (i.e., flag persons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway segment, all contractors, and those overseen by the Contractor/Design Builder, shall provide appropriate signage indicating alternative routes.
4. To maintain adequate access for emergency vehicles when construction activities would result in roadway closures, the contractor will give fourteen (14) calendar day notice to the University's Representative, so that the University Office of Planning, Design & Construction can consult with the UCPD, EH&S, and RFD, as appropriate to disclose closures and identify alternative travel routes.
5. The hauling and disposal of any excess clean soil excavated from or already stockpiled on the site will be the responsibility of the Contractor/Design Builder to transport and stockpile it at the UCR Ag Ops area, or University approved location as directed by the University's Representative.

B. Pedestrian Access Plan for Project Construction.

1. All contractors will comply with a University reviewed and approved Pedestrian Access Plan for project construction prepared by the Contractor/Design Builder prior to the commencement of construction. At a minimum the Plan will include, alternate routes, appropriate signage, and curb cuts at street crossings to assure alternate routes around all construction sites or areas under the control of the Contractor/Design Builder are accessible during all phases of the Project.

2.10 LIGHT AND GLARE

A. Outdoor lighting

1. All contractors, and overseen by the Contractor/Design Builder, shall ensure that all outdoor lighting on campus resulting from new development shall be directed to the specific location intended for illumination (e.g., roads, walkways, or recreation fields) to prevent stray light spillover onto adjacent residential areas. In addition, all fixtures on elevated light standards in parking lots, parking structures, and athletic fields shall be shielded to reduce glare. Lighting plans shall be reviewed and approved by the University's Representative prior to project-specific design and construction document approval.

END OF SECTION 01 3540

**SECTION 01 3543
ENVIRONMENTAL PROCEDURES**

PART 1 – GENERAL

1.1. SUMMARY

A. This Section includes:

1. Hazardous Materials Procedures
2. Toxic Materials Procedures
3. University of California – Approved TSDFs (Attached to end of Section.)

B. Submittals:

1. Submit Material Safety Data Sheets (MSDS) for all materials, whether existing or incorporated into the work, which are identified as potentially hazardous but not required to be abated.

1.2. HAZARDOUS MATERIALS PROCEDURES

- A. Except as otherwise specified, in the event Contractor encounters on the Project site material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), or other hazardous materials which have not been rendered harmless, Contractor shall immediately stop Work in the area affected and report the condition to University and University's Representative in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of University and Contractor if in fact the material is asbestos, PCB, or other hazardous materials and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos, PCB, or other hazardous materials, or when such materials have been rendered harmless.
- B. If material has been encountered on site and the Contractor has reported the condition to the University's Representative, then the University Representative shall contact UCR Environmental Health and Safety office (EH&S) and **Ambient Environmental**, the University's hazardous material consultant to conduct an on-site assessment of the material and if it is found to be hazardous then **Ambient Environmental** shall prepare a plan to remove it off site and dispose of it at a University of California approved Treatment, Storage, and Disposal Facility (TSDF). See the list of University of California – Approved TSDFs attached to the end of this Section.

1.3. TOXIC MATERIALS PROCEDURES

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

University of California - Approved TSDFs

This document is a list of permitted treatment, storage, and disposal facilities (TSDFs) that have been deemed acceptable for use in managing hazardous waste generated by the University of California (UC) or at UC facilities. Neither UC nor any of its employees makes any warranty, express or implied, as to the merchantability or fitness for a particular purpose of the goods or services provided by the TSDFs listed above. Except as stated above, reference to the TSDFs in this document does not necessarily constitute or imply its endorsement or recommendation by UC and UC expresses no opinion as to any TSDF that does not appear in this document. This document shall not be used for advertising or product endorsement purposes or for any other use not expressly authorized in writing by UC.

TSDF name	Street	City	State	Zip phone	EPA ID
Altamont Landfill	10840 Altamont Pass Road	Livermore	CA	94550 (925) 455-7306	CAD981382732
AERC INC (MTI)	30677 Huntwood Avenue	Hayward	CA	94544 (510) 429-1129	CAD982411993
Azusa Land Reclamation Co.	1201 W. Gladstone	Azusa	CA	91702 (626) 334-0719	CAD009007626
Bethlehem Apparatus	890 Front Street	Hellertown	PA	18055 (610) 838-7034	PAD002390961
Chemical Waste Management (CWM) - Kettleman Hills	35251 Old Skyline Roac	Kettleman	CA	93239 (559) 386-9711	CAT000646117
Chemical Waste Management (CWM) - TWI	7 Mobile Drive	Sauget	IL	62201 (618)271-2804	ILD098642424
Chem-Nuclear Systems, Inc (Barnwell)	140 Stoneridge Drive	Columbia	SC	29210 (803) 758-1826	SCD048372429
Clean Harbors (Aragonite), LOC Inc.	P.O. Box 22890	Aragonite	UT	84122 (801) 323-8100	UTD981552177
Clean Harbors (Chicago)	11800 S. Stony Island Ave.	Chicago	IL	60617 (800)678-4844	ILD000608471
Clean Harbors (Deer park), Inc	2027 Battleground Road	Deer Park	TX	77536 (713) 930-2300	TXD055141378
Clean Harbors (Kimball, Incinerator Facility)	2247 S. Highway 71	Kimball	NE	69145 (308)235-4012	NED981723513
Clean Harbors (Lokern)	2500 West Lokern Rd.	Buttonwillow	CA	93206 (805) 762-6200	CAD980675276
Clean Harbors (Los Angeles), Inc.	5756 Alba Street	Los Angeles	CA	90058 (213) 585-5063	CAD050806850
Clean Harbors (Phoenix)	1340 West Lincoln Street	Phoenix	AZ	85007 (602)258-6155	AZD049318009
Clean Harbors (Sacramento)	6000 - 88th Street	Sacramento	CA	95828 (916) 386-4999	CAD000084517
Clean Harbors (San Jose)	1040 Commercial St. Suite 109	San Jose	CA	95112 (408) 453-6046	CAD059494310
Clean Harbors (Spring Grove Resources Recovery)	4829 Spring Grove Ave.	Cincinnati	OH	45232 (513)681-5738	OHD000816629
Crosby & Overton, Inc.	1630 W 17th Street	Long Beach	CA	98013 (562) 432-5445	CAD028409019
DeMenno/Kerdoon	22000 N. Alameda Street	Compton	CA	90222 (310)537-7100	CAT080013352
Diversified Scientific Services (DSSI)	P.O. Box 863	Kinston	TN	37831 (615) 376-0084	TND982109142
Duratek	1560 Bear Creek Road	Oak Ridge	TN	37831 (423) 481-0222	TND982157570
ENSCO	309 American Circle	El Dorado	AR	71730 (870) 862-0272	ARD069748192
ENSCO West	1737 East Denni Street	Wilmington	CA	90744 (310) 835-9997	CAD044429835
Envirocare of Utah, Inc	US I-80, Exit 49	Clive	UT	84029 (801) 532-1330	UTD982598898
Environmental Management & Controls (EMC)	3106 South Faith Home Road	Turlock	CA	95380 (209)-667-1102	Radioactive Material License # 3546-5C
Envirosafe	hwy 78 Missile Base Roac	Grand View	ID	82624 (208)834-2275	IDD073114654
Heritage Environmental Services, Inc	7901 West Morris Street	Indianapolis	IN	46231 (317) 243-0811	IND093219012
Heritage Environmental Services, LLC	5122 East Story Road	Coolidge	AZ	85228 (520)723-4167	AZD081705402
Heritage Landfill	4370 W.CR 1275N	Roachdale	IN	46172 (317)243-0811	IND980503890
Kinsbursky Brothers Incorporated	1314 Lemon Street	Anaheim	CA	92801 (714)738-8516	CAD088504881
Mercury Waste Solutions, Inc.	21211 Durand Avenue	Union Grove	WI	53182 414-878-2599	WIR 000 000 356
Merry X-Ray	131 South Maple #1	S. San Fran	CA	94080 (650)6742-6630	CAL000512065
ONYX (formerly AETS)	1125 Hensley Street	Richmond	CA	94801 (510) 233-8001	CAT080014079
Onyx (formerly CWM OSCO)	1704 W. First Street	Azusa	CA	91702 (626) 815-2215	CAD008302903
Onyx (Superior Special Services, Inc.)	5736 West Jefferson	Phoenix	AZ	85043 (602) 233-2955	AZD983473539
Perma-Fix (Quadrex)	1940 NW 67th Street	Gainesville	FL	32653 (405) 468-2000	FLD980711071
Philip Environmental (Burlington)	20245 - 77th Avenue, south	Kent	WA	98032 (206) 872-8030	WAD991281767
Philip Environmental (Georgetown)	734 Lucile Street	Seattle	WA	98108 (206) 762-3362	WAD000812909
Philip Environmental (Rho-Chem)	425 Isis Avenue	Inglewood	CA	90301 (213) 776-6233	CAD008364432
Photo Waste Recycling Co., Inc.	2980 Kerner Boulevard	San Rafael	CA	94901 (415)459-8807	CAD981429673
Photo Waste Recycling Co., Inc.	12898 Bradley Avenue, Suite B	Sylmar	CA	91342 (818)362-0668	CAD000121946
Ramos Environmental Services Inc.	1515 South River Road	W. Sacramento	CA	95691 (916)-371-5747	CAD044003556
Romic Environmental Technologies Corp	2081 Bay Road	East Palo Alto	CA	94303 (650)-324-1638	CAD009452657
Romic Environmental Technologies Corp (Southwest)	6760 West Allison Road	Chandler	AZ	85226 (602) 796-1040	AZD009015389
Ross Environmental Services	36790 Giles Road	Grafton	OH	44044 (440) 748-5800	OHD 048415665
Stericycle, Inc. (Formerly BFI)	4135 West Swift Avenue	Fresno	CA	93722 (559)275-0991	None
Stericycle, Inc. (Formerly BFI)	90 North 1100 West	North Salt Lake	UT	84054 (801) 295-1555	UTD988078150
Systech Environmental Corp.	South Cement Road	Fedonia	KS	66736 (316) 378-4451	KSD980633259
SET Environmental INC. (Treatment One)	5743 Chestwood	Houston	TX	77087 (713)645-8710	TXD055735388
U.S. Filter Recovery Services (Norris Environmental)	5375 South Boyle Ave.	Los Angeles	CA	90058 (213) 277-1500	CAD097030993
Von Roll America (WTI)	1250 Saint George Street	East Liverpool	OH	43920 (800) 403-4888	OHD980613541
Waste Control Specialists (WCS)	1710 West Broadway	Andrews	TX	79714 (713) 944-5900	TXD988088464

Pacific Resource Recovery Services Big Bear CA CAD008252405
 Yellow Highlight indicates TSDF pending approval.

SECTION 01 4100 REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.1. SUMMARY

- A. Section includes:
 - 1. Applicable Codes, Regulations, and Authorities
 - 2. Regulatory Notifications
 - 3. Plan Review and Permit Issuance Requirements, Notifications, and Certificates
 - 4. Fees
- B. References in the Specifications to "code" or to "building code," not otherwise identified, shall mean the foregoing specified codes, together with the additions, changes, amendments, and interpretations adopted by the enforcing agency and in effect on the date of these Contract Documents. Nothing on the Drawings or in the Specifications shall be interpreted as requiring or permitting work that is contrary to these rules, regulations, and codes.
- C. Where other regulatory requirements are referenced in these Specifications, the affected work shall meet or exceed the applicable requirements of such references.
- D. Nothing stated in this Section of the Specifications or other Sections of the Specifications, the other Contract Documents or shown on the Drawings shall be construed as allowing Work that is not in strict compliance with all applicable Federal, State, regional, and local statutes, laws, regulations, rules, ordinances, codes and standards.
- E. Regulatory requirements referred to shall have full force and effect as though printed in these Specifications.
- F. Discrepancies between these codes/rules/etc. and the Contract Documents shall be brought to the attention of the University's Representative for resolution. Unless otherwise directed by the University's Representative, if a conflict exists between referenced regulatory requirements and the Contract Documents, comply with the one establishing the more stringent requirements, but which shall not be less than minimum code requirements.

1.2. APPLICABLE CODES, REGULATIONS, AND AUTHORITIES

- A. All applicable federal, state, and local laws and the rules and regulations of governing utility districts and the various other authorities having jurisdiction over the construction and completion of the Project, including the latest rules and regulations of the Campus Building Official, state fire marshal, DCFM, OSHA, and the California Labor Code, shall apply to the Contract throughout, and they shall be deemed to be included in the Contract the same as though printed in these Specifications.
- B. Codes and regulations that apply to this Project include, but are not limited to, the following including additions, changes, and interpretations adopted by the enforcing agency in effect as of the date of these Contract Documents.
 - 1. California Code of Regulations (CCR):
 - a. Title 8, Industrial Relations
 - b. Title 17, Public Health
 - c. Title 19, Public Safety
 - d. Title 20, Public Utilities and Energy

- e. Title 21, Public Works
 - f. Title 22, Environmental Health
 - g. Title 24: Building Standards Code
 - (1) Part 1, California Administrative Code
 - (2) Part 2, California Building Code (Volume 1 and 2)
 - (3) Part 3, California Electric Code
 - (4) Part 4, California Mechanical Code
 - (5) Part 5, California Plumbing Code
 - (6) Part 6, California Energy Code
 - (7) Part 9, California Fire Code Part 11, California Green Building Standards Code
 - (8) Part 12, California Referenced Standards Code
2. In addition to the above, work shall comply with the following:
- a. California Environmental Quality Act (CEQA).
 - b. California Health and Safety Code.
 - c. California Occupational Safety and Health Act Standards (Cal-OSHA).
 - d. California Department of Transportation (Caltrans): Standard Specifications, latest edition.
 - e. National Fire Protection Association (NFPA): Standards 13, 24, 72, and 80.
 - f. Americans with Disabilities Act - Title II (ADA).
 - g. Federal Occupational Safety and Health Act (OSHA).
 - h. Federal Environmental Protection Agency – Clean Air Act.
 - i. Storm Water Pollution Prevention Act.
3. All work shall meet or exceed code and regulatory requirements.
- C. Copies of Regulations: Obtain copies of the following regulations and retain at the Project site to be available for reference by parties who have a reasonable need:
- 1. California Code of Regulations, Title 8, 9 and 19
 - 2. California Code of Regulations, Title 24, including:
 - a. Part 1, California Administrative Code
 - b. Part 2, California Building Code, Volumes 1 and 2
 - c. Part 3, California Electrical Code
 - d. Part 4, California Mechanical Code
 - e. Part 5, California Plumbing Code
 - f. Part 6, California Energy Code
 - h. Part 9, California Fire Code
 - i. Part 11, California Green Building Standards Code
 - i. Part 12, California Referenced Building Standards Code
 - 2. California Health and Safety Code regulations as referenced in the specifications.
 - 1. CAL/OSHA Construction Safety Orders.
 - 2. City of Riverside "Department of Public Works Standards and Specifications.
 - 3. ~~National Electrical Code.~~ Covered by Part 3
 - 4. National Fire Protection Association standards as referenced within the specifications
 - 5. State of California, Department of Transportation, Division of Highways, "Materials Specifications." [should keep this in]
 - 6. State of California, Department of Transportation, Division of Highways, "Standard Specifications." [should keep this in]
 - 7. ~~State of California, Office of State Fire Marshal~~ Covered by Title 19 and Part 9
 - 8. California Industrial Accident Commission, Safety Bulletins .
 - 9. ~~Uniform Building Code~~
 - 10. ~~Uniform Mechanical Code~~
 - 11. ~~Uniform Plumbing Code~~

12. Standard Specifications for Public Works, (Greenbook), with local agency amendments.

D. 2010 ADA Accessibility Standards for Accessible Design

1.3. REGULATORY NOTIFICATIONS

- A. Submit all required notifications to Federal, State of California, State in which disposal facility is located if not in California, regional, and local agencies with regulatory responsibilities associated with the Work activities that are included in the Contract. All notifications shall be served in writing, in the form required by the agency requiring notification, and in a timely manner so as not to negatively impact the Project schedule. Serve notifications at least 10 business days in advance (or earlier if required by agency) of activity requiring notice. The Contractor shall serve all required notifications in writing to all governmental and quasi-government agencies having notification requirements pertaining to any portion of the Work included in the Project.
- B. Using the "SMARTS" Website: <https://smarts.waterboards.ca.gov>, the Contractor shall file a Notice of Intent for coverage under State General Construction Activity Storm Water Permit National Pollutant Discharge Eliminate System (NPDES). Contractor shall comply with applicable permit requirements including the project Storm Water Pollution Prevention Plan.

1.4. CAMPUS BUILDING PERMIT PROCESS REQUIREMENTS (Contact Lezlie Howard, Permit Program Manager (Lezlie.howard@ucr.edu), for any questions regarding the Campus Building Permit Process),

- A. Prior to commencement of construction and permit issuance by the UC Riverside Department of Building and Safety, a permit application shall be entered into the Building and Safety Departments portal along with completed project construction documents for review, approval and permit issuance. The portal address is found at the PD&C Webpage, <https://pdc.ucr.edu/>
- B. Building and Safety staff will distribute all submitted Project Construction Documents to all campus reviewers for their respective review and approval.
- C. Once all campus reviewers have approved their respective plan reviews and returned them to Building and Safety, the Permit Program Manager will issue the Campus Building Permit and stamped approved construction documents for the project. Once this process is completed, construction and inspections may commence.
- D. Inspections may then be requested through the same portal found at the PD&C webpage. (Contact Lezlie Howard, Permit Program Manager, for assistance with the Inspection request process).
- E. Outside agency Permits, Licenses, and Certificates: For the University's records, submit copies of permits, licenses, certifications, Special inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgment, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 NOTIFICATIONS, AND CERTIFICATES

- F. Underground Service Alert (USA) Notifications: Prior to commencing clearing, excavation and trenching, coordinate with Underground Service Alert of Southern California for field verification and marking of utilities within the limits of Project site. Contractor shall be responsible for outlining limits of excavation with white chalk paint prior to coordination with USA. Coordination shall require 2 business days advance notification prior to start of excavation work. Provide USA notification permit number to the University's Representative prior to starting site Work.
- G. In no event, shall the Contractor install materials that contain asbestos, PCB, lead or other known hazardous materials unless prior approval is obtained from the University.

- H. Regulated Carcinogens by Title 8 California Code of Regulations (CCR), Subchapter 7, Group 16 (Control of Hazardous Substances), Article 110 (Regulated Carcinogens).
1. Products containing chemicals regulated as carcinogens by the State of California are not allowed for use on University projects.
 2. Case-by-case exceptions may be considered for products containing the following Cal/OSHA recognized carcinogens:
 - Methylene Chloride, 5202
 - Cadmium, 1532, 5207
 - Inorganic Arsenic, 5214
 - Formaldehyde, 5217
 - Benzene, 5218
 3. Case-by-case exceptions may only be made when suitable alternative products are not available. Such exceptions are subject to written approval by the University's Representative.
 4. Exceptions require that the Contractor shall have an established carcinogen program as required by Cal/OSHA (§5203. Carcinogen Report of Use Requirements) and shall submit to University's Representative, a copy of the Cal/OSHA Confirmation of Report for Cal/OSHA carcinogens.
 5. When exceptions are granted, the Contractor is responsible for providing to the University's Representative a copy of the semi-annual Confirmation of Report received from Cal/OSHA or, in lieu of that, a copy of the Contractor's semi-annual report as submitted to Cal/OSHA at periods not to exceed 6 months, or at project closeout, whichever occurs first.
- I. Fire Department and Additional Notifications, Manifests, and Requirements: As required by University and coordinated by Contractor with the University's Representative.

~~4.6 FEES~~

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

SECTION 01 4200 REFERENCES

PART 1 – GENERAL

1.1. SUMMARY

A. Section includes:

1. Specification Format and Content Explanation
2. Definitions
3. Reference Standards
4. Abbreviations and Acronyms

1.2. SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. Specification Format: These Specifications are organized into Divisions and Sections based on the 49-division format and CSI/CSC's "Master Format" numbering system.
- B. Specification Content: These 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 interpolated as the sense requires. Singular words shall be interpreted as plural and plural words 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 the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the 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.

1.3. DEFINITIONS

- A. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings; or to other paragraphs or schedules in the Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," "detailed" and "specified" are used to help the user locate the reference. Location is not limited.
- B. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the University's Representative or University, requested by the University's Representative or University, and similar phrases.
- C. "Approved": The term "approved," when used in conjunction with the University Representative's action on the Contractor's submittals, applications, and requests, is limited to the University Representative's duties and responsibilities as stated in the Conditions of the Contract.
- D. "Regulations," "building code," "code": The terms "regulations," "building code", and "code" include laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

- E. “Furnish”: The term “furnish” means to supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- F. “Install”: The term “install” describes operations at the Project site including the actual unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing protecting, cleaning, and similar operations.
- G. “Provide”: The term “provide” means to furnish and install, complete in place, operating, tested, approved, and ready for the intended use.
- H. “Installer”: An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - 1. Unless specified otherwise in other Sections, the term “experienced,” when used with the term “installer,” means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.
 - 2. Trades: 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 tradespersons of the corresponding generic name.
- I. “Project site” is the space available to the Contractor for performing construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
- J. “Testing Agencies”: A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.
- K. “Similar”: The term “similar” means in the general sense and not necessarily identical.
- L. See also the Instructions to Bidders and General Conditions.

1.4. REFERENCE 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.
 - 1. Requirements for packaging, packing, marking, and preparation for shipment or delivery included in referenced federal specifications are not mandatory for products provided for this Work.
- B. Publication Dates: Comply with the standards in effect as of the date of the Contract Documents except where a specific publication date or issue is included with the reference in other Sections of these Specifications.
 - 1. When a named or proposed product complies with a referenced standard of different publication date or issue than required by these Specifications, submit the product as a substitute under provisions of Division 1 Section “Substitutes.” Provide a detailed written summary of changes in product or workmanship quality and performance as a result of the product complying with a different version of a standard from the version referenced.

- C. **Conflicting Requirements:** Where 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 the University's Representative for a decision before proceeding.
 - 1. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicate numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the University's Representative for a decision before proceeding.
 - 2. Where a product is specified by both brand name and reference to 1 or more standards, provide that product only if it actually complies with the required standards. Listing of a product by brand or trade name in these Specifications is not a warranty that the product complies with the standards which may also be listed. If a named product does not comply with 1 or more of the required standards and no alternative product is listed which does comply, submit a substitute product under provisions of Division 1 Section "Substitutes" which complies with the required standards.

- D. **Copies of Standards:** Each entity engaged in construction on the Project must 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, the Contractor shall obtain copies directly from the publication source and make them available on request.

1.5. **ABBREVIATIONS AND ACRONYMS**

- A. **Trade Abbreviations and Association Names:** Trade association names and titles of general standards are frequently abbreviated. The following abbreviations and acronyms, as referenced in the Contract Documents, mean the associated names. Names and addresses are subject to change and are believed, but not assured, to be accurate and up-to-date as the date of the Contract Documents.

- B. **Federal Government Agencies:** Names and titles of Federal Government standards- or specification-producing agencies are often abbreviated. The following abbreviations and acronyms referenced in the Contract Documents indicate names of standards- or specification-producing agencies of the Federal Government. Names and addresses are subject to change and are believed, but are not assured, to be accurate and up-to-date as of the date of the Contract Documents.

- C. The following are commonly used abbreviations which may appear in the Project Manual. Refer to Construction Specifications Institute Document TD-2-4 "Abbreviations" for explanation of other abbreviations.

C	degree Centigrade
Co.	Company
Corp.	Corporation
F	degree Fahrenheit
ft.	foot (feet)
ga.	gage or gauge
gal.	gallon(s)
in.	inch(es)

Inc.	Incorporated
HVAC	Heating, Ventilating and Air Conditioning
lb(s).	pound(s)
o.c.	on center
psi	pounds per square inch
psf	pounds per square foot
sq.	square
yd.	yard(s)

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

SECTION 01 4300 INSPECTION OF WORK

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes, without limitation, the following:
 - 1. Access to the Work
 - 2. Testing and Approval
 - 3. University's Inspectors
 - 4. Inspection Requests
 - 5. Inspection Request Form
 - 6. Nonconforming Work Notice
- B. The University will provide a Project Inspector or Inspector of Record (IOR) for this project. Contractor shall not cover any work requiring inspection until the IOR has inspected and approved the subject work. For uncovering of work, refer to General Conditions, Article 12.

1.2 ACCESS TO THE WORK

- A. In addition to the requirements of the General Conditions, University, University's Representative and their representatives shall at all times have access to the Work wherever it is in preparation or progress and Contractor shall provide safe and proper facilities for such access and for inspection. The inspection and written acceptance of material and workmanship, unless otherwise stated in these Specifications, shall be final except as provided in Article 12.2 of the General Conditions.

1.3 TESTING AND APPROVAL

- A. In addition to the requirements of the General Conditions, if any law, ordinance or public authority or the Specifications or University's Representative's instructions require any work to be specially tested or approved (including use of ionizing radiation for radiography), Contractor shall give University's Representative timely notice of its readiness for inspection, and if the inspection is by another authority, other than University's Representative, of the date fixed for such inspection.
- B. Re-examination of questioned work may be ordered by University's Representative.

1.4 UNIVERSITY'S INSPECTORS

- A. The IOR shall work in close coordination with the University's Representative findings of completed inspections. The IOR is a direct report to the Director of Building, Safety and Emergency Management. The IOR shall observe construction in progress and shall have the following responsibilities and limitations on authority.
 - 1. Act in coordination with the University's Representative.
 - 2. Observe installation and work in progress as a basis for determining conformance of the work, materials and equipment with the Contract Documents. IOR will report any discrepancies observed to University's Representative and Contractor. Only University's Representative has the final authority to make approvals or rejections.
 - 3. Only University's Representative shall interpret the requirements of the Contract Documents. If any item is ambiguous, University's Representative shall make a written interpretation. If Contractor requests changes or modifications to the Contract Documents, University's Representative shall make a written

determination on the requested changes or modifications.

4. Prepare and submit an inspection report to University's Representative for each inspection performed.
 5. Review application for payments.
 6. Assist University's Representative in reviewing the test and inspection results of testing laboratories.
 7. The IOR is not authorized to permit deviations from the requirements of the Contract Documents unless such deviation has been approved by University's Representative in writing.
 8. The IOR shall not supervise, coordinate, or direct the Work. The IOR has no responsibility or control over Contractor's construction means, methods, techniques, sequences, procedures, or coordination of any portions of the Work, or over any safety programs in connection with the Project.
- B. The failure of University, University's Representative and its representatives and consultants, or University's IOR to observe or inspect the Work, or to detect deficiencies in the Work, or to inform Contractor of any deficiencies which may be discovered, shall not relieve Contractor, its subcontractors regardless of tier, or suppliers from their responsibility for construction means, methods, techniques, sequences and procedures, construction safety, nor from their responsibilities to carry out the work in accordance with the Contract Documents and to detect and correct defective work as defined in the General Conditions.

1.5 INSPECTION REQUESTS

- A. Contractor shall request inspection of completed portions of the Work through University's Representative, using the UC Riverside Department of Building and Safety, Inspection Request Software. Contractor shall submit a request for inspection using University's Inspection Request Software, with instructions for using that software attached to the end of this Section.
1. Contractor shall submit an Inspection Request **at least 3 working days prior** to the time the work will be ready for inspection.
 2. For work to be inspected by a third party testing laboratory, whether Contractor's or University's, Contractor shall submit an Inspection Request **at least 3 working days prior** to the time the work will be ready for inspection.
 3. For work not in conformance with the Contract Documents, the IOR shall submit to the Contractor a Nonconforming Work Notice.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

- 2.1 Refer to the Inspection Request Software instructions attached at the end of this Section.
- 2.2 Refer to the Nonconforming Work Notice form attached at the end of this Section.

END OF SECTION

INSPECTION REQUEST SOFTWARE INSTRUCTIONS

INSPECTION REQUEST INSTRUCTIONS USING THE **CFORMS** and/or new **Campus Building Permit Citizenserve Inspection Request Process**.

NOTE: The CForms Inspection Request Process is to be used only for Campus Building Permit numbers B21-510 and lower. The new Campus Building Permit Citizenserve Portal is required to be used for all Campus Building Permit numbers B21-511 and above.

1. **CForms**-For inspection requests using the older CForms Inspection Request System, log into <http://ucr.cforms.net>. Follow instructions.
2. **Citizenserve**-For newer Campus Permit Inspection Requests, Create an account and log into the new Campus Building Permit Citizenserve System. This can now be found on the PD&C website or "Copy and paste" <https://citizenserve.com/ucr> and then follow the instructions provided.
3. Complete Automated Inspection Request Form
4. Select your Permit # from the drop-down menu and request the inspection you need.
5. In either system, a notification will go out to the inspector on the project., advising them that there is an inspection request pending their review.
6. Once requested inspection is conducted, the IOR will input the disposition into Inspection Request system (approved, disapproved, corrections, etc.). There may be other attachments such as reports, photos, notes, etc., added to the inspection request disposition as well.
7. Results of the inspection is input after the inspection in real-time and it can be viewed by all parties real-time. . Inspectors may also upload photos and other documents and attach them to the inspection file in the Inspection Request System
8. Completed "As-Built" plans of project shall be provided to Inspector of Record (IOR) prior to final inspection signature is allowed.
9. Once the work is completed, request a final inspection and a final inspection will be conducted. If approved, the permit will be signed as approved and complete., and a Certificate of Occupancy will be prepared for signature by the Campus Fire Marshal and Campus Building Official

NOTE: If you are not already associated with a permit, a request to be added to that specific permit must be completed prior to an inspection request being submitted. *Access to Specific Permits must be granted by the Building and Safety Division. Contact Lezlie Howard at the Building and Safety Division for authorization and assistance in gaining access to these specific permits.

NONCONFORMING WORK NOTICE
NUMBER: _____
DATE: _____

TO:

FROM:

SPEC. SEC. REF.: _____ PARA: _____ DWG REF: _____ DETAIL: _____

DESCRIPTION OF DEFECTIVE CONDITION (IOR): _____

REPORTED BY (IOR): _____

CORRECTIVE ACTION SHOULD BE TAKEN AS SOON AS POSSIBLE AND COORDINATED WITH THE INSPECTOR OF RECORD (IOR). IF FURTHER INFORMATION IS NEEDED, ADVISE THE UNIVERSITY'S REPRESENTATIVE IMMEDIATELY.

DESCRIPTION OF CORRECTIVE ACTION TAKEN (CONTRACTOR): _____

ACCEPTED BY (CONTRACTOR): _____ **DATE:** _____

UCR USE ONLY

ACCEPTANCE OF CORRECTED DEFECTIVE CONDITION (IOR): _____

ACCEPTED BY (IOR): _____ **DATE:** _____

COPIES: UNIVERSITY CONSULTANT CONTRACTOR

**SECTION 01 4339
MOCKUPS**

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Design and Performance Requirements
2. Submittals
3. Quality Assurance
4. Materials
5. Examination
6. Construction
7. Review and Acceptance
8. Maintenance
9. Removal and Salvage
10. Mockup Schedule

B. Mock-ups will be used to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, interface, testing, and operation of various building components.

1. Construction of a free-standing, on-site, building wall mock-up on site.
2. Representative Residential Unit
3. Additional Material Mock-Ups: As required by the Specifications Sections.

C. Related Requirements:

1. Review requirements specified in other Sections for materials incorporated into the mock-ups.

1.2 DESIGN AND PERFORMANCE REQUIREMENTS

A. Design Concept: Wall mock-up is intended to permit verification of workmanship and visual qualities of the final completed installation.

B. Include, as part of wall mock-up as applicable, required shoring and bracing to support mock-up.

C. Mock-ups may be subjected to inspections, but are not intended for formal performance testing unless specified.

D. Make necessary additions and modifications to the details shown on the Drawings as may be required to comply with specified performance requirements while maintaining the design concept.

E. Accepted mock-ups shall be used as a visual standard for the final installation and, to the extent tested, performance requirements specified.

1.3 SUBMITTALS

A. General:

1. Review all Sections.
2. Procedures: In accordance with Section 01 3300, "Submittals."

B. Action Submittals:

1. Samples: Initial samples for materials to be incorporated into each mock-up shall be reviewed and approved prior to providing materials for mock-up and mock-up construction. Where actual final finished materials are not available for inclusion in mock-up, facsimile materials shall be submitted for approval.

C. Informational Submittals:

1. Although a temporary structure, Contractor shall submit documentation that building mock-up has been fabricated to meet structural requirements if requested by governing authorities.
2. Report of field testing on window elements of mock-up if testing is required.

1.4 QUALITY ASSURANCE

- A. Mock-up components shall be finished as required for completed installation including selected colors.
- B. Obtain approval from University's Representative of all mock-ups before starting work, fabrication or construction.
- C. Allow in Construction Schedule a minimum of 7 days for initial review and each re-review of each mock-up.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. General: Materials for the mock-up shall be as shown and specified in the Specification Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine site and area established by the University's Representative to receive free standing mock-up and conditions under which mock-up is to be constructed. Deficiencies shall be brought to the attention of the University's Representative and corrected as directed.

3.2 CONSTRUCTION

- A. Mock-ups shall be erected on site within the limits of work at a location to be determined by the University's Representative.
- B. Construct mock-ups as shown on Drawings and in accordance with reviewed submittals, complete with all required fastenings, bracing, and other elements, plumb and true, firmly erected and anchored.
- C. Anchorage and assembly shall conform to code requirements including seismic stability. Retaining a licensed engineer to assure mock-ups meet code requirements is the responsibility of the Contractor.
- D. Coordinate mock-up construction with delivery and assembly of related materials and components to be included in the mock-up.

3.3 REVIEW AND ACCEPTANCE

- A. Upon completion of mock-up construction, notify University's Representative and make arrangements for review, evaluation, and any testing required by University's Representative.
 - B. Modify mock-ups, or construct new components if requested by University's Representative until final acceptance is obtained.
 - C. Following acceptance, mock-ups shall remain on site and shall be readily identifiable to serve as a visual standard of quality and appearance of the work it represents, including interface with adjacent materials and components.
- 3.4 MAINTENANCE
- A. Maintain mock-ups in a clean condition and as approved by University's Representative.
- 3.5 REMOVAL AND SALVAGE
- A. Remove mock-ups prior to completion of Project but not before the work they are being used to judge has been accepted by University's Representative.
 - B. Where appropriate, accepted mock-ups and field samples may be incorporated into the finished work subject to approval of University's Representative.
- 3.6 MOCK-UP SCHEDULE
- A. Erect the full-size, representative exterior building wall mock-up as shown on the Drawings. As a minimum, this mock-up shall show the following components and materials.
 - 1. All exterior finish materials included in cement plaster and cladding systems of fiber cement siding, sheet meal panels, and brick veneer.
 - 2. Storefront and single hung windows, including exterior sun control.
 - 3. Underlayments and flashings; reviewed before installation of finish materials and windows.
 - 4. Include, as part of wall mock-up as applicable, required shoring and bracing to support mock up.
 - B. Residential Unit:
 - 1. Typical unit components of kitchen, bath and vanity.
 - 2. Kitchen, bath and vanity casework.
 - 3. Appliances (actual or dummy)
 - C. Additional Mock-Ups and Field Samples: As specified in other Sections.

END OF SECTION

SECTION 01 4500 QUALITY CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for quality-control services, without limitation, the following:
 - 1. Contractor's Responsibilities
 - 2. Tests and Inspections
 - 3. Test Reports
 - 4. Geotechnical Engineer and Other Special Inspection and Testing
 - 5. Repair and Protection
- B. Quality-control services include inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by University's Representative.
- C. Special Inspection and testing services are required to verify compliance with requirements specified or indicated. They shall be coordinated with the Project IOR in order for the IOR to accompany the Special Inspector on these inspections and testing services. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements, and are in addition to the regular daily IOR inspections which are required by California Building Standards Codes, project documentation, contracts and the Authority Having Jurisdiction, UC Riverside DCFM, and UC Riverside CBO and project IOR (AHJ),
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
 - 1. Specific quality-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 special inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-control services, required by University's Representative, are not limited by provisions of this Section.
- E. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Cutting and Patching" specifies requirements for repair and restoration of construction disturbed by special inspection and testing activities.

1.2 DEFINITIONS

- A. The term "University's Testing Laboratory" means a third-party independent testing laboratory retained and paid for by the University for the purpose of performing the testing services required by the Contract Documents except where specifically noted to be done by contractor, reviewing material and product reports, and performing other services as determined by University's Representative.
- B. The term "Contractor's Testing Laboratory" means a testing laboratory retained and paid for by Contractor to perform the testing services which are required by the Contract Documents to be performed by Contractor. Contractor's Testing Laboratory shall be an organization other than University's Testing Laboratory and shall be acceptable to University's Representative. It may be a commercial testing organization or the testing

laboratory of a trade association. Contractor's Testing Laboratory shall have performed testing of the type specified for at least five (5) years and shall maintain a separate General and Professional Liability Insurance, (Errors and Omissions,) in amount not less than one million dollars (\$1,000,000) each.

- C. Tests, special inspections, and acceptances of portions of the Work required by the Contract Documents or by Applicable Code Requirements shall be made at the appropriate times. Contractor shall give University's Representative timely notice of when and where tests and special inspections are to be made and/or required regardless whose Testing Laboratory will perform the tests and special inspections.
- D. If such procedures for testing, special inspection, or acceptance reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for University's Representative's services and expenses.
- E. If University's Representative is to observe tests, special inspections, or make acceptances required by the Contract Documents, University's Representative will do so promptly upon 3 days advance written notice and, where practicable, at the normal place of testing.
- F. Tests or special inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

1.3 CONTRACTOR'S RESPONSIBILITIES

- A. Secure and deliver to Contractor's Testing Laboratory adequate quantities of representative samples of materials proposed for use as specified.
- B. Submit to University's Testing Laboratory the preliminary design mixes proposed to be used for concrete and other materials which require review by University's Testing Laboratory.
- C. Submit copies of product test reports as specified.
- D. Furnish incidental labor and facilities, as required:
 - 1. To provide University's Testing Laboratory access to the Work to be tested.
 - 2. To obtain and handle samples at the Project site or at the source of the product to be tested.
 - 3. To facilitate special inspections and tests.
 - 4. For storage and curing of test samples.
- E. Provide written notice to University's Representative sufficiently in advance (a minimum of 3 days) of operations to allow for University's Testing Laboratory assignment of personnel and scheduling of tests.
- F. When tests or special inspections are not performed after such notice, Contractor shall reimburse University for University's Testing Laboratory personnel and travel expenses incurred.

1.4 TESTS AND SPECIAL INSPECTIONS

- A. Certain portions of the Work will be tested, inspected, or both, at various stages. Nothing in any prior acceptance or satisfactory test result shall govern, if at any subsequent time the Work, or portion thereof, is found not to conform to the requirements of the Contract Documents.
- B. If initial tests or special inspections made by University's Testing Laboratory's Geotechnical Engineer reveal that any portion of the Work does not comply with Contract Documents,

or if University's Representative determines that any portion of the Work requires additional testing or inspection, additional tests and inspections shall be made as directed.

- C. If such additional tests or inspections establish that such portion of the Work fails to comply with the Contract Documents, all costs of such additional tests and special inspections, and all other costs resulting from such failure, including compensation for University's Representative and University Representative's Consultants shall be deducted from the Contract Sum.
- D. Fixtures, equipment, materials, and other items removed, demolished, abandoned, or capped and left in place, shall be tested to verify that there is no damage caused after the items have been covered by construction.

1.5 TEST REPORTS

- A. University's Testing Laboratory and Contractor's Testing Laboratory shall submit five (5) copies of all reports to University's Representative, indicating observations and results of tests and indicating compliance or non-compliance with the Contract Documents.

1.6 GEOTECHNICAL ENGINEER AND OTHER SPECIAL INSPECTION AND TESTING

- A. The University shall retain and pay the expenses of a Geotechnical Engineer and materials testing, inspection and observation services consultant ("TIO Consultant") to perform inspection, testing, and observation functions specified by the University. Geotechnical Engineer and such other TIO Consultant shall communicate only with University and University's Representative. University's Representative shall then give notice to Contractor, with a copy to the University, of any action required of Contractor.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: Upon completion of special inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with Contract Document requirements for Division 1 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

END OF SECTION

**SECTION 01 4516
CONTRACTOR'S QUALITY CONTROL PROGRAM**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. This Section includes, without limitation, the following:
 - 1. Quality Control Program
 - 2. Submittals
 - 3. Qualifications of Quality Control Manager
 - 4. Reporting Procedures
 - 5. Implementation

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

1.2 SUMMARY

- A. This Section describes the requirements for implementation of a Quality Control Program by the Contractor to assure performance of the Work in conformance with the provisions of the Contract Documents.

- B. Related Work Specified Elsewhere:
 - 1. Testing and Special Inspection Services of Quality Control are specified in Section 01 4500, "Quality Control."

1.3 QUALITY CONTROL PROGRAM

- A. The Contractor shall prepare and submit within thirty (30) days after the issuance of Notice to Proceed, the Quality Control Program (QCP) they intend to implement for the Work for approval by the University. This Program shall be tailored to the specific requirements of the Work and shall become an active part of the construction procedures. The Quality Control Program shall include the procedures, instructions, reports and forms to be used throughout the performance of the Work. The University reserves the right to review and reject all or part of the Quality Control Program as proposed by the Contractor. The Contractor shall revise and resubmit as appropriate until satisfactory to the University. The basic objectives of the Quality Control Program are as follows:
 - 1. To ensure that all Work adheres strictly to all provisions of the Contract Documents and governing agencies.
 - 2. To produce good quality workmanship.
 - 3. To prevent deficiencies through pre-construction quality control coordination.
 - 4. To detect and correct deficiencies in a timely manner.
 - 5. To provide an auditable record of all tests, inspections, procedures, non-compliance and corrections, and any other pertinent data as required by the University.

- B. The Contractor shall notify the University in writing of any proposed change to their Quality Control system and changes shall not be permitted if they would, in the opinion of the University, result in nonconformance with the Contract requirements.

- C. The Contractor may select either an outside "agency" or in-house personnel to administer the program. In either case, the Quality Control staff on-site shall be responsible only for Quality Control and the Quality Control Manager shall report directly to the Contractor's highest ranking

Corporate Officer involved in the Work. Quality Control staff members shall interface with the University, its Inspectors and Consultants, as required and appropriate.

1.4 SUBMITTALS

- A. The Quality Control Program submittal shall include, as a minimum, the following:
1. The Quality Control organization chart, beginning with the Quality Control Manager, shall include Quality Control personnel as may be necessary to accomplish complete and adequate inspection of the Work.
 2. Names and qualifications of personnel and firms selected to implement the Quality Control Program on-site and off-site.
 3. Authority and responsibility of the Quality Control Staff.
 4. Methods of Quality Control inspection including subcontractor's work and describing name of qualified testing laboratory to be used, if applicable.
 5. Documents to be used to record inspections and tests, including those specified in the Contract.
 6. Formats for documentation and reports.
 7. Model agenda for Quality Control Meetings
 8. A letter signed by the Responsible Managing Officer of the Contractor's firm outlining the authority of the Quality Control Manager to include, among other things, the authority as described herein. Clerical personnel sufficient to accomplish timely submittal of Quality Control Reports and other required documentation shall be provided.

1.5 QUALIFICATION OF QUALITY CONTROL MANAGER

- A. The minimum qualifications required of the Quality Control Manager are as follows:
1. Has recent construction experience in projects of similar size and nature.
 2. Has ten (10) years' experience performing construction-related work on Type I or II buildings.
 3. Has seven (7) years' experience performing Quality Control services on Type I or II multi story projects. At least 3 years must be on projects in California.
- OR
4. Has recent construction experience in projects of similar size and nature.
 5. Possess current certification issued by State of California OSHPD Class A level or DSA Class 1 level.
 6. Has seven (7) years' experience performing Quality Control work or inspection services on multi story Type I or II projects. At least 3 years must be on projects in California.
- OR
7. Possess an undergraduate degree in architecture, civil engineering or construction management.
 8. Has five years (5) performing Quality Control services or inspection experience on Type I or II multi story buildings. At least 3 years must be on projects in California.
 9. Possess at least four special inspector current certifications issued by ICC.
- B. Responsibilities and Duties of the Quality Control Staff:
1. The Quality Control Manager shall have the authority to stop work, reject work, order work removed, initiate remedial work, propose solutions, and reject material not in compliance with the Contract Documents.
 2. Responsibilities of the Quality Control Manager shall include, but are not limited to the following:
 - a. Present on-site during all working hours and assigned "full time" to this Project. Contractor shall designate alternate individual(s) to assume responsibilities in the temporary absence of the Quality Control Manager or when overtime work is being performed.
 - b. Have complete familiarity with the Drawings and Specifications.

- c. Establish and implement Quality Control Programs for the Contractor and with the various Subcontractors and monitor their conformance.
- d. Present samples, mock-ups and test panels to be used as standards of quality for review by the University and their Consultants.
- e. Inspect existing conditions prior to the start of new work segments.
- f. Perform in-progress and follow-up inspections on each work segment to ensure compliance with the Contract Documents. Accompany the University and their Consultants on such inspections.
- g. Coordinate required tests, inspections, and demonstrations with the University's IOR inspectors, consultants and any other authority having jurisdiction.
- h. Inspect all materials and equipment arriving at the job site to ensure conformance to the provisions of the Contract Documents. Prepare and submit to the University written reports as required by the Contract Documents.
- i. Identify, report and reject defective Work or Work not in conformance with the Contract Documents. Monitor the repair or reconstruction of rejected Work.
- j. Develop checklists to be used for the inspection of each Division of the Work.
- k. Retain specialists or outside firms for inspection of Work in areas where additional technical knowledge is required (mechanical, electrical, electronics, controls, communications, security, welding, structural, security hardware, etc.).
- l. Schedule additional site visits where appropriate.
- m. Verify and report that all materials and equipment manufactured off-site are in conformance with the Contract Documents.
- n. Prior to the start of each Division, Section and/or major item of Work required by the Contract Documents, conduct a preconstruction Quality Control meeting with responsible field and office representative and the University and their Consultants. Provide the University and their Consultants minutes of these meetings within forty-eight (48) hours.
- o. Work closely with the University to ensure optimum Quality Control. Attend Project meetings as required by the University.

1.6 REPORTING PROCEDURES

- A. As a minimum, develop forms, logs and reporting procedures consisting of the following:
 1. A Quality Control meeting shall be held at least monthly between the University, Consultants and the Quality Control Manager during which only Quality related topics will be reviewed.
 2. A monthly written report published at month end providing an overview of Quality Control activities, problems found and/or solved, status of remedial work, status of mock-ups, anticipated problems and planned activities for the coming month, etc.
 3. Deficiency reports: Plan of action by the Contractor for correcting any known contract deficiencies including delay in scheduled progress.
 4. Weekly reports (including reports from Contractor and Subcontractors) to the University describing:
 - a. Equipment and material received.
 - b. Tests and inspections performed with submittal information.
 - c. Deficiencies noted and/or corrected.
 - d. Quality Control concerns and problems.
 - e. Record keeping (as required).

1.7 IMPLEMENTATION

- A. The Contractor's Quality Control program shall be adequate to cover all operations, including both on-site and off-site and will be keyed to the proposed sequence of work and shall include as a minimum at least three (3) phases of inspection for all definable items or segments of work, as follows:
 1. Preparatory inspection shall be performed prior to beginning any work on any definable segment of the Work and shall include a review of Contract requirements; verification that

all materials and/or equipment have been tested, submitted, and accepted; verification that provisions have been made to provide required control testing; examination of the work area to ascertain that all preliminary work has been completed; and a physical examination of materials and equipment to assure that they conform to accepted shop drawings or submittal data and that all material and/or equipment are available. As a part of this preparatory work, Contractor's Quality Control organization will review and verify that all documents, including but not limited to; shop drawings, submittal data, method of Quality Control, product data sheets, test reports, affidavits, certification and manufacturer's instructions have been submitted and accepted by the University as required herein. Each submittal to the University shall bear the date and the signature of the Contractor's Quality Control Manager indicating that he has reviewed the submittal and certified it to be in compliance with Drawings and Specifications or showing the required changes.

2. Initial Inspection: To be performed as soon as a representative segment of the particular item of work has been accomplished and to include examination of the quality or workmanship and a review of control testing for compliance with Contract requirements, exclusion of defective or damaged materials, omissions, and dimensional requirements.
3. Follow-up Inspection: To be performed daily or as frequently as necessary to ensure continuing compliance with Contract requirements, including control testing, until completion.
4. The Contractor shall maintain daily current records with information as described above, in an appropriate format of all inspections and tests that the required inspection or tests have been performed. These records must cover both conforming and defective items and must include a statement that all supplies and materials, incorporated in the Work, are in full compliance with the terms of the Contract. Two legible copies must be furnished to the University. The report will cover all work performed or completed subsequent to the previous report.

END OF SECTION

SECTION 01 5100 TEMPORARY UTILITIES

PART 1 – GENERAL

1.1. SUMMARY

A. Section includes:

1. Installation
2. Temporary Electricity
3. Temporary Water
4. Temporary Lighting
5. Temporary Heating, Cooling, and Ventilating
6. Temporary Telecommunications

1.2. INSTALLATION

- A.** Use qualified personnel for installation of temporary utilities. Locate utilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify utilities as required. Coordinate temporary utilities with University Representative, IOR and Facilities Services.
- B.** Provide each utility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until utilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- C.** Utility Service Connection: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.
1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.(Utilize the Utility Shut Down Forms whenever required)
 2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
 3. Obtain easements to bring temporary utilities to the site where the University's easements cannot be used for that purpose.
 4. Use Charges: Cost or use charges for temporary facilities are not chargeable to the University or University's Representative. Neither the University nor University's Representative will accept cost or use charges as a basis of claims for Change Orders.
- D.** Submittals:
1. Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
 2. Implementation and Termination Schedule: Within 15 days of the date established for commencement of the Work, submit a schedule indicating implementation and termination of each temporary utility. Temporary Utilities: Prepare a schedule indicating dates for taking over the responsibility of the existing temporary utilities that the University already has in place from the first phase and termination of each temporary utility. At the earliest feasible time, when acceptable to the University, change over from use of temporary service to use of permanent service.

E. Quality Assurance:

1. Comply with industry standards and applicable laws and regulations of the University including, but not limited to, the following:
 - a. Potentially hazardous materials.
 - b. Health and safety regulations.
 - c. Utility company regulations.
 - d. Police, fire department, and rescue squad rules.
 - e. Environmental protection regulations.
2. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
 - a. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."
3. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.
4. Construction Facilities and general construction activities shall comply with the energy use guidelines in Title 24 of the California Administrative Code.

1.3. TEMPORARY ELECTRICITY

- A. Temporary Electric Power Service: Electric power will be furnished by the University at cost of \$0.087/KWH. Provide weatherproof, grounded electric power service and distributions system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters, and main distribution switch gear.
1. Contractor Responsibilities:
 - a. The University is providing temporary power equipment for the Contractor's use at the management trailer compound. The equipment includes; power skid, meter, quad-plex wire, panel board and Nema enclosure. Install project site electric power service with a meter at the point of connection designated by the University's Representative. Refer to the diagram for locating temporary power connections at the end of this section.
 - b. Maintain connections and extensions in a safe manner and utilize so as to not constitute a hazard to persons or property.
 - c. Connections and extensions will be subject to OSHA regulatory requirements. Immediately remove or remedy connections and extensions that represent safety hazards or cause undue interruption of University's normal operations.

1.4. TEMPORARY WATER

- A. Water Service: Water for use in construction, testing, and irrigation will be furnished by the University at a cost of \$1.12/CCF (748 gallons).
1. Contractor Responsibilities:
 - a. Provide meter and all connections and extensions required.
 - b. Maintain connections and extensions in a safe manner and utilize so as to not constitute a hazard to persons or property.

- c. Connections and extensions will be subject to approval of the University. Immediately remove or remedy connections and extensions that represent safety hazards or cause undue interruption of University's normal operations.

1.5. TEMPORARY LIGHTING

- A. Temporary Lighting: Provide temporary lighting with local switching as required to supplement existing lighting.
- B. Temporary Exterior Lighting: Install exterior yard and sign lights so signs are visible when Work is being performed.

1.6. TEMPORARY HEATING, COOLING, AND VENTILATING

- A. Temporary Heat: Provide temporary heat required by construction activities. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.
- B. Maintain temperature at less than 60 degrees F (16 degrees C) in permanently enclosed portions of the building and areas where finished Work has been installed.
- C. Heating Facilities: Except where the University's Representative authorizes use of the permanent system, provide vented, self-contained, LP-gas or fuel-oil heaters with individual space thermostatic control. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.

~~1.7. TEMPORARY TELECOMMUNICATIONS~~

- ~~A. Temporary Telephones and Data Services: Provide temporary telephone and data service at the existing Construction Trailer site throughout the construction period for all personnel engaged in construction activities as described below.~~
 - ~~1. Provide Communications Work Order(s) (e.g. voice add and/or data add) for service through UCR Computing & Communications (UCR C&C), Communications Services, contact Sheri Morgan at (951) 827-3979. Contractor is responsible for providing Network Electronics, Telephone Sets and all installation and monthly recurring service charges.~~
 - ~~2. Install separate telephone lines (phone numbers) for each temporary trailer/office and first-aid station. At each telephone, post a list of important telephone numbers.~~
 - ~~3. Provide telephone lines and telephone sets for the following:
 - ~~a. Contractor's field trailer/office: Direct line telephones (telephone lines and telephone sets) as required.~~
 - ~~b. University's Representative's field trailer/office: Three (3) Direct line digital telephones and three (3) telephone sets.~~~~
 - ~~4. Provide data connections for the following:
 - ~~a. Contractor's field trailer/office: as required. NOTE: A signed and approved Memo of Understanding (MOU) between Contractor(s) and UCR C&C will be required for all data services that are to be provided to Contractor(s).~~
 - ~~b. University's Representative's field trailer/office: Provide four (4) data connections.~~~~

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

EXHIBIT A

Utility Shutdown-Protocol and Forms

University of California, Riverside-Facilities Manual

In order to provide clearer direction to the project Design Professional and also to the Contractor for the processes and procedures to request and obtain shutdowns using the Utility Shutdown Request (USR), as well as to assist Campus Staff members and faculty in coordination of this process, the following “Utility Shutdown Protocol and Procedures” is created. This shall be part of Division 1, of the project specification manual as part of the detailed submittals for any university projects requiring shutdown and turn-on of any utilities.

University of California, Riverside-Utility Shutdown Protocol and Procedures

The following **Utility Shutdown Protocol and Procedure** has been created in order to directly fulfill the requirements set out in the UCOP Facilities Manual. Additionally, it will ensure that design professionals, contractors and the campus community are provide with proper, timely and accurate utility shutdown information; ensures and maintains a documented, organized and orderly procedure for design professionals who prepare construction documents for projects at the University, as well as requiring all contractors who work on University construction projects, to follow a strict protocol and procedure, which will be a uniform standard for all utility shutdown events, during construction projects, at the University. The following is that protocol. This document shall be included in the project specifications manual for all projects, with all of the required attachments, forms and other related documents completed for each Utility Shutdown activity.

1. General

- a. The coordination of Utility Shutdowns has become increasingly complex at UCR due to the increase and complexity of construction activity and the effect utility shutdowns have on surrounding people, buildings and facilities. By nature, utility shutdowns affect a variety of stakeholders, including students, faculty, researchers, administration, pedestrians, security and law enforcement personnel, and various departments within UCR (Communications, Information Technology, Operations and Maintenance of Plant (OMP), Building Maintenance and Custodial Services, etc.), as well as the surrounding general public. Impacts to life safety and security systems, as well as automatically and mechanically controlled climate systems on campus, are particularly critical when considering utility shutdowns. To minimize negative impacts, UCR has developed procedures and guidelines for design professionals and contractors to use when planning for and requesting a utility shutdown on all construction projects.
- b. Contractor requested Utility shutdowns are discretionary on UCR’s part. Not until UCR has reviewed the utility shutdown request application, and has been fully apprised of the potential risks and impacts, and any necessary contingency plans, will the Utility Shutdown Request (USR) be granted. It shall be the sole responsibility of the design professional and contractor to provide the above information, in accordance with the provisions in this section. This procedure and protocol, as well as all associated forms and schedules, in addition to the information requested herein, shall be included in the Division 1 section of the project specifications manual for each project, so that preliminary approval can be obtained prior to project commencement. The final approved Utility Shutdown Plan shall be included in the 100% Construction documents, project specifications manual.
- c. The procedures and guidelines provided herein may be changed at any time by UCR for security, safety, and other operational reasons and needs.

2. Definitions

- a. **Contingency Plan:** Based upon the findings identified in the Impact Analysis, a Contingency Plan may be required by the university. This plan will identify those actions necessary to

mitigate and/or minimize disruptions in utility service and to maintain operational readiness during a utility shutdown. The General Contractor shall provide all necessary management, personnel and material resources needed to execute the plan at the time of the utility shutdown event, and such shall be included in this Contingency plan.

- b. **Contractor:** As used herein, the Contractor is the entity with overall responsibility for executing the scope of work necessitating the utility shutdown. This could be the General Contractor for a specific capital construction project, a tenant improvement contractor for a tenant improvement project, or any Operations and Maintenance of Plant (OMP) project or any other entity who is authorized by the university.
- c. **Impact Analysis:** The Impact Analysis identifies all systems, operations, and parties that will be affected by the proposed shutdown of the utility and specifically what that impact is. It shall include sufficient field forensic investigations to verify as-built conditions and that all systems and parties affected by the shutdown have been identified. Drawings and work plans shall be developed to convey actual field conditions and affected physical areas and infrastructure of the facility. This research shall also identify the affected stakeholders and the resulting impacts to their operations. This Impact Analysis will be used by UCR to determine the need for development of a **contingency plan**.
- d. **UCR Architects and Engineers (A&E):** is the authority requiring, and who is responsible for the review and approval process for all Capital Program project USR's and all construction documents at UCR.
- e. **Campus Building Official/Senior Construction Inspector Of Record (IOR):** Is the UCR field representative directly responsible for all construction inspections, general oversight and enforcement of all code requirements and approved construction documents, including all USR's, for the construction project. He/she will be instrumental in oversight of the Utility Shutdown event and will be present during the event.
- f. **Project Manager (PM):** Is the UCR representative directly responsible for the preparation and general oversight and coordination of the construction project, and who is involved with the overall review, scheduling and approval of the Utility Shutdown Request (USR).
- g. **Utility Shutdown:** A utility shutdown is any disruption or disconnects of continuity (including abandonment) of any and all utility systems for any length of time. This includes, but is not limited to: electrical, water, natural gas, fuel, fire alarm, security/automatic security cameras, sewer, communications, HVAC, automatic fire sprinkler system, etc.
- h. **Utility Shutdown Plan (USP):** The overall plan, which includes **Utility Shutdown Request Form, Impact Analysis, Shutdown Calendar**, and all other details relating to the shutdown of any utilities on a specific Capital Programs, Construction and Design Project. This (**USP**) shall be submitted and included in the Construction Documents and Project Specifications Manual for each specific project.
- i. **Utility Shutdown Request (USR):** The USR form identifies the time and date of the proposed shutdown, the type of shutdown, specific location, work area, affected buildings/systems, point of contact for the contractor, etc. It also includes a required Impact Analysis. A check list is attached to the form to assist the contractor in addressing the impact analysis.

3. Protocols

- a. Utility Shutdowns are defined as a singular event; one turn-off/one turn-on.
- b. Generally speaking, shutdowns should occur during a maximum of a four hour window on weekends and/or during the hours of 12 am and 5 am within a 24 hour period, unless otherwise approved by UCR.
- c. One USR is required for each 24 hour period, even if the preceding shutdown is being duplicated.
- d. Contractors shall follow UCR “Lockout/Tagout” procedures. An approved “Lock Out/Tag Out” program and confined space program, reviewed by UCR EHS, shall be detailed and included for all Electric Panels and circuitry, and/or any other utility service which is being worked on or any confined space and included in a project. This program information shall be included in all USR related documentation provided by the design professional and the contractor and it shall also be included in the contract documents submittal and project specification manual. All parties involved in the lockout/tagout process, such as, contractor, subcontractors, UCR Operations and Maintenance of Plant, should apply their own locks and tags. No share lock is allowed at all time.
- e. A single USR form is required for the physical shutdown of a single utility. If, by shutting down one utility, this causes loss of other systems or utilities, those other systems and utilities are identified and addressed in the Impact Analysis. For example; a shutdown of electrical may cause the loss of the Fire Alarm. The loss of the Fire Alarm is addressed as an impact.
- f. A USR is required for the physical shutdown of each utility even when occurring during the same time period. For example, if both electrical and water are proposed to be shut down during a given period, two URS Forms are required. Each utility shutdown will result in different impacts, likely independent of the other, and therefore will undergo independent evaluations and approvals.
- g. Utility Shutdown Request (USR) must be submitted 30 calendar days prior to the proposed utility shutdown, unless otherwise required or authorized by UCR. In the event that there is an “immediate” or “emergency” utility shutdown which must occur with less than a 30 day notice, then UCR Project Manager shall be notified with absolutely as much time as possible with all required details and impacts included in the request. UCR Staff will assist in this request as quickly as possible however no shutdown will be approved until all documents and review are completed.
- h. USR’s are submitted electronically or manually, including all required documentation, and they are to be included in the project specifications for each specific Capital Programs project.
- i. Status of each USR review is available from the Project Manager for each project.
- j. Only UCR Operations and Maintenance of Plant (OMP) personnel are permitted to disrupt or disconnect any utility system.
- k. Personnel required to be at all shutdowns include the Operations and Maintenance of Plant (OMP) personnel, who will be conducting the actual shutdown; the UCR Contractor of Record; as well as Architects & Engineers (A&E) inspectors. In addition, shutdowns may require other A&E Staff, UCR Environmental Health & Safety, UCR Police Department, and UCR subcontractors. All other resources necessary for the

successful shutdowns and restoration are provided by the Contractor at the time of the Shutdown and turn-on of utilities.

- l. Only one primary switchboard is to be shutdown at any given time.
- m. Electrical shutdowns may be required to be scheduled at a minimum of three days apart.
- n. A utility shutdown may be canceled the night of the shutdown for any of the following reasons:
 - i. All elements identified in contingency plan are not in place;
 - ii. Contractor is not ready within 30 minutes of scheduled shutdown;
 - iii. Security and operational readiness issues identified by UCR Staff;
- o. If a shutdown is canceled for any reason, the Project Manager (PM) and Construction Inspector of Record (CIOR) shall be contacted immediately. The Project Manager and Construction Inspector of Record will then notify all stakeholders of the cancelation.

4. UCR Roles and Responsibilities

- a. **UCR Operations and Maintenance of Plant (OMP) (performs ALL shutdowns):** (OMP) is a division within the Finance and Business Operations Research and Development unit (REDFBO) and is the ONLY party allowed to physically disrupt or disconnect any utility system. The role of (OMP) is to provide maintenance of the overall University facility. Utility shutdowns are therefore resource constrained, and will be scheduled based on availability of those resources, while recognizing that it will be necessary to schedule those required resources, and calculate all fees for the service as early as is possible.
- b. **UCR A&E, Construction Inspector of Record (CIOR) (participants on ALL shutdowns):** UCR Construction Inspectors will be present at the beginning, periodically during and at the end of all utility shutdowns and turn-on events. Inspections shall certify that the utility has been re-established satisfactorily and (CIOR) will document the same. UCR Inspector shall communicate UCR lockout/tagout procedure with the contractor.
- c. **UCR A&E, Project Manager (PM) (participant in ALL shutdowns):** The designated Project Manager is the single point of contact for the contractor for all utility shutdowns. The PM has the initial responsibility to approve and/or reject the USR and, with others, will review the Contractors implementation of the Contingency Plan and proposed execution of the utility shutdown and may be at the site at the time of shutdown and/or turn-on.

5. Design Professional Roles and Responsibilities

- a. Each project **Design Professional** shall submit, and include in the project documents and specifications manual, the detailed **Utility Shutdown Plan** which, upon a necessary shutdown of any utilities, shall identify all of the utilities affected, how the utility is to be isolated, maximum allowable duration of interruption (if applicable) and the affected facilities and systems, and lockout/tagout procedures for all shut downs. This plan will include the **Impact Analysis** which identifies all systems, operations, and

parties which will be affected by the proposed utility shutdown of the utility and specifically what that impact is. It shall also include sufficient field forensic investigations to verify as-built conditions and that all systems and parties affected by the shutdown have been identified, as well as all other required or requested data or information needed to substantiate, organize and schedule the proposed shut down of utilities.

- b. In communication with the Project Manager for the specific project, the Design Professional of Record shall meet with all **Shutdown Stakeholders** in order to address/mitigate fully, all comments or concerns raised by the utility shutdown activity. The Project Manager will coordinate this meeting.
- c. Once all comments and issues are discussed and addressed, and/or the initial Utility Shutdown Plan is approved, the Design Professional will correct and re-submit all Utility Shutdown Plan documents to the Project Manager and for inclusion in the Construction Documents and Project Specifications Manual.
- d. Design Professional shall prepare all Utility Shutdown forms for Contractor of Record (Unknown at this time).
- e. Design Professional shall ensure that all Construction Documents are updated so that final "As-Built" documents reflect all Utility Shutdown activity for this project.
- f. Design Professional of Record may be involved further at the time of the Utility Shutdown event.

6. Contractor Responsibilities

- a. The Contractor is responsible for submitting a **Utility Shutdown Request (USR)** for each and every proposed utility shutdown event, each with a minimum of 30 calendar days lead time prior to each requested shutdown event date. Emergency Shutdown events will be handled on a case by case basis, however as much prior notice as possible, shall be provided to the Project Manager. Immediately notify the Project Manager if/when this occurs. Only UCR A&E team members in conjunction with OMP shall decide if the event is an "emergency".
- b. Contractor is responsible for reviewing the Impact Analysis to be included with the USR. The Impact Analysis must include the specific location of the utility shutdown, documentation of field forensic investigations to verify as-built conditions and all systems and parties affected by the shutdown, lockout/tagout procedures, and the specific impact to each system and party affected. Documentation can include written narrative, diagrams, sketches, and photos as appropriate. The Impact Analysis shall include a specific work plan for providing contractor personnel and equipment to support the shutdown, including requirements generated by the impacts to other systems and parties. The Impact Analysis must also identify the need for support from other entities such as UCR Communication and Computer Systems Services, UCR OMP, UCR EH&S, UCR Police Department, UCR Subcontractors, and others. Early notice is imperative for proper coordination.
- c. Contractor is responsible for developing and implementing a contingency plan, if requested by UCR, to mitigate specific impacts during the shutdown. Any and all resources, including equipment, manpower and supervision required for the execution of the contingency plan are the responsibility of the contractor. This includes, but is not

limited to, temporary signage, temporary power, clean-up of collateral damage, operational workarounds, etc. This may include all areas and systems impacted by the shutdown.

- d. The Contractor is responsible for issuing a rolling 30 or 45 day look-ahead calendar that includes the identification of all projected USR's. The calendar shall be submitted weekly to the Project Manager and shall identify the contractor's utility shutdown identification/number (CUSR) and the date and type of the proposed shutdown. If modifications are needed the schedule shall be submitted to the Project Manager within 24 hours of identification of the change. Upon notification the Project Manager will immediately notify UCR OMP and UCR EH&S.
- e. The Contractor is responsible for implementation of the approved USR including all supporting elements and required contingencies within the designated schedule, as initially approved.
- f. During the utility shutdown, the Contractor is responsible for documenting previously unknown conditions found at the shutdown location, and for including them on the official project construction documents for permanent archiving with the Architects & Engineers Office.
- g. The Contractor is responsible for contacting the Project Manager, Physical Plant (OMP), EH&S and the Inspector (CIOR) at least 2 hours prior to the actual utility shutdown and prior to the utility restart. If there is any delay in the shutdown or restart from the approved schedule, the Contractor is responsible for notifying the (PM), (OMP) and (CIOR) as soon as that information is known.

7. Process and Procedures for Submitting USP and USR's

- a. The Design Professional shall submit, included in the project documents and specifications manual, the initial detailed Utility Shutdown Plan (USP), which includes and identifies all utilities affected, how the utility is to be isolated, maximum allowable duration of interruption (if applicable) and the affected facilities, and lockout/tagout procedures for all major shut downs. Design Professional shall also specify by-pass or temporary service if required to minimize disruption to the University. This plan, which includes the prepared Utility Shutdown Request (USR) will be included in the project specifications manual, once the request is approved.
- b. The Contractor submits the project USR, in electronic or hard copy format, including the Impact Analysis (mandatory), to the Office of Architects and Engineers, Project Manager. This shall be included in the project construction as built specifications manual. This starts the 30 calendar day period allowed for processing the USR. Any revisions or additions to the submitted USR, necessitating the re-submittal of the USR, will result in the restart of the 30 calendar day period.
- c. The PM will review the submitted USR for need, completeness of the USR (including the mandatory Impact Analysis), and compliance with the 30 day notification period. Any required changes to the USR or Impact Analysis along with any requirement for a contingency plan will be transmitted to the Contractor from the PM. The PM will provide the initial approval of the USR.

- d. Following the initial approval by the PM the USR, Impact Analysis, and Contingency Plan (if required) will be reviewed by Physical Plant (OMP), Environmental Health & Safety (EH&S) and other stakeholders. This review will include a technical review of the Impact Analysis, by impacted stakeholders, and coordination of schedule for the utility shutdown.
- e. Upon a satisfactory review of the USR, including the Impact Analysis and Contingency Plan, the PM will schedule a Stakeholder Coordination Meeting, if needed. This meeting is chaired by the PM and includes the Contractor and all applicable stakeholders identified in the USR or as part of the review process. The purpose of the meeting is to review all elements of the utility shutdown including the review of impacts and applicable contingencies to assure all known elements have been addressed. The USR and applicable Contingency Plan can be modified in this meeting provided all stakeholders are in agreement, the modification does not impact any additional stakeholder not in attendance, and the resulting shutdown in the field can be fully supported.
- f. Upon satisfactory completion of the Stakeholder Coordination Meeting, the PM will obtain final approval signatures.
- g. The PM will return the approved (USR) to the Contractor with copies to the (OMP, EH&S) and all stakeholders identified in the (USR) as well as other parties identified by the UCR Staff.
- h. Following approval of a (USR), if the (USR) is cancelled for any reason, the PM will immediately notify all stakeholders of the cancellation.

8. Sample Forms and Checklists

- a. Utility Shutdown Request Application (USR)
- b. USR Impact Analysis
- c. USR Impact Analysis Check List
- d. Utility Shutdown Request for Assistance
- e. Utility Shutdown Process Flow Diagram

UTILITY SHUTDOWN REQUEST (USR)

APPLICATION (USR) #2021USR-_____

PD&C Project Number: _____ **Contractor USR Tracking Number:** 2021USR-2021-950XXX

Construction Project Description: _____ **Project Manager:** _____

1. E-mail/submit one (1) form for each utility being requested for shutdown. You must fill out separate forms for each shutdown request.

2. Shutdown information times shall be in half-hour increments.
 3. E-mail completed form to the Services and PD&C Project Manager.
 4. Requests must be received a minimum of 30 days prior to the utility shutdown event time-NO EXCEPTIONS
 5. Utilities shall be shutdown and restored by Facility Services personnel ONLY.
 6. The shutdown will not occur unless the Contractor is present at the shutdown location and work area.
 7. Please complete the form in its entirety including attached Impact Analysis and Impact Analysis Checklist.
- INCOMPLETE FORMS WILL NOT BE PROCESSED.**
 NOTICE: All forms received on Saturday, Sunday or after 1:00 p.m. (Weekdays) will be marked as "RECEIVED" on the following business day.

SHUTDOWN TIMES MAY CHANGE WITHOUT NOTICE DUE TO UNIVERSITY OPERATIONAL PRIORITIES

(Select ONE utility per form)

- Water
 Electrical
 Gas
 Fire Alarm
 Security System
 HVAC
 Sewer
 Automatic Fire Sprinklers
 Communications
 HVAC
 Lab Vacuum
 Lab Air
 Other _____

LOCATION INFORMATION:

Specific Location: _____
 Work Areas Adjacent To: _____
 Affected Buildings/Systems: _____
 Purpose: _____
 Floor Level: _____ Landside Area: _____
 Building to Remain Occupied? Yes No
 Is this a Laboratory? Yes No

Contractors Signature: _____

CONTACT INFORMATION:

Subcontractor: _____ Contact Name: _____
 Phone Number: () _____ - _____ FAX: () _____ - _____ E-MAIL: _____

SHUTDOWN INFORMATION:

Day: _____ Date: _____ Time: _____
 Contractor Requestor's Name: _____
 Phone: () _____

RESTORE INFORMATION:

Day: _____ Date: _____ Time: _____
 Position/Title: _____
 CONTACT E-MAIL: _____

DO NOT WRITE BELOW THIS LINE FOR UNIVERSITY OF CALIFORNIA, RIVERSIDE USE ONLY

Date (USR) Received: _____ Time: APPROVED DENIED (NOT APPROVED)
 Comments: _____
 Director-Signature: _____ Date: _____ Project Manager-Signature: _____ Date: _____



UTILITY SHUTDOWN REQUEST(USR)

APPLICATION (USR) #2021USR-_____
IMPACT ANALYSIS (1 of 3)

Project No. _____ PD&C Project Manager: _____

Construction Project Description: _____

Detailed Description of Utility to be Shutdown:

Specific Location:

Lockout/Tagout :

Lock Out/Tag Out Plan:

Affected Systems/Equipment:

Impact of Work on Systems/Equipment/Stakeholders:

Plan to Mitigate Impacts:

Proposed Work Plan for Implementing the Shutdown:

Affected Systems/Equipment:

Impact of Work on Systems/Equipment/Stakeholders

Plan to Mitigate Impacts:

Proposed Work Plan for Implementing the Shutdown:

ATTACH DOCUMENTATION FO FIELD FORENSIC INVESTIGATION, SKETCHES, DIAGRAMS, PHOTOS, AND ADDITIONAL NARRATIVE EXPLANATION AS APPROPRIATE. PROVIDE NAME OF SPECIFIC STAKEHOLDERS IMPACTED



UTILITY SHUTDOWN REQUEST(USR)

APPLICATION (USR) #2021USR-_____
 IMPACT ANALYSIS (2 of 3)

UCR Project Number: _____ PD&C Project Manager: _____

Construction Project Description: _____

Utilities to be shut down: _____ Locations: _____

Field Forensics Investigations and Documentation Complete Date of Completion: ____/____/____

NOTE: CONTRACTOR IS REQUIRED TO COMPLETE AND DOCUMENT FIELD FORENSIC INVESTIGATIONS TO VERIFY AS-BUILT CONDITIONS

Impacted Facilities	Yes	No	Description
Parking Structure-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sports Field-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Student Recreation Center----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Laboratory-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Administration Building -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Class Rooms-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Streets-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Facility Services-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Central Plant/Steam Plant-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sports Facility-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other-----	<input type="checkbox"/>	<input type="checkbox"/>	_____

Impacted Parties (Stakeholders)	Yes	No	Description
Students-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Faculty -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Administration-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Vendors-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other Contractors/Projects--	<input type="checkbox"/>	<input type="checkbox"/>	_____
UCR Department-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
IT/Communications-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fire and Life Safety-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Police/Security-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Facility Services-----	<input type="checkbox"/>	<input type="checkbox"/>	_____

Impacted Systems	Yes	No	Description
Water-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sewer-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Electrical-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fire Sprinklers-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fire Alarms-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Gas-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Landscape/Water-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Security-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
HVAC-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
IT/Communications-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other -----	<input type="checkbox"/>	<input type="checkbox"/>	_____



UTILITY SHUTDOWN REQUEST(USR)

APPLICATION (USR) #2021USR-_____
IMPACT ANALYSIS (3 of 3)

Project Number: _____ PD&C Project Manager: _____
 Construction Project Description: _____
 Utility to be shut down: _____ Locations: _____
 Field Forensics Investigations and Documentation Complete Date of Completion: ____ / ____ / ____

NOTE: *CONTRACTOR IS REQUIRED TO COMPLETE AND DOCUMENT FIELD FORENSIC INVESTIGATIONS TO VERIFY AS-BUILT CONDITIONS*

<u>Work Plan Requirements</u>	<u>Yes</u>	<u>No</u>	<u>Description</u>
Parking Structure-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sports Field-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Student Recreation Center----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Laboratory-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Administration Building -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Class Rooms-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Streets-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Facility Services-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Central Plant/Steam Plant-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sports Facility-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other-----	<input type="checkbox"/>	<input type="checkbox"/>	_____

<u>Work Plan Reviewers</u>	<u>Yes</u>	<u>No</u>	<u>Description-(Specific Persons who will review this Work Plan)</u>
Students-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Faculty -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Administration-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Vendors-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other Contractors/Projects--	<input type="checkbox"/>	<input type="checkbox"/>	_____
UCR Departments-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
IT/Communications-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fire and Life Safety-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Police/Security-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Facility Services/Central Plant	<input type="checkbox"/>	<input type="checkbox"/>	_____

<u>Impacted Systems</u>	<u>Yes</u>	<u>No</u>	<u>Description</u>
Water-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sewer-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Electrical-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fire Sprinklers-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fire Alarms-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Gas-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
Landscape/Water-----	<input type="checkbox"/>	<input type="checkbox"/>	_____

UTILITY SHUTDOWN REQUEST (USR)

APPLICATION (USR) #2021USR-_____

Request for Assistance

Check Box if Meeting is Required Required (See Below)

Project No. _____ PD&C Project Manager: _____

Construction Project Description: _____

Time Charged to Complete this Request for Assistance: _____

Project Manager- Detailed Description of Assistance Requested from Facility Services:

Project Manager- Specific Location of Shutdown:

Project Manager- Affected Systems/Equipment Under Discussion:

Facility Services Response-Plan/Discussion to Mitigate Impacts or Proposed Work Plan for Implementing the Shutdown:

Schedule Meeting to Discuss:

ATTACH DOCUMENTATION FOR FIELD FORENSIC INVESTIGATION, SKETCHES, DIAGRAMS, PHOTOS, AND ADDITIONAL NARRATIVE EXPLANATION AS APPROPRIATE. PROVIDE NAME OF SPECIFIC STAKEHOLDERS IMPACTED

**SECTION 01 5200
CONSTRUCTION FACILITIES**

PART 1 – GENERAL

1.1. SUMMARY

- A. Section includes:
1. Supervision and Security
 2. Maintenance
 3. Field Offices and Sheds
 4. First Aid Facilities
 5. Sanitary Facilities
 6. Storage
 7. Termination and Removal

1.2. SUPERVISION AND SECURITY

- A. Staff Names: Within 15 days of commencement of construction operations, post a list of the Contractor's principal staff assignments, including the superintendent and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.
1. Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.
- B. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- C. Security:

1. Protection and security measures required by the University are considered minimum requirements. Provide additional measures as necessary and appropriate to the hazards of this Project. Employ all measures necessary to ensure the security of the Project site. Security measures provided by the University do not relieve the Contractor from responsibility for site security and protection of the work as required by the Contract Documents.
2. Watchman: The University will not be providing security services for the Project. During all hours that Work is not being prosecuted, including weekends and holidays, furnish such watchman's services as Contractor may consider necessary to safeguard materials and equipment in storage on the Project site, including Work in place or in process of fabrication, against theft, acts of malicious mischief, vandalism, and other losses or damages. The University will not be liable for any loss or damage.
3. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
 - a. Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
4. The contractor shall provide a security camera system for the Project site as follows:
 - a. Twelve (12) cameras shall be outdoor rated powered over Ethernet (POE) with zoom capability.
 - b. Wireless or hardwired within 300' from POE switch provided by Contractor.
 - c. Streaming video
 - d. Web based
 - e. Security camera system shall also include four (4) DVRs with computer and electronic related equipment to be used onsite during construction. Contractor to provide proper power, CAT 6 cabling for the IP camera and twelve (12) 20' pole, properly braced, for the mounting of each IP camera. The Contractor shall provide system access to University and training to University Representatives and designees.

1.3. MAINTENANCE

- A. Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities if required, as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.
- B. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

- C. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

1.4. FIELD OFFICES AND SHEDS

- A. Locate field offices, storage sheds, and other temporary construction and support facilities for easy access, and as approved by the University's Representative, within the area of the site designated as "Limits of Work".
- B. The University is providing the existing 12' x 60' Field Office for UCR use in the area of Work which the Contractor shall maintain until final acceptance of the Project. The Contractor shall be responsible for providing a cleaning/maintenance service to maintain and clean the offices 2x a week for the duration of the project.
1. University's Representative's field office shall contain at a minimum the following furnishings:
 - a. Three (3) standard size desks with drawers.
 - b. Twenty four (24) Lineal ft. of bookshelves.
 - c. Seven (7) two drawer legal size filing cabinets.
 - d. Two (2) drawing racks with minimum five (5) sticks each.
 - e. Three (3) swivel base desk chairs.
 - f. Six (6) visitor chairs.
 - g. One (1) drafting stools.
 - h. Three (3) waste baskets.
 - i. One (1) bottled water dispensing station (hot & cold), with bottled water supplied by contractor.
 - j. Four (4) 4' X 8' folding tables and twelve (12) chairs.
 2. University Representative's field office shall contain at a minimum the following equipment:
 - a. One multi-function photocopy machine (Xerox, Canon or equal) with self-feed, enlargement and reduction capabilities. Capable of copying in color to and from 8-1/2 x 11, 8-1/2 x 14 and 11 x 17 paper with paper Supplied by Contractor.
 - b. Photocopier equipment to also include plain paper fax capabilities and flat plate digital scanning function for scanning documents into PDF files to use as attachments to email..
 - c. Ten (10) construction hard hats (Fibre-Metal 3-Action-Gear). These hard hats shall remain the property of the Regents.
 - d. One (1) complete set of all code books and references applicable to this project. These code books and references shall remain the property of the University.
 - e. Items c and d will become the property of the Regents.
- C. Field Offices: The University is providing the Contractor with an insulated, weather tight, temporary office of sufficient size (triple wide) to accommodate the required office personnel at the Project Site with adequate lighting, power, heating, and cooling. Contractor to keep the office clean and orderly for use for large progress meetings and shall be responsible for providing a cleaning/maintenance service to maintain and clean 2x a week for the duration of the project. Furnish and equip offices as follows:
1. Furnish with desks and chairs for Contractor's on-site staff, 4-drawer file cabinets, plan rack, and a 6-shelf bookcase. Furnish a conference table of sufficient size to comfortably accommodate a minimum of 14 people.
 2. Equip with a water cooler.
- D. Storage and Fabrication Sheds: Install storage and fabrication sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility service.

1. Maintain secure storage for tools (including personal tools of individual workers), equipment, and materials. The University will not be responsible for loss or damage to tools, equipment, or materials.

E. Materials

1. General: Provide new materials. If acceptable to the University's Representative, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
2. Lumber and Plywood:
 - a. For job-built temporary offices, partitions, shops, and sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.
 - b. For signs and directory boards, provide exterior-type, Grade B-B high-density concrete form overlay plywood of sizes and thickness indicated.
 - c. For vision barriers, provide minimum 3/8-inch-(9.5-mm-) thick exterior plywood.
 - d. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch-(16-mm-) thick exterior plywood.
3. Roofing Materials: Provide UL Class A standard-weight asphalt shingles or UL Class C mineral-surfaced roll roofing on roofs of job-built temporary offices, shops, and sheds.
4. Paint:
 - a. For job-built temporary offices, shops, sheds, fences, and other exposed lumber and plywood, provide exterior-grade acrylic-latex emulsion over exterior primer.
 - b. For sign panels and applying graphics, provide exterior-grade alkyd gloss enamel over exterior primer.
5. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
6. Water: Provide potable water approved by local health authorities.
7. Open-Mesh Fencing: The University has temporary construction fencing already in place around the entire Glen Mor 2 site. The ~~contractor~~University shall transfer over the lease ~~from the University to the Contractor~~ at the start of construction and Contractor shall maintain the fencing in good order for the duration of the project until Substantial Completion. Contact American Fence at (951) 443-3550 for rental terms and conditions.

F. Equipment

1. General: Provide new equipment. If acceptable to the University's Representative, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.
2. Water Hoses: Provide 3/4-inch (19-mm), heavy -duty, abrasion-resistant, flexible rubber hoses 100 feet (30 m) long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
3. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle

outlets equipped with ground fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.

4. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
5. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.
6. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.
7. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
 - a. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
 - b. Comply with requirements of authorities having jurisdiction.

1.5. FIRST AID FACILITIES

- A. First Aid Supplies: Provide types and quantities required by referenced standards, the University's Representative, and as prudent for the conditions existing for the Work.

1.6. SANITARY FACILITIES

- A. Maintenance of Septic Tanks: Septic tanks are required to serve both the Contractor's management offices and the University's site offices. The contractor shall provide maintenance services to remove effluent on a regularly scheduled basis.
 1. Maintain temporary toilets and septic tanks in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.
- B. Temporary Toilet Units: Provide self-contained, single-occupancy toilet units of the chemical, aerated re-circulation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material. Use of existing University sanitary facilities will not be permitted.

1.7. STORAGE

- A. Contractor's use of the Project site for the Work and storage is restricted to the areas designated on the Drawings or as approved by University's Representative. Use of mechanical and electrical rooms for storage of materials or furniture is prohibited.
- B. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
 1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

3. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
 6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
 - a. Concrete slabs on grade and suspended floors have not been designed for heavy loading.
 - b. Slabs on Grade: Do not subject slabs on grade to excessive loading by shoring, storage of materials, or operation of construction equipment unless adequately protected by planking designed to safely distribute loads. Maintain slabs and repair or replace damaged slabs at no additional cost to the University.
 - c. Suspended Floors: Do not subject suspended slabs to construction loads greater than 40 psf unless adequate shoring and protection is provided. Retain a civil or structural engineer experienced in shoring design and registered in the State of California to design necessary temporary support systems.
 7. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.
 8. Immediately remove from the site materials and equipment that are damaged or do not comply with requirements of the Contract Documents.
 9. When handling and moving materials and equipment, protect all finished surfaces.
- C. Keep copies of manufacturer's specifications and instructions on site and available for reference.

1.8. TERMINATION AND REMOVAL

- A. Remove each temporary facility when the need has ended, when 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 the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
- B. Materials and facilities that constitute temporary facilities are the Contractor's property. The University reserves the right to take possession of project identification signs.
- C. Repair or replace street paving, curbs, and sidewalks damaged by construction traffic.
- D. At Substantial Completion, clean and renovate any permanent facilities used during the construction period.
- E. After removal of temporary facilities at the management compound in Lot 14 i.e. office trailers, wood patio decks, ramps, fencing, anchorage, electrical equipment, etc. which were placed on portions of the existing site not scheduled for new Work, Contractor shall repair all damage, holes, etc., to the pavement and apply a seal coat to the pavement (see Section 32 1300) and restripe all of the stalls in the three rows of parking (approximately 42 spaces) adjacent to the

management compound. A parking stall layout shall be provided by the University Representative.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

**SECTION 01 5300
TEMPORARY CONSTRUCTION**

PART 1 – GENERAL

1.1. SUMMARY

A. Section includes:

1. Temporary Stairs, Scaffold, and Runways
2. Trenching and Shoring
3. Temporary Bridges
4. Temporary Decking
5. Temporary Overpasses
6. Temporary Ramps
7. Temporary Runarounds

1.2. TEMPORARY STAIRS, SCAFFOLD, AND RUNWAYS

- A. Provide all scaffolds, stairs, hoist plant, runways, platforms, and similar temporary construction as may be necessary for the performance of the Contract. Such facilities shall be of the type and arrangement as required for their specific use, substantially constructed throughout and strongly supported, well secured and complying with all applicable rules and regulations of the Industrial Accident Commission of the State of California and all applicable laws and ordinances. Refer to Section 01 41002, Regulatory Requirements.
- B. Arrange for construction equipment access to areas which may be partly blocked by existing obstructions.

~~1.3. TRENCHING AND SHORING~~

- ~~A. All Work shall be in full accordance, but not necessarily limited to the following codes and regulations: Titles 8, 19, 21, 22 and 24, State of California, California Code of Regulations (CCR), California Occupational Safety and Health Administration (OSHA).~~
- ~~B. Protection. Pursuant to Labor Code Sections 6705 and 6707, Contractor shall include in its base bid all costs incident to the provision of adequate sheeting, shoring, bracing or equivalent method for the protection of Life and Limb which shall conform to the applicable Federal and State Safety Orders.~~
- ~~C. Before beginning excavation five feet or more in depth, Contractor shall submit to University's Representative a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazards of caving ground during the excavation. The proposed plan shall comply with the State of California Construction Safety Orders, Title 8 and Title 24 of the California Code of Regulations (CCR). If the detailed plan varies from such shoring system standards, it shall be prepared by a registered civil or structural engineer registered in the State of California, University's Representative's determination of the matter shall be final and conclusive on Contractor. The cost of required engineering services shall be borne by Contractor and shall be deemed to have been included in the amount bid for the Work as stated in the Agreement.~~
- ~~D. Neither the review nor approval of any plan showing the design of shoring, bracing, sloping, or other provisions for worker protection, shall relieve Contractor from its obligation to comply with Construction Safety Orders Standards and Title 24 CCR for the design and construction of such protective Work, and Contractor shall indemnify University and University's Representative from any and all claims, liability, costs, action and causes of action arising out of or related to the failure of such protective systems.~~

~~Contractor shall defend University, its officers, employees, and agents and University's Representative in any litigation or proceeding brought with respect to the failure of such protective systems.~~

~~E. Comply with State of California Construction Safety Orders, Article 6 Excavations, Trenches, Earthwork whether or not the excavation, trench, or earthwork is five feet or more in depth.~~

~~1.4. TEMPORARY BRIDGES~~

~~1.5. TEMPORARY DECKING~~

~~1.6. TEMPORARY OVERPASSES~~

~~1.7. TEMPORARY RAMPS~~

~~1.8. TEMPORARY RUNAROUNDS~~

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

**SECTION 01 5400
CONSTRUCTION AIDS**

PART 1 – GENERAL

1.1. SUMMARY

A. This Section Includes:

~~1.2. TEMPORARY ELEVATORS~~

1.3. TEMPORARY LIFTS AND HOISTS

A. Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

1.4. TEMPORARY CRANES

A. A. Provide facilities for hoisting materials. Cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities. If a crane is needed, a crane lift plan is required and shall be submitted and approved by Building & Safety prior to any work being performed.

~~1.5. TEMPORARY SWING STAGING~~

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

**SECTION 01 5500
VEHICULAR ACCESS AND PARKING****PART 1 – GENERAL****1.1. SUMMARY****A. Section includes:**

1. Temporary Access Roads
2. Haul Routes
3. Temporary Parking Areas
4. Temporary Roads
5. Traffic Control
6. Staging Areas

B. Submittals:

1. Submittals shall be submitted in accordance with Section 01 3300, "Submittals."
 - a. Submit Traffic Control Plan for Project Construction prior to the start of construction activities for approval by University's Representative.
 - b. Submit Pedestrian Access Plan for Project Construction prior to the start of construction activities for approval by University's Representative.

~~1.2. TEMPORARY ACCESS ROADS~~~~1.3. HAUL ROUTES~~**1.4. TEMPORARY PARKING AREAS****A. Parking:** Limited parking for workers employed on the Work may be provided on the Project Site to the extent that space for that purpose is available without interference with activities of University or activities related to performance of the Work. Refer to Section 01 3540 "Environmental Mitigation".

1. All vehicles are required to display a parking permit while parked on campus. Transportation and Parking Services will sell parking permits to contractors, their employees and sub-contractors in parking lots where spaces are currently available for purchase. 2014-15 monthly permit rates are \$40/Gold, \$47/Blue and \$64/Red. All rates are subject to change. Monthly permits are available at the Parking Service Building located at 683 Linden Street. Daily permits can be purchased in the Parking Service Building, at information kiosks at campus entrances, and in posted visitor parking lots. Parking permits are lot specific. All vehicles entering the campus are required to adhere to the University's parking policies and the California Vehicle Code. .
2. Contractor may use available space within its Project Site fence limits for parking without a permit.
3. ~~Provide 3 parking spaces within Contractor's Project Site fence limits for University's Representative and its Consultants use.~~

~~1.5. TEMPORARY ROADS~~**1.6. TRAFFIC CONTROL****A.** Prior to the start of construction activities, determine the routing of construction vehicles and the measures necessary to control traffic during construction. Provide measures including, but not limited to, the following:

1. Contractor is responsible for controlling construction traffic on and adjacent to the site, including public right-of-ways. Comply with requirements of authorities having jurisdiction for traffic controls in public right-of-ways.
 - a. Provide necessary measures including, but not limited to, flag personnel, barricades, sufficient lights, reflectors, warning signals, warning signs indicating closures, directional, and detour instructions.
 2. Route construction equipment, trucks, and similar vehicles through the campus to University Avenue and existing public streets to and from the site as approved by the University's Representative and as specified in Section 01 3540 Environmental Mitigation.
 3. Schedule deliveries to minimize disruption of University traffic and duration of on-site storage.
- B. Traffic Control Plan for Project Construction.
1. Contractor and all subcontractors shall ensure that the construction site and access road speed limits are established and enforced during the Contract Time until Substantial Completion. Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads.
 2. Contractor and all subcontractors shall comply with the Traffic Control Plan for project construction prepared by Contractor and approved by University's Representative prior to the commencement of construction activities.
 3. To the extent reasonable, Contractor and all subcontractors shall maintain at least one unobstructed lane in both directions on campus roadways. At any time only a single lane is available, Contractor and all subcontractors shall provide a temporary traffic signal, signal carriers (i.e., flag persons), or other appropriate traffic controls, as approved by University's Representative, to allow travel in both directions. If construction activities require the complete closure of a roadway segment, contractor and all subcontractors shall provide appropriate signage indicating alternative routes as approved by University's Representative.
 4. To maintain adequate access for emergency vehicles when construction activities would result in roadway closures, Contractor shall give 14-days notice to the University's Representative, so that the University's Representative can consult with the UCPD, EH&S, and Riverside Fire Dept. as appropriate to disclose closures and identify alternative travel routes.
 5. ~~The hauling and disposal of any excess clean soil excavated from or already stockpiled on the site will be the responsibility of the contractor to transport and stockpile it at the UCR Ag Ops area located near Lot 13 as directed by the University Representative. Refer to Section 31 2000 Earth Moving for additional information regarding the collection and disposal of unsatisfactory material and debris.~~
 6. All construction traffic will access the Project Site from the west at University Avenue & Campus Drive. ~~Construction traffic will avoid using Valencia Hill Drive, Watkins Drive and Big Springs Road. There are two existing, posted construction traffic warning signs at the corner of Watkins Drive and Valencia Hill Drive which shall remain in place and maintained by the Contractor for the duration of the Project and will be the Contractor's responsibility to remove and dispose of the signs at the completion of the Work.~~
- C. Pedestrian Access Plan for Project Construction.
1. Contractor and all subcontractors shall comply with the Pedestrian Access Plan for project construction prepared by the Contractor and approved by University's Representative, prior to the commencement of construction activities.

1.7. STAGING AREAS

A. Parking Lot 1

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

**SECTION 01 5600
TEMPORARY BARRIERS AND ENCLOSURES**

PART 1 – GENERAL

1.1. SUMMARY

A. This Section includes:

1. General Cleaning and Protection
2. Temporary Fire Protection
3. Temporary Barricades, Warning Signs, Signals and Lights
4. Temporary Fencing
5. Temporary Protective Walkways

1.2. GENERAL CLEANING AND PROTECTION

- A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.
- B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- C. 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. Where applicable, such exposures include, but are not limited to, the following:
1. Excessive static or dynamic loading.
 2. Excessive internal or external pressures.
 3. Excessively high or low temperatures.
 4. Thermal shock.
 5. Excessively high or low humidity.
 6. Air contamination or pollution.
 7. Water or ice.
 8. Solvents.
 9. Chemicals.
 10. Light.
 11. Radiation.
 12. Puncture.
 13. Abrasion.
 14. Heavy traffic.
 15. Soiling, staining, and corrosion.
 16. Bacteria.
 17. Rodent and insect infestation.
 18. Combustion.
 19. Electrical current.
 20. High-speed operation.
 21. Improper lubrication.
 22. Unusual wear or other misuse.
 23. Contact between incompatible materials.
 24. Destructive testing.
 25. Misalignment.
 26. Excessive weathering.

27. Unprotected storage.
28. Improper shipping or handling.
29. Theft.
30. Vandalism.

1.3. TEMPORARY FIRE PROTECTION

- A. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the University's Representative.
- B. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," and requirements of the University.
 1. Locate fire extinguishers where convenient and effective for their intended purpose.
 2. Store combustible materials in containers in fire-safe locations.
 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in all buildings and anywhere on site.
 4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.

1.4. TEMPORARY BARRICADES, WARNING SIGNS, SIGNALS AND LIGHTS

- A. Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
 1. Enclose excavations and openings with proper barricades.
 2. Clearly identify hazards on and adjacent to the Project site. Maintain clearly visible and, if applicable, audible identification on a continuous 24-hour-per-day basis.
 3. Illuminate barricades, warning signs, obstructions, and other hazards at night. Provide adequate light for clear visibility from sunset to sunrise.
 4. Where appropriate, provide audible warning signals.

~~1.5. TEMPORARY FENCING~~

~~1.6. TEMPORARY PROTECTIVE WALKWAYS~~

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

SECTION 01 5639 TREE AND PLANT PROTECTION

PART 1 – GENERAL

1.1. SUMMARY

- A. Provide all labor, materials, equipment, tools, services and miscellaneous and incidental work to provide all tree and plant protection as indicated on the drawings and as specified including:
1. Quality Assurance.
 2. Job Conditions.
 3. Guarantee.
 4. Protection of Trees and Plants: Protection and welfare of all existing trees and plants within and adjacent to the Contract Limits which are noted to remain, including trimming, cabling, and repair of such and plants as necessary on the Drawings and as specified.
 5. Trimming of Trees.
 6. Irrigation System: Protection of any existing irrigation system servicing trees and plants to remain.
 7. Repair Compensation.
 8. Maintenance: Contractor shall submit tree maintenance plan for University's Representative approval.
- B. Definitions
1. "Injury" is defined, without limitation, as any bruising, scarring, tearing, or breaking of roots, branches, or trunk.
 2. "Drip line" is defined as the outermost limits of the tree canopy.

1.2. QUALITY ASSURANCE

- A. General Responsibility: The Contractor shall be directly responsible for protection and welfare of existing trees and plants within the Contract Limits which are noted to remain. This responsibility shall continue throughout the full construction period until the entire project is completed and accepted by the University's Representative and through completion of the guarantee period. Completely coordinate with all work.
- B. Qualifications of workmen: Trimming shall be performed only by a licensed arborist. Provide at least one person approved by the University's Representative who shall be present at all times during tree protection and trimming operations, who shall be thoroughly familiar with the type of work involved, and who shall direct all protection and trimming work.
- C. Reference Standards: Published specifications, standards, tests, or recommended methods of trade, industry, or governmental organizations apply to work of this section.
- D. International Society of Arboriculture (ISA) "Guide for Establishing Values of Trees and Other Plants," prepared by the Council of Tree and Landscape Appraisers (CTLA).

- E. "Cabling, Bracing and Guying Standards for Shade Trees", as published by the National Arborist Association (NAA), 174 RT 101, Bedford, New Hampshire, 03102.

1.3. JOB CONDITIONS

- A. Prior to performing any work of this Contract, Contractor shall call for a site meeting with the University's Representative and University's Representative's Consultant. This meeting shall occur prior to construction of any nature on site. The purpose of the meeting shall be to establish the conditions of all existing trees to be preserved or relocated upon receipt of the site by the Contractor. Failure to call for said meeting implies acceptance by the Contractor of trees to be preserved in their existing condition.
- B. Sequencing Schedule: Coordinate and cooperate with other trades to enable the work to proceed as rapidly and efficiently as possible.

1.4. GUARANTEE

- A. Contractor shall guarantee that all plants covered by the provisions of this Section will be healthy and in flourishing condition of active growth 1 year from the date of Final Completion.
- B. During the warranty period the Contractor shall be liable for damages to all trees covered by the provisions of this Section and shall pay compensation to the University.
- C. Contractor will not be held responsible for failures due to neglect by the University, vandalism, etc., during the warranty period. Report such conditions to the University's Representative.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 PROTECTION OF TREES AND PLANTS

- A. Water: Provide ample water supply of potable quality and sufficient quantity for all operations required under this Section.
- B. The existing trees to be preserved presently are in excellent condition. Trees and plants shall not be allowed to deteriorate and shall be maintained in a healthy and vigorous condition during the course of construction and maintenance period.
- C. During the course of construction the Contractor shall take all necessary precautions, as outlined herein, to protect the existing trees to be preserved from injury or death. Protection shall be given to the roots, trunk, and foliage of all existing trees to remain.
- D. Trees and plants, subject to the provisions of this Section, which have been injured shall be repaired immediately by an approved, certified arborist. Repair shall include removal of rough edges and sprung bark and severely injured branches as directed by the University's Representative.
- E. Tree protection fencing shall be installed for the protection of existing trees to be preserved. No construction, demolition, or work of any nature will be allowed within the fenced area without prior written approval by the University's Representative.
 - 1. Tree Protection Fence: 8-foot high chain link fence, sturdy and capable of acting as a barrier against objects, vehicles, etc., and designed so as to allow for relocations as required and shall have gate access to inside for care of tree. It shall be continuously maintained and repaired as necessary. Metal shall be galvanized.

2. Install tree protection fencing around trees to be preserved at a distance required from the base of the trunk to the drip line of the tree. Fencing shall remain until landscape work has commenced, and it shall then be removed as directed by the University's Representative.
 3. During the course of construction, relocation of the fence may be required to facilitate construction. The Contractor shall do so as directed by the University's Representative at no additional expense to the University.
 4. Approval by the University's Representative for work within the fenced area shall not release the Contractor from any of the provisions specified herein for the protection of existing trees and plants to be preserved.
 5. During the course of construction of approved work within the fenced area, no roots larger than two inches in diameter shall be cut without prior written approval by the University's Representative.
- F. During construction the existing site surface drainage patterns shall not be altered within the area of drip line.
- G. Contractor shall not alter the existing water table within area of drip line.
- H. Take necessary measures to maintain healthy living conditions for existing trees and plants to be preserved. Such measures shall include but not be limited to periodic washing of leaves for the removal of dust, irrigation, etc.
- I. Do not permit the following within drip line of any existing tree to be preserved.
1. Storage or parking of automobiles or other vehicles.
 2. Stockpiling of building materials or refuse of excavated materials.
 3. Skinning or bruising of bark.
 4. Use of trees as support posts, power poles, or signposts; anchorage for ropes, guy wires, or power lines; or other similar functions.
 5. Dumping of poisonous materials on or around trees and roots. Such material includes but is not limited to paint, petroleum products, contaminated water, or other deleterious materials.
 6. Cutting of tree roots by utility trenching, foundation digging, placement of curbs and trenches, and other miscellaneous excavation without prior written approval by the University's Representative.
 7. Damage to trunk, limbs, or foliage caused by maneuvering vehicles or stacking material or equipment too close to the tree.
 8. Compaction of the root area by movement of trucks or grading machines; storage of equipment, gravel, earth fill, or construction supplies; etc.
 9. Excessive water or heat from equipment, utility line construction, or burning of trash under or near shrubs or trees.
 10. Damage to root system from flooding, erosion, and excessive wetting and drying resulting from dewatering and other operations.
- J. Excavation Around Trees and Plants:
1. Excavation within drip lines of trees and plants shall be done only where absolutely necessary.
 2. Where trenching for utilities is required within drip lines, tunneling under and around roots shall be by hand digging. Main lateral roots and taproots shall not be cut. Smaller roots that interfere with installation of new work may be cut with prior approval.
 3. Where excavation for new construction is required within drip line of trees, hand excavation shall be employed to minimize damage to root system. Roots shall be relocated in backfill areas wherever possible. If large, main lateral roots are encountered, they shall be exposed beyond excavation limits as required to bend and relocate without breaking. If encountered immediately adjacent to location or new

construction and relocation is not practical, roots shall be cut approximately 6 inches back from new construction.

4. Exposed roots shall not be allowed to dry out before permanent backfill is placed. Temporary earth cover shall be provided, or roots shall be packed with wet peat moss or four layers of wet, untreated burlap and temporarily supported and protected from damage until permanently relocated and covered with backfill. The cover over the roots shall be wetted to the point of runoff daily.
5. Branching structure shall be thinned in accordance with NAA "Pruning Standards and Practices" to balance loss to root system. Thinning shall not exceed 30 percent of existing branching structure.

3.2 TRIMMING OF TREES

- A. In company with the University's Representative and registered arborist ascertain the limbs and roots which are to be trimmed, and clearly mark them to designate the approved point of cutting.
- B. A consulting arborist, registered by the American Society of Consulting Arborists (ASCA), shall be engaged to direct removal of branches from trees and large shrubs which are to remain if required to clear for new construction.
- C. Dead and damaged trees that are determined by the University's Representative and arborist to be incapable of restoration to normal growth pattern shall be removed.
- D. Cut evenly, using proper tools and skilled workmen, to achieve neat severance with the least possible damage to the tree.
- E. In the case of root cuts, apply wet burlap or other protection, approved as noted herein, to prevent drying out, and maintain in a wet condition as long as necessary for temporary protection.

3.3 IRRIGATION SYSTEM

- A. Protect the existing, temporary irrigation system from damage. Conduct weekly inspections throughout the term of the project to test the irrigation system timers, lines and spray heads and make any repairs and or improvements as necessary to maintain the health of the existing grass and trees. Contractor shall remove any and all trash, debris, tumbleweeds, etc., which may accumulate within the protected areas of the existing landscape areas along Valencia Hill and Big Springs Rd.
- B. Contractor to provide regular lawn mowing and edging of all protected areas inside construction fencing every two weeks.

3.4 REPAIR COMPENSATION

- A. Damage to existing tree crowns or roots over 1-inch in diameter shall be immediately reported to University's Representative in writing, and, at the direction of the University's Representative, repaired immediately at the Contractor's expense by an approved certified arborist.
- B. A certified arborist shall direct repair of trees damaged by construction operations. Repairs shall be made promptly after damage occurs to prevent progressive deterioration of damaged trees.
- C. Any tree to remain which is damaged or destroyed owing to the Contractor's negligence or failure to provide adequate protection shall be compensated for in accordance with the following schedule of values using "tree caliper" method (greatest trunk diameter, measured 18 inches above ground):

1. For trees and shrubs with diameters up to and including 6 inches, compensation shall be the actual cost of replacement with item similar in species, size, and shape, including:
 - a. Actual cost of item boxed out of ground.
 - b. Transportation or delivery of boxed item to site.
 - c. Planting and staking.
 - d. Maintenance, including watering, fertilizing, pruning, pest control, and other care to bring replacement to same general condition of original item.
2. For trunks up to:

7".....	\$1,500
8".....	\$2,000
9".....	\$2,500
10".....	\$3,000
11".....	\$3,500
12".....	\$4,000
13".....	\$4,500
14".....	\$5,000
15".....	\$5,500
16".....	\$6,000
17".....	\$6,500
18" and over, add for each caliper inch.....	\$ 700

D. Damaged tree limbs or trees which have died as a result of injury during construction shall remain the property of the University and shall remain or be removed by the Contractor as directed by the University's Representative.

3.5 MAINTENANCE

- A. Contractor shall be responsible to perform periodic inspections of existing trees to be preserved and submit written proposals to the University's Representative for additional maintenance work as may be required to ensure the health and general well-being of the trees. Contractor shall retain, at the direction of the University's Representative additional specialists as may be required to perform this work.
- B. Root Hormone: Apply as follows:
 1. Construct tree basins at rims or outer edge of the tree box so that applied water will remain on top of the root-ball.
 2. Apply root hormone at the rate of 2 ounces of root hormone dissolved in a 2-gallon bucket of water, poured on top of the root-ball and contained thereon by the basin rims. Immediately after root hormone application, fill the tree basin with water and allow it to settle within the soil. Repeat application, fill the tree basin with water and allow it to settle within the soil. Repeat application of water twice.
- C. Mulching: Trees shall be mulched with 1-inch nitrolized fir bark immediately after completion of the root hormone application and its irrigation into the rootball.
- D. Irrigation: During construction the existing trees to be preserved shall, at the direction of the University's Representative, be given deep watering (be irrigated). Quantities and lengths of time are variable and shall depend upon seasonal rainfall.

END OF SECTION

**SECTION 01 5700
TEMPORARY CONTROLS**

PART 1 – GENERAL

1.1. SUMMARY

A. This Section Includes:

1. Control of Construction Water
2. Dust Control, Air Pollution, and Odor Control
3. Noise Control
4. Temporary Erosion and Sediment Control (SWPPP)
5. Temporary Environmental Controls
6. Temporary Pest Control
7. Biological Resources
8. Cultural Resources
9. Aesthetics
10. Air Quality

1.2. CONTROL OF CONSTRUCTION WATER

- A.** Provide impermeable floor coverings and suitable dams to prevent damage by water used for the Work. Immediately clean up and remove all surplus water and water spilled in non-working areas. Do not allow water to overflow gutters, flood streets or parking lots.

1.3. DUST CONTROL, AIR POLLUTION, AND ODOR CONTROL

A. The Contractor shall employ measures to prevent the creation of dust, air pollution and odors.

1. Unpaved areas where vehicles are operated shall be periodically wetted down or given an equivalent form of treatment as defined in South Coast Air Quality Management District (SCAQMD) Rule 403 to eliminate dust formation.
2. All volatile liquids including fuels or solvents shall be stored in closed containers.
3. No open burning of debris, lumber or other scrap will be permitted.
4. Equipment shall be maintained in a manner to reduce gaseous emission.
5. Low sulfur fuel shall be used for construction equipment.
6. Stockpiles of excavated materials shall be covered with material approved by University's Representative.
7. Contractor shall provide street sweeping whenever silt from construction site is carried over to adjacent streets.

B. Provide measures, including regular watering, necessary to minimize air-borne dust.

1. Exposed surfaces should be watered twice daily.
2. Stockpiles of excavated materials should be covered.
3. A berm shall be erected on the downslope of the project site to prevent silt-laden water from running off site.
4. Trucks carrying excavated materials from the site shall be covered and shall have their tires and undercarriages washed prior to exiting the site as required to remove material that may fall or blow off later.
5. Paving of exposed dirt surfaces should be done as quickly as is reasonably possible.

6. Streets affected by fugitive dust shall be swept regularly.
 7. The Contractor shall assign a person to be responsible for monitoring dust levels, reviewing conditions with the University's Representative, and suggesting appropriate additional control measures when required.
 8. Uncovered soil shall be bound by grass or similar ground cover as soon as is reasonably possible.
 9. Excavation should not be conducted when surface winds exceed 11 miles per hour.
 10. Unnecessary idling of construction vehicles and equipment shall be avoided.
- C. All contractors, and overseen by the General Contractor, shall implement dust control measures consistent with South Coast Air management District (SCAQMD) Rule 403 – Fugitive Dust during the construction phases on the project development.
1. Apply water and/or non-toxic chemical soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded areas that have been inactive for 10 or more days).
 2. Replace ground cover in disturbed areas as quickly as possible.
 3. Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content.
 4. Water active grading sites at least twice daily.
 5. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed over 25 mile per hour over a 30-minute period.
 6. All trucks hauling dirt, sand, soil, or other loose material are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and top of the trailer) in accordance with section 23114 of the California Vehicle Code.
 7. Sweep streets at the end of the day if visible soil material is carried over to adjacent roads.
 8. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving project site for each trip.
 9. Apply water three times daily of chemical soil stabilizers according to manufacturer's specifications to all unpaved parking or staging areas or unpaved road surfaces.

1.4. NOISE CONTROL

- A. Noise control shall be maintained by the contractor in all areas of construction, guarding against any undue noise, which may impair proper use of existing facilities. Contractor shall use noise suppressed equipment available and control noise on equipment to the maximum extent possible.
- B. The following noise control procedures shall be employed:
1. Noise control shall be maintained by the contractor in all areas of construction, guarding against any undue noise, which may impair proper use of existing facilities. Contractor shall use noise suppressed equipment available and control noise on equipment to the maximum extent possible.

2. Equipment: Jack hammers shall be equipped with exhaust mufflers and steel muffling sleeves. All diesel equipment shall have exhaust muffled. Air compressors shall be of a quiet type such as a "whisperized" compressor. Require contractors to use the quietest among alternative equipment or to muffle/control noise from available equipment to the maximum extent possible.
3. Operations: Machines shall not be left idling. Electric power shall be used in lieu of internal combustion engine power wherever possible. Equipment shall be maintained to reduce noise from vibration, faulty mufflers, or other sources.
4. Scheduling: Noisy operations shall be scheduled so as to minimum their disturbance to occupied adjacent areas and duration at any given location. Schedule activities with highest noise potential for times when background ambient noise levels are highest.

1.5. TEMPORARY EROSION AND SEDIMENT CONTROL

- A. Exposed earth surfaces shall be watered to minimize dust generation as necessary according to weather conditions.
- B. During winter construction, an erosion and sediment-transport control plan incorporating standard erosion control practices shall be implemented prior to the first day of earth moving activities.
 1. Erosion control shall include retaining sediments within project site by the use of catch basins; using interceptor ditches and benches to prevent gulying of slopes; and preparing and implementing erosion control plans.
- C. Storm Water Pollution Prevention Plan (SWPPP):
 1. This project has an active SWPPP permit and the university has retained a SWPPP management consultant for this project. The contractor shall take over the contract of the SWPPP consultant for the SWPPP management of the project for the duration of the schedule until substantial completion. Contact David Beckwith, President, David Beckwith & Associates at (714) 349-7007. The details of the SWPPP for Glen Mor 2 and its implementation can be viewed online at the California State Water Resources Board's SMARTS website (type "University of California, Riverside").
 2. Refer to Section 01 2100 Allowances for the description of the SWPPP allowance.
 3. For additional information see Section 31 1000 "Site Clearing".
 4. Protection Against Inclement Weather: Brace, secure, and cover all parts of the Work to prevent damage by inclement weather. Refer to Section 3.9 Storm Water Control for SWPPP information.
 5. Protect the Work from damage due to nuisance water such as rainwater, surface runoff, and irrigation water. Comply with requirements of the University's Representative regarding routing and disposal of nuisance water.
- D. Storm Water Control
 1. This project already has an open SWPPP permit on file. Refer to Section 01 1400 "Contractor's Use of the Project Site" for more detailed SWPPP information.

- a. Provide engineering, drawings, etc., to meet the requirements.
 2. Erect berm and other appropriate measures to prevent water from running off site and staging area.
 3. Erect berm and other appropriate measures to prevent water from entering the site and staging area.
 4. Temporary Storm Water Pollution Control: Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.
- 1.6. TEMPORARY ENVIRONMENTAL CONTROLS
- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce levels of harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.
 - B. See also Section 01 3543, Environmental Procedures.
- ~~1.7. TEMPORARY PEST CONTROL~~
- 1.8. BIOLOGICAL RESOURCES
- A. Pre-Construction Surveys for Burrowing Owls will be conducted (by University representatives) **not more than 30 days prior to ground disturbance and/or construction related activities**. No ground disturbance and/or construction related activities shall begin until survey complete and any avoidance measures identified and implemented.
 - B. Pre-Construction Nesting Bird Surveys will be conducted (by University representatives) **within a maximum of 7 days prior to initiation of ground disturbance activities** when vegetation removal will occur between February 15 and September 15. No ground disturbance activities shall occur until survey complete and any avoidance measures identified and implemented.
 1. Prior to initiation of ground disturbance activities, disturbance limits adjacent to or within the Arroyo shall be clearly staked by University representatives, including disturbance limits associated with Arroyo improvements. Access to the Arroyo shall be limited to existing roads and shall be fenced to ensure unnecessary encroachment to the Arroyo does not occur.
 - C. Minimize Temporary Impacts
 1. Biological Resources to be avoided during construction, include identified California Dept. of Fish and Game (CDFG) jurisdictional streambeds and riparian habitats, and shall be avoided if practicable. No impacts on the Arroyo shall occur outside of staked disturbance limits.
 2. At a minimum, the following areas shall be avoided:
 - a. Riparian vegetation adjacent to the path/culvert removal.

- b. Riparian vegetation located at the northwest side of the south abutment temporary work area for Bridge 2.
- c. CDFG jurisdictional streambed located on the south side of the bank re-contouring area.
- d. The mature cottonwood tree near the Valencia Hill culvert extension work limit.
 - (1) The following measures will be implemented to minimize disturbance to the cottonwood tree at the Valencia Hill culvert work area:
 - (2) Establishment and demarcation of a tree protection zone. This should be accomplished under the guidance of an International Society of Arboriculture (ISA) certified arborist and employ a protective barrier consisting of 3-foot- high orange construction fencing. The preferred protection zone shall encompass a buffer of 5 feet beyond the drip line, or 15 feet from trunks, whichever is greater. Where the proposed improvements extend into the preferred protection zone, placement of the protective barrier shall minimize encroachment into the preferred protection zone to the maximum extent practical.
 - (3) Pruning of tree roots, limbs and canopy prior to start of construction, under the guidance of an ISA certified arborist and in accordance with ISA pruning standards (for instance, cuts made clean and to the bark collar of the closest joint on the branch). Pruning should occur during the dormant period (approximately November to March).
 - (4) Construction of the Valencia Hill culvert extension shall be monitored by an ISA certified arborist. The arborist may require implementation of best management practices to minimize disturbance within the work limits, including but not limited to padding of vehicles, minimizing soil removal or addition, and use of protective matting.
 - (5) Upon completion of construction, the tree shall be evaluated by an ISA certified arborist. Evaluations shall occur quarterly for one full year to monitor for signs of failure (including canopy dieback, reduced size or number of leaves, premature fall color). If in the opinion of the arborist, the tree is not showing signs of failure, it shall be determined that the avoidance measures have been successful and no further action shall be required.
 - (6) If post-construction monitoring indicates the tree has failed, the measures provided for below shall be implemented to replace the lost functions and values:
 - (7) In the event the mature cottonwood tree at the Valencia Hill culvert extension is determined to have failed the re-vegetation plan shall include the following measures to replace the lost functions and values:
 - (8) Replacement planting of three coast live oaks on the upper bank within the removed canopy area. Replacement trees shall be at least 6 inch caliper and 10 feet in height.
 - (9) Replacement planting of Fremont's cottonwood (15 gallon minimum) along the stream channel within the area immediately downstream of the extended culvert. The total number of replacement trees (live oak and cottonwood) shall provide a minimum 1:1 replacement ratio based on the 85-inch diameter at breast

height (DBH) measurement of the existing cottonwood tree. It is expected compliance with this measure would require planting of approximately 25 to 30 cottonwood trees.

- e. To reduce disturbance of Natural and Naturalistic Open Space areas:
 - (1) Unnecessary driving in sensitive or otherwise undisturbed areas shall be avoided. New roads or construction access roads would not be created where adequate access already exists.
 - (2) Removal of native shrub or brush shall be avoided, except where necessary.
 - (3) Drainages shall be avoided, except where required for construction. Limit activity to crossing drainages rather than using the lengths of drainage courses for access.
 - (4) Excess fill or construction waste shall not be dumped in washes.
 - (5) Vehicles or other equipment shall not be parked in washes or other drainages.
 - (6) Overwatering shall be avoided in washes and other drainages.
 - (7) Wildlife including species such as fox, coyote, snakes, etc. shall not be harassed. Harassment includes shooting, throwing rocks, etc.

D. Worker Education Program

- 1. All contractors, and overseen by the General Contractor, shall participate in a worker education program for all construction personnel prior to personnel initiating ground disturbance activities, which will include a discussion of the importance of the Arroyo and areas within the Arroyo to be avoided (including parking and staging of equipment), a discussion of native wildlife with the potential to occur, and education on not harassing native wildlife.

E. Biological Monitoring During Construction

- 1. All contractors, and overseen by the General Contractor, shall cooperate with and follow required direction from the qualified biologist who shall monitor the project for compliance with best management practices.

F. Exotic species

- 1. Any exotic species removed shall be properly handled to prevent sprouting or re-growth. Construction equipment shall be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds before mobilizing to the work of construction. Cleaning of any equipment shall occur at least 300 feet from the Arroyo area and before leaving the work area during the course of construction.

1.9. CULTURAL RESOURCES

A. Protection and Recovery of Buried Artifacts

- 1. If an archaeological resource is discovered during construction, all soil-disturbing work within 100 feet of the find shall cease and the University Representative shall be notified and shall contact a qualified archaeologist within 24 hours of discovery to inspect the site. If a resource within the project area of potential effect is determined to qualify as a unique archaeological resource (as defined by CEQA), the University shall devote adequate time

and funding to salvage the material. Any archaeologically important artifacts recovered during monitoring shall be cleaned, catalogued, and analyzed, with the results presented in a report of finding that meets professional standards.

2. In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area of the find shall be protected and the University immediately shall notify the Riverside County Coroner of the find and comply with the provisions of P.R.C. Section 5097 with respect to Native American involvement, burial treatment, and re-burial, if necessary.

1.10. AESTHETICS

- A. Strict adherence to the approved Detailed Planting Plans to Maintain Existing View Corridors.

1.11. AIR QUALITY

- A. All construction vehicles and equipment containing an internal combustion engine and operating on the project site shall meet EPA-certified Tier 2 emission standards or higher. Contractor shall maintain on-going verification records of equipment certification as new equipment is delivered to the site for University Representatives to review for compliance.
- B. Low NOx diesel fuel and construction equipment shall be used to the extent that is readily available at the time of construction. Contractor shall maintain on-going, updated records for University Representatives to review for compliance.
- C. The following Air Quality reduction procedures shall be implemented throughout the construction process:
 - a. Compliance with all SCAQMD rules and regulations.
 - b. Maintenance programs to assure vehicles remain in good operating condition.
 - c. Avoid unnecessary idling of construction vehicles and equipment.
 - d. Use of alternative fuel vehicles.
 - e. Provision of electrical power to site to eliminate the need for on-site generators.
- D. All off-road equipment operating on project site, as well as on-road heavy-duty vehicles (including hauling and material delivery trucks) traveling to and from the project site will be fitted with an oxides catalyst. Contractor shall maintain on-going verification records of equipment certification as equipment is delivered to the site for University Representatives to review for compliance.
- E. Limited on-campus parking outside the project site boundaries will be made available for construction workers. The University will provide contractors' workers with limited, free, on-campus parking in a designated portion of Lot 13 across Big Springs Rd from the project site.
 1. Confine parking to the construction site or specifically designated areas of Lot 13. Vehicles parked elsewhere are subject to Campus parking fees or fines. Campus parking permits are available through Parking Services of **\$56.00** per month (check with Parking Services for daily and weekly rates) per vehicle. Rate is subject to change.
 2. Contractor may use available space within its Project fence limits for parking without a permit.
 3. Provide 3 parking spaces within the staging area for University's Representative and its Consultants use.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

**SECTION 01 5800
TEMPORARY SIGNAGE**

PART 1 – GENERAL

1.1. SUMMARY

A. This Section includes:

1. Temporary Project Signage.
2. Temporary Interior Signage.

1.2. TEMPORARY PROJECT SIGNAGE

- A. Project Identification: Two (2) 8' x 4' post mounted temporary project identification signs are already in place at two locations on the site. The Contractor shall make minor text revisions of the name of the UCR Vice Chancellor, the project's construction firm and the time of occupancy. Verify the actual copy with University Representative.
- B. Contractor shall make minor changes to the required text on the (2) Project identification signs. The text shall match the existing (black times Roman) font and dimensions on the sign. **All Stars Signs of Escondido** is a pre-approved supplier to UC Riverside project signs although any vendor can be used. Contractor to change the name of the Vice Chancellor, change the name of the project construction firm and change the time of occupancy. Verify the actual copy with University Representative.
- C. Provide signs for traffic direction and warnings such as "Construction Project" and "Keep Out" to facilitate control of personnel and vehicles. Use only the minimum number necessary, to 2' x 4' maximum size.
- D. ~~Provide 3 signs along the construction fence facing _____ and 3 signs along _____ with the telephone number for the Neighbor Complaint HotLine.~~
- E. After text changes have been made, reinstall signs securely on existing wood posts. Maintain in good condition throughout the construction period and remove upon completion, including concrete footings, if any.
- F. Contractor shall submit all name and title changes on the existing signs to University's Representative for approval prior to installation. Contractor shall review completed project sign with University Representative, prior to installation.

~~1.3. TEMPORARY INTERIOR SIGNAGE~~

~~PART 2 – PRODUCTS (Not Applicable)~~

~~PART 3 – EXECUTION (Not Applicable)~~

END OF SECTION

SECTION 01 6000 PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project:
1. Quality Assurance
 2. Product Delivery, Storage, and Handling
 3. Product Selection
 4. Product Installation
- B. Definitions: The Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - a. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature that is current as of the date of the Contract Documents.
 - b. "Foreign Products," as distinguished from "domestic products," are items substantially manufactured (50 percent or more of value) outside the United States and its possessions. Products produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens of, nor living within, the United States and its possessions are also considered to be foreign products.
 2. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
 3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.2. QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
- B. Compatibility of Options: When the Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
1. Each prime contractor is responsible for providing products and construction methods that are compatible with products and construction methods of other prime or separate contractors.
 2. If a dispute arises between prime contractors over concurrently selectable, but incompatible products, the University's Representative will determine which products shall be retained and which are incompatible and must be replaced.

- C. Foreign Product Limitations: Except under one or more of the following conditions, provide domestic products, not foreign products, for inclusion in the Work:
1. No available domestic product complies with the Contract Documents.
 2. Domestic products that comply with the Contract Documents are available only at prices or terms substantially higher than foreign products that comply with the Contract Documents.
- D. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.
1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.
 2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
 - c. Capacity.
 - d. Speed.
 - e. Ratings.
 3. UL Label: Provide products bearing appropriate UL label as indicated.

1.3. PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Refer to Section 01 5200, Paragraph 1.5.

PART 2 – PRODUCTS

2.1. PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation, except where salvaged materials are indicated.
1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
1. Nonproprietary Specifications: When Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract

- Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
2. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.
 3. Visual Matching: Where Specifications require matching an established Sample, the University Representative's decision will be final on whether a proposed product matches satisfactorily.
 - a. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category.
 4. Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The University's Representative will select the color, pattern, and texture from the product line selected.

PART 3 – EXECUTION

3.1 PRODUCT INSTALLATION

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION

**SECTION 01 7100
EXAMINATION AND PREPARATION****PART 1 – GENERAL****1.1. SUMMARY**

A. This Section includes:

- ~~1. Mobilization~~
2. Acceptance of Conditions
3. Construction Layout
4. Construction Surveying
5. Protection of Adjacent Construction
6. Non-Destructive Concrete Examination

~~1.2. MOBILIZATION~~**1.3. ACCEPTANCE OF CONDITIONS**

1. Prior to commencing the Work, the Contractor and University's Representative shall tour together the Project site (and areas immediately surrounding the site) to examine and record damage to existing buildings and improvements constructed under a prior contract. As such the Contractor accepts the work constructed on site "as-is" and must finish what is installed into a complete and functional system.
2. This record shall serve as a basis for determination of subsequent damage due to Contractor's operations and shall be signed by all parties making the tour. Any cracks, sags, or damage to the adjacent buildings, improvements and landscaping elements not noted in the original survey, but subsequently discovered, shall be reported to University's Representative within 15 days from Notice to Proceed.
3. The Contractor shall prepare a report of the survey, including:
 - a. Report of existing conditions.
 - b. Photographs of significant features requested by University's Representative.
 - c. Key plan with references to video/photographs
4. The Contractor and University Representative shall periodically monitor conditions of existing buildings and installations for signs of movement, settlement, or other damage related to construction.
5. Contractor is solely responsible for repairing damage to existing construction and finishes and for replacing damaged components, which cannot be repaired.
6. Contractor is solely responsible for maintaining and watering existing landscaping within the Project site and for replacing landscaping elements, which are damaged or destroyed during the course of the Work.

1.4. CONSTRUCTION LAYOUT**1.5. CONSTRUCTION SURVEYING****1.6. PROTECTION OF ADJACENT CONSTRUCTION****1.7. NON-DESTRUCTIVE CONCRETE EXAMINATION**

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

**SECTION 01 7123
FIELD ENGINEERING**

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section specifies administrative and procedural requirements for field-engineering services including, but not limited to, the following:
1. Surveys, Lines, and Levels Examination.
 2. Surveys, Lines, and Levels Performance.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Identification: The University's Design Professional or its designee will identify existing control points including horizontal and vertical control points.
- B. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks, before proceeding to lay out the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.
1. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost and destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.
 2. Promptly replace lost or destroyed Project control points. Base replacements on the original survey control points.
- C. Establish and maintain a minimum of 2 permanent benchmarks on the site, referenced to data established by survey control points.
1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
- D. Existing Utilities and Equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work Contractor shall employ and pay for underground utilities service company to investigate and verify the existence and location of all underground utilities and other construction.
1. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping.
 2. The Drawings show, if applicable, existing above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water and other utilities, which are known to the University.
 3. Existing installations shall be kept in service where possible and damage to them shall be repaired with no adjustment of Contract Sum.
 4. If any other structures or utilities are encountered, request University's Representative to provide direction on how to proceed with the Work.

5. If any structure or utility is damaged, take appropriate action to ensure the safety of persons and property. Repair damage and restore utility to service at no cost to the University.
6. Obtain University Representative approval at least 30 days prior to any service shutdown or cutover. All utility shut downs shall be kept to a minimum. Contractor shall coordinate for all shut downs to occur during weekend hours without change to the contract sum. Identify date, time and expected duration (no more than 8 hours duration) of all utility shutdowns. There will be no shut downs for sewer services, must do bypass.

3.2 PERFORMANCE

- A. Work from lines and levels established by the property survey. Establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.
 1. Advise entities engaged in construction activities of marked lines and levels provided for their use.
 2. As construction proceeds, check every major element for line, level, plumb, movement, settlement, or other damage.
- B. Site Improvements: Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes, and invert elevations.
- C. Existing Utilities: Furnish information necessary to adjust, move, or relocate existing structures, utility poles, lines, services, or other appurtenances located in or affected by construction. Coordinate with, and obtain required approvals from University's Representative.

END OF SECTION

SECTION 01 7329 CUTTING AND PATCHING

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes general administrative and procedural requirements for cutting and patching, including without limitation, the following:
 - 1. Submittals
 - 2. Quality Assurance
 - 3. Warranty
 - 4. Materials
 - 5. Inspection
 - 6. Preparation
 - 7. Performance
 - 8. Cleaning
- B. Requirements of this Section apply to mechanical and electrical installations. Refer to Specification Divisions 20-28 for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.
- C. Refer to other applicable Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
- D. Cutting and Patching, in addition to requirements of the General Conditions, includes removing, altering, and repairing portions of the Work as required to accomplish the following:
 - 1. Make several parts fit properly.
 - 2. Uncover work to provide for installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove samples of installed work as specified or requested by the University's Representative for testing.
 - 5. Install new construction penetrations of or connections to existing construction.

1.2. SUBMITTALS

- A. Cutting and Patching Proposal: Submit written notice to the University's Representative requesting permission to proceed with cutting which could affect structural safety of the project 10 days in advance of starting cutting. Request approval to proceed. Include the following information, as applicable, in the proposal:
 - 1. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
 - 2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 - 3. List products to be used and firms or entities that will perform Work.
 - 4. Indicate dates when cutting and patching will be performed.
 - 5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out-of-service. All utility shut downs shall be kept to a minimum. Contractor shall coordinate for all shut downs to occur during weekend hours without change to the contract sum. Identify date, time and expected duration (no more than 8 hours duration) of all utility shutdowns. There will be no shut downs for sewer services, must do bypass.

6. Approval by the University's Representative to proceed with cutting and patching does not waive the University's Representative right to later require complete removal and replacement of unsatisfactory work.

B. Changed Conditions Notice: Submit written recommendations to the University's Representative should conditions of work or schedule indicate change of materials or methods, including the following:

1. Conditions indicating change.
2. Recommendations for alternative materials and methods.
3. Information required for substitution.

1.3. QUALITY ASSURANCE

A. Requirements for Structural Work:

1. Obtain approval of the cutting and patching proposal before cutting and patching structural elements including, but not limited to, the following:

- a. Foundation construction.
- b. Structural concrete.
- c. Miscellaneous structural metals.
- d. Piping and equipment.

B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems

- a. Primary operational systems and equipment.
- b. Fire protection systems.
- c. Communication systems.
- d. Electrical wiring systems.
- e. Security systems

C. Visual Requirements: Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction cut and patch in a visually unsatisfactory manner.

1.4. WARRANTY

A. Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

PART 2 – PRODUCTS

2.1. MATERIALS

A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

2.2.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action and notify University's Representative before proceeding.
 - 1. Before proceeding, meet at the Project Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.
 - 2. Provide drawings and calculations signed by a licensed California Structural Engineer for shoring, bracing and support to maintain structural integrity.
 - 3. Protect other portions of the Project.
 - 4. Protect Project from the element.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.
 - 1. In general, where cutting, use hand or small power tools designed for sawing or 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. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.
 - 4. Comply with requirements applicable Division 2 Sections where cutting and patching requires excavating and backfilling.
 - 5. Where services are required to be removed, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 3. Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.
- 3.4 CLEANING
- A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION

SECTION 01 7400 CLEANING AND WASTE MANAGEMENT

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes:
 - 1. Progress Cleaning and Site Maintenance
 - 2. Construction Waste Management and Disposal
 - 3. Final Cleaning
 - 4. Contractor C&D Waste Monitoring Form and Green Waste Monitoring Form, copies of which are attached at the end of this Section.
- B. Cleaning Agents: Use cleaning materials and agents recommended by the 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.
- C. Environmental Requirements: Conduct cleaning and waste-disposal operations in compliance with local laws and ordinances. Comply fully with federal and local environmental and antipollution regulations.
 - 1. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in streams, storm or sanitary drains.
 - 2. Burning or burying of debris, rubbish, or other waste material on the premises is not permitted.
 - 3. Comply with requirements of Southern California Air Quality Management District in effect at the time of construction.
 - 4. Comply with governing regulations and safety standards for cleaning operations. Remove waste materials from the site and dispose of lawfully.
- D. Submittal: Prior to requesting inspection for Substantial Completion and Final Completion, submit written certification to the University's Representative that final cleaning has been performed in accordance with the Contract Documents.

1.2. PROGRESS CLEANING AND SITE MAINTENANCE

- A. Collection and Disposal of Waste: Contractor shall furnish all labor, equipment, containers, transportation, materials, supplies and related expenses to provide the University with comprehensive waste collection and waste recycling services for the Project. Contractor shall collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 degrees F (27 degrees C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly.
 - 1. Do not burn waste materials. Do not bury debris or excess materials on the University's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems or streams. Remove waste materials from the site and dispose of lawfully.
 - 2. Where extra materials of value remain after completion of associated Work, they become the University's property. Dispose of these materials as directed by the University's Representative.

3. Provide on-site containers for collection of waste materials, debris, and rubbish, and empty at least weekly. Maintain containers in such condition so as to ensure they are clean and sanitary, to prevent odor and insect infestation, and ensure no unsightly presentation. Perform maintenance on the containers as required to ensure proper function for the intended purpose.
 4. Handle waste materials in a controlled manner. Do not drop or throw materials from heights.
 5. Remove combustible debris from the building daily and store in covered, non-combustible containers located not less than 40 feet from any building.
- B. Cleaning During Construction Period: Comply with regulations of the University and safety standards for cleaning.
1. Schedule cleaning operations so that dust and other contaminants resulting from cleaning operations will not settle on wet paint, or other coatings or finishes during their cure period.
 2. Comply with manufacturer's instructions for cleaning the surfaces and parts of finishes and equipment. Use only those cleaning materials and procedures recommended by the manufacturer of the item to be cleaned.
 3. Provide cleaning during construction as necessary to ensure operations can proceed on schedule and that finish materials can be installed properly and viewed for determination of aesthetic characteristics.

1.3. CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

- A. The University has established that this Project shall generate the least amount of waste possible and that processes that ensure the generation of as little waste as possible shall be employed to enable the University to meet a minimum 95% percent diversion of construction and demolition (C&D) waste (including green waste) from the landfill.
- B. Contractor shall be responsible for monitoring and maintaining a written log using the C&D Waste Monitoring Form and Green Waste Monitoring Form, copies of which are attached at the end of this Section, to report when actual container deliveries and waste pickups occur, the types of C&D waste material included, weight of each type (in Tons) diverted or landfilled and total percentage of waste diverted from landfill, and any other data required to be reported on the respective forms. Contractor shall submit completed forms with the required data to University's Representative, or designee, **with each Application for Payment**. Such written information shall be used as backup to support payment of Contractor's scheduled value for Division 1, General Requirements.
- C. C&D waste is a combination of concrete, lumber, plaster, cardboard, glass, various metals, paper, PVC, ABS, HDPE, PP, PDPE, PET, white foam, paint buckets, carpet, green waste, and dirt.
1. C&D waste accepted for recycling:
 - a. Card Board.
 - b. Mixed metals.
 - c. PVC Pipe.
 - d. ABS Pipe.
 - e. H.D.P.E. Pipe.
 - f. Carpet.
 - g. Carpet Pad.
 - h. Mixed Plastics.
 - i. Glass.

- j. Bottles & Cans – CRV.
- k. H.D.P.E Plastics.
- l. H.D.P.E Pipe.
- m. Foam – White.
- n. Paper – Mixed.
- o. Plastic Buckets – Paint (empty) & Landscapers.
- p. Drywall.
- q. Wood.
- r. Particle Board.
- s. Green Waste:
 - (1) Green Waste refers to waste resulting from removal of vegetation; it is a combination of brush, branches, leaves, flowers, shrubs and small trees and other items listed on the Green Waste Monitoring Form.
 - (2) Green Waste accepted for recycling and/or compost:
 - (a) Grass Clippings.
 - (b) Trees – Tree trunks shall be cut into 4' and 10" pieces.
 - (c) Branches – Branches shall be cut into 4' and 10" pieces.
 - (d) Tree Trimmings – All other material other than trunks, branches, and leaves.
 - (e) Wood.
 - (f) Mulch.
 - (g) Brush.
 - (h) Leaves.
 - (i) Flowers.
 - (j) Shrubs.
 - (k) Palm Fronds.
- t. Inert Material – Soil, Asphalt, Brick, Concrete

1.4. FINAL CLEANING

- A. This Section includes the administrative and procedural requirements for final cleaning at Substantial Completion and Final Inspection.
- B. Provide final-cleaning operations when indicated. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to the condition expected from a commercial cleaning and maintenance program. Comply with manufacturer's instructions.
- C. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for the entire Project or a portion of the Project.
 - 1. Clean the Project Site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and foreign substances.
 - 2. Sweep paved areas broom clean. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - 3. Remove petrochemical spills, stains, and other foreign deposits.
 - 4. Remove tools, construction equipment, machinery, and surplus material from the site.
 - 5. Remove snow and ice, if any, to provide safe access to the building.
 - 6. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural

- weathering of exterior surfaces. Restore reflective surfaces to their original condition.
7. Remove debris and surface dust from limited access spaces, including trenches, equipment vaults, manholes and similar spaces.
 8. Broom clean concrete floors in unoccupied spaces.
 9. Remove labels that are not permanent labels.
 10. 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.
 - a. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 11. Wipe surfaces of electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 12. Remove grease, dust, dirt, stains, and other marks from surfaces exposed-to-view.
 13. Leave the Project clean.
- D. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Project of rodents, insects, and other pests. Comply with regulations of local authorities.
- E. Removal of Protection: Remove temporary protection and facilities installed during construction to protect previously completed installations during the remainder of the construction period.
- F. Where extra materials of value remain after completion of associated Work, they become the University's property. Dispose of these materials as directed by the University's Representative at no additional cost to the University.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

**SECTION 01 7700
CONTRACT CLOSEOUT**

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
 - 1. Substantial Completion
 - 2. Final Inspection Acceptance
 - 3. Closeout Procedures
 - 4. Instruction and Evaluation of University's Personnel
 - 5. Training Tools and Materials
 - 6. Qualifications of Instructors
 - 7. Operation and Maintenance Manuals and Instructions
 - 8. Spare Parts and Extra Stock Materials
 - 9. Warranties

- B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 33.

1.2. SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
 - 1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 - 2. Advise the University of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance and service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases enabling the University unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Submit record drawings, operation and maintenance manuals, final project photographs, damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra stock, and similar items.
 - 7. Make final changeover of permanent locks and transmit keys and key schedule to the University. Advise the University's personnel of changeover in security provisions.
 - 8. Complete startup testing of systems and instruction of the University's operation and maintenance personnel. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
 - 9. Complete final cleanup requirements, including touchup painting.
 - 10. Touch up and otherwise repair and restore marred, exposed finishes.
 - 11. Adjust and balance all systems and adjust all valves.
 - 12. Check fluid and gas carrying pipe systems, roofs, flashings, gutters, and downspouts for leaks. Repair or replace as necessary.

13. Lubricate all moving parts of machinery and equipment as recommended by the manufacturers of the machinery and equipment.
14. Submit certification required in Section 01 7400 for "Final Cleaning."

B. Inspection Procedures: On receipt of a request for inspection, the University's Representative will either proceed with inspection or advise the Contractor of incomplete or incorrect work. The University's Representative will prepare the Punchlist following inspection or advise the Contractor of what must be completed or corrected before the certificate will be issued.

1. The University's Representative will repeat inspection when requested and assured that the Work is substantially complete.
2. Results of the completed inspection will form the basis of requirements for final acceptance.
3. Allow 3 weeks for the University's Representative to prepare the list of items to be corrected.

1.3. FINAL INSPECTION ACCEPTANCE

A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
3. Submit a certified copy of the University Representative's final inspection list of items to be completed or corrected, endorsed and dated by the University's Representative. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the University's Representative.
4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the University took possession of and assumed responsibility for corresponding elements of the Work.
5. Submit consent of surety to final payment.
6. Submit a final liquidated damages settlement statement.
7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
8. Completed Punchlist.

B. Reinspection Procedure: The University's Representative will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the University's Representative.

1. Upon completion of reinspection, the University's Representative will prepare a certificate of final acceptance. If the Work is incomplete, the University's Representative will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
2. If necessary, reinspection will be repeated and related costs of University's Representative and University Representative's Consultants will be deducted from final retention payment.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 CLOSEOUT PROCEDURES

- A. Operation and Maintenance Instructions: Arrange for each Installer of equipment that requires regular maintenance to meet with the University's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:
1. Operation and Maintenance manuals.
 2. As-Built documents.
 3. Spare parts and materials.
 4. Tools.
 5. Lubricants.
 6. Fuels.
 7. Identification systems.
 8. Control sequences.
 9. Hazards.
 10. Cleaning.
 11. Warranties and bonds.
 12. Maintenance agreements and similar continuing commitments.
- B. As part of instruction for operating equipment, demonstrate the following procedures:
1. Startup.
 2. Shutdown.
 3. Emergency operations.
 4. Noise and vibration adjustments.
 5. Safety procedures.
 6. Economy and efficiency adjustments.
 7. Effective energy utilization.
- 3.2 INSTRUCTION AND EVALUATION OF UNIVERSITY'S PERSONNEL
- A. Perform hands-on demonstrations and instruction for University's designated personnel in the operation, adjustment and maintenance of products, equipment, and systems, as required and at agreed upon times.
- B. Instruction Before Final Inspection: Before Final Inspection, and after work under this contract is completed, tested and prior to acceptance by the University; and not less than five (5) days after submittal of the Operation and Maintenance Data, operate all the systems for a period of three (3) 8-hour periods during which time a qualified factory trained representative familiar with the items installed shall instruct and supervise the University's Personnel in the operation and maintenance of the equipment and systems. This instruction period is in addition and subsequent to any period of operation, testing and adjustment called for elsewhere in these specifications.
- C. Instruction by Manufacturer's Representatives: Any instructions from manufacturer's representatives required under other sections of this specification shall be conducted during this period. This instruction period shall be conducted after completion of all piping and equipment labeling required by the Contract.
- D. Time of Instructions: Make all arrangements and notices for operation and instruction periods through the University's Representative.
- E. Seasonal Operation: For equipment requiring seasonal operation, perform demonstrations and instructions for each required season and at agreed upon times.
- F. Evaluation: During and after demonstrations and instructions for University's designated personnel, evaluate their ability to perform the necessary maintenance and operation functions required to properly operate and maintain each piece of equipment. Make sure

that at the end of the training session, the University's designated personnel are reasonably proficient in the operations and maintenance of products, systems, and equipment.

3.3 TRAINING TOOLS AND MATERIALS

- A. Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance. For all systems requiring operation and maintenance training from factory representative, written authorization from the University is required. All systems of more than one manufacturer, a factory representative from each will be required.
- B. Prepare and insert additional data in Operation and Maintenance Manual when need for such data becomes apparent during instruction.

3.4 QUALIFICATIONS OF INSTRUCTORS

- A. Instructions for the University's Personnel. For instruction of the University's operating and maintenance personnel, use experienced instructors thoroughly trained and experienced in the operation and maintenance of the building equipment or system involved.

3.5 OPERATION AND MAINTENANCE MANUALS AND INSTRUCTIONS

- A. Assemble and furnish a minimum of 3 complete sets (unless otherwise indicated in a specific section) of all mechanical and electrical systems data, except that noted to be mounted in frames, in three-ring loose-leaf binders, complete with index, with indexed dividers permanently attached and exterior labels on cover and back of binders.
- B. Data Required:
 - 1. Manufacturers' Manuals: Provide complete installation, operation, maintenance, and service manuals and printed instructions and parts lists for all materials and equipment, where such printed matter is regularly available from the manufacturer. This includes but is not limited to such service manuals as may be sold by the manufacturer covering the operation and maintenance of items, and complete replacement parts lists sufficiently detailed for parts replacement ordering to manufacturer. Bound publications need not be assembled in binders.
 - 2. Equipment Nameplate Data: A typewritten list of all mechanical and electrical equipment showing all equipment nameplate data exactly. Identify equipment by means of names, symbols, and numbers used in the Contract Documents.
 - 3. System Operating Instructions: Typewritten instructions covering operation of the entire system as installed (not duplicating manufacturers' instructions for operating individual components). Include schematic flow and control diagrams as appropriate and show, locate, or list system valves, control-elements, and equipment components using identification symbols and numbers. List rooms, area of equipment served, and show proper settings for valves, controls, and switches.
 - 4. System Maintenance Instructions: Typewritten instructions covering routine maintenance of systems. List each item of equipment requiring inspection, lubrication, or service and briefly describe such maintenance, including types of lubricants and frequency of service. It is not intended that these instructions duplicate manufacturers' detailed instructions. Give name, address, and phone number of nearest firm authorized or qualified to service equipment or provide parts.
 - 5. Warranty, Bonds, and Service Contracts: Provide a copy of each warranty, bond, and service contract issued. These should be accompanied by a sheet which outlines procedures to take in the event of failure and the circumstances which might affect the validity of warranties or bonds.
 - 6. Wall Mounted Data: Frame one set of typewritten system instructions and diagrams as required under Paragraphs 3. and 4. above, covered with plexiglass and mount in locations as directed by the University's Representative.

3.6 — SPARE PARTS AND EXTRA STOCK MATERIALS

3.7 WARRANTIES

A. General Provisions:

1. This subsection includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers' standard warranties on products and special warranties.
 - a. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.
 - b. Refer to Divisions 2 through 33 for specific requirements for warranties on products and installations specified to be warranted.
 - c. Certifications and other commitments and agreements for continuing services to University are specified elsewhere in the Contract Documents.
2. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.
3. Effective Date: Warranties shall begin on the date of Final Acceptance unless specifically designated differently or a different date is mutually agreed upon in writing by the parties involved.
4. General Conditions require all items to be under warranty for a period of one (1) year from date of final completion (Notice of Completion) unless otherwise indicated. Warranties for more than one year required by individual Sections require a written warranty by Contractor and Subcontractor. Refer to individual Section of the Specifications to verify if longer warranties are required.

B. Definitions:

1. Standard product warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the University.
2. Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the University.

C. Warranty Requirements

1. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.
2. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

3. **Replacement Cost:** Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Regents have benefited from use of the Work through a portion of its anticipated useful service life.
 4. **Regents' Recourse:** Expressed warranties made to the Regents are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Regents can enforce such other duties, obligations, rights, or remedies.
 - a. **Rejection of Warranties:** The Regents reserve the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - b. The Regents reserve the right to refuse to accept Work for the Project where a special guarantee, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented so that entities required to countersign such commitments are willing to do so.
 5. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the University reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.
 6. **Disclaimers and Limitations:** Manufacturer's disclaimers and limitations on standard product warranties shall not relieve the Contractor of the Contractor's warranty on the Work that incorporates the products, and shall also not relieve suppliers, manufacturers, and subcontractors required to counter-sign special warranties with the Contractor.
- D. **Warranty Submittals**
1. Submit written warranties to the University's Representative prior to the date certified for Substantial Completion. If the University Representative's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion, or a designated portion of the Work, submit written warranties upon request of the University's Representative.
 - a. When a designated portion of the Work is completed and occupied or used by the University, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the University's Representative within 10 days of completion of that designated portion of the Work.
 2. Forms for special warranties are included at the end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Submit a draft to the University, through the University's Representative, for approval prior to final execution.
 - a. Refer to Divisions 2 through 33 for specific content requirements and particular requirements for submitting special warranties.
 3. **Form of Submittal:** At Final Completion compile 3 copies of each required warranty, in the form included at the end of this Section, properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 4. Assemble required guarantees, bonds, and service and maintenance contracts.

5. Number of original signed copies required: Three (3) sets, each on 8-1/2 inch x 11 inch sheets, 3-hole punched in 3-ring binders. Fold larger sheets to fit into binders. Submit in commercial quality, 3-ring binders, with durable, cleanable plastic covers. Each set of binders shall include:
 - a. Cover: Identify each binder on the cover with typed or printed title, "WARRANTIES", University's Project Name and Number, Name of General Contractor, and binder number, such as "Set 1, Volume 1 of 2", etc.
 - b. Table of Contents: in a spreadsheet/table format, neatly typed and in orderly sequence by CSI number, based on Specifications Table of Contents in the Bidding-Contract Documents, with the following information:
 - (1) CSI Number.
 - (2) Name of Product or Work item.
 - (3) Brief Scope Description.
 - (4) Firm name, address, telephone number, and name of principal with email address.
 - (5) Date of beginning of guarantee, bond, or service and maintenance contract.
 - (6) Duration and expiration date of warranty or service and maintenance contract.
 - c. When warranted, construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.
 - d. Except when a special warranty is required by the provisions of a specific Section of these Specifications, or a standard warranty is not offered as a matter of record by the manufacturer of a specified product, submit the manufacturer's standard warranty for each product incorporated in the Work.
 - e. When a manufacturer does not offer a standard warranty, provide a written form listing the product and indicating "Standard Product Warranty Not Available."
6. Special Warranty Forms: Attached at the end of this Section.

END OF SECTION

GUARANTEE

Project Name: _____ Date: _____

Project Location: _____

Project Number: _____

GUARANTEE FOR _____ (the "Contract"), between
The (Specification SECTION and Contract No.)

The Regents of the University of California ("University") and

("Contractor")

(Name of Contractor or Subcontractor)

hereby guarantees to University that the portion of the Work described as follows:

which it has provided for the above referenced Project, is of good quality; free from defects; free from any liens, claims, and security interests; and has been completed in accordance with Specification SECTION and the other requirements of the Contract.

The undersigned further agrees that, if at any time within _____ months after the date of the guarantee the undersigned receives notice from University that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the undersigned will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

In the event the undersigned fails to commence such correction, repair, or replacement within 10 days after such notice, or to diligently and continuously prosecute the same to completion, the undersigned, collectively and separately, do hereby authorize University to undertake such correction, repair, or replacement at the expense of the undersigned; and Contractor will pay to University promptly upon demand all costs and expenses incurred by University in connection therewith.

SUBCONTRACTOR

Signed: _____ Title: _____
Typed Name: _____
Name of Firm: _____
Contractor License Classification and Number: _____
Address: _____
Telephone Number: _____

CONTRACTOR

Signed: _____ Title: _____
Typed Name: _____
Name of Firm: _____

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SPECIAL WARRANTY FORM

When required in Sections of the Specifications, Special Warranties shall be in the following form and written on Contractor's own letterhead:

"Warrant _____
(portion of work warranted)

Project: _____

Address: _____

Date: _____

We, the undersigned hereby warrant to the Regents of the University of California ("Regents") that the portion of the work identified, which we have installed in the above-named Project has been performed in accordance with the Contract Documents and that the work, as installed, will fulfill the requirements of the warranty included in this Specification. We agree to repair or replace any or all of our work, together with any other work which may be damaged or displaced by so doing, that may prove to be defective in its workmanship, materials, operation, or failure to conform to Contract provisions and requirements within a period of year(s) from date of Substantial Completion of the stipulated below for the above-named Project, without any expense whatever to the said Regents, ordinary wear and tear and unusual abuse or neglect excepted. In the event of our failure to comply with the above-mentioned conditions within ten (10) calendar days after being notified in writing by the Regents, we collectively or separately do hereby authorize the Regents to proceed to have said defects repaired and made good at our expense, including all collection cost and reasonable attorney fees, and we will honor and pay the costs and charges therefore upon demand."

WARRANTY PERIOD: _____ STARTING: _____ TERMINATING _____

Name of General Contractor

Name of Subcontractor

Signature of General Contractor

Signature of Subcontractor

Address

Address

Phone Number

Phone Number

State License Number

State License Number

Name of Manufacturer

Manufacturer Phone Number

Signature of Manufacturer

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**SECTION 01 7839
AS-BUILT DOCUMENTS****PART 1 – GENERAL****1.1. SUMMARY**

- A. This Section includes administrative and procedural requirements for As-Built Documents, including without limitation, the following:
1. As-Built Drawings
 2. As-Built Specifications
 3. As-Built Product Data
 4. As-Built Sample Submittal
 5. Miscellaneous As-Built Submittals
 6. Recording
- B. As-Built Documents required include the following:
1. Marked-up copies of Drawings.
 2. Marked-up copies of Shop Drawings.
 3. Newly prepared drawings.
 4. Marked-up copies of Specifications, Addenda, and Change Orders.
 5. Marked-up Product Data submittals.
 6. Samples.
 7. Field records for variable and concealed conditions.
 8. Record information on Work that is recorded only schematically.
 9. Operation and Maintenance Data submittals.
 10. Miscellaneous submittals.
- C. Maintenance of Documents and Samples: Store As-Built Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use As-Built Documents for construction purposes. Maintain As-Built Documents in good order, legible condition, and in a clean, dry, secure, fire-safe location. Make As-Built Documents and Samples available at all times for the University's Representative's inspections.
1. Maintain 1 set of all As-Built Documents at the Project site for the entire duration of construction.
 2. Clearly label each document or item "AS-BUILT DRAWING," "AS-BUILT SAMPLE," "AS-BUILT SPECIFICATION," or similarly as appropriate and applicable.
- D. Do not conceal Work requiring verification for As-Built Documents until such information has been verified and recorded.

1.2. AS-BUILT DRAWINGS

- A. Markup Procedure: During construction, maintain a clean, undamaged set of blue- or black-line white prints of Contract Drawings and Shop Drawings for As-Built Document purposes.
1. Mark these Drawings to show the actual installation where the installation varies from the installation shown originally. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later. Items required to be marked include, but are not limited to, the following:
 - a. Dimensional changes to the Drawings.
 - b. Revisions to details shown on the Drawings.
 - c. Depths of foundations below the first floor. Indicate foundation elevations relative to first floor elevation.
 - d. Horizontal locations and vertical depths of underground utilities and appurtenances, including both site utilities and those under buildings and structures, referenced to permanent surface improvements.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Changes made by change order or field order.
 - h. Changes made following the University Representative's written orders and pertinent graphic and written responses to RFI's.
 - i. Details not on original Contract Drawings.
 2. Mark As-Built prints of Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings location.
 3. Mark As-Built sets with red erasable colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 4. Mark important additional information that was either shown schematically or omitted from original Drawings. Mark new information that is important to the University but was not shown on Contract Drawings or Shop Drawings.
 5. Note field order numbers, alternate numbers, change order numbers, RFI numbers, ASI numbers, and similar identification.
 6. Identify and date each drawing; include the printed designation "AS-BUILT DRAWING" in a prominent location on each drawing
- B. Responsibility for Markup: The individual or entity who obtained As-Built data, whether the individual or entity is the installer, subcontractor, or similar entity, shall prepare the markup on As-Built drawings.
1. Accurately information in an understandable drawing technique.
 2. Record data as soon as possible after obtaining it, but within 24 hours maximum. Record and check the markup prior to enclosing concealed installations.
 3. At time of Substantial Completion, submit As-Built drawings to the University's Representative for the University's records. Organize into sets and bind and label sets for the University's continued use. Bind each set with durable-paper cover sheets. Include appropriate identification, including titles, dates, and other information on the cover sheets.
- C. Newly Prepared As-Built Drawings: Prepare new drawings instead of following procedures specified for preparing As-Built drawings where new drawings are required, and the University's

Representative determines that neither original Contract Drawings nor Shop Drawings are suitable to show the actual installation.

- D. Consult with the University's Representative for the proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. When completed and accepted, integrate newly prepared Drawings with procedures specified for organizing, copying, binding and submittal of As-Built drawings.

1.3. AS-BUILT SPECIFICATIONS

- A. During the construction period, maintain 3 copies of the Specifications, including addenda and modifications issued, for As-Built Document purposes.
 1. Mark the Specifications to indicate the actual installation where the installation varies from that indicated in Specifications and modifications issued. Note related project record drawing information, where applicable. Give particular attention to substitutions, selection of product options, and information on concealed installations that would be difficult to identify or measure and record later.
 - a. In each Specification Section where products, materials, or units of equipment are specified or scheduled, mark the copy with the proprietary name and model number of the product furnished.
 - b. Record the name of the manufacturer, supplier, installer, and other information necessary to provide a record of selections made and to document coordination with As-Built Product Data submittals and maintenance manuals.
 - c. Note related As-Built Product Data, where applicable. For each principal product specified, indicate whether As-Built Product Data has been submitted in maintenance manual instead of submitted as As-Built Product Data.
 - d. Use pen and black ink so marks will reproduce clearly.
 2. Upon completion of markup, submit As-Built Specifications to the University's Representative for the University's records.

1.4. AS-BUILT PRODUCT DATA

- A. During the construction period, maintain one copy of each Product Data submittal for As-Built Document purposes.
 1. Mark Product Data to indicate the actual product installation where the installation varies substantially from that indicated in Product Data submitted. Include significant changes in the product delivered to the site and changes in manufacturer's instructions and recommendations for installation.
 2. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 3. Note related change orders and markup of As-Built Drawings, where applicable.
 4. Upon completion of markup, submit a complete set of As-Built Product Data to the University's Representative for the University's records.
 5. Where As-Built Product Data is required as part of maintenance manuals, submit marked-up Product Data as an insert in the manual instead of submittal as As-Built Product Data.

1.5. AS-BUILT SAMPLE SUBMITTAL

- A. Immediately prior to date of Substantial Completion meet with the University's Representative and the University's personnel at the site to determine which of the Samples maintained during the construction period shall be transmitted to the University for record purposes. Comply with the University Representative's instructions for packaging, identification marking, and delivery to the University's Sample storage space. Dispose of other Samples in a manner specified for disposing surplus and waste materials.

1.6. MISCELLANEOUS AS-BUILT SUBMITTALS

- A. Refer to other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Immediately prior to Substantial Completion, complete miscellaneous As-Built records and place in good order, properly identified and bound or filed, ready for use and reference. Submit to the University's Representative for the University's records.

- 1. Categories of requirements resulting in miscellaneous As-Built Documents include, but are not limited to, the following:

- a. Field records on excavations and foundations.
- b. Field records on underground construction and similar work.
- c. Survey showing locations and elevations of underground lines.
- d. Invert elevations of drainage piping.
- e. Surveys establishing building lines and levels.
- f. Authorized measurements utilizing unit prices or allowances.
- g. Records of plant treatment.
- h. Ambient and substrate condition tests.
- i. Certifications received in lieu of labels on bulk products.
- j. Batch mixing and bulk delivery records.
- k. Testing and qualification of tradesmen.
- l. Documented qualification of installation firms.
- m. Load and performance testing.
- n. Inspections and certifications by governing authorities.
- o. Leakage and water-penetration tests.
- p. Final inspection and correction procedures.
- q. Field test reports.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

3.1 RECORDING

- A. Post changes and modifications to the As-Built Documents as they occur. Do not wait until the end of the Project. The University's Representative and IOR will periodically review As-Built Documents to determine compliance with this requirement.
- B. Current updated As-Built Documents shall be made available to the University's Representative and IOR for review at the time of submitting applications for payment.
- C. Per the General Conditions, the University has the right to withhold payment until As-Built Documents are completed and current to date as of the latest application for payment

END OF SECTION

LEED CONCRETE TRACKING FORM

PROJECT NAME: _____

CONTRACTOR: _____

SPEC SECTION: _____

CONTACT NAME: _____

Tel. no: _____ SUBMITTAL NO: _____

A. Mix Number	B. Supplier	C. Total Materials Cost of Concrete (\$)	D. Mass of recycled SCMs (lbs.)	E. Mass of total cementitious materials only (lbs.) ¹	F. SCMs as a percentage of total cementitious materials only (%) [D/E]	G. Dollar value of all cementitious materials only (\$) [from concrete supplier]	H. Recycled content value per yard (\$) [(F/2) x G]	I. Distances from both harvesting AND manufacturing point to project site (miles) ²
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

¹ This column includes Portland cement, recycled SCM's and any other cementitious ingredients that are not recycled (not total lbs. of concrete).

² Materials can travel more than 500 miles, provided materials always remain within 500 mile radius of project site.

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SECTION 01 8113 SUSTAINABLE DESIGN REQUIREMENTS

PART 1 – GENERAL

1.1. SUMMARY

- A. This Section includes: Requirements and procedures for compliance with certain U.S. Green Building Council's (USGBC) LEED (Leadership in Energy and Environment Design) New Construction (NC) Version 3 (v3) prerequisites and credits needed for the Project to obtain at minimum LEED Silver certification with the goal being LEED Gold including:
1. Prerequisites and credits which the Owner intends to achieve.
 2. Requirements for LEED documentation and submittals.
 3. A copy of the LEED Project Checklist, attached at the end of this Section for information only.
- B. Definitions:
1. **Agrifiber Product:** Products consisting of fibrous material derived from the agricultural industry and typically characterized by rapidly renewable characteristics. Such products may consist of wheat straw, sugar cane, and other agricultural crops.
 2. **Chain-of-Custody Certificates:** Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria for Forest Stewardship." Certificates shall include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.
 3. **Chain of Custody:** A tracking procedure to document the status of a product from the point of harvest, extraction, or recovery to the point of ultimate end use.
 4. **Chemical Waste:** Includes paints, adhesives, sealants, coatings, petroleum products, bituminous materials, salts, acids, alkalis, herbicides, pesticides, organic chemicals, and inorganic wastes.
 5. **Chlorofluorocarbons (CFCs):** Any of various halocarbon compounds consisting of carbon, hydrogen, chlorine, and fluorine, once used widely as aerosol propellants and refrigerants. Chlorofluorocarbons have been identified to cause depletion of the atmospheric ozone layer.
 6. **Construction and Demolition Waste:** Includes solid wastes, such as building materials, packaging, rubbish, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
 7. **Construction IAQ Management Plan:** A document that outlines measures to minimize contamination in a building during construction and to flush the building of contaminants prior to occupancy.
 8. **Cost Basis:** A basis of calculation wherein the input values are in terms of monetary cost (US Dollar).

9. Hazardous Materials: Includes pesticides, biocides, carcinogens, and “wet products” as listed by recognized authorities, such as the Environmental Protection Agency (EPA), International Agency for Research on Cancer (IARC), the State of California, and any special local requirements.
10. Heat Island Effect: A condition wherein elevated temperatures are experienced in urban landscapes as a result of solar energy retention within constructed bodies. Principal bodies that contribute to the heat island effect include streets, sidewalks, parking lots, and buildings.
11. Interior Final Finishes: Materials and products that will be exposed at interior occupied spaces, including flooring, wall covering finish carpentry, and ceilings.
12. LEED v3 NC: Leadership in Energy & Environmental Design, version 3 for New Construction. The LEED Green Building Rating System represents the US Green Building Council’s effort to provide a national standard for what constitutes a green building.
13. Point of Extraction, Harvest, or Recovery: The geographic location where the material was extracted, harvested, or recovered.
14. Point of Final Assembly: The geographic location where individual components are assembled into the product that is furnished and installed by the tradesmen.
15. Post-Consumer Material: Recycled material from consumer waste.
16. Post-Consumer Recycled Content: The percentage of material in a product (by weight) that was consumer waste. The recycled material was generated by household, commercial, industrial, or institutional end-users and can no longer be used for its intended purpose. It includes returns of materials collected through recycling programs, discarded products (e.g., furniture, cabinetry, decking), and landscaping waste (e.g., leaves, grass clippings, tree trimmings). (ISO 14021)
17. Pre-Consumer (Post-Industrial) Material: Material diverted from the waste stream during the manufacturing process (can also be considered post-industrial). Excluded is reutilization of materials such as rework, re-grind or scrape generated in a process and capable of being reclaimed within the same process that generated it.
18. Rapidly Renewable Materials: Materials made from plants that are typically harvested within a 10-year or shorter cycle. Rapidly renewable materials include products made from bamboo, cotton, flax, jute, straw, sunflower seed hulls, vegetable oils or wool.
19. Recycled Content: The percentage by weight of constituents that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer).
 - a. Spills and scraps from the original manufacturing process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product are not recycled materials.
 - b. Discarded materials from one manufacturing process that are used as constituents in another manufacturing process are pre-consumer recycled materials.

20. Regionally Extracted, Harvested, or Recovered Materials: Materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site. Manufacturing refers to the final assembly of components into the building product that is installed at the Project site.
21. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
22. Volatile Organic Compounds (VOCs): Carbon compounds emitted by materials that participate in atmospheric photochemical reactions. VOC's are common in building products and are emitted over time through outgassing. Sources of VOC's may include solvents in paints and other coatings; wood preservatives; strippers and household cleaners; adhesives in particleboard, fiberboard, and some plywoods; and foam insulation. When released, VOC can contribute to the formation of smog and can cause respiratory tract problems, headaches, eye irritations, nausea, and damage to the liver, kidneys, and central nervous system, and possibly cancer.
23. Waste Management Plan: A Project-related plan for the collection, transportation, and disposal of the waste generated at the construction site. The purpose of the plan is to ultimately reduce the amount of material being landfilled.
24. Weight Basis: A basis of calculation wherein the input values are in terms of weight (US Pound).

1.2. GENERAL REQUIREMENTS

- A. Work must be completed in accordance with the requirements of the U.S. Green Building Council's LEED Rating System for achieving the credits shown in the attached Checklist. Changes to the LEED Checklist shall be approved by the LEED Project Administrator.
- B. LEED credits needed to obtain LEED Gold certification are dependent on material selections and may not be specifically identified as LEED requirements. Compliance with requirements needed to obtain LEED prerequisites and credits will be used as one criterion to evaluate substitution requests.
- C. Additional LEED prerequisites and credits needed to obtain the specified LEED certification are dependent on the design and other aspects of the Project that are not part of the Work under this Contract.
- D. LEED rating system applicable to the work shall be USGBC's LEED Rating System for New Construction and Major Renovations (LEED-NC), Version 3.
- E. LEED Registration: The LEED Project Administrator has registered the Project with the internet based LEED Tracking System "LEED-Online".
- F. The General Contractor shall provide a LEED Representative to provide and coordinate Contractor related services for LEED. The General Contractor's LEED Representative shall be a LEED Accredited Professional.
- G. Contractor's LEED® Representative shall be an individual responsible for implementation, coordination, and documentation of LEED® Credit Requirements specified herein. General Contractor's LEED® Representative shall attend LEED® Certification meetings and put together a LEED Action Plan critical showing how LEED prerequisites and credits requirements will be met. General Contractor's LEED® Representative shall be present on site at all times necessary when work is in progress to insure that the LEED Action Plan is being met.

- H. Other Sections in Divisions 02 through 33: Specific information related to sustainable design and in reference to LEED credits.

1.3. REFERENCE STANDARDS

- A. American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE).
- B. Carpet and Rug Institute (CRI): Indoor Air Quality Green Label Plus Testing Program.
- C. CARB - California Air Resources Board Suggested Control Measures for Architectural Coatings
- D. Environmental Protection Agency (EPA): Energy Star - Program Requirements for Roof Products
- E. Energy Policy Act (EPACT) of 2005.
- F. Forest Stewardship Council (FSC) "Principles and Criteria." G. Green Seal (GS) Environmental Standards.
- G. LEED Reference Guide for New Construction and Major Renovations, Version 3 (LEED-Cv3).
- H. South Coast Air Quality Management District (SCAQMD).
- I. Sheet Metal and Air Conditioning Contractors' National Association (SMACNA).

1.4. LEED PROJECT GOALS

- A. This project shall incorporate campus-wide credits that were to be approved by the USGBC in March of 2012. The General Contractor shall be required to provide full credit documentation and back-up for each Credit, as required, as part of their Construction Submittal. The Contractor shall refer to the Project Checklist for LEED credits having bearing on the Contractor's scope of work. Any credit documentation required from a listed subcontractor who is unable to provide the required documentation shall then become the General Contractor's responsibility as part of their Construction Submittal.
- B. Contractor shall appoint a LEED Representative to be present on-site to coordinate and insure LEED project goals/credits are achieved. The Contractor's LEED Representative will coordinate with the University's LEED Representative.
 - 1. The University's Representative will designate trades where the Contractor shall designate a LEED[®] Representative. Contractor's LEED[®] Representative shall be responsible for implementation, coordination, and documentation of relevant LEED[®] Credit Requirements specified herein. Contractor's LEED[®] Representative shall provide the General Contractor with all necessary documentation to insure LEED[®] prerequisites and credits requirements are met.
 - 2. General Contractor's LEED[®] Representative shall coordinate of all Contractors and shall insure Contractors not designated by the University to have a LEED[®] Representative, meet LEED[®] prerequisites and credits requirements, and provide sufficient documentation for LEED[®] compliance.
- C. Contractor shall refer to the LEED-NC v3 "Reference Guide" for more detailed information and exact language of the requirements and the exact nature of the submittals, referred to as "credit templates and supporting documentation." The University's LEED Representative shall provide further details as needed.

- D. Contractor shall maintain a copy of the LEED-NC v3 “Reference Guide” on site. Additional information on LEED® and how to purchase copies of the LEED®-NC v3.0 reference guide and how to use LEED®-Letter Templates can be found at www.usgbcv.org and <https://leedonline.usgbc.org>.
- E. The following table summarizes the credits that need full documentation from the Contractor as noted in this LEED specification.

LEED® Certification	
LEED® REFERENCE	Point Description
SSp1: PTC	Construction Activity Pollution Prevention
MR 4.1 – 4.2: PTC	Recycled Content Material
MR 5.1 – 5.2: PTC	Local/Regional Materials
MR 6.0: PTC	Rapidly Renewable Materials
MR 7.0: PTC	Certified Wood
EQ 3.1 – 3.2: PTC	Construction IAQ Management Plan
EQ 4.1 – 4.4: PTC	Low-Emitting Materials

1.5. SUBMITTALS

- A. Sustainable Design and LEED submittals are in addition to other submittals. If submittal item is identical to that submitted to comply with other requirements, submit duplicate electronic copies as a separate submittal to verify compliance. Any discrepancies shall be referred to the Universities Representative for clarification.
- B. LEED Documentation Submittals shall be prepared and submitted using the LEED-Online credit website.
 - 1. The Contractor is responsible to obtain project access to LEED-Online and join the project using the project’s 15 digit project access code.
 - a. Contractor shall assign one representative to coordinate the LEED-Online PDF credit templates and submittal documents assigned to the Contractor.
 - b. Access to the credit templates requires installation of the current version of Adobe software as required by LEED-Online.
 - c. Additional instructions on how to access the project can be provided by the LEED Project LEED Administrator.
 - 2. Once the Contractor has joined the project through LEED-Online, the LEED Project Administrator will assign the LEED credits that the Contractor is responsible for completing.
 - a. Each credit template is an editable Adobe PDF document.
 - b. Each credit template may be completed or updated at any time prior to the LEED Construction Submittal.
 - c. After completion of documentation for each credit, use the “Save Template to LEED- Online” button at the lower right hand corner of the last page of the template to save the data.
 - d. Additional submittal documentation and back-up requirements should be uploaded to the LEED-Online website following the instructions for each credit.

3. LEED-Online submittals require calculations for items such as recycled content materials to be inserted into an online form called a template. Costs and materials need to be broken down and the calculations carried out on the templates.
 4. The Contractor is responsible for providing the information, downloading and completing the templates and uploading them on the LEED-Online website. Certain types of backup information such as the material safety data sheets (MSDS) for low-emitting materials, need to be submitted by the Contractor. The LEED-NC v3 "Reference Guide" provides detailed documentation requirements.
 - a. All Sub-Contractors shall provide the Contractor with the necessary cutsheets and MSDS data sheets for the materials used on site.
 5. The Contractor is responsible for providing resubmission of any requested information or documentation on the LEED-Online website in response to USGBC review comments to LEED credits previously submitted.
- C. LEED Materials Cost Analysis Sheet: Provide updates and maintain materials' cost data for recycled content, regional content and certified wood excluding mechanical, electrical, and plumbing components, and specialty items such as elevators and equipment, concurrent with each Application for Payment. The Project Administrator shall provide a template for use by the Contractor.
1. Provide actual material costs which can include shipping costs. Material costs should account for all taxes and transportation costs incurred by the contractor but, exclude labor and equipment costs once the material has been delivered to the site. For each material supplied for Divisions 3-11 specific material cost data for individual components and materials (not including labor) will be required to be provided as part of some LEED® pre-requisite and credit requirements submittals.
 2. For assemblies formulated from multiple materials (e.g., a composite wood panel) or a product made up of subcomponents (e.g., a window system), determine the percentage of applicable material content (percentage of weight for recycled content and for FSC wood as a percentage of total weight, volume or cost).
 3. Consistent numbers must be applied to various LEED® credits submittals requiring similar material cost data.
- D. LEED Data Sheet: Submit LEED Data Sheets with each submittal and with each change order. Sample form is attached at the end of this Section.
- E. LEED Action Plans: Provide the following plans within 14 days of date established in the Notice to Proceed:
1. Credit SS Prerequisite 1: Erosion and sedimentation control plan. See Sections 01 1400, 01 3540, and 31 1000 for requirements.
 2. Prerequisite EA 1.0: Plan for fundamental commissioning complying with the requirements in Section 01 9113.
 3. Credit MR 2.1 and 2.2: Construction and Demolition Debris Recycling (Waste Management) Plan in order to meet 95% construction waste diversion. See Section 01 7419 Construction Waste Management for requirements.
 4. Credit MR 4.1: List of proposed materials with recycled content.
 - a. Indicate cost, post-consumer recycled content, and pre-consumer recycled content for each product having recycled content. Use materials with recycled content such that the sum of postconsumer recycled content

plus ½ of the preconsumer content constitutes at least 10% based on cost of the total value of the materials in the project.

- b. Indicate cost of all products and materials used regardless of recycled content for the purpose of comparison so as to ultimately derive a cost-based percentage of recycled content.
5. Credit MR 5.1: List of proposed regional materials.
 - a. Identify each regionally extracted, processed, and manufactured material, its source, and cost.
 6. Credit MR 7.0: List of proposed certified wood products.
 - a. Include statement indicating costs for each product containing certified wood. In the case of manufactured products containing non-wood materials, only the new wood portion can contribute to this credit.
 - b. Include statement indicating total cost for wood-based materials used for Project, including non-rented temporary construction.
 7. Credit IEQ 3.1: Provide an Indoor Air Quality Plan for activities during construction following the SMACNA 2007 guidelines.
 8. Credit IEQ 3.2: Create a plan and schedule for building flush-outs to be performed in accordance with credit requirements after all finishes have been installed and the building has been completely cleaned before occupancy.
 9. Credit EQ 4.1, 4.2, 4.3 & 4.4: Low Emitting Materials
- F. LEED Progress Reports: Concurrent with each Application for Payment, submit reports comparing actual construction and purchasing activities with LEED action plans for the following:
1. Prerequisite SSp1 Construction Activity Pollution Prevention.
 2. Credit MR 2.1 and 2.2: Waste reduction progress reports.
 3. Credit MR 4.1 and 4.2: Recycled content.
 4. Credit MR 5.1 and 5.2: Regional material.
 5. Credit MR 7.0: Certified wood.
 6. Credit IEQ 3.1 and 3.2: Construction IAQ Management Plan: During Construction and Before Occupancy
- G. Within 21 calendar days of Project Substantial Completion, General Contractor shall provide to University's Representative an electronic copy of all LEED required documentation demonstrating compliance with LEED Certification requirements, including but not limited to, documentation provided during the submittal process. This shall be submitted through the Universities LEED Management Software.

1.6. SUBSTITUTIONS

- A. Requests for substitutions shall comply with the provisions of Section 01 2500 Product Options and Substitutions and the following additional requirements specified in this Article for LEED certification related materials and requirements and environmental products and procedures identified in this Section. Submit a description of the differences

of the proposed substitution from specified product related to LEED requirements. Include description of environmental advantages of proposed substitution over specified product.

1. No substitutions shall be submitted without the full projected LEED® impact documented.
2. Where LEED® material emission limits are specified, the University shall reject proposed substitutions where:
 - a. Data for VOC's is not provided.
 - b. Emissions of VOC's exceed the material's specified VOC limit.
 - c. There is negative impact on overall system efficiency.
 - d. The total number of LEED® credits will be compromised.
 - e. The intent of the LEED® credits are compromised.
- B. The Contractor is responsible for re-submittal of calculations and documentation of products or material substitutions that affect LEED prerequisites and credits referenced in this Section, and which apply to any credits previously submitted as part of the LEED Design Application Submittal, and credits included in the LEED Construction Submittal Products that do not meet these requirements shall not be submitted for substitution.

1.7. CREDIT REQUIREMENTS

- A. The following is a list of Credit Requirements for which the General Contractor shall contribute LEED® certification documentation demonstrating compliance with the corresponding LEED® Credit Requirements. The LEED BD&C v2009 Reference Guide shall be used along with following requirements.
- B. All Contractors shall provide the General Contractor with their trade's relevant documentation contributing to LEED® certification.
- C. The following Credit Requirements for LEED® compliance are in addition to those requirements specified elsewhere in the Specifications.
- D. Construction Activity Pollution Prevention (SSp1):
 1. Contractor shall comply with the Universities Erosion Control Plan.
 2. Keep an inspection report or photos to demonstrate compliance.
- E. Building Systems Commissioning: Contractor shall comply with the following requirements of LEED® Energy and Atmosphere Prerequisite 1 – Fundamental Building Systems Commissioning.
 1. Refer to Section 01 9113 General Commissioning Requirements.
- F. Construction Waste Management (MRc2): Contractor shall divert at minimum 95% of construction waste from the landfill by weight.
- G. Recycled Content (MRc4): Contractor shall use materials with recycled-content so that the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 10 percent of the total value of the materials in the project. (Mechanical and electrical components shall not be included in this calculation). Documentation includes:

1. Cost of each material or product, excluding cost of labor and equipment for installation.
 2. Manufacturer's product data, product literature, or a letter from the manufacturer verifying the percentage of post-consumer and pre-consumer recycled content (by weight) of each material or product.
 3. An electronic spreadsheet that tabulates the Project's total materials cost and combined recycled content value (defined as the sum of the post-consumer recycled content value plus one-half of the pre-consumer recycled content value) expressed as a percentage of total materials cost.
- H. Local Regional Material (MRc5): Contractor shall provide a minimum of 10 percent (cost basis) of project materials that are extracted, processed, and manufactured within a radius of 500 miles of the project. Documentation Includes:
1. Cost of each material or product, excluding cost of labor and equipment for installation.
 2. Location of product manufacture and distance from point of manufacture to the Project Site.
 3. Location of point of extraction, harvest, or recovery for each raw material in each product and distance from the point of extraction, harvest, or recovery to the Project Site.
 4. Manufacturer's product data, product literature, or a letter from the manufacturer verifying the location and distance from the Project Site to the point of manufacture for each regional material.
 5. Manufacturer's product data, product literature, or a letter from the manufacturer verifying the location and distance from the Project Site to the point of extraction, harvest, or recovery for each regional material or product.
 6. An electronic spreadsheet that tabulates the Project's total materials cost and regional materials value, expressed as a percentage of total materials cost.
- I. Certified Wood (MRc6): Contractor shall provide a minimum of 50% (cost basis) of all new non-salvaged wood-based materials that are certified in accordance with the Forest Stewardship Council (FSC) guidelines for wood building components.
1. Track certified wood purchases and retain associated COC (Chain of Custody) documentation. Collect copies of vendor invoices for each certified wood product. Maintain a list that identifies the percentage of certified wood in each purchase. In the case of manufactured products that combine wood and non-wood materials, only the new wood portion can be applied toward the credit.
 2. You will need a letter, cut sheet, or statement from the vendor indicating the type of FSC certification.
 - a. FSC Pure: valued at 100% of product cost.
 - b. FSC Mixed Credit: valued at 100% of product cost.
 - c. FSC Mixed (XX)%: A percentage of FSC content is indicated, and you can claim that percentage of the product's cost.

- d. FSC Recycled and FSC Recycled Credit: do not count toward this credit at all and can be left out of the baseline wood budget. FSC Recycled can count towards MRc4 Recycled Content.
- 3. If FSC wood is part of an assembly, **Request that manufacturers provide assembly information** broken down by weight, volume, or cost.
 - a. If in an assembly, only the portion of FSC certified wood can count towards this credit.
- J. Construction Indoor Air Quality Management Plan During Construction (IEQc3.1): Contractor shall develop and implement an Indoor Air Quality (IAQ) Management Plan for the construction and preoccupancy phases of Project buildings.
 - 1. General Contractor shall submit to University's Representative an electric copy of a Construction IAQ Management Plan within 14 calendar days of Notice to Proceed. Plan shall include, but not be limited to, the following:
 - a. Provision to meet the five requirements of SMACNA IAQ Guideline for Occupied Buildings Under Construction, 2nd Edition 2007, ANSI/SMACNA 008-2008.
 - b. Provision to protect stored on-site or installed absorptive materials from moisture damage. This shall include a description of:
 - (1) Storage of materials on elevated platforms, under cover, and in a dry location.
 - (2) Secure coverage of the tops and sides of material with waterproof sheeting if materials are not stored in an enclosed location.
 - c. Provision to protect HVAC equipment during construction. This shall include a description and commitment to:
 - (1) Shut down the return side of the HVAC system during heavy construction or demolition and cover return air openings air tight to prevent introduction of contaminants.
 - (2) Provide temporary filters that shall be replaced with new media prior to occupancy if the HVAC system is operated during heavy construction.
 - d. Provision to take Construction Photographs demonstrating conformance with the approved Construction Indoor Air Quality Management Plan measures to insure protection of materials and air-handling equipment from moisture while stored on site.
 - (1) A minimum of 6 Construction Photographs shall be taken on three different occasions during Construction for a total minimum of 18. Construction photographs shall be time stamped and shall be taken during those periods' absorptive materials and HVAC equipment is stored on site. Construction Photographs shall include identification of the SMACNA approach featured by each photograph.
 - (2) Contractor shall submit Construction Photographs to the University's Representative for approval.
 - (3) If permanently installed air handlers are used during construction, filtration media with a minimum efficiency reporting value (MERV) of 8 must be used at each return air grille, as determined by ASHRAE Standard 52.2-1999 (with errata but without addenda). Replace all filtration media immediately prior to occupancy.

Project teams wishing to use ASHRAE approved addenda for the purposes of this credit may do so at their discretion. Addenda must be applied consistently across all LEED credits.

- K. Construction Indoor Air Quality Management Plan Before Occupancy (IEQc3.2): After construction ends, prior to occupancy and with all interior finishes installed, install new filtration media and perform a building flush-out by supplying a total air volume of 14,000 cubic feet of outdoor air per square foot of floor area while maintaining an internal temperature of at least 60 degrees F and a relative humidity no higher than 60%.
- L. If occupancy is desired prior to completion of the flush-out, the space may be occupied following delivery of a minimum of 3,5000 cubic feet of outdoor air per square foot of floor area. Once the space is occupied, it must be ventilated at a rate of 0.30 cubic feet per minute (cfm) per square foot of outside air or the design minimum outside air rate determined in IEQ Prerequisite 1: Minimum Indoor Air Quality Performance, whichever is greater. During each day of the flush-out period, ventilation must begin a minimum of 3 hours prior to occupancy and continue during occupancy. These conditions must be maintained until a total of 14,000 cubic feet per square foot of outside air has been delivered to the space. Provide a written narrative describing the building flush out procedures implemented. Provide Flushout Start Date and End Date for each building.

OR

Conduct baseline IAQ testing after construction ends and prior to occupancy using testing protocols consistent with the EPA Compendium of Methods for Determination of Air Pollutants in Indoor Air "or the ISO method listed in the table below. Testing must be done in accordance with one standard; project teams may not mix requirements from the EPA Compendium of Methods with ISO.

- M. Low-Emitting Materials:
 - 1. Credit EQc4.1: Adhesives, Sealants and Sealant Primers must comply with the South Coast Air Quality Management District (SCAQMD) Rule #1168. Volatile organic compound (VOC) limits listed in the table below correspond to an effective date of July 1, 2005 and rule amendment date of January 7, 2005.
 - a. Wood Glues: 30 g/L.
 - b. Metal to Metal Adhesives: 30 g/L.
 - c. Adhesives for Porous Materials (Except Wood): 50 g/L.
 - d. Subfloor Adhesives: 50 g/L.
 - e. Plastic Foam Adhesives: 50 g/L.
 - f. Carpet Adhesives: 50 g/L.
 - g. Carpet Pad Adhesives: 50 g/L.
 - h. VCT and Asphalt Tile Adhesives: 50 g/L.
 - i. Cove Base Adhesives: 50 g/L.
 - j. Gypsum Board and Panel Adhesives: 50 g/L.
 - k. Rubber Floor Adhesives: 60 g/L.
 - l. Ceramic Tile Adhesives: 65 g/L.
 - m. Multipurpose Construction Adhesives: 70 g/L.
 - n. Fiberglass Adhesives: 80 g/L.
 - o. Structural Glazing Adhesives: 100 g/L.
 - p. Wood Flooring Adhesive: 100 g/L.
 - q. Contact Adhesive: 80 g/L.
 - r. Special Purpose Contact Adhesive: 250 g/L.
 - s. Structural Wood Member Adhesive: 140 g/L.
 - t. Sheet Applied Rubber Lining Operations: 850g/L.
 - u. Plastic Cement Welding Compounds: 50 g/L.
 - v. ABS Welding Compounds: 4325 g/L.

- w. CPVC Welding Compounds: 490 g/L.
 - x. PVC Welding Compounds: 510 g/L.
 - y. Adhesive Primer for Plastic: 550 g/L.
 - z. Architectural Sealants: 250 g/L.
 - aa. Non-membrane Roof Sealants: 300 g/L.
 - bb. Roadway Sealants: 250 g/L.
 - cc. Single-ply Roof Membrane Sealants: 450 g/L.
 - dd. Other Sealants: 420 g/L.
 - ee. Sealant Primers for Nonporous Substrates: 250 g/L.
 - ff. Sealant Primers for Porous Substrates: 775 g/L.
 - gg. Other Sealants Primers: 750 g/L.
2. Credit EQ 4.2: Paints and coatings used on the interior of the building (i.e., inside of the weatherproofing system and applied on-site) must comply with the following criteria as applicable to the project scope.
- a. Architectural paints and coatings applied to interior walls and ceilings must not exceed the volatile organic compound (VOC) content limits established in Green Seal Standard GS-11, Paints, 1st Edition, May 20, 1993.
 - b. Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed the VOC content limit of 250 g/L established in Green Seal Standard GC-03, Anti- Corrosive Paints, 2nd Edition, January 7, 1997.
 - c. Clear wood finishes, floor coatings, stains, primers, sealers and shellacs applied to interior elements must not exceed the VOC content limits established in South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.
 - d. Flat Paints and Coatings: VOC not more than 250 g/L.
 - e. Non-Flat Paints and Coatings: VOC not more than 250 g/L.
 - f. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
 - g. Restricted Components: Paints and coatings shall not contain any of the following:
 - (1) Acrolein.
 - (2) Acrylonitrile.
 - (3) Antimony.
 - (4) Benzene.
 - (5) Butyl benzyl phthalate.
 - (6) Cadmium.
 - (7) Di (2-ethylhexyl) phthalate.
 - (8) Di-n-butyl phthalate.
 - (9) Di-n-octyl phthalate.
 - (10) 1,2-dichlorobenzene.
 - (11) Diethyl phthalate.
 - (12) Dimethyl phthalate.
 - (13) Ethylbenzene.
 - (14) Formaldehyde.
 - (15) Hexavalent chromium.
 - (16) Isophorone.

- (17) Lead.
- (18) Mercury.
- (19) Methyl ethyl ketone.
- (20) Methyl isobutyl ketone.
- (21) Methylene chloride.
- (22) Naphthalene.
- (23) Toluene (methylbenzene).
- (24) 1,1,1-trichloroethane.
- (25) Vinyl chloride.

Product Type	Referenced Standard	VOC Limit (g/L minus water)
Interior Flat Coating or Primer	Green Seal GS-11, 1993	50
Interior Non-Flat Coating or Primer	Green Seal GS-11, 1993	150
Anti-Corrosive/ Anti-Rust Paint	Green Seal GC-03, 2nd Edition, 1997	250
Clear Wood Finish: Lacquer	SCAQMD Rule 1113, 2004	550
Clear Wood Finish: Sanding Sealer	SCAQMD Rule 1113, 2004	350
Clear Wood Finish: Varnish	SCAQMD Rule 1113, 2004	350
Clear Brushing Lacquer	SCAQMD Rule 1113, 2004	680
Floor Coatings	SCAQMD Rule 1113, 2004	100
Sealers and Under coaters	SCAQMD Rule 1113, 2004	200
Shellac: Clear	SCAQMD Rule 1113, 2004	730
Shellac: Pigmented	SCAQMD Rule 1113, 2004	550
Stain	SCAQMD Rule 1113, 2004	250
Concrete Curing Compounds	SCAQMD Rule 1113, 2004	350
Japans/ Faux Finishing Coatings	SCAQMD Rule 1113, 2004	350
Magnesite Cement Coatings	SCAQMD Rule 1113, 2004	450
Pigmented Lacquer	SCAQMD Rule 1113, 2004	550
Waterproofing Sealers	SCAQMD Rule 1113, 2004	250
Waterproofing Concrete/ Masonry Sealers	SCAQMD Rule 1113, 2004	400
Wood Preservatives	SCAQMD Rule 1113, 2004	350
Low-Solids Coatings	SCAQMD Rule 1113, 2004	120*

*Note: VOC levels for Low-Solids Coatings are measured in grams of VOC per liter of material.

3. Credit EQ 4.3: All carpet installed in the building interior must meet the testing and product requirements of the Carpet and Rug Institute Green Label Plus program. All carpet cushion installed in the building interior must meet the requirements of the Carpet and Rug Institute Green Label1 program. All hard surface flooring must be certified as compliant with the FloorScore 2 standard (current as of the date of this rating system, or more stringent version) by an independent third-party. Flooring products covered by FloorScore include vinyl, linoleum, laminate flooring, wood flooring, ceramic flooring, rubber flooring and wall base.

IEQc4.3: LOW-EMITTING MATERIALS—FLOORING SYSTEMS REQUIREMENTS	
Option 1	
Carpet	Meet testing and product requirements of the Carpet and Rug Institute’s Green Label Plus program.
Carpet cushion	Meet requirements of the Carpet and Rug Institute Green Label program.
Carpet adhesives	Meet VOC limit of 50 g/L (Same as for EQc4.1).
Hard surface flooring (see exceptions below)	Meet the testing and product requirements of FloorScore certification.
Floor finishes	Meet the requirements of South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004 (Same as for IEQc4.2).
Tile setting adhesives and grout	Meet the South Coast Air Quality Management District (SCAQMD) Rule 1168. VOC limits correspond to an effective date of July 1, 2005 and rule amendment date of January 7, 2005. (Same as for IEQc4.1).
Tile, masonry, terrazzo, cut stone, and solid-wood flooring without coatings or sealants	Qualifies for credit without testing.
Option 2	
All flooring elements installed in the building interior	Meet the testing and product requirements of the California Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.
Tile, masonry, terrazzo, cut stone, and solid-wood flooring without coatings or sealants	Qualifies for credit without testing.

4. Credit EQ 4.4: Composite wood and agrifiber products used on the interior of the building (i.e., inside the weatherproofing system) must contain no added urea-formaldehyde resins. Laminating adhesives used to fabricate on-site and shop-applied composite wood and agrifiber assemblies must not contain added urea-formaldehyde resins.

IEQc4.4: LOW-EMITTING MATERIALS—COMPOSITE WOOD AND AGRIFIBER PRODUCTS REQUIREMENTS	
Composite wood and agrifiber products: <ul style="list-style-type: none"> • Particleboard • Medium density fiberboard (MDF) • Plywood • Wheatboard • Strawboard • Panel substrates • Door cores • Plywood sections of I-beams 	No added urea-formaldehyde resins
Laminating adhesives used for assemblies	No added urea-formaldehyde resins

PART 2 – PRODUCTS

2.1. LEED ACTION PLANS

- A. See list of required plans.

2.2. LEED PROGRESS REPORTS

- A. See list of required progress reports.

2.3. LEED CREDIT DOCUMENTATION

- A. See LEED Data Sheet.

PART 3 – EXECUTION

3.1 CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT

- A. Product Data:

1. MERV ratings for all air filter media used should be provided in compliance with the requirements for Credit IEQ Pr1, Credits IEQ 3.1-3.2, and Credit IEQ 5.
2. Product emissions data and material safety data sheets (MSDS) showing compliance with the requirements for the following materials and credits:
 - a. Adhesives and sealants used on the interior of the building (Credit IEQ 4.1).
 - (1) Interior adhesives and sealants shall comply with the VOC limits of SCAQMD Rule #1168.

- (2) Aerosol Adhesives must comply with Green Seal Standard for Commercial Adhesives GS-36 requirements in effect on October 19, 2000.
 - b. Paints and coatings used on the interior of the building. Indicate VOC content in grams per liter (g/l) calculated according to 40 CFR 59, Subpart D (EPA method 24) and chemical components (Credit IEQ 4.2).
 - (1) Architectural paints and coatings applied to interior walls and ceilings must not exceed the volatile organic compound (VOC) content limits established in Green Seal Standard GS-11, Paints, 1st Edition, May 20, 1993.
 - (2) Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed the VOC content limit of 250 g/L established in Green Seal Standard GC-03, Anti-Corrosive Paints, 2nd Edition, January 7, 1997.
 - (3) Clear wood finishes, floor coatings, stains, primers, sealers, and shellacs applied to interior elements must not exceed the VOC content limits established for those coating types in South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.
 - c. Flooring products and materials (Credit IEQ 4.3).
 - (1) All Carpet and carpet cushion installed in the building must meet the testing and product requirements of the Carpet and Rug Institute Green Label Plus program.
 - (2) All hard surface flooring must meet the requirements of the FloorScore standards as shown with testing by an independent third-party.
 - (3) All flooring adhesives and finishes meeting IEQc4.1 and 4.2 requirements.
 - d. Composite wood materials (Credit IEQ 4.4).
 - (1) Composite wood and agrifiber products including laminating adhesives used on the interior of the building (i.e., inside the weatherproofing system) must contain no added urea-formaldehyde resins.
- B. Construction Indoor Air Quality Management Plan. During construction Contractor shall meet or exceed the minimum requirements of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings under Construction, 2nd Edition 2007, ANSI/ SMACNA 008-2008 (Chapter 3). Submit a plan that addresses how SMACNA Guidelines will be met in each of the following five areas:
1. Material and equipment protection.
 2. Source control and materials emissions.
 3. Pathway interruption.
 4. Housekeeping.
 5. Material scheduling.

- C. Temporary Construction Ventilation-HVAC use and protection during construction: If used during construction, HVAC systems will either run 100 percent outside air or have MERV 8 air filters in place during construction. After construction MERV 13 filters shall be put in place. Contractor shall maintain sufficient temporary ventilation of areas where materials are being used that emit VOC's, and maintain ventilation continuously during installation, and until emissions dissipate after installation. If continuous ventilation is not possible via the building's HVAC system(s) then ventilation shall be supplied via open windows and temporary fans, sufficient to provide no less than three air changes per hour. Contractor shall submit a Pre-Occupancy Indoor Air Quality Management Plan that addresses the following:
1. The period after installation shall be sufficient to dissipate odors and elevated concentrations of VOCs. Where no specific period is stated in these Specifications, a time period of 72 hours shall be used.
 2. All areas shall be vented directly to outside. Areas shall not be vented to other enclosed areas.
 3. Estimated start and end dates of a building flush-out supplying a total air volume of 14,000 cubic feet of outdoor air per square foot of floor area.
 4. Use of MERV 13 filters prior to and after the building flush-out.
 5. Use of 100% outside air for the duration of the flush-out period.
- D. During dust producing activities (e.g. drywall installation and finishing) ventilation system shall be off, and openings in supply and return HVAC system shall be protected from dust infiltration. Provide temporary ventilation as required.
- E. Preconditioning: Prior to installation, Contractor shall allow products which have odors and VOC emissions to off-gas in dry, well-ventilated space outside of building for 14 calendar days, in order to allow for reasonable dissipation of odors and emissions.
- F. Signed LEED letters indicating proper completion of work for IEQ 3.1 and 3.2 Construction IAQ Management Plan, during construction and pre-occupancy.
- G. Photographs: Document the implementation of the SMACNA Guidelines during construction with six photographs at three different occasions (total of 18 photographs). Include a brief description of the measures in each photograph, location in the building, and the date the photograph was taken.

3.2 SEQUENCING

- A. Environmental Issues: Contractor shall complete all interior finish material installation no less than 14 days prior to Substantial Completion to allow for building flush out. Submit notification to General Contractor's LEED Representative when all interior finish material installation is complete, highlighting the date of completion.

3.3 FIELD QUALITY CONTROL

- A. Building Flush Out: Prior to Substantial Completion, Contractor shall flush out building continuously (i.e. 24 hours per day, 7 days per week) using 100 percent outside air at standard operational set-point temperatures for at least 14 calendar days. Conduct flush-out with new MERV 13 filtration media, and after flush-out, replace with new MERV 13 filtration media, except the filters solely processing outside air. For air handlers, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 must be used at each return air grill, as determined by ASHRAE 52.2-1999. If interruptions of more than 4 hours are required for testing and balancing purposes, extend flush out period by a minimum of 1 day.

1. When touch-up work is performed, Contractor shall provide temporary construction ventilation during installation and extend building flush out by a minimum of 4 days after touch-up installation is complete.
 2. Return ventilation system to normal operation following flush-out period to minimize energy consumption.
 3. Replace all outside air filtration media prior to occupancy. Filtration media shall have a MERV of 13 as determined by ASHRAE 52.2-1999.
- B. IAQ Testing: If Building Flush Out is not undertaken, Contractor shall conduct a baseline indoor air quality testing procedure consistent with current EPA protocol for Environmental Requirements, Baseline IAQ and Materials.

3.4 PROTECTION

- A. Protect stored on-site and installed absorptive materials from moisture damage. Where absorptive materials not intended for wet applications are exposed to moisture, immediately remove from site and dispose of properly.
- B. Protect installed materials using methods that do not support growth of molds and mildews.
1. Immediately remove from site and properly dispose of materials showing signs of mold and signs of mildew, including materials with moisture stains.
 2. Replace materials showing signs of mold and mildew with new, undamaged materials.
 3. Ducts: Seal ducts during transportation, delivery, and construction to prevent accumulation of construction dust and construction debris inside ducts.
- C. Ducts: Seal ducts during transportation, delivery, and construction to prevent accumulation of construction dust and construction debris inside ducts.

END OF SECTION

LEED CREDIT CHECKLIST

Contractor Certification:

I, _____, a duly authorized representative of _____ (Contractor), hereby certify that the material information contained herein is an accurate representation of the material qualifications to be provided by Contractor, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the University's Representative.

SIGNATURE OF CONTRACTOR'S AUTHORIZED REPRESENTATIVE: _____ Date: _____

P. ____ OF ____

Example:

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LEED DATA SHEET

Shall be submitted with each submittal along with cut sheets supporting the data below:

ENVIRONMENTAL MATERIALS REPORTING FORM (provide cut sheets for the data below)



PROJECT NAME: _____ CONTRACTOR: _____

SPEC SECTION: _____

CONTACT NAME: _____ TEL. NO: _____ SUBMITTAL NO: _____

Product Name	Vendor or Manufacturer	REQUIRED for ALL products identified in Specs <small>CSI 2004 Divisions 3-10, 31.00 Foundations, 32.10 Paving, 32.30 Site Improvements, and 32.90 Planning. MEP excluded.</small>	Percentage of the product salvaged, refurbished or reused ¹	Recycled Content ² (for concrete, use separate form)		Location and distances from manufacturing point to project site AND raw material harvesting point to project site (miles) ³	Percentage of product that is rapidly renewable ⁴	For all wood-based products ⁵			
				% post-consumer	% pre-consumer			% New wood	% Certified Wood	FSC Tracking COC #	Urea formaldehyde in composites (Y/N)
1.		Total Material Cost (excl. labor & equipment)				Harvest: Manufacture:					
2.						Harvest: Manufacture:					
3.						Harvest: Manufacture:					
4.						Harvest: Manufacture:					

CONTRACTOR CERTIFICATION:

I, _____ a duly authorized representative of _____ hereby certify that the material information contained herein is an accurate representation of the material qualifications to be provided by us, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: _____ DATE: _____

D. _____ of _____

¹ **Salvaged:** Material or product which has been recovered from existing buildings or construction sites and reused in other buildings (e.g., structural beams, doors, brick).
² **Post-Consumer Recycled Content:** Portion of material or product which derives from discarded consumer waste that has been recovered for use as a raw material (e.g., plastic bottles, newspaper).
³ **Pre-Consumer Recycled Content:** Portion of material or product which derives from recovered industrial and mfg. materials that are diverted from municipal solid waste for use in a *different* mfg. process, prior to use by a consumer (e.g., fly-ash in concrete or synthetic gypsum board, both of which are by-products of coal-burning power plants). Note that spills and scraps from the original mfg. process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product do not qualify.
⁴ **Regional Materials:** Materials are considered regional if harvested AND manufactured within 500 miles of the project site. Materials can travel more than 500 miles, provided materials always remain within a 500 mile radius of project site. For salvaged/recycled materials such as steel, you do not need to provide the original harvesting location, but rather the location the steel was sourced from. Distances are as the crow flies, not actual miles traveled via surface transport.
⁵ **Rapidly Renewable:** Materials and products made from raw materials that are harvested within a 10-year cycle (e.g., bamboo, cork, linoleum, fast-growing poplar, wheatboard, wool carpet)
FSC Certified: Wood-based products which are certified by the Forest Stewardship Council and carry a Chain-of-Custody certificate number from the vendor or manufacturing.
Composite Wood & Agrifiber Products: Any wood based products must not contain added urea-formaldehyde.

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VOC REPORTING FORM

CONTRACTOR: _____

SECTION: _____

CONTACT NAME: _____

TEL. NO: _____

PROJECT NAME:

SPEC

SUBMITTAL NO:

Product type or application	Product name	Vendor or Manufacturer	Greenguard or SCS Certified (Y/N) (provide certificate): Systems Furniture and Seating Only	REQUIRED for ALL field-applied adhesives, sealants, paints & coatings identified in Specs (including those related to MEP work)		
				VOC content ¹ (grams per liter)	Corresponding LEED VOC limit	Backup documentation ²
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

1. VOC: Volatile organic compound which vaporizes into a gas at normal room temperatures and is emitted during the use, application, curing, or drying of an adhesive, sealant, paint, or coating product (excludes methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds).
2. Submit backup documentation from manufacturer indicating VOC content of the product, defined in either grams per liter, or lbs. per gallon (e.g., MSDS sheet, Product Data Sheet)
3. Refer to the Sustainable Design Requirements Spec. for applicable VOC limits and chemical component limitations for adhesives, sealants, paints and architectural coatings.

CONTRACTOR CERTIFICATION:

I, _____ a duly authorized representative of _____ hereby certify that the material information contained herein is an accurate representation of the material qualifications to be provided by us, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: _____

DATE: _____

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SECTION 01 9113 GENERAL COMMISSIONING REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes general requirements that apply to implementation of commissioning without regard to systems, subsystems, and equipment being commissioned:

1. Commissioning Team
2. University's Responsibilities
3. Contractor's Responsibilities
4. CxA's Responsibilities
5. Commissioning Documentation
6. Submittals
7. Quality Assurance
8. Title 24 Acceptance Testing
9. Start-up, Pre-Functional Checklists and Initial Checkout
10. Functional Performance Testing
11. Operation and Maintenance Training Requirements
12. Costs of Commissioning Work
13. Equipment and System Schedule

B. Related Sections:

- a. Division 1 Section "Sustainable Design Requirements" for LEED Documentation related to commissioning.
- b. Audio visual equipment
- c. Fire suppression systems
- d. Plumbing systems
- e. HVAC systems, including Controls or Integrated Automation.
- f. Lighting and other electrical systems.
- g. Communications and Data systems.
- h. Safety and security systems.

C. Basis of Design (BOD) and Owner's Project Requirements (OPR) documentation prepared by University contains requirements that apply to this Section. This information is available to Bidders upon request.

D. Comply with the Acceptance Testing requirements of Title 24 Energy Code and ACM (Alternative Calculation Method) Approval Manual. Additional requirements are given in Part 3 of this Section.

1.2 DEFINITIONS

A. Commissioning Process: The basic purpose of building commissioning is to provide documented confirmation that building systems function in compliance with criteria set forth in the Project Documents to satisfy the owner's operational needs.

B. Basis of Design (BOD) document: A document that records concepts, calculations, decisions, product selections used to meet the OPR and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual items that support the design process.

C. CxA: Commissioning Authority.

- D. University Project Requirements (OPR): A written document, prepared by the University, that details the functional requirements of Project and expectations of how it will be used and operated. This document includes Project and design goals, measurable performance criteria, budgets, schedules, success criteria, and supporting information.
- E. Systems, Subsystems, and Equipment: Where these terms are used together or separately, they shall mean "as-built" systems, subsystems, and equipment.
- F. TAB: Testing, Adjusting, and Balancing.
- G. Title 24: California Code of Regulations, Title 24, Part 1 - Building Energy Efficiency Standards (latest edition).

1.3 COMMISSIONING TEAM

- A. Members Appointed by Contractor: Individuals, each having authority to act on behalf of the entity he or she represents, explicitly organized to implement the commissioning process through coordinated actions. The commissioning team shall consist of, but not be limited to, representatives of Contractor, including Project superintendent and subcontractors, installers, suppliers, and specialists deemed appropriate by the CxA.
- B. Members Appointed by University:
 - 1. CxA: The designated person, company, or entity that plans, schedules, and coordinates the commissioning team to implement the commissioning process. Owner may engage the independent CxA under a separate contract.
 - 2. Representatives of the facility user and operation and maintenance personnel.
 - 3. Architect and engineering design professionals.

1.4 UNIVERSITY'S RESPONSIBILITIES

- A. Provide the OPR documentation to the CxA and Contractor for use in developing the commissioning plan; systems manual; operation and maintenance training plan; and testing plans and checklists.
- B. Assign operation and maintenance personnel and schedule them to participate in commissioning team activities including, but not limited to the following:
 - 1. Coordination meetings.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 3. Testing meetings.
 - 14. Demonstration of operation of systems, subsystems, and equipment.
- B. Provide the BOD documents, prepared by University or its consultants, to the CxA and Contractor for use in developing the commissioning plan, systems manual, and operation and maintenance training plan.

1.5 CONTRACTOR'S RESPONSIBILITIES

- A. Provide utility services required for the commissioning process.
- B. Contractor is responsible for construction means, methods, job safety, and/or management function related to commissioning on the job site.
- C. Contractor shall assign representatives with expertise and authority to act on behalf of the Contractor and schedule them to participate in and perform commissioning team activities including, but not limited to, the following:
 - 1. Participate in construction-phase coordination meetings.

2. Participate in maintenance orientation and inspection.
 3. Participate in operation and maintenance training sessions.
 4. Participate in final review at acceptance meeting.
 5. Certify that Work is complete and systems are operational according to the Contract Documents, including calibration of instrumentation and controls.
 6. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.
 7. Review and comment on final commissioning documentation.
- D. Contractor shall integrate all commissioning activities into Contractor's master construction schedule.
- E. Subcontractors shall assign representatives with expertise and authority to act on behalf of subcontractors and schedule them to participate in and perform commissioning team activities including, but not limited to, the following:
1. Participate in construction-phase coordination meetings.
 2. Participate in maintenance orientation and inspection.
 3. Participate in procedures meeting for testing.
 4. Participate in final review at acceptance meeting.
 5. Provide schedule for operation and maintenance data submittals, equipment startup, and testing to CxA for incorporation into the commissioning plan. Update schedule on a weekly basis throughout the construction period.
 6. Provide information to the CxA for developing construction-phase commissioning plan.
 7. Participate in training sessions for University's operation and maintenance personnel.
 8. Provide updated Project Record Documents to the CxA on a daily basis.
 9. Gather and submit operation and maintenance data for systems, subsystems, and equipment to the CxA, as specified in Division 01 Section "Operation and Maintenance Data."
 10. Provide technicians who are familiar with the construction and operation of installed systems, who shall execute the test procedures developed by the CxA, and who shall participate in testing of installed systems, subsystems, and equipment.

1.6 CxA'S RESPONSIBILITIES

- A. Organize and lead the commissioning team.
- B. Conduct a commissioning design review of the OPR, BOD, and design documents prior to mid-construction documents phase and back-check the review comments in the subsequent design submissions, in accordance with LEED credit EA3 "Enhanced Commissioning".
- C. Prepare a construction-phase commissioning plan. Collaborate with design team, University, Contractor and with subcontractors to develop test and inspection procedures. Include design changes and scheduled commissioning activities coordinated with overall Project schedule. Identify commissioning team member responsibilities, by name, firm, and trade specialty, for performance of each commissioning task.
- D. Work with the University to schedule commissioning activities. All parties will address scheduling issues in a timely manner in order to expedite the commissioning process.
- E. Review and comment on submittals from Contractor for compliance with the OPR, BOD, Contract Documents, and construction-phase commissioning plan. Review and comment on performance expectations of systems and equipment and interfaces between systems relating to the OPR and BOD.

- F. Convene commissioning team meetings on a monthly basis for the purpose of coordination, communication, and conflict resolution; discuss progress of the commissioning processes. Responsibilities include arranging for facilities, preparing agenda and attendance lists, and notifying participants. The CxA shall prepare and distribute minutes to commissioning team members and attendees within five (5) workdays of the commissioning meeting.
- G. At the beginning of the construction phase, conduct an initial construction-phase coordination meeting for the purpose of reviewing the commissioning activities and establishing tentative schedules for operation and maintenance submittals; operation and maintenance training sessions; TAB Work; and Project completion.
- F. Observe and inspect construction and report progress and deficiencies. In addition to compliance with the OPR, BOD, and Contract Documents, inspect systems and equipment installation for adequate accessibility for maintenance and component replacement or repair.
- G. Prepare Project-specific test and inspection procedures and checklists.
- H. Schedule, direct, witness, and document tests, inspections, and systems startup.
- I. Compile test data, inspection reports, and certificates and include them in the systems manual and commissioning report.
- J. Certify date of acceptance and startup for each item of equipment for start of warranty periods.
- K. Review Project Record Documents for accuracy. Request revisions from Contractor to achieve accuracy. Project Record Documents requirements are specified in Division 01 Section "Project Record Documents."
- L. Review and comment on operation and maintenance documentation and systems manual outline for compliance with the OPR, BoD, and Contract Documents. Operation and maintenance documentation requirements are specified in Division 01 Section "Operation and Maintenance Data."
- M. Review Contractor's operation and maintenance training program. Operation and maintenance training is specified in Division 01 Section "Demonstration and Training."
- N. Obtain the services of a professional agency to video the training sessions where required by individual Specification Sections.
- O. Video construction progress including hidden shafts.
- P. Prepare commissioning reports.
- Q. Assemble the final commissioning documentation, including the commissioning report and Project Record Documents.

1.7 COMMISSIONING DOCUMENTATION

- A. Index of Commissioning Documents: CxA shall prepare an index to include storage location of each document.
- B. Commissioning Plan: A document, prepared by CxA, that outlines the schedule, allocation of resources, documentation requirements of the commissioning process, and shall include, but is not limited to the following:

1. Plan for delivery and review of submittals, systems manuals, and other documents and reports. Identification of the relationship of these documents to other functions and a detailed description of submittals that are required to support the commissioning processes. Submittal dates shall include the latest date approved submittals must be received without adversely affecting commissioning plan.
 2. Description of the organization, layout, and content of commissioning documentation (including systems manual) and a detailed description of documents to be provided along with identification of responsible parties.
 3. Identification of systems and equipment to be commissioned.
 4. Description of schedules for testing procedures along with identification of parties involved in performing and verifying tests.
 5. Identification of items that must be completed before the next operation can proceed.
 6. Description of responsibilities of commissioning team members.
 7. Description of observations to be made.
 8. Description of requirements for operation and maintenance training, including required training materials.
 9. Description of expected performance for systems, subsystems, equipment, and controls.
 10. Schedule for commissioning activities with specific dates coordinated with overall construction schedule.
 11. Identification of installed systems, subsystems, and equipment, including design changes that occurred during the construction phase.
 12. Process and schedule for documenting changes on a continuous basis to appear in Project Record Documents.
 13. Process and schedule for completing prestart and startup checklists for systems, subsystems, and equipment to be verified and tested.
 14. Step-by-step procedures for testing systems, subsystems, and equipment with descriptions for methods of verifying relevant data, recording the results obtained, and listing parties involved in performing and verifying tests.
- C. Pre-Functional Checklists: CxA shall develop pre-functional checklists for all equipment to be commissioned. Further requirements are specified in Part 3 of this Section.
- D. Functional Performance Testing: CxA shall develop functional performance test procedures for all equipment and systems to be commissioned. Further requirements are specified in Part 3 of this Section.
- E. Certificate of Readiness: Certificate of Readiness shall be signed by Contractor, Subcontractor(s), and installer(s) certifying that systems, subsystems, equipment, and associated controls are ready for testing. Completed test checklists signed by the responsible parties shall accompany this certificate.
- F. Test and Inspection Reports: CxA shall record test data, observations, and measurements on test checklists. Photographs, forms, and other means appropriate for the application shall be included with data. CxA shall compile test and inspection reports and test and inspection certificates and include them in systems manual and commissioning report.
- G. Corrective Action Documents: CxA shall document corrective action taken for systems and equipment that fail tests. Include required modifications to systems and equipment and revisions to test procedures, if any. Retest systems and equipment requiring corrective action and document retest results.
- H. Issues Log: CxA shall prepare and maintain an issues log that describes design, installation, and performance issues that are at variance with the OPR, BoD, and Contract Documents. Identify and track issues as they are encountered, documenting the status of unresolved and resolved issues.

1. Creating an Issues Log Entry:
 - a. Identify the issue with unique numeric or alphanumeric identifier by which the issue may be tracked.
 - b. Assign a descriptive title of the issue.
 - c. Identify date and time of the issue.
 - d. Identify test number of test being performed at the time of the observation, if applicable, for cross-reference.
 - e. Identify system, subsystem, and equipment to which the issue applies.
 - f. Identify location of system, subsystem, and equipment.
 - g. Include information that may be helpful in diagnosing or evaluating the issue.
 - h. Note recommended corrective action.
 - i. Identify commissioning team member responsible for corrective action.
 - j. Identify expected date of correction.
 - k. Identify person documenting the issue.

2. Documenting Issue Resolution:
 - a. Log date correction is completed or the issue is resolved.
 - b. Describe corrective action or resolution taken. Include description of diagnostic steps taken to determine root cause of the issue, if any.
 - c. Identify changes to the OPR, BOD, or Contract Documents that may require action.
 - d. State that correction was completed and system, subsystem, and equipment is ready for retest, if applicable.
 - e. Identify person(s) who corrected or resolved the issue.
 - f. Identify person(s) documenting the issue resolution.

- I. Commissioning Report: CxA shall document results of the commissioning process including unresolved issues and performance of systems, subsystems, and equipment. The commissioning report shall indicate whether systems, subsystems, and equipment have been completed and are performing according to the OPR, BOD, and Contract Documents. The commissioning report shall include, but is not limited to, the following:
 1. Lists and explanations of substitutions; compromises; variances in the OPR, BOD, and Contract Documents; record of conditions; and, if appropriate, recommendations for resolution. This report shall be used to evaluate systems, subsystems, and equipment and shall serve as a future reference document during University occupancy and operation. It shall describe components and performance that exceed requirements of the OPR, BOD, and Contract Documents and those that do not meet requirements of the OPR, BOD, and Contract Documents. It may also include a recommendation for accepting or rejecting systems, subsystems, and equipment.
 2. OPR and BOD documentation.
 3. Commissioning plan.
 4. Testing plans and reports.
 5. Corrective modification documentation.
 6. Issues log.
 7. Completed test checklists.
 8. Listing of off-season test(s) not performed and a schedule for their completion.

- J. Systems Manual: CxA shall gather required information and compile systems manual. Systems manual shall include, but is not limited to, the following:
 1. OPR and BOD, including system narratives, schematics, and changes made throughout the Project.
 2. Project Record Documents as specified in Division 01 Section "Project Record Documents."

3. Final commissioning plan.
4. Commissioning report.
5. Operation and maintenance data as specified in Division 01 Section "Operation and Maintenance Data."

1.8 SUBMITTALS

The CxA shall submit the following:

- A. Commissioning Plan Prefinal Submittal: Submit three (3) hard copies of pre-final commissioning plan. Deliver one copy to Contractor, one to Owner, and one to University Consultant. Present submittal in sufficient detail to evaluate data collection and arrangement process. One copy, with review comments, will be returned to the CxA for preparation of the final construction-phase commissioning plan.
- B. Commissioning Plan Final Submittal: Submit three (3) hard copies and two sets of electronically formatted information of final commissioning plan. Deliver one hard copy and one set of discs to University, and one copy to University Consultant. The final submittal must address previous review comments. The final submittal shall include a copy of the pre-final submittal review comments along with a response to each item.
- C. Test Checklists and Report Forms: Submit sample checklists and forms to Contractor quality-control manager and subcontractors for review and comment. Submit three (3) copies of each checklist and report form.
- D. Certificates of Readiness.
- E. Test and Inspection Reports.
- F. Corrective Action Documents.
- G. Pre-final Commissioning Report Submittal: Submit three (3) hard copies of the pre-final commissioning report. Include a copy of the preliminary submittal review comments along with CxA's response to each item. CxA shall deliver one copy to University and one copy to University Consultant. One copy, with review comments, will be returned to the CxA for preparation of final submittal.
- H. Final Commissioning Report Submittal and LEED™ Documentation: Submit three (3) hard copies and three (3) sets of electronically formatted information of the final commissioning report. The final submittal must address previous review comments and shall include a copy of the pre-final submittal review comments along with a response to each item.
- I. Recommissioning Management Manual: Develop an indexed Recommissioning Management Manual to be delivered to the Owner with the final commissioning report. Include all components listed in the LEED Reference Guide.
- J. LEED™ Documentation. Compile LEED™ Documentation. Format as required by USGBC for submittal under LEED™ rating system.

1.9 QUALITY ASSURANCE

- A. Training Instructor Qualifications: Contractor shall provide factory-authorized service representatives, experienced in training, operation, and maintenance procedures for installed systems, subsystems, and equipment.
- B. Test Equipment Calibration: Comply with test equipment manufacturer's calibration procedures and intervals. Recalibrate test instruments (per NIST requirements if applicable) immediately whenever instruments have been repaired following damage or

dropping. Affix calibration tags to test instruments. Instruments shall have been calibrated within six months prior to use.

CxA shall coordinate the following:

- A. **Coordinating Meetings:** Conduct regular coordination meetings of the commissioning team at least monthly to review progress on the commissioning plan, to discuss scheduling conflicts, and to discuss upcoming commissioning process activities.
- B. **Pretesting Meetings:** Conduct pretest meetings of the commissioning team to review startup reports, pretest inspection results, testing procedures, testing personnel and instrumentation requirements, and manufacturers' authorized service representative services for each system, subsystem, equipment, and component to be tested.
- C. **Testing Coordination:** Coordinate sequence of testing 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

1.2 TITLE 24 ACCEPTANCE TESTING

- A. Comply with the requirements of Title 24, and Appendix NJ of the Nonresidential Alternative Calculation Method (ACM) Approval Manual.
 - 1. The installing Contractor shall be responsible for reviewing the plans and specifications to assure they conform to the Acceptance Requirements. This is typically done prior to signing a Certificate of Compliance.
 - 2. The installing Contractor shall be responsible for providing all necessary instrumentation, measurement and monitoring, and undertaking all required acceptance requirement procedures. They shall be responsible for correcting all performance deficiencies and again implementing the acceptance requirement procedures until all specified systems and equipment are performing in accordance with the Standards.
 - 3. The installing Contractor shall be responsible for documenting the results of the acceptance requirement procedures including paper and electronic copies of all measurement and monitoring results. They shall be responsible for performing data analysis, calculation of performance indices and crosschecking results with the requirements of the Standard. They shall be responsible for issuing a Certificate of Acceptance. The University shall not release a final Certificate of Occupancy until a Certificate of Acceptance is submitted that demonstrates that the specified systems and equipment have been shown to be performing in accordance with the Standards.
 - 4. The installing Contractor upon completion of undertaking all required acceptance requirement procedures shall record their State of California Contractor's License number or their State of California Professional Registration License Number on each Certificate of Acceptance that they issue.

1.3 START-UP, PRE-FUNCTIONAL CHECKLISTS AND INITIAL CHECKOUT

- A. The following procedures apply to all equipment to be commissioned.
- B. **General.** Pre-functional Checklists are developed and completed for all major equipment and systems being commissioned. The checklist captures equipment nameplate and

characteristics data, confirming the as-built status of the equipment or system. These checklists also ensure that the systems are complete and operational, so that the functional performance testing can be scheduled. The checklists are created by the CxA and completed (filled out) by the installing Contractor.

- C. Start-up and Initial Checkout Plan. The CxA shall assist the commissioning team members responsible for startup of any equipment in developing detailed start-up plans for all equipment. The primary role of the CxA in this process is to ensure that there is written documentation that each of the manufacturer-recommended procedures have been completed.
- D. Pre-functional Checklists. The CxA shall create pre-functional checklists, based primarily on the manufacturer's startup and initial checkout procedures are created. Each checkout item shall have a place to document that proper installation has occurred. Once the pre-functional checklist is completed by the installing Contractor, this signifies that the equipment is properly installed per manufacturer's procedures, and the controls and TAB are complete and the equipment is ready for final functional performance testing. The Contractor determines which Sub-contractor is responsible for executing and documenting each of the line item tasks.
- E. Sensor Calibration. Calibration of all sensors shall be included as part of the pre-functional checklists performed by the Contractors.
- F. Execution of Pre-functional Checklists and Startup.
 - 1. Sub-contractors and vendors schedule startup and checkout with the University, Contractor, and CxA.
 - 2. The CxA shall observe, at minimum, the procedures for each piece of primary equipment, unless there are repetitive multiple units, (in which case a sampling strategy may be used as approved by the University).
 - 3. For lower-level components of equipment in non-sensitive areas of the Project, (e.g., VAV boxes, reheat coils), the CxA shall observe a sampling of the pre-functional and start-up procedures.
 - 4. The Contractor and vendors shall execute startup and provide the CxA with a signed and dated copy of the completed start-up and pre-functional checklists.
 - 5. Only individuals that have direct knowledge and witnessed that a line item task on the pre-functional checklist was actually performed shall initial or check that item off.
- G. Deficiencies, Non-Conformance and Approval in Checklists and Startup.
 - 1. The Contractor shall clearly list any outstanding items of the initial start-up and pre-functional procedures that were not completed successfully, at the bottom of the procedures form or on an attached sheet. The procedures form and any outstanding deficiencies are provided to the CxA within two days of test completion.
 - 2. The CxA reviews the report and recommends approval to the University. The CxA shall work with the Contractor and vendors to correct and retest deficiencies or uncompleted items. The CxA will involve the University and others as necessary.

1.4 FUNCTIONAL PERFORMANCE TESTING

- A. Objectives and Scope. The objective of functional performance testing is to demonstrate that each system is operating according to the documented design intent and Contract Documents. In general, each system should be operated through all modes of operation (seasonal, occupied, unoccupied, warm-up, cool-down, part- and full-load) where there is a specified system response. Verifying each sequence in the sequences of operation is required. Proper responses to such modes and conditions as power failure, freeze condition, low oil pressure, no flow, equipment failure, etc. shall also be tested.

- B. **Development of Test Procedures.** Before test procedures are written, the CxA shall obtain all requested documentation and a current list of change orders affecting equipment or systems, including an updated points list, program code, control sequences and parameters. The CxA shall develop specific test procedures and forms to verify and document proper operation of each piece of equipment and system. Prior to execution, the CxA shall provide a copy of the test procedures to the Contractor who shall review the tests for feasibility, safety, equipment and warranty protection. The CxA shall review University-contracted or factory testing which the CxA is not responsible to oversee and shall determine what further testing may be required to comply with the Contract Documents. Redundancy of testing shall be minimized.

The test procedure forms developed by the CxA shall include the following information:

1. System and equipment or component name(s).
2. Equipment location and ID number.
3. Date.
4. Project name and University Project Number.
5. Participating parties.
6. Reference to the specification section describing the test requirements.
7. A copy of the specific sequence of operations.
8. Instructions for setting up the test.
9. Special cautions, alarm limits, etc.
10. Specific step-by-step procedures to execute the test.
11. Acceptance criteria of proper performance with a Yes / No check box.
12. A section for comments.
13. Signatures and date block for the CxA.

- C. **Test Methods.**

1. Functional performance testing and verification may be achieved by manual testing (persons manipulate the equipment and observe performance) or by monitoring the performance and analyzing the results using the control system's trend log capabilities or by stand-alone data loggers. The CxA will determine which method is most appropriate.
2. Setup. Each function and test shall be performed under conditions that simulate actual conditions as close as is practically possible. The Contractor executing the test shall provide all necessary materials, system modifications, etc. to produce the necessary flows, pressures, temperatures, etc. necessary to execute the test according to the specified conditions. At completion of the test, the Contractor shall return all affected building equipment and systems, due to these temporary modifications, to their pre-test condition.
3. Sampling. Multiple identical pieces of non-life-safety or non-critical equipment may be functionally tested using a sampling strategy. The sampling strategy will be developed by the CxA and approved by the University. If, after three attempts at testing the specified sample percentage, failures are still present, then all remaining units are tested at the Contractor's expense.

- D. **Coordination and Scheduling.** The Contractor shall provide sufficient notice to the CxA regarding their completion schedule for the pre-functional checklists and startup of all equipment and systems. The CxA will schedule functional tests through the University Representative and Contractor. The CxA shall direct, witness and document the functional testing of all equipment and systems. The Contractor shall execute the tests.

- E. **Problem Solving.** The CxA will recommend solutions to problems found; however the burden of responsibility to solve, correct and retest problems is with the Contractor and University consultants.

1.5 OPERATION AND MAINTENANCE TRAINING REQUIREMENTS

- A. Training Preparation Conference: Before operation and maintenance training, CxA shall convene a training preparation conference to include Owner's operation and maintenance personnel, Contractor, and subcontractors. In addition to requirements specified in Division 01 Section "Demonstration and Training," perform the following:
1. Review the OPR and BoD.
 2. Review installed systems, subsystems, and equipment.
 3. Review instructor qualifications.
 4. Review instructional methods and procedures.
 5. Review training module outlines and contents.
 6. Review course materials (including operation and maintenance manuals).
 7. Inspect and discuss locations and other facilities required for instruction.
 8. Review and finalize training schedule and verify availability of educational materials, instructors, audiovisual equipment, and facilities needed to avoid delays.
 9. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.
- B. Training Modules: Develop an instruction program that includes individual training modules for each system, subsystem, and equipment as specified in Division 01 Section "Demonstration and Training."

1.6 COSTS OF COMMISSIONING WORK

- A. The cost of the CxA shall be borne by the University.
- B. The cost to the Contractor and Subcontractors to comply with the specified requirements and to support the work of the CxA shall be included in the Contractor's and Subcontractor's bid price.
- C. If a device, piece of equipment, sequence, or system fails a test, corrections shall be made and a second test shall be performed. If the second test is not successful, then the CxA's cost for a third test or subsequent tests shall be reimbursed to the CxA by the Contractor.

1.7 EQUIPMENT & SYSTEM SCHEDULE

- A. The following equipment shall be commissioned in this Project.

System	Equipment	Note	Req'd by LEED
HVAC System	Chillers		X
	Boilers		X
	Pumps		X
	Cooling towers		X
	Variable frequency drives		X
	Air handlers		X
	Packaged AC units		X
	Terminal units for Court Rooms and other high occupancy rooms		X
	Terminal units for Office areas	2	X
System	Equipment	Note	Req'd by LEED
HVAC System	Unit heaters		X
	Heat exchangers		X
	Exhaust fans		X
	Supply fans		X
	Return fans		X
	Chilled beams		X

Building Energy Management System (EMS)	Sequences of Operation, Monitored Points, Control Points, and Alarms		X
	Metering/Monitoring Devices and Equipment		X
	Software Commissioning, GUI presentation commissioning, system access performance criteria, software tools/source code commissioning, instrument data sheets, middleware commissioning, Internet Protocol commissioning		
Lighting and Shade Control System	Sequences of Operation, Monitored points, control points, user controls		X
Electrical System	Sweep or scheduled lighting controls	2	X
	Daylight dimming controls		X
	Lighting occupancy sensors		X
	Electrical grounding		
Plumbing System	Domestic water heaters		X
Security Alarm Systems	Security cameras and monitoring system personal duress alarm system; Intercom system; Paging System.		
Security Electronics	Security plumbing fixture water management system.		
Seminar/Conference Rooms	Door Controls.		
	Fire alarm system.		
	Distributed radio antenna system.		
	Access control system.		
	Room acoustics.		
Fire/Life Safety Systems	Sound masking system.		
	Assisted listening.		
	Video projection.		
	Audio system.		
	Lighting and lighting controls.		X
	All devices		
Communication System	Alarm drivers		
	HVAC/Fire System Integration		
	Event Notifying and Reporting Systems		

Notes:

1. Centralized equipment should be fully commissioned.

PART 2 - Items which represent multiple, identical repetitive equipment may be tested on a "sampling" or "spot-check" basis, 20% of total.

END OF SECTION

PROJECT MANUAL

UCR Performance Lab Repairs

900 University Ave.
Riverside, CA 92521
PROJECT #: 957450



MILLER

architecture

interiors

planning

MILLER architecture

1177 Idaho St., Ste. 200
Redlands, CA 92374
Phone: 909.335-7400

MILLER Project No.: 2100069.RA



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END OF SECTION

SECTION 02 4119

SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
1. Demolition and removal of selected portions of building or structure.
 2. Salvage of existing items to be reused or recycled.

1.2 REFERENCES

- A. Reference Standards:
1. National Fire Protection Association / American National Standards Institute:
 - a. NFPA 241, 'Standard for Safeguarding Construction, Alteration, and Demolition Operations', 2013 Edition.
 2. American Society of Safety Engineers:
 - a. ASSE A10.6-2006, 'Safety Requirements for Demolition Operations'.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
1. Storage or sale of removed items or materials will not be permitted on-site.
- B. Pre-Installation Conference:
1. Before beginning Selective Demolition work, in addition to requirements in Section 01, meet on site to confirm work to be demolished, items to be salvaged or reused, and coordination with Owner.
- C. Scheduling:
1. Indicate detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.

1.4 SUBMITTALS

- A. Informational Submittals:
 - 1. Special Procedure Submittals:
 - a. Inventory:
 - 1) After selective demolition is complete, submit list of items that have been removed and salvaged.

1.5 QUALITY ASSURANCE

- A. Regulatory Agency Sustainability Approvals:
 - 1. Comply with governing EPA notification regulations before beginning selective demolition.
 - 2. Comply with hauling and disposal regulations of authorities having jurisdiction.
 - 3. Standards: Comply with ANSI A10.6 and NFPA 241.

1.6 FIELD CONDITIONS

- A. Existing Conditions:
 - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

PART 2 - PRODUCTS: Not Used

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification Of Conditions:
 - 1. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
 - a. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Evaluation And Assessment:
 - 1. Hazardous Materials:
 - a. It is not expected that hazardous materials will be encountered in the Work. Identified hazardous materials will be removed by Owner before start of the Work.

- b. If materials suspected of containing hazardous materials are encountered, do not disturb and immediately notify Architect.
2. Inventory and record condition of items to be removed and reinstalled and items to be removed and salvaged.
3. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure nature and extent of conflict. Promptly submit written report to Architect.
4. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
5. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 PREPARATION

A. Temporary Facilities:

1. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
2. Maintain fire-protection facilities in service during selective demolition operations.

B. Temporary Shoring:

1. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
2. Strengthen or add new supports when required during progress of selective demolition.

C. Utility Services:

1. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.

2. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - a. Arrange to shut off indicated utilities with utility companies.
 - b. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

3.3 SELECTIVE DEMOLITION

A. General:

1. Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
2. Demolish and remove existing construction only to extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - a. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - b. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - c. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - d. Maintain adequate ventilation when using cutting torches.

- e. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - f. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - g. Dispose of demolished items and materials promptly.
- B. Selective Demolition Procedures For Specific Materials:
- 1. Stucco System Assembly: Demolish in sections. Cut assembly full depth at junctures with construction to remain and at regular intervals, using power-driven saw, then remove assembly between saw cuts.
- C. Existing Items to Remain:
- 1. Protect construction indicated to remain against damage and soiling during selective demolition.
 - 2. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.4 CLEANING

- A. General:
- 1. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations.
 - 2. Return adjacent areas to condition existing before selective demolition operations began.
- B. Waste Management:
- 1. Disposal of Demolished Materials:
 - a. Remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill. Do not burn demolished materials.
 - 1) Do not allow demolished materials to accumulate on-site.

- 2) Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- 3) Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

END OF SECTION

SECTION 03 5300
CONCRETE TOPPING – SLOPING MORTAR

PART 1 - GENERAL

1.1 SUMMARY

- A. This specification describes the patching or overlay of exterior horizontal surfaces with a polymer- modified, portland cement mortar/concrete.

1.2 QUALITY ASSURANCE

- A. Manufacturing qualifications: The manufacturer of the specified product shall be ISO 9001 certified and have in existence a recognized ongoing quality assurance program independently audited on a regular basis.
- B. Contractor qualifications: Contractor shall be qualified in the field of concrete repair and protection with a successful track record of 5 years or more. Contractor shall maintain qualified personnel who have received product training by a manufacturer's representative.
- C. Install materials in accordance with all safety and weather conditions required by manufacturer or as modified by applicable rules and regulations of local, state, and federal authorities having jurisdiction. Consult Material Safety Data Sheets for complete handling recommendations

1.3 SUBMITTALS

- A. Submit two copies of manufacturer’s literature, to include: Product Data Sheets, and appropriate Material Safety Data Sheets (MSDS).

1.4 DELIVERY, STORAGE AND HANDLING

- A. All materials must be delivered in original, unopened containers with the manufacturer’s name, labels, product identification, and batch numbers. Damaged material must be removed from the site immediately.
- B. Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.
- C. Condition the specified product as recommended by the manufacturer.

1.5 PROJECT CONDITIONS

- A. Environmental Conditions: Do not apply material if it is raining or snowing or if such conditions appear to be imminent. Minimum application temperature 45°F (7°C) and rising.
- B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified material.

1.6 WARRANTY

- A. Provide a written warranty from the manufacturer against defects of materials for a period of one (1) year, beginning with date of substantial completion of the project.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. SikaTop 122 Plus, as manufactured by Sika Corporation, is considered to conform to the requirements of this specification. <https://usa.sika.com/>
- B. Requests for substitutions will be considered only if submitted to the architect in writing and must include substantiation of product performance, 10 days prior to the original bid date

2.2 MATERIALS

- A. Polymer-modified Portland cement mortar:
 - 1. Component A shall be a liquid polymer emulsion of an acrylic copolymer base and additives.
 - a. pH: 4.5-6.5
 - b. Film Forming Temperature: 73° F max.
 - c. Tear Strength: 950-psi min.
 - d. Elongation at Break: 500% min.
 - e. Particle Size: less than 0.1 micron
 - 2. Component A shall contain an organic, penetrating corrosion inhibitor which has been independently proven to reduce corrosion in concrete via ASTM G3 (half-cell potential tests). The corrosion inhibitor shall not be calcium nitrite and shall have a minimum of 5 years of independent field testing to document performance on actual construction projects.

- 3. Component B shall be a blend of selected portland cements, specially graded aggregates, admixtures for controlling setting time, water reducers for workability, and an organic accelerator.
 - 4. The materials shall be non-combustible, both before and after cure.
 - 5. The materials shall be supplied in a factory-proportioned unit.
 - 6. The polymer-modified, portland cement mortar must be placeable from 1/8-in. to 1-in. in depth per lift for horizontal applications.
- B. To prepare a polymer-modified portland cement concrete: aggregate shall conform to ASTM C-33. The factory- proportioned unit shall be extended with 42-lb. max. of a 3/8 in. (No.8 distribution per ASTM C-33, Table II) clean, well-graded, saturated surface dry aggregate, having low absorption and high density. Aggregate must be approved for use by the Engineer.

2.3 PERFORMANCE CRITERIA

- A. Typical Properties of the mixed polymer-modified, portland cement mortar:
- 1. Working Time: Approximately 30 minutes
 - 2. Finishing Time: 50-120 minutes
 - 3. Color: concrete gray when mixed
- B. Typical Properties of the cured polymer-modified, portland cement mortar:
- 1. Compressive Strength (ASTM C-109 Modified)
 - a. 1 day: 3000 psi min. (20.7 MPa)
 - b. 7 day: 5500 psi min. (37.9 MPa)
 - c. 28 day: 7000 psi min. (48.3 MPa)
 - 2. Flexural Strength (ASTM C-293) @ 28 days: 2000 psi (13.8 MPa)
 - 3. Splitting Tensile Strength (ASTM C-496) @ 28 days 750 psi (5.2 MPa)
 - 4. Bond Strength (ASTM C-882 Modified) @ 28 days: 2200 psi (15.2 MPa)
 - 5. The portland cement mortar shall not produce a vapor barrier.
 - 6. Density (wet mix): 136 lbs. / cu. ft. (2.18 kg/l)

- 7. Permeability (AASHTO T-277 @ 28 days Approximately 500 Coulombs)
- C. Note: Tests above were performed with the material and curing conditions @ 71oF – 75oF and 45-55% relative humidity.

PART 3 - EXECUTION

3.1 SURFACE PREPERATION

- A. Areas to be repaired must be clean, sound, and free of contaminants. All loose and deteriorated concrete shall be removed by mechanical means. Mechanically prepare the concrete substrate to obtain a surface profile of +/- 1/16” (CSP 5 or greater as per ICRI Guidelines) with a new exposed aggregate surface. Area to be patched shall not be less than 1/8” in depth.
- B. Where reinforcing steel with active corrosion is encountered, sandblast the steel to a white metal finish to remove all contaminants and rust. Where corrosion has occurred due to the presence of chlorides, the steel shall be high pressure washed after mechanical cleaning. Prime steel with 2 coats of Sika Armatec 110 EpoCem as directed by manufacturer. (See Spec Component SC-201-0699)

3.2 MIXING AND APPLICATION

- A. Mechanically mix in appropriate sized mortar mixer or with a Sika jiffy paddle and low speed (400-600 rpm) drill. Pour approximately 4/5 gal Component A into the mixing container. Add Component B while continuing to mix. Mix to a uniform consistency for a maximum of three minutes. Add remaining Component A to mix if a more loose consistency is desired. Should smaller quantities be needed, be sure the components are measured in the correct ratio and that the Component B is uniformly blended before mixing the components together. Mix only that amount of material that can be placed in 30 minutes. Do not retemper material.
- B. Mixing of the polymer-modified portland cement concrete: Pour all (1-gallon) of Component A into the mixing container. Add Component B while continuing to mix. Add correct amount of the pre-approved coarse aggregate, and continue mixing to a uniform consistency. Mixing time should be 3 minutes maximum.
- C. Placement Procedure: At the time of application, the substrate should be saturated surface dry with no standing water. Mortar and/or concrete must be scrubbed into substrate filling all pores and voids. While the scrub coat is still plastic, force material against edge of repair, working toward center.

If repair area is too large to fill while scrub coat is still wet use Sika Armatec 110 EpoCem in lieu of scrub coat (See Spec Component SC-200). After filling, consolidate, then screed. Allow mortar or concrete to set to desired stiffness, then finish with trowel, manual or power, for smooth surface. Broom or burlap drag for rough surface. Areas where the depth of the repair is less than 1-inch shall be repaired with polymer-modified portland cement mortar. In areas where the depth of the repair is greater than 1 inch, the repair shall be made with polymer-modified portland cement concrete.

- D. As per ACI recommendations for portland cement concrete, curing is required. Moist cure with wet burlap and polyethylene, a fine mist of water or a water-based* compatible curing compound. Moist curing should commence immediately after finishing and continue for 48 hours. Protect newly applied material from rain, sun, and wind until compressive strength is 70% of the 28-day compressive strength. To prevent from freezing cover with insulating material. Setting time is dependent on temperature and humidity.

*Pretesting of curing compound is recommended.

- E. Adhere to all procedures, limitations and cautions for the polymer-modified portland cement mortar in the manufacturers current printed technical data sheet and literature.

3.3 CLEANING

- A. The uncured polymer-modified portland cement mortar can be cleaned from tools with water. The cured polymer - modified portland cement mortar can only be removed mechanically.
- B. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas

END OF SECTION

SECTION 07 2500

WEATHER RESISTIVE BARRIER

PART 1 - GENERAL

1.1 GENERAL

- A. This Section includes requirements for supplying labor, materials, tools, and equipment to complete the Work as shown on the architectural drawings and as specified.
 - 1. Mechanically attached weather barrier
 - 2. Flashing
 - 3. Seam tape
 - 4. Sealant

1.2 RELATED REQUIREMENTS

- A. Section 09 2423 Portland Cement Plaster
- B. Section 09 2236 Lath & Accessories

1.3 PREINSTALLATION MEETING

- A. Preinstallation Conference: Review and discuss project conditions as it relates to the integrity of the chosen assembly.

1.4 REFERENCES

- A. ASTM C920; Standard Specification for Elastomeric Joint Sealants
- B. ASTM C1193; Standard Guide for Use of Joint Sealants
- C. ASTM D1117; Standard Guide for Evaluating Non-woven Fabrics
- D. ASTM E96; Test Method for Water Vapor Transmission of Materials
- E. ASTM E1677; Specification for Air Barrier Material or System for Low-Rise Framed Building Walls
- F. ASTM E2178; Test Method for Air Permeance of Building Materials
- G. ICC-ES AC-38 Water-Resistive Barriers

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer current technical literature for each component.

- B. Provide SDS (formerly MSDS), Article Information Sheet, third-party certifications, or product technical data confirming that systems meet or exceed emissions guidelines for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs), as follows:
- C. Sample Warranty: For manufacturer's warranty.
- D. Manufacturer's Instructions: For installation of each product specified.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is certified by weather barrier system manufacturer to install manufacturer's product in accordance with manufacturer's installation guidelines and recommendations.
- B. Source Limitations: Provide weather barrier and accessory materials produced by single manufacturer.
- C. Invite and allow WRB Manufacturer representative site access during installation. Contact Manufacturer two weeks prior for scheduling.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver weather barrier materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Store weather barrier materials as recommended by system manufacturer. Do not store near heat source or open flame.

1.8 SCHEDULING

- A. Review requirements for sequencing of installation of weather barrier assembly with installation of lath, accessories, and flashings to provide a weather-tight barrier assembly.

1.9 WARRANTY

- A. Manufacturer's Product Warranty: To repair or replace weather barrier product that fails in materials within specified warranty period when all terms of Warranty are met.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Tyvek 'Stucco Wrap' by DuPont, 974 Centre Rd. Wilmington, DE 19805, (833) 338-7668, <https://www.dupont.com/>

- B. WeatherSmart Commercial, Henry Company, 999 N. Pacific Coast Highway, Suite 800, El Segundo, CA 90245, (800) 486-1278, <https://henry.com/>

2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed weather barrier and accessories shall withstand specified wind pressures, liquid water penetration, and water vapor pressures, without failure due to defective manufacture of products.

2.3 WEATHER RESISTIVE BARRIER SYSTEM (STUCCOWRAP)

- A. DuPont™ Tyvek® StuccoWrap® and related assembly components.
- B. Conformable Weather Barrier Flashing: DuPont™ FlexWrap™ EZ.
- C. Strip Flashing: DuPont™ Flashing Tape
- D. Building Wrap Seam Tape: [2] [or] [3] inch wide, Pressure-sensitive plastic tape recommended by weather barrier manufacturer for sealing joints and penetrations in building wrap: DuPont™ Tyvek® Tape.
- E. Fasteners with Self-Gasketing Washers: Building wrap manufacturer's recommended pneumatically or hand-applied fasteners with [1-inch- (25-mm-)] or [2-inch- (50-mm-)] diameter, high-density polyethylene cap washers with UV inhibitors: DuPont™ Tyvek® Commercial Wrap Caps.
- F. Sealants: Refer to Section 07 92 00 Joint Sealants or provide sealants that comply with ASTM C920, elastomeric polymer sealant to maintain watertight conditions: DuPont™ Sealant
- G. Primer for Flashings: Synthetic rubber-based product; spray applied where additional adhesion is required to ensure a high-quality flashing installation: DuPont™ Adhesive/Primer.

2.4 WEATHER RESISTIVE BARRIER SYSTEM (WEATHERSMART)

- A. Henry® WeatherSmart® Commercial: Color: Tan
- B. Assembly Component Materials:
1. Flashing: Self-adhered butyl flashing integrally laminated to a white engineered poly film surface: Henry® FortiFlash® Butyl, Blueskin® Butyl Flash or Moistop® E-Z Seal.
 2. Liquid Applied Flashing: Air-Bloc® LF
 3. Seam tape: Acrylic adhesive, pressure sensitive tape: Henry® Sheathing Tape, Roll size: 3" wide roll
 4. Sealants: One component, moisture curing, non-sag, gun-grade elastomeric polymer: Henry® Moistop® Sealant

PART 3 - EXECUTION

3.1 EXAMINATION

- A. It is the installing subcontractor's responsibility to verify the substrate is in accordance with Water Resistive Barrier Manufacturer requirements. Commencement of the Work indicates installer acceptance of the substrate.
- B. Substrate must be continuous and secure, and free of projections and irregularities that may be detrimental to membrane installation. Sheathing fasteners must be installed into solid backing and set flush with sheathing.
- C. Verify surfaces are sound, clean, and free of frost, oil, grease, dirt, excess mortar or other contaminants.
- D. Do not apply assembly components until substrate and environmental conditions are in accordance with Water Resistive Barrier Manufacturer's published literature Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Verify surfaces are in accordance with the product specific technical data sheet and as stated in this specification.

3.3 WEATHER BARRIER INSTALLATION

- A. Install water resistive barrier assembly in accordance with Water Resistive Barrier Manufacturer product specific technical data sheet, details, guide specification, and technical bulletins to create a continuous water resistive barrier.
- B. Install water resistive barrier in shingle fashion and without folds, bunches, or voids
- C. Tape seams in accordance with weather resistive barrier technical data sheet. Seal seams with building wrap tape per manufacturer's recommended installation instructions. Seal tears, perforations, or damage to membrane with sheathing tape to create a continuous water resistive barrier.
- D. Fasteners: Use weather barrier manufacturer's recommended fasteners to secure weather barrier and install fasteners according weather barrier manufacturer's installation guidelines.

3.4 WEATHER BARRIER FLASHING

- A. Installation: Remove wrinkles and bubbles, reposition weather barrier as necessary to produce a uniform, smooth surface.
- B. Penetrations: Seal weather barrier around each penetration with weather barrier manufacturer's recommended self-adhered flashing product. Integrate products with flanges into the weather barrier.
- C. Terminations: Provide minimum 2 inches (50 mm) overlap using strip flashing on adjoining roof and base of wall systems to maintain continuous downward drainage plane.
- D. Flashing Patches: Apply weather barrier manufacturer's recommended weather barrier flashing patches behind fastening plates, such as metal-flashing clips, and metal channels.

3.5 PROTECTION

- A. Protect installed weather barrier from the following:
 - 1. Damage from cladding, structure, or a component of the structure (e.g. lathing or accessories).
 - 2. Contamination from building site chemicals, premature deterioration of building materials, or nonstandard use or application of products.
 - 3. Foreign objects or agents, including the use of materials incompatible with weather barrier products.
 - 4. UV exposure in excess of products' stated limits.

3.5 CLEANING

- A. Immediately remove release paper and scrap from work area and dispose of material in accordance with University requirements.

END OF SECTION

SECTION 07 2613

ABOVE GRADE VAPOR RETARDERS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Furnish all labor, materials, tools and equipment as necessary to perform installation of a surface applied moisture mitigation system (vapor retarder) on new and/or existing concrete slabs free of oil contamination or previously treated with a sealer, as shown on drawings and as specified in this section.
- B. Repairs and preparation of concrete floors.

1.2 REFERENCES

- A. ASTM E 1907 - Standard Practices for Determining Moisture-Related Acceptability of Concrete Floors to Receive Moisture-Sensitive Finishes; 1997.
- B. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials; 1995

1.3 SUBMITTALS

- A. General: Submit manufacturer's certification that proposed materials, details and systems as indicated and specified fully comply with manufacturer's details and specifications. If any portion of Contract Documents do not conform to manufacturer's standard recommendations, submit notification of portions of design that are at variance with manufacturer's specifications.
- B. Product Data:
 - 1. Submit manufacturer's literature, installation instructions and MSDS (Material Safety Data Sheet) for each product.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. Company specializing in manufacturing products specified in this Section with minimum 10 years documented experience
- B. Installer Qualifications:



- 1. Acceptable to manufacturer with documented experience on at least 3 projects of similar nature in past 5 years and/or training provided by the product manufacturer.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver and store in a dry, well ventilated area at minimum 50 deg F (10 deg C) and maximum 90 deg F (32 deg C).
- B. Deliver materials in manufacturer's unopened containers fully identified with brand, type, grade, class and all other qualifying information. Provide Material Safety Data Sheets for each product.

1.6 SYSTEM REQUIREMENTS

- A. Coordinate floor sealing installation with other trades.
- B. Provide materials and accessories in timely manner so as not to delay Work.

1.7 PROJECT CONDITIONS

- A. Maintain surfaces to be sealed and surrounding air temperature at not less than 50 deg F (10 deg C).
- B. Exercise caution when temperatures exceed 90 deg F (32 deg C).

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Approved Manufacturers: AQUAFIN, Inc. 505 Blue Ball Rd., #160, Elkton, MD, Phone (800) 394-1410 or (410) 392-2300; Fax (410) 392-2324; e-mail info@aquafin.net.
- B. Requests for substitutions will be considered only if submitted to the architect in writing and must include substantiation of product performance, 10 days prior to the original bid date

2.2 MATERIALS

- A. Moisture Vapor Emission Reduction Control System (concrete floor sealer): One-part system consisting of a two-component, 100% solids, solvent free, moisture tolerant, high density, low odor, chemically enhanced epoxy based product which must reduce vapor emissions (MVER) to 3 lbs/24 hrs*1000 SF

or less and be compatible with floor finishes and adhesives approved by the manufacturer.

Characteristics:

1. Product: VAPORTIGHT COAT®-SG3
2. Component-A and B: Precise blend of clear and yellowish liquid
3. VOC content: 0 g/L
4. Bond/Adhesion: (ASTM D-4541)>220 psi (>1.5 Mpa) at 28-day old concrete
5. Permeance: (ASTM E-96) <0.5 perm (<3.1E-08 grams/Pa*s*m2)
6. Alkaline Resistance: (ASTM D-1308) up to pH 14
7. Vapor Reduction: (ASTM E-96) up to 97%
8. Cured for installation of flooring: 12 hrs. at 73 deg F (23 deg C)
9. pH on cured surface: 7
10. Average Critical Radiant Flux: 1.00 W/cm2 (ASTM E 648-03)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine all construction substrates and conditions under which concrete floor sealer material is to be installed. Do not proceed with the concrete floor sealer installation until unsatisfactory conditions are corrected.
- B. Assure that surfaces to be treated do not contain any kind of sealer or organic compounds.
- C. Anhydrous Calcium Chloride Testing as per ASTM F-1869 and/or Relative Humidity Testing as per ASTM F-2170:
 1. Before installation of concrete floor sealer: use tests carried out by Architect/Engineer during study phase and confirm by testing through installer or independent laboratory prior to installation of concrete floor sealer.
 2. After installation of concrete floor sealer: not required by manufacturer of specified concrete floor sealer, unless to be carried out on a test application, specified during bid stage.

3. Alternatively, or in addition to Calcium Chloride Testing use Relative Humidity tests carried out by Architect/Engineer during study phase and confirm by testing through installer or independent laboratory prior to installation of concrete floor sealer.

3.2 PREPARATION

- A. Protect adjacent surfaces not designated to receive concrete floor sealer.
- B. Substrate preparation:
 1. Remove existing floor coverings, coatings and adhesives down to bare concrete, curing compounds, efflorescence, dust, grease, laitance, etc. with steel shot blasting, abrasive (sand) blasting or grinding using a diamond cup blade (run in low gear to prevent polishing effect). Acid etching is not allowed.
 2. Assure that all slabs have surface profile ICRI CSP 3 - 5 (ICRI, Des Plaines, IL, Guideline No.03732.) for mechanical bond (i.e. medium grit sandpaper). Smooth surfaces are not acceptable, they must be shot blasted.
 3. Burn off reinforcing fibers and collect and vacuum remains.
 4. Repair defective areas such as honeycombs, cracks or other defects with a suitable repairing or manufacturer recommended mortar.
 5. Treat saw cut and expansion joints as per manufacturer's application guideline.
 6. Install cementitious underlayment, leveling mortars, flash patching, on top of surface applied concrete floor sealer.
 7. Do not apply floor sealer to unprotected surfaces or surfaces where water has accumulated (puddles).

3.3 INSTALLATION

- A. Mix concrete floor sealer material in proportions recommended by manufacturer.
- B. Apply concrete floor sealer material in quantities as per manufacturer's specifications and recommendations.
 1. Apply in one coat at specified rate.

2. Apply using non-shed synthetic roller or notched squeegee to the still moist substrate, and carefully scrub it into the pores with a long-handled scrub brush. Follow with a non-shed synthetic roller to achieve a uniform coverage.
- C. Where specified install leveling course as per manufacturer's specifications and recommendations.
- D. Where specified install floor covering as per manufacturer's specifications and recommendations.
- E. Note:
1. Water based adhesives under VCT, sheet vinyl, linoleum, rubber backed carpet or other non-breathable flooring systems require a cementitious underlayment on top of the concrete floor sealer for their curing process. Consult adhesive manufacturer for recommended minimum thickness of cementitious underlayment.
 2. Pressure sensitive adhesives installed directly over concrete floor sealer require a longer "tack" time than listed on manufacturer's literature to prevent adhesive moisture entrapment.

3.4 ACCEPTANCE

- A. Remove left over materials and any foreign material resulting from the work from the site.
- B. Clean adjacent surfaces and materials.

END OF SECTION

SECTION 07 5419

SINGLE PLY PVC ROOFING

PART 1 – GENERAL

1.1 SCOPE

- A. All roofing areas, flashings, penetrations, and equipment shall be included in the work under this section.
- B. Furnish materials and perform labor as specified and as necessary to complete the specified reroofing, including but not limited to these major items:
 - 1. Removal of and discarding existing foam roof system to substrate.
 - 2. Low slope roof installation with white California Title 24, 60-mil single ply smooth PVC felt back membrane adhered with low VOC adhesive over " Dens Deck Prime roof cover board.
 - 3. Preparation of deck substrate, which includes necessary repair.
 - 4. Installation of tapered insulation crickets as required correcting inadequate drainage.
 - 5. Water testing of existing drains.
 - 6. Installation of new 24—gauge Kynar coated sheet coping metal at top of parapet walls.
 - 7. NOTE: Inspection services should be utilized by the UCR to oversee the work.
 - 8. NOTE: The entire roof surface shall be washed after completion of installation.
 - 9. NOTE: Roofing contractor shall be responsible for necessary due diligence in terms of roof test cut samples and existing conditions to avoid unforeseen conditions.
 - 10. NOTE: Roofing contractor shall be responsible for current governing codes, such as insulation, inspection, and/or permits

1.2 PERFORMANCE REQUIREMENTS

- A. General: Provide and install specified membrane and its base flashings that remain watertight, do not pond water, resist thermal movement and resist exposure to weather without failure.

1.3 REFERENCES

- A. American Society for Testing & Materials (ASTM)
- B. Federal Specifications (FS)
- C. Underwriters Laboratories (UL)
- D. Factory Mutual (FM)

1.4 QUALITY ASSURANCE

- A. Compliance to Specifications
 - 1. Roofing foreman shall always have a copy of these specifications on the job during application and shall refer to same for proper application methods.
 - 2. Whenever specification items found herein are less stringent than the roofing manufacturer's published specifications, the manufacturer's minimum requirements shall be followed. UCR will invite the roofing manufacturer's representative to the pre-construction conference, and the representative will visit the work in progress.
 - 3. Written specifications submitted to the roofing contractor do not relieve the roofing contractor of his obligation to thoroughly check the size, substrate, slope and other conditions of the roof.
 - 4. Contractor must provide submittals of roofing materials including MSDS information at the pre-construction conference, for the purpose of review and approval by NRC prior to the start of the work.
- B. Regulatory Requirements
 - 1. Fire Regulations: Roofing contractor shall be responsible for meeting fire regulations. A certified fire extinguisher of adequate size shall be located on the roof near the work.
 - 2. Roof Membrane Attachment: Membrane attachment shall conform to roofing manufacturer, Uniform Building Code, Factory Mutual

and shall include upgrades to modify attachment for special requirements in area where building is located.

a. Minimum attachment shall conform to FM I-90.

3. Safety barriers shall be erected around chute to dumpster for demolition, and ladder to roof level. Warning tape shall be placed at material storage location and roof edges where roofing is in progress.
4. Roofing contractor shall be responsible to meet OSHA and Cal-OSHA requirements for safety of all involved and around buildings.
5. Hazardous materials shall be disposed of according to government regulations.
6. Roofing contractor shall obtain any required permits from the City of Riverside as necessary

C. Quality Control

1. Work may be performed under the observation of National Roofing Consultants (NRC), 118 Lincoln Ave, Pomona CA 91767 (909) 620-0177.
2. Responsibility for Payment: UCR will provide and make payment to NRC for I daily observation; however, the roofing contractor will be responsible (by whatever arrangements are mutually agreed upon between the roofing contractor and UCR) for observation costs incurred as the result of unapproved time delays and observation costs incurred when work is not performed as scheduled.
3. At option of and where designated by the NRC representative, 1-1/2" sample welds shall be taken by roofing contractor each morning and afternoon prior to commencing application. Areas from which test cuts have been taken shall be repaired in manner directed by NRC representative and manufacturer representative as part of the work.
4. Coordination
 - a. Job Conference: Prior to commencement of work the UCR representative shall arrange a conference to be held at the job site to review specifications and to walk deck. Roofing contractor, manufacturer representative, UCR

representative, and NRC representative are to be in attendance.

- b. Notification: The roofing contractor shall give 72 hours prior notice to consulting service before starting application and shall notify the same each time work is to be performed. Lack of notification of work schedule changes shall result in compensation for NRC's lost time and expenses at the contractor's expense.
- c. Final/Punch List
 - 1) Consulting service and the UCR representative shall be notified upon completion of roof and shall return and do final/punch list.

D. Change Orders

- 1. If a bidder sees work that bidder feels is part of the scope, but feels is not listed in specifications, bidder shall raise that question seven (7) days prior to bid opening. UCR will then clarify the scope or specification question at that time, or by addendum to the specifications. Attendance at the pre-bid conference is mandatory.
- 2. The Quality Control Observer does not have authority to permit specification changes. Any information or assistance provided by the same does not relieve the roofing contractor of strict compliance with specifications, drawings, and material manufacturer's requirements. NRC does not assume responsibility, such as water damage, which is normally the roofing contractors. Bidders are required to meet the specifications at time of bid. The work will be observed according to the specifications.
- 3. No change orders covering cost additions to meet manufacturer's requirements will be accepted. The roofing contractor is responsible to meet all manufacturers' requirements, which are more stringent than the issued job specifications. Costs for roof insulation to match existing current r value, costs to improve existing conditions, i.e. minimum curb height, lead drain flashings; crickets, etc. are to be included in the bid. Compliance with manufacturer recommendations shall apply only as directed by these specifications. The contractor shall identify those items that apply with the material manufacturer.

4. Any variance from the specifications shall be by written change order or written instruction from UCR only. Work in the area of question shall terminate until authorization to proceed has been given.
 5. Bidder wishing to submit an alternate or equal material must do so seven (7) days prior to bid due date. Failure to do so will disqualify bid. Include written proof in the form of ASTM and FS number, type, UL ratings and manufacturer's specification number.
 6. When a make or trade name is specified, it shall indicate the standard required. Contractor proposing an alternate material shall submit the following:
 - a. Written application with explanation of why it should be considered.
 - b. Manufacturer's literature and samples of requested substitutions.
 - c. Three (3) job references of applications 5 years old or older available for inspection within 100 miles of project where substitutions were used under similar conditions.
- E. Roofing Contractor's Qualifications
1. Bidder must include, with bid, a letter from manufacturer stating that bidder is certified to install manufacturer's product.
 2. Job Experience: The roofing contractor installing the system shall have a minimum of two (2) years' experience successfully applying the same or similar materials. The roofing contractor shall only use skilled workmen who are familiar with the products and application methods.
- F. Coordination
1. Contractor is required to attend a pre-construction conference with the consultant, UCR representative and material manufacturer representative, which will establish start date.

1.5 SUBMITTALS

- A. Necessary items pertaining to Section 1.4A4
- B. Necessary items pertaining to Section 1.4E1

1.6 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver all materials in their original containers with seals unbroken and manufacturer label and product identification clearly legible on each package.
- B. Storage: Store materials at site on pallets and under cover and maintain in dry condition

1.7 PROJECT CONDITIONS

- A. Moisture: Wet materials shall not be applied nor shall roofing application proceed when moisture is on roof or deck.
- B. Water tightness: Roofing contractor shall always be responsible for maintaining roof in a watertight condition. Interior damage caused by leakage during roof application shall be the responsibility of the roofing contractor.
- C. Building Protection
 - 1. Tear-off and debris transit must not disturb operations of the building. Enclosed chutes and other methods shall be used to contain dust and debris.
 - 2. The building exterior must be protected from damage, markings, or spillage using tarpaulins or protective sheeting.
 - 3. The contractor will be responsible for damage to grass, shrubs, trees or grounds including curbs and sidewalks. Protective covers shall be utilized under any equipment that would damage or stain any surface.
- D. Clean Up: Premises shall be kept clean daily during application and left clean when roof is completed.
- E. Contractor to provide portable toilet facilities.
- F. Dogs, drugs, alcohol and radio playing are prohibited.

1.8 SEQUENCING & SCHEDULING

- A. Time Limitation: Roofing contractor shall complete a minimum of 1,500 sq. ft. per day over thirty (30) continuous working days; weekend days and inclement weather accepted. Roofing contractor shall be penalized an amount equivalent to the full daily inspection rate for work extended beyond the time limitation

- B. Roofing contractor shall inform Owner representative and receive approval for start date, work duration time, material and equipment storage area and vehicle, equipment, and pedestrian traffic pattern.

1.9 GUARANTEE

- A. Roofing contractor shall provide to UCR a written guarantee against defects of workmanship and to maintain roof in a watertight condition for a period of five (5) years from final acceptance of product by UCR.
- B. Manufacturer's Warranty
 - 1. Provide manufacturer's 20-year NDL warranty to provide repairs or correction of roof stemming from material defects, contractor workmanship and ordinary wear and tear of elements.
 - 2. Warranty shall not exclude ponding water of any kind.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Membrane
 - 1. The roofing system shall be adhered with a low VOC bonding adhesive for use with reinforced polyvinyl chloride (PVC) felt back membrane. PVC membrane shall be installed over 1/2" Dens deck prime roof cover board. Material components shall all be from one (1) manufacturer, shall have a U/L Class A fire rating, and shall be manufacturer's current published specification.
 - 2. Color
 - a. Low Slopes: White
 - b. Parapet Walls: White
- B. Approved Manufacturers and Products
 - 1. Manufacturers
 - a. Carlisle: Arturo Ortiz (818) 813-4082
 - b. Sika Samafil: Mark Ouellette (800) 421-1662
 - c. Owner approved equal
 - 2. Products
 - a. 60-mil PVC

- b. Low VOC bonding adhesive
- c. Dens Deck Prime roof cover board
- d. Owner approved equal

C. Summary of Materials: Materials shall not be less than the following per 100 square feet.

1	Dens Deck Prime roof cover board	096.0 lbs
2	Adhesive	011.0 lbs
3	Single ply membrane	032.0 lbs
TOTAL APPROXIMATE WEIGHT		139.0 lbs

D. Standards: All materials shall conform to the following:

1. Low Slope PVC Felt Back Membrane: 60 mils (minimum) white, heat-welded polyvinyl chloride sheet roofing membrane.
2. Roof Cover board: 'Dens Deck' Prime roof cover board.
3. Membrane Sealant: One-part polyurethane.
4. Membrane Adhesive: Low VOC bonding adhesive.
5. Termination Bar: 16-gauge extruded aluminum
6. Flashing Membrane: PVC membrane of specified thickness to be used for flashing.
7. Miscellaneous Materials: Materials required or supplied by the manufacturer.
8. Metal Counter Flashing: 24-gauge Kynar coated sheet metal.
9. Tapered Insulation: Tapered perlite or polyisocyanurate, minimum 3/8 " per foot or twice the roof slope, whichever is greater.
10. Coping Lap Sealant: Elastomeric silicone, one-part; Dow 795, GE Silpruf SCS 2000 or Sika WS-295
11. Penetration Seal: Prefabricated polymer curb with self-leveling, pourable sealant. Chem Curb by Chem Link, (800) 826-1681 or Carlisle specified pourable fluid- applied sealant for unusual penetrations.

12. Insulation and Underlayment Adhesive: Manufacturers recommended two-part low-rise foam adhesive.
13. Clad Metal Edge: 25-gauge, sheet metal edge with factory-applied PVC coating, 4" flange and face with 3" drip edge.

PART 3 – EXECUTION

3.1 ASBESTOS REMOVAL

- A. Removal and disposal of incidental asbestos-containing materials shall be performed in accordance with governing codes and regulations.

3.2 PREPARATION OF SURFACES

- A. Repair substrate, as necessary.
- B. Assure substrate is smooth and clean.
- C. Provide water cutoffs or otherwise complete terminations and base flashings and seals to prevent water from entering completed work at the end of the day or when rain is eminent. Remove and discard temporary seals before beginning work on adjoining roofing.

3.3 UNUSED JACKS, PIPES, PADS, ETC.

- A. Remove from roof and level off. Fill large opening flush with deck level. Cover smaller holes with 24-gauge sheet metal, nailed solid. It is the roofing contractor's responsibility to identify all items to be removed before submitting bid.

3.4 EXAMINATION

- A. Verify that roof penetrations are in place and secured.
- B. Verify that wood blocking, curbs and nailers are securely anchored to the substrate.
- C. Verify that substrate is visibly dry and free of moisture.
- D. Verify that contaminants that will impair adhesion of roofing components have been removed.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.5 OUTLETS

A. Drains

1. Remove scupper flashings and replace with new 25-gauge, G-90 sheet metal with factory-applied PVC coating.
2. Remove drain domes and clamping rings. Inspect for rust damage and replace any compromised domes with new domes.
3. Prepare base per manufacturer's requirements, then apply roofing membrane. Install clamping ring and cover. NOTE: The roofing membrane shall smoothly transition with the drains and shall be applied in such a manner that water will not dam up.

3.6 FLASHINGS

A. Pipe or Conduit Penetrations

1. Remove and discard metal flashings and apply aluminum tape around penetrations if required or use cone or prefabricated boot. Seal tape with PVC flashing membrane and clamp off top with a hose clamp. Seal the clamp with specified sealant.

B. Multiple (nested) Penetrations

1. At multiple penetrations, provide manufacturer's one-part pourable sealant or install Chem Curb penetration seals installed per manufacturers' requirements.

C. Sheet Metal Roof Vents

1. If applicable, replace existing roof vents with new PVC clad metal vents having 6" wide flanges fabricated from clad metal. Secure vent flanges to with manufacturer's approved fasteners at 4" O.C. Heat weld field sheets to flange with 2" minimum wide weld.
2. Install rodent screens at all openings larger than 3".

3.7 PARAPETS

A. Walls

1. Install roofing membrane fully adhered, and terminate at top outside edge or counter flashing, and securely attached with approved mechanical fasteners.

B. Base Flashings

1. Install (adhere) roofing membrane to the base of the wall, and then secure to deck with termination bar. Install flashing on wall just below the bottom of the upper reglet or curb counter flashing drip edge with proper adhesive. Secure top of flashing with termination bar. Seal top of termination bar and membrane termination point with specified sealant.
- C. Copings
1. Install new metal copings after application of wall covering complete.
 2. Seal external coping laps with a 1/8" thick application of polyurethane sealant straddled across lap, neatly applied and taped to avoid over application.

3.8 INSULATION AND COVER BOARD

- A. Insulation
1. Install tapered insulation crickets at drain side walls. Contractor shall verify where crickets are required or where adverse conditions exist.
 2. Adhere all layers using manufacturers approved adhesive.
 3. Adhere 'Dens Deck' Prime roof cover board per manufacturer's specifications.
 4. Do not install wet, damaged, or warped insulation boards.

3.9 ROOFING MEMBRANE

- A. The system is to be fully adhered. The smooth membrane is to be broomed and rolled immediately after placement to assure that adhesive has been properly spread (dispersed). Visual indications of adhesive beads (ribbons) or adhesive in general will not be accepted. Adjacent sheets of smooth membrane shall have minimum lap areas of 3" side and 6" end. When machine welding welds shall be 1", and 2" when hand welding. Welding equipment shall be provided by or approved by manufacturer. All completed welded seams shall be checked after cooling using a round screwdriver or another suitable blunt object. Visible evidence that welding is proceeding acceptably is smoke during the welding process, shiny membrane, and an uninterrupted flow of black material from the edge of completed joints.

3.10 CLEAN-UP/TOUCH-UP/CLOSE-OUT

- A. Paint all new and existing metal (or use Kynar-coated metal), including new counter flashings with specified coating or paint in a minimum of two (2) coats. Color to be designated.
- B. Perform UCR representative and manufacturer final inspections.
- C. Provide manufacturer warranty documentation to UCR.

END OF SECTION

SECTION 07 9200

JOINT SEALANTS

PART 1 GENERAL

2.01 SUMMARY

- A. Includes But Not Limited To:
 - 1. Furnish and install sealants not specified to be furnished and installed under other Sections.
 - 2. Quality of sealants to be used on Project not specified elsewhere, including submittal, material, and installation requirements.
- B. Related Requirements:
 - 1. Removing existing sealants specified in Sections where work required.
 - 2. Furnishing and installing of sealants is specified in Sections specifying work to receive new sealants.

2.02 REFERENCES

- A. Reference Standards:
 - 1. ASTM International:
 - a. ASTM C920-14a, 'Standard Specification for Elastomeric Joint Sealants'.
 - b. ASTM C1193-16, 'Standard Guide for Use of Joint Sealants'.
 - c. ASTM C1330-02(2013), 'Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants'.
 - d. ASTM D5893/D5893M-16, 'Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements'.

2.03 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency current edition.
- B. ASTM C1193 - Standard Guide for Use of Joint Sealants 2016.
- C. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid- Applied Sealants 2018.
- D. ASTM C1481 - Standard Guide for Use of Joint Sealants with Exterior Insulation and Finish Systems (EIFS) 2012.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2020.
- F. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements 2009 (Reapproved 2016).
- G. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials Current Edition, Including All Revisions.
- H. ASTM C834 - Standard Specification for Latex Sealants 2017.
- I. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications 2018.
- J. ASTM C920 - Standard Specification for Elastomeric Joint Sealants 2018.

2.04 ADMINISTRATIVE REQUIREMENTS

- A. Scheduling:
 - 1. Schedule work so waterproofing, water repellents and preservative finishes are installed after sealants, unless sealant manufacturer approves otherwise in writing.
 - 2. Ensure sealants are cured before covering with other materials.

2.05 SUBMITTALS

- A. Action Submittals:
 - 1. Product Data:

- a. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
 - b. Manufacturer's literature for each Product.
 - c. Schedule showing joints requiring sealants. Show also backing and primer to be used.
- B. Informational Submittals:
1. Certificates:
 - a. Manufacturer's Certificate:
 - 1) Certify products are suitable for intended use and products meet or exceed specified requirements.
 - 2) Certificate from Manufacturer indicating date of manufacture.
 2. Manufacturers' Instructions:
 - a. Manufacturer's installation recommendations for each Product.
 - b. Manufacturer's installation for completing sealant intersections when different materials are joined.
 - c. Manufacturer's installation for removing existing sealants and preparing joints for new sealant.

2.06 QUALITY ASSURANCE

- A. Qualifications:
1. Manufacturer: Company specializing in manufacturing products specified in this section with minimum ten (10) years documented experience.
 2. Applicator Qualifications:
 - a. Company specializing in performing work of this section.
 - b. Provide if requested, reference of projects with minimum three (3) years documented experience, minimum three (3) successfully completed projects of similar scope and complexity and approved by manufacturer.

- c. Designate one (1) individual as project foreman who shall be on site at all times during installation.
- B. Preconstruction Testing:
 - 1. Pre-construction testing is not required when sealant manufacturer can furnish data acceptable to Architect based on previous testing for materials matching those of the Work.
- C. Mockups:
 - 1. Provide mockups including sealant and joint accessories to illustrate installation quality and color if requested by Architect or Project Manager.
 - a. Incorporate accepted mockup as part of Work.

2.07 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Acceptance Requirements:
 - 1. Deliver and keep in original containers until ready for use.
 - 2. Inspect for damage or deteriorated materials.
- B. Storage and Handling Requirements:
 - 1. Handle, store, and apply materials in compliance with applicable regulations and material safety data sheets (MSDS).
 - 2. Handle to prevent inclusion of foreign matter, damage by water, or breakage.
 - 3. Store in a cool dry location, but never under 40 deg F (4 deg C) or subjected to sustained temperatures exceeding 80 deg F (27 deg C) or as per Manufacturer's written recommendations.
 - 4. Do not use sealants that have exceeded shelf life of product.

2.08 FIELD CONDITIONS

- A. Ambient Conditions:
 - 1. Do not install sealant during inclement weather or when such conditions are expected. Allow wet surfaces to dry.
 - 2. Follow Manufacturer's temperature recommendations for installing sealants.

3. Ambient Conditions:
 - a. Do not apply caulking at temperatures below 40 deg F (4 deg C).

2.09 WARRANTY

- A. Manufacturer Warranty:
 1. Signed warranties against adhesive and cohesive failure of sealant and against infiltration of water and air through sealed joint for period of three (3) years from date of Substantial Completion.
 - a. Manufacturer's standard warranty covering sealant materials.
 - b. Applicator's standard warranty covering workmanship.

PART 2 PRODUCTS

3.01 SYSTEMS

- A. Manufacturers:
 1. Manufacturer Contact List:
 - a. Dow Corning Corp., Midland, MI www.dowcorning.com.
 - b. Laticrete International Inc., Bethany, CT www.laticrete.com.
 - c. Sherwin-Williams, Cleveland, OH www.sherwin-williams.com.
 - d. Sika Corporation, Lyndhurst, NJ www.sikaconstruction.com
 - e. Tremco, Beachwood, OH www.tremcosealants.com
- B. Materials:
 1. Design Criteria:
 - a. Compliance: Meet or exceed requirements of these standards:
 - 1) ASTM C920: Elastomeric joint sealant performance standard.
 - 2) ASTM D5893/D5893M: Silicone Joint Sealant for Concrete Pavements.

- b. Comply with Manufacturer's ambient condition requirements.
 - c. Sealants must meet Manufacturer's shelf-life requirements.
 - d. Sealants must adhere to and be compatible with specified substrates.
 - e. Sealants shall be stable when exposed to UV, joint movements, and environment prevailing at project location.
 - f. Primers (Concrete, stone, masonry, and other nonporous surfaces typically do not require a primer. Aluminum and other nonporous surfaces except glass require use of a primer. Installer Option to use Adhesion Test to determine if primer is required or use primer called out in related sections):
 - 1) Adhesion Test:
 - (a) Apply silicone sealant to small area and perform adhesion test to determine if primer is required to achieve adequate adhesion. If necessary, apply primer at rate and in accordance with Manufacturer's instructions. See 'Field Quality Control' in Part 3 of this specification for Adhesive Test.
 - 2) If Primer required, shall not stain and shall be compatible with substrates.
 - 3) Allow primer to dry before applying sealant.
2. Sealants at Exterior Building Elements:
- a. Description:
 - 1) Weathersealing expansion, contraction, perimeter, and other movement joints which may include all or part of the following for project:
 - (a) Entrance perimeters and thresholds.
 - (b) Stucco Joints
 - (c) Connections
 - (e) Door frames
 - (i) Concrete Masonry Units

- (j) Parapet caps
 - (k) Wall penetrations
 - (l) Other joints necessary to seal off building from outside air and moisture.
- b. Design Criteria:
- 1) Meet following standards for Sealant:
 - (a) ASTM C920: Type S, Grade NS, Class 50 Use NT, M, G, A.
 - 2) Limitations:
 - (a) Do not use below-grade applications.
 - (b) Do not use on surfaces that are continuously immersed or in contact with water.
 - (c) Do not use on wet, damp, frozen or contaminated surfaces.
 - (d) Do not use on building materials that bleed oils, plasticizers or solvents, green or partially vulcanized rubber gaskets or tapes.
 - 3) Color:
 - (a) Architect to select from Manufacturer's standard colors.
 - (b) Match building elements (do not use white that shows dirt easily).
- c. Approved Products:
- 1) Dow Corning:
 - (a) Primer: 1200 Prime Coat.
 - (b) Sealant: 791 Silicone Weatherproofing Sealant.
 - 2) Tremco:
 - (a) Primer:
 - (1) Metal surface: No. 20 primer.

- (2) Porous surfaces: No. 23 primer.
- (b) Sealant: Spectrum 1 Silicone Sealant.
- 3. Sealants at Exterior Sheet Metal and Miscellaneous:
 - a. Description:
 - 1) Weathersealing expansion, contraction, perimeter, and other movement joints which may include all or part of the following for project:
 - (a) Flashings.
 - (b) Gutters.
 - (c) Penetrations in soffits and fascia's.
 - (d) Roof vents and flues.
 - b. Design Criteria:
 - 1) Meet following standards for Sealant:
 - (a) ASTM C920: Type S Grade NS, Class 25 (min) Use NT, M, G, A and O.
 - 2) Limitations:
 - (a) Do not use below-grade applications.
 - (b) Do not use on surfaces that are continuously immersed or in contact with water.
 - (c) Do not use on wet, damp, frozen or contaminated surfaces.
 - (d) Do not use on building materials that bleed oils, plasticizers or solvents, green or partially vulcanized rubber gaskets or tapes.
 - c. Approved Products:
 - 1) Dow Corning: 790 Silicone Building Sealant.
 - 2) Tremco: Tremsil 600 Silicone Sealant.

3.02 ACCESSORIES

- A. Bond Breaker Tape:
 - 1. Pressure sensitive tape as by Sealant Manufacturer to suit application.
 - 2. Provide tape to prevent adhesion to joint fillers or joint surfaces at back of joint and allow sealant movement.
- B. Joint Backing:
 - 1. Comply with ASTM C1330.
 - 2. Flexible closed cell, non-gassing polyurethane or polyolefin rod or bond breaker tape as recommended by Sealant Manufacturer for joints being sealed.
 - 3. Oversized 25 to 50 percent larger than joint width.
- C. Joint Cleaner:
 - 1. Non-corrosive and non-staining type as recommended by Sealant Manufacturer, compatible with joint forming materials.
- D. Masking Tape:
 - 1. Non-staining, non-absorbent tape product compatible with joint sealants and adjacent joint surfaces.

PART 3 EXECUTION

4.01 EXAMINATION

- A. Verification of Conditions:
 - 1. Examine substrate surfaces and joint openings are ready to receive Work.
 - a. Verify each sealant is compatible for use with joint substrates.
 - b. Verify joint surfaces are clean and dry.
 - c. Ensure concrete surfaces are fully cured.
 - 2. Sealants provided shall meet Manufacturer's shelf-life requirements.
 - 3. Notify Architect of unsuitable conditions in writing.
 - a. Do not proceed until unsatisfactory conditions are corrected.

4. Commencement of Work by installer is considered acceptance of substrate.

4.02 PREPARATION

A. Surface Preparation:

1. Surfaces shall be clean, dry, free of dust, oil, grease, dew, frost or incompatible sealers, paints or coatings that may interfere with adhesion. Prepare substrates in accordance with Manufacturer's instructions:
 - a. Porous surfaces: Clean by mechanical methods to expose sound surface free of contamination and laitance followed by blasting with oil-free compressed air.
 - b. Nonporous surfaces: Use two-cloth solvent wipe in accordance with ASTM C1193. Allow solvent to evaporate prior to sealant application.
 - c. High-pressure water cleaning: Exercise care that water does not enter through failed joints.
 - d. Primers:
 - 1) Primers enhance adhesion ability.
 - 2) Use of primers is not a substitution for poor joint preparation.
 - 3) Primers should be used always in horizontal application where there is ponding water.
2. Field test joints in inconspicuous location.
 - a. Verify joint preparation and primer required to obtain optimum adhesion of sealants to joint substrate.
 - b. When test indicates sealant adhesion failure, modify joint preparation primer, or both and retest until joint passes sealant adhesion test.
3. Masking: Apply masking tape as required to protect adjacent surfaces and to ensure straight bead line and facilitate cleaning.

B. Joints:

1. Prepare joints in accordance with ASTM C1193.

- a. Clean joint surfaces of contaminants capable of affecting sealant bond to joint surface using Manufacturer's recommended instructions for joint preparation methods.
 - b. Remove dirt, dust, oils, wax, paints, and contamination capable of affecting primer and sealant bond.
 - c. Clean concrete joint surfaces to remove curing agents and form release agents.
- C. Protection:
1. Protect elements surrounding the Work of this section from damage or disfiguration.

4.03 APPLICATION

- A. General:
1. Apply silicone sealant in accordance with Manufacturer's instructions.
 2. Do not use damaged or deteriorated materials.
 3. Install primer and sealants in accordance with ASTM C1193 and Manufacturer's instructions.
 4. Apply primer where required for sealant adhesion.
 5. Install sealants immediately after joint preparation.
 6. Do not use silicone sealant as per the following:
 - a. Apply caulking/sealant at temperatures below 40 deg F (4 deg C).
 - b. Below-grade applications.
 - c. Brass and copper surfaces.
 - d. Materials bleeding oils, plasticizers, and solvents.
 - e. Structural glazing and adhesive.
 - f. Surfaces to be immersed in water for prolonged time.
- B. Joint Backing:
1. Install joint backing to maintain sealant joint ratios recommended by Manufacturer.

2. Install without gaps, twisting, stretching, or puncturing backing material. Use gage to ensure uniform depth to achieve correct profile, coverage, and performance.
 3. Rod for open joints shall be at least 1-1/2 times width of open joint and of thickness to give solid backing. Backing shall fill up joint so depth of sealant bite is no more than 3/8 inch (9.5 mm) deep.
- C. Bond Breaker:
1. Install bond breaker where joint backing is not used or where backing is not feasible.
 - a. Apply bond-breaker tape in shallow joints as recommended by Sealant Manufacturer.
- D. Sealant:
1. Apply sealant with hand-caulking gun with nozzle of proper size to fit joints. Use sufficient pressure to insure full contact to both sides of joint to full depth of joint. Apply sealants in vertical joints from bottom to top.
 2. Fill joint opening to full and proper configuration.
 3. Apply in continuous operation.
 4. Tool joints immediately after application of sealant if required to achieve full bedding to substrate or to achieve smooth sealant surface. Tool joints in opposite direction from application direction, i.e., in vertical joints, from the top down. Do not 'wet tool' sealants.
 5. Depth of sealant bite shall be 1/4 inch (6 mm) minimum and 1/2 inch (12.7 mm) maximum, but never more than one half or less than one fourth joint width.
- E. Install at perimeter joints and mechanical and electrical penetrations in sound insulated rooms. Apply sealant with hand-caulking gun with nozzle of proper size to fit joints. Use sufficient pressure to insure full contact to both sides of joint to full depth of joint.
- F. Tool joints immediately after application of sealant if required to achieve full bedding to substrate or to achieve smooth sealant surface.
- G. Caulk gaps between painted or coated substrates and unfinished or pre-finished substrates. Caulk gaps larger than 3/16 inch (5 mm) between painted or coated substrates.

4.04 TOLERANCES

- A. Provide joint tolerances in accordance with Manufacturer's printed instructions.

4.05 FIELD QUALITY CONTROL

- A. Inspection:
 - 1. Examine sealant joints to verify compliance with Contract Document requirements.
- B. Non-Conforming Work. Non-conforming work as covered in the General Conditions applies, but is not limited to the following:
 - 1. Sealant material found to be contaminated or damaged or inadequate preparation of substrate results in deficiencies in joint sealant adhesion is considered defective or not complying with Contract Document requirements.
 - 2. Correct any work found defective or not-complying with Contract Document requirements at no additional cost to Owner.
- C. Adhesion Test (Installer Option to use adhesion test to determine if primer is required).
 - 1. Perform adhesion tests in accordance with Manufacturer's instructions and ASTM C1193, Method A, Field-Applied Sealant joint Hand-Pull Tab:
 - a. Perform five (5) tests for first 1,000 linear feet (300 meters) of applied silicone sealant and one (1) test for each 1,000 linear feet (300 meters) seal thereafter or perform one (1) test per floor per building elevation minimum.
 - b. For sealants applied between dissimilar materials, test both sides of joints.
 - 2. Sealants failing adhesion test shall be removed, substrates cleaned, sealants re-installed, and re-testing performed.
 - 3. Maintain test log and submit report to Architect indicating tests, locations, dates, results, and remedial actions.

4.06 CLEANING

- A. Remove sealant from adjacent surfaces in accordance with Sealant Manufacturer and Substrate Manufacturer recommendations as work progresses.
- B. Remove masking tape and excess sealant.
- C. Clean adjacent materials, which have been soiled, immediately (before setting) as recommended by Manufacturer.
- D. Waste Management: Dispose of products in accordance with manufacturer's recommendation.

END OF SECTION

SECTION 09 2236**LATH & ACCESSORIES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
1. Furnish and install lath on surfaces to be plastered as described in Contract Documents.

1.2 REFERENCES

- A. Reference Standards:
1. ASTM International:
 - a. ASTM B69-87, 'Standard specification for flat rolled zinc'
 - b. ASTM A641/A641M-09a, 'Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.'
 - c. ASTM C1063, 'Specification for Installation of Lathing and Furring for Exterior Portland Cement-Based Plaster.'
 - d. ASTM C847, 'Specification for Metal Lath.'
 - e. ASTM C926, 'Specification for Application of Portland Cement-Based Plaster'
 - f. ASTM C933, 'Specification for Welded Wire Lath'
 - g. ASTM C954, 'Specification for steel drill screws for metal plaster bases to steel studs'
 - h. ASTM C1032, 'Specification for Woven Wire Plaster Base'
 2. California Building Code (CBC) Title 24, Part 2, chapters:
 - a. Chapters 14 and 14a "Exterior Wall Coverings"
 - b. Chapter 25 and 25a, 'Gypsum Board, Gypsum Panel Products And Plaster' (2019).
 - 1) Table 2507.2, 'Lath, Plastering Materials and Accessories'.
 3. U S Department of Commerce:
 - a. Federal Specification QQ-L-101C, 'Lath, Metal, (And Other Metal Plaster Bases)' (27 April 1972).
 4. National Association of Architectural Metal Manufactures:

- a. 'Guide Specifications for Expanded Metal Lathing and Furring"

1.3 SUBMITTALS

- A. Certification of compliance of materials with Contract Documents.
- B. Manufacturer's written specifications, and installation instructions for factory-prepared materials.
- C. Evidence of applicator's experience. Letter from Lathing manufacturer is acceptable.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Water Resistant Barrier (WRB), Drainage Plane:
 1. Acceptable Products:
 - a. Tyvek 'Stucco Wrap' by DuPont, 974 Centre Rd. Wilmington, DE 19805, <https://www.dupont.com/brands/tyvek.html>
 - b. WeatherSmart® Commercial, Henry Company, 999 N. Pacific Coast Highway, Suite 800, El Segundo, CA 90245, (800) 486-1278, <https://henry.com/>
 - c. Equal as approved by Architect before installation. Requests for substitutions will be considered only if submitted to the architect in writing and must include substantiation of product performance, 10 days prior to the original bid date.
- B. Metal Lath:
 1. Expanded Metal Lath: (Soffits, and Discontinuous Lath) Use Self-Furring Dimple Lath, Ramset attached at CMU walls.
 - a. Meet requirements of ASTM C847.
 - b. Use 3.4 lb (1.8 kg) per sq meter diamond mesh on framing spaced 16 inches (400 mm) on centers.
 - c. Use 3/8 inch (9.5 mm), 3.5 lb (1.9 kg) per sq meter rib lath on framing spaced 24 inches (600 mm) on centers.
 - d. Galvanized.
 2. Welded Wire Metal Lath: (Walls)

- a. Galvanized Welded Wire Fabric of 16 ga (0.0575 in) wire with 2-inch openings or 17 ga with 1-1/2" openings meeting requirements of ASTM C933.
- b. Acceptable Products:
 - 1) K-Lath, Stucco-Rite, San Bernardino, CA
www.treeisland.com 1 (800) 255-6974
 - 2) Cemco, 13191 Crossroads Pkwy N., Ste 325, City of Industry, CA 91746, 800.775.2362,
<https://cemcosteel.com/>
 - 2) Twin Trac, Clark Dietrich, West Chester, OH 45069, 1 (513) 870-1100, <https://www.clarkdietrich.com/>
3. Lathing Accessories:
 - a. Zinc and Zinc-Coated (Galvanized) Accessories: The following accessories shall be fabricated from [zinc] [or] [zinc-coated (galvanized)].
 - b. Meet requirements of CBC Chapter 25, table 2507.2 and be galvanized after fabrication unless specified differently.
 - c. Includes:
 - 1) Exterior Corner Reinforcement: 18 ga (0.0516 in).
 - 2) Casing Beads and Drip Screed: 24 ga (0.0276 in).
 - 3) Corner Beads and Base or Parting Screeds: 26 ga (0.0217 in).
 - 4) Expansion Joint: (M-Slide) Control Joints: 2-piece formed to produce slip-joint.
 - 5) Strip Mesh: Metal Lath, 3.4 lb/yd² expanded metal; 6 in. wide x 18 in. long used as 'butterflies' minimize re-entrant cracking
 - 6) CornerAid or Cornerite and Strip Reinforcements: 2.5 lb (1.34 kg) per sq meter metal lath coated with rust-inhibitive paint.
 - 7) DHF: Drip Head Flashing (No. 6). For door head
 - 8) Attachment Clips: As approved by Lath Manufacturer.
4. Attaching Devices:

- a. Hanger Wire And Tie Wire: Meet requirements of ASTM A641/A641M.
 - b. Power-Driven Staples: Formed from galvanized (Type I Coating) steel wire with tensile strength from 80,000 to 110,000 psi (552 to 758 MPa) and meeting governing codes.
 - c. Attachment Clips: As approved by Lath Manufacturer.
 - d. Acceptable Products:
 - 1) Stockton Products, Las Vegas, NV 89081, 877-862-5866, <http://www.stocktonproducts.com>
 - 2) Clark Dietrich, West Chester, OH 45069, 513 870-1100, <https://www.clarkdietrich.com/>
 - 3) Cemco, 13191 Crossroads Pkwy N., Ste 325, City of Industry, CA 91746, 800.775.2362, <https://cemcosteel.com/>
- C. Sealants: See Section 07 9200. Acrylic latex complying with ASTM C834, Polyurethane, polyurethane modified, polysulfide, or silyl-terminated polyether elastomeric sealant complying with ASTM C920 or 100% silicone.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Secondary Moisture Protection Barrier 'Stucco Wrap' at framed walls:
 - 1. Install in accordance with Manufacturer's installation instructions.
- B. Accessories
 - 1. Verify locations of dissimilar base materials and provide 6-inch-wide strip of galvanized, self-furring metal plaster base, with 3 inches extending on either side of the two-piece expansion joint.
 - 2. Control and expansion joints shall be provided with removable tape to prevent plaster from filling the joint.
 - 3. Install control and expansion joints in accordance with drawings and specifications. Control Joints shall be tied to the lath. Fasteners that penetrate the Weather-resistant Barriers shall be prohibited. Lath shall be discontinuous at the Control or Expansion Joints. Butt joints of accessories shall be pressed into fresh sealant to embed

the joint in sealant. Intersections of accessories shall be mitered to maintain the attachment flanges in plane and shall be pressed into fresh sealant to embed the joint. Provide sealant over backer rod at stucco panel edges typ. Install or "back-seal" trims with sealant prior to plastering. No sealant shall be placed where an accessory terminates on a weep mechanism.

3.2 INSTALLATION

A. Expanded Metal Lath:

1. Install in accordance with requirements of ASTM 1063-12a.
2. Secure lath to supports at intervals not to exceed 6 inches (150 mm) on center.
 - a. Wire: Place where sides of sheets lap at supports and at side laps of sheets between supports.
 - b. Fasteners: Engage at least two strands of diamond mesh. Where common nails are used, bend across three strands minimum.
3. Laps: 1-inch minimum at sides and at ends. Ends shall occur over supports and be staggered.
4. Corners:
 - a. Diamond Mesh: Start at least one stud away from corner. Bend into corner and carry on to abutting wall at least 3 inches (76 mm). Otherwise use corner lath.
 - b. Rib or Sheet Lath: Butt into corner and use corner lath.

B. Woven Wire Metal Lath:

1. Install in accordance with requirements of ASTM 1063-12a, ASTM C926 and C1063. and manufacturers recommendations.
2. Secure lath to supports at intervals not to exceed 6 inches (150 mm) on center. Furr lath out 1/4 inch (6 mm) from substrate.
3. Laps: A minimum of one wire square at sides and at ends.

END OF SECTION

SECTION 09 2423

PORTLAND CEMENT STUCCO

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
 - 1. Furnish and install Portland Cement Plaster “stucco” as described in Contract Documents.

1.2 REFERENCES

- A. California Building Code: 2019 CBC
- B. ASTM C144-18, ‘Specification for Aggregate for Masonry Mortar’.
- C. ASTM C150/C150M-18, ‘Specification for Portland Cement’.
- D. ASTM C926 – 11a, ‘Specification for Application of Portland Cement-Based Plaster’
- E. ASTM C932 - Surface-Applied Bonding Agents for Exterior Plastering
- F. ASTM C933 – Standard Specification for Welded Wire Lath
- G. ICC Evaluation Service, Inc. AC-38 Acceptance Criteria for Weather-Resistive Barriers.

1.3 SUBMITTALS

- A. Action Submittals:
 - 1. Plaster contractor to provide qualification for quality assurance.
 - 2. Samples of the finish coat shall be of an adequate size as required to represent each color and texture to be utilized on the project and produced using the same techniques and tools required to complete the project. No sample shall be less than 12” by 12”.
 - 3. Submit a unit square foot price for a “Stucco Crack Reduction System” Mesh, Alkali resistant, minimum 4.0 oz., woven glass fiber fabrics. Only at angled framed walls. As an alternate option instead of reinforcement fiber admixture. Base coat and other admixes must be compatible with mesh and finish coats.
 - 4. Manufacturer’s written specifications, proportion mixes, and installation instructions for factory-prepared materials.

1.4 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Plastering Contractor Shall specialize in lath and plaster contracting and provide a qualification submittal that includes evidence that the stucco applicator’s company has a minimum of five years of continuous experience in similar stucco work.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver all materials to the construction site in their original, unopened packaging with labels intact.
- B. Inspection: Inspect the materials upon delivery to assure that specified products have been received. Report defects or discrepancies to the responsible party according to the construction documents; do not use reported material for application.
- C. Storage: Store all products per manufacturer’s recommendations. Generally, store materials in a cool, dry location; away from direct contact with the ground and/or concrete; out of direct sunlight; and protect from weather and other damage.

1.6 SEQUENCING AND SCHEDULING

- A. Plastering contractor shall request and attend a pre-installation meeting with general contractor and architect prior to the work. Plastering contractor shall advise architect of control/expansion joint layout concerns. There shall be no cost to the owner for moving one-piece control joints prior and up to this meeting date, additional lineal footage of control joints from plans shall warrant a change order.
- B. Staffing: Provide sufficient manpower and proper supervision to ensure continuous operation, free of cold joints, scaffolding lines, curing, variations in texture, etc.
- C. Curing: Provide sufficient moisture and allow sufficient time between coats to cure or develop enough rigidity to resist cracking.

1.7 MAINTENANCE

- A. The following materials shall be presented to the owner following the application of the work:
 - 1. One container of finish for each color and texture utilized on the project.

2. Supply a maintenance program for Owners O&M manual as required.

PART 2 - PRODUCTS

2.1 ADMIXTURES:

- A. Admixtures shall be proportioned and mixed in accordance with the directions of the admixture manufacturer.

2.2 MATERIALS

- A. Cement: Low alkali Portland cement complying with ASTM C150. Plastic cement complying with ASTM C1328.
- B. Sand:
 1. Field mixes shall comply with ASTM C-926 and must have sand that is clean and free from deleterious amounts of loam, clay, silt, soluble salts, and organic matter. Sampling and testing shall comply with ASTM C144 or C897.
 2. An "engineered performance mix" is acceptable with appropriate approvals (ICC ES, IAPMO or Interek report).
- C. Water: Clean and potable without foreign matter.
- D. Reinforcement Fibers: Chopped strands of alkali-resistant polypropylene fibers added to the concrete mix for protection against shrinkage cracks. At all angled framed walls. Not required at vertical CMU walls.
- E. Bonding Agent: ASTM C932, for bonding of cement plaster to concrete or masonry substrate
 1. Acceptable Products:
 - a. Weld-Crete by Larsen Products Corporation, Jessup, MD, <https://larsenproducts.com/>
 - b. Equal as approved by Architect before installation. Requests for substitutions will be considered only if submitted to the architect in writing and must include substantiation of product performance, 10 days prior to the original bid date.
- F. Latex Additive: Multi-purpose latex additive for dry set mortars.
 1. Acceptable Products:

- a. Planicrete by Mapei Corporation, Garland, TX,
<https://www.mapei.com/us/en-us/>
- b. Equal as approved by Architect before installation. Requests for substitutions will be considered only if submitted to the architect in writing and must include substantiation of product performance, 10 days prior to the original bid date.

2.3 SHEATHING WITH INTEGRATED WRB

- A. 1/2" OSB, Exposure 1, sheathing with integrated water-resistive barrier
 1. Acceptable Products:
 - a. LP WeatherLogic Panel, Louisiana-Pacific Corporation, 1-(888)-820-0325, <https://lpcorp.com/>
 - b. ZIP System by Huberwood, 1-(800) 933-9220
<https://www.huberwood.com/>

2.4 WATER-RESISTIVE BARRIER

- A. Secondary Moisture Protection Barrier:
 1. Type Two Acceptable Products:
 - a. Tyvek 'Stucco Wrap' by DuPont, 974 Centre Rd. Wilmington, DE 19805, (833) 338-7668, <https://www.dupont.com/>
 - b. WeatherSmart Commercial, Henry Company, 999 N. Pacific Coast Highway, Suite 800, El Segundo, CA 90245, (800) 486-1278, <https://henry.com/>

2.5 STUCCO FINISH

- A. Finish Coat Integrally Colored Acrylic-Based Elastomeric Float Finish. Install primer per finish coat manufacturer. Texture shall be as selected and approved by the architect from samples prepared and submitted by the Contractor.

2.6 MIXES

- A. Stucco Mix Design and Proportions Per ASTM C926 Section 6:
 1. All stucco shall be mixed and proportioned in accordance with Tables 1,2, and 3.
- B. Portland Cement Plaster Basecoats:

1. Prescriptive: Ratios and Mix Design shall be per ASTM C926. Contractor may select one of the following mixes:

a	Portland Cement	1 part
	Masonry Cement	1 part
	Sand	3 1/2 to 4 1/2 parts per Cement
	Fibers	Max. 3 oz per batch
b	Portland Cement	1 part
	Lime (type S)	1/4 to 1/2 parts per Cement
	Sand	3 to 4 parts per cement & Lime
	Fibers	Max. 3 oz per batch
c	Plastic Cement	1 part
	Sand	3 1/2 to 4 1/2 parts per Cement
	Fibers	Max. 3 oz per batch

2. Proprietary: An engineered performance mix or factory-prepared mix is acceptable with appropriate approvals. See Submittal requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of Existing Conditions:
- Contractor shall walk the project prior to starting work and notify the architect or owner's representative of any deficiencies that will negatively impact the plaster assembly. Do NOT proceed until remedied.
 - Prior to installation, inspect the wall for surface contamination or other defects that may adversely affect the performance of the materials, and shall be free of residual moisture. See that substrate for system is properly installed. Check lathing and furring for defects. Do not apply plaster until such defects are corrected.
 - Verify that all substrates to receive plaster conform to the Requirements of ASTM C926
- B. Adequate surface preparation of solid surfaces of concrete masonry, shall be straight and true within 1/4 in. in 10 ft and shall be free of foreign elements which could interfere with bonding. See surface preparation instructions.

- C. Verify sheathing is gapped an 1/8-inch around all edges and 1/8 inch from all other structural elements such as masonry or concrete.
- D. Seams, joints, and terminations of all WRBs are taped or sealed. All penetrations are flashed and sealed.
- E. Environmental Requirements: Follow product manufacturer's recommendations for environmental conditions and surface preparation.
- F. Temperatures: Before, during and following the application of the Portland cement plaster, protect stucco from uneven and excessive evaporation, especially during hot, dry, and/or windy weather.

3.2 PREPARATION

- A. Protection: Adequately protect finish materials against damage from operations of this Section.
- B. Install WRB(s) and/or Lath and accessories in accordance with CBC 2019, ASTM C1063 and C1861, ASTM C926 and manufacturer's instructions.
- C. CMU Surface Preparation: Measures to promote bond on CMU; sandblasting, wire brushing, acid etching, and/or chipping, prepared to comply with International Concrete Repair Institute (ICRI) CSP-7, to provide mechanical bond or use bonding agent per manufactures written directions. Prepare test patches to insure proper bond.

3.3 APPLICATION

- A. Tolerances:

- 1. Minimum thickness including finish coat:

BASE	Exterior	Exterior
Metal Lath	7/8 inch	22 mm
CMU Walls	3/4 inch	19 mm

- 2. Minimum Thickness Exterior (depending on substrate):

Scratch Coat	1/4 to 3/8 inch	6 to 9 mm
Brown Coat	1/4 to 1/2 inch	6 to 13 mm
Finish Coat	1/16 to 1/8 inch	1.5 to 3 mm

- B. Procedure

- 1. Scratch Coat:

- a. Attach grounds.
 - b. Apply scratch coat of thickness required, curling plaster in back of lath to form keys. Allow to dry twenty-four hours.
 - c. Before scratch coat sets, rake, and cross-rake furrows **1/8 inch (3 mm)** deep, **1/8 inch (3 mm)** wide, and **1/2 to 3/4 inch (12.7 to 19 mm)** apart.
2. Brown Coat:
- a. Apply plaster screed, if required.
 - b. Apply brown coat to thickness required. Allow to dry twenty-four hours.
 - c. Using screeds for guide, straighten surface with rod (straight edge).
 - d. Fill in any hollows or voids and rod surface again.
 - e. Level and compact surface with darby. Rake and cross-rake to receive finish coat. (See paragraph above under Scratch Coat).
 - f. Angles (corners) should now be sharply defined and the plaster trimmed back around grounds (corner beads, casing beads, etc) to be applied flush with face of ground.
3. Finish Coat:
- a. Apply finish coat first to angles over partially dry base coat.
 - b. Straighten angles with rod, or featheredge.
 - c. Fill surfaces between all angles with skim coat of plaster. Apply sufficient pressure on trowel to force material into rough surface of base coat to provide contact for bond.
 - d. Double back on surface immediately with sufficient material to bring finish coat to final thickness.
 - e. Float angles. If necessary, apply small additional amount of plaster during floating to fill minor voids that appear in surface.
 - f. Float and fill all depressions (drawing-up).

3.4 CLEANING

- A. Maintain premises in neat condition. Leave floors broom clean. Clean plaster from stops, beads, trim, etc.

END OF SECTION

SECTION 09 9653 ELASTOMERIC COATINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
1. All labor, materials, tools and other equipment, services and supervision required to complete all exterior painting of elastomeric coating as described in Contract Documents.
 2. The Work shall also include, but not necessarily be limited to surface preparation of substrates as required for acceptance of painting, including cleaning, small crack repair, patching, caulking, making good surfaces and areas, pre-treatment, priming and back-priming to the extent / limits defined under MPI preparation requirements.
- B. Related Requirements:
1. Section 07 9200: 'Joint Sealants'.

1.2 QUALITY ASSURANCE

- A. This Contractor shall have a minimum of five (5) years proven satisfactory experience and shall maintain a qualified crew of painters throughout the duration of the work. Only qualified journeypersons, as defined by local jurisdiction shall be engaged in painting work. Apprentices may be employed provided they work under the direct supervision of a qualified journeyman in accordance with trade regulations.

REFERENCES

- A. Reference Standards:
1. American Society of Testing and Materials:
 - a. ASTM D412-16, 'Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension'.
 - b. ASTM E96/E96M-16, 'Standard Test Methods for Water Vapor Transmission of Materials'.
 2. Architectural Painting Specification Manual by the Master Painters Institute (MPI), including Identifiers, Evaluation, Systems,

Preparation and Approved Product List. (hereafter referred to as the MPI Painting Manual)

1.3 SUBMITTALS

- A. Action Submittals:
 - 1. Product Data:
 - a. Manufacturer's data sheets including but not limited to:
 - 1) Installation procedures.
 - 2) Material Safety Data Sheets (MSDS).
 - 3) Maintenance procedures and instructions.
 - 4) Primer requirements and finish specification.
 - 5) Surface preparation instructions and recommendations.
- B. Provide Color Paint Samples over 12" x 12" Stucco System Finish
 - a. Sherwin Williams: Slate Violet (SW9155) & Autumn Orchid (SW9157)
 - b. Other MPI Product 113 Paint Manufacturer. Submit a complete set of color chips that represent the full range of manufacturer's products, colors, and sheens available.
- C. At project completion provide an itemized list complete with manufacturer, paint type and color-coding for colors, provide 1 gallon of each type and color of paint from same production run (batch mix) used in unopened cans] [full unopened cans of surplus paint], properly labeled and identified for Owner's later use in maintenance. Store where directed.
- D. If requested, submit a work schedule for various stages of work when painting occupied areas for the Consultant's review and Owner's approval.

1.4 PRODUCT DELIVERY STRAGE & HANDLEING

- A. Deliver all painting materials in sealed, original labeled containers bearing manufacturer's name, brand name, type of paint or coating and color designation, standard compliance, materials content as well as mixing and/or reducing and application requirements.
- B. Store all paint materials in original labeled containers in a secure (lockable), dry, and well ventilated single designated area meeting the minimum requirements of both paint manufacturer and authorities having

jurisdiction and at a minimum ambient temperature of 45° F (7° C). Only material used on this project to be stored on site.

- C. Take all necessary precautionary and safety measures to prevent fire hazards and spontaneous combustion and to protect the environment from hazard spills. Materials that constitute a fire hazard (paints, solvents, drop clothes, etc.) shall be stored in suitable closed and rated containers and removed from the site on a daily basis. Comply with requirements of authorities having jurisdiction, in regard to the use, handling, storage and disposal of hazardous materials.

1.5 PROJECT REQUIREMENTS

- A. Perform no exterior painting work unless environmental conditions are within MPI and paint manufacturer's requirements or until adequate weather protection is provided. Protection facilities shall be in place to maintain minimum ambient air and substrate temperatures for 24 hours before, during and after paint application.
- B. Test masonry and plaster surfaces for alkalinity as required. The pH of the surface should be between 6 and 9 unless the products are designed to be used in high pH environments. Plaster Cement (Stucco) surfaces must be fully cured and hardened at least 30-60 days prior to painting work and must be visually dry and surface must be clean and free of any loose stucco.

PART 2 - PRODUCTS

2.1 SYSTEMS

- A. Manufacturers:
 - 1. Approved Products and Manufacturers.
 - a. Sherwin Williams, 101 Prospect Ave.; Cleveland, OH 44115; (800) 524-5979, www.swspeccs.com: Product: ConFlex Sherlastic, or,
 - b. Contractor may choose another product listed in the edition of MPI Approved Product List current at time of bidding and later are approved, providing they meet VOC requirements in force where Project is located.
 - c. All such material shall be from a single manufacturer for each system used.

- B. Description:
1. System: Use MPI EXT. 9.1C - G1 Elastomeric Coating for Stucco
 2. MPI Product 113, 'Elastomeric, Pigmented, Exterior, Water Based, Flat'.
- C. Performance:
1. Design Criteria:
 - a. Resistant to wind driven rain when tested in accordance with ASTM E96/E96M.
 - b. Meet elongation and tensile strength requirements (at 25 deg F 280 PSI / 380 percent) when tested in accordance ASTM D412.
- D. Mixing & Tinting:
1. Unless otherwise specified herein or pre-approved, all paint shall be ready-mixed and pre-tinted. Re-mix all paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and color and gloss uniformity. Where thinner is used, addition shall not exceed paint manufacturer's recommendations.
 2. If required, thin paint for spraying according in strict accordance with paint manufacturer's instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to Architect.
- E. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- F. Coating Application Accessories: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

PART 3 - EXECUTION

3.1 PREPARATION

- A. The condition and preparation requirements for all surfaces shall be in accordance with MPI Painting Manual requirements.

- B. Do not paint unless substrates are acceptable and/or until all environmental conditions (heating, ventilation, lighting and completion of other subtrade work) are acceptable for applications of products.
- C. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50 degrees F.

3.2 EXTERIOR FINSH / COATING SYSTEMS

- A. Paint exterior surfaces in accordance with the manufacturer recommendations and following MPI Painting Manual requirements:
 - 1. EXT 9.1C -G1 Elastomeric coating
 - 2. MPI Product 113, 'Elastomeric, Pigmented, Exterior, Water Based, Flat'.

3.3 INSTALLATION

- A. Apply coatings using methods recommended by manufacturer with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen. Apply coatings at spreading rate required to achieve the manufacturers recommended dry film thickness. Apply as many coats as necessary for complete hide, and uniform appearance.
- B. The coated surface must be inspected and approved by the UCR Project Manager or Architect just prior to the application of each coat.

3.4 PROTECTION

- A. Protect finished coatings from damage until completion of project. Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

3.4 CLEANING

- A. Clean up debris related to work of this Section and remove from Project site.

END OF SECTION