

# **ADDENDUM NO. 4**

**March 27, 2019**

## **PREQUALIFICATION & BIDDING DOCUMENTS**

**FOR**

**MOBILITY HUB  
PROJECT NO. 950549**



The following changes, additions, or deletions shall be made to the following documents as indicated for this Project; and all other terms and conditions shall remain the same. New language is shown in **italics**, deleted language is shown using ~~strikethrough~~.

1. **BID FORM**

- a. **Delete** and replace the Bid Form with the one issued in this Addendum.

2. **LIST OF DRAWINGS**

- a. **Delete** the List of Drawings and replace with the one issued in this Addendum.

3. **DRAWINGS (ISSUED UNDER SEPARATE COVER)**

- a. **Delete** sheet G001, SHEET INDEX and replace with the one issued in this Addendum.
- b. **Delete** sheet C001, TITLESHEET and replace with the one issued in this Addendum.
- c. **Delete** sheet C100, OVERALL KEY MAP and replace with the one issued in this Addendum.
- d. **Delete** sheet C103, SITE DEMOLITION PLAN and replace with the one issued in this Addendum.
- e. **Delete** sheet C104, SITE DEMOLITION PLAN and replace with the one issued in this Addendum.
- f. **Delete** sheet C105, SITE DEMOLITION PLAN and replace with the one issued in this Addendum.
- g. **Delete** sheet C106, SITE DEMOLITION PLAN and replace with the one issued in this Addendum.
- h. **Delete** sheet C201, HORIZONTAL CONTROL PLAN AND STRIPING and replace with the one issued in this Addendum.
- i. **Delete** sheet C201 and replace with the one issued in this Addendum.
- j. **Delete** sheet C202, HORIZONTAL CONTROL PLAN AND STRIPING and replace with the one issued in this Addendum.
- k. **Delete** sheet C203, HORIZONTAL CONTROL AND STRIPING PLAN and replace with the one issued in this Addendum.
- l. **Delete** sheet C204, HORIZONTAL CONTROL AND STRIPING PLAN and replace with the one issued in this Addendum.
- m. **Delete** sheet C205, HORIZONTAL CONTROL AND STRIPING PLAN and replace with the one issued in this Addendum.
- n. **Delete** sheet C206, HORIZONTAL CONTROL AND STRIPING PLAN and replace with the one issued in this Addendum.
- o. **Delete** sheet C301, GRADING AND PAVING PLAN and replace with the one issued in this Addendum.
- p. **Delete** sheet C302, GRADING AND PAVING PLAN and replace with the one issued in this Addendum.

- q. **Delete** sheet C303, GRADING AND PAVING PLAN and replace with the one issued in this Addendum.
- r. **Delete** sheet C304, GRADING AND PAVING PLAN and replace with the one issued in this Addendum.
- s. **Delete** sheet C305, GRADING AND PAVING PLAN and replace with the one issued in this Addendum.
- t. **Delete** sheet C306, GRADING PLAN and replace with the one issued in this Addendum.
- u. **Delete** sheet C401, CIVIL UTILITY PLAN and replace with the one issued in this Addendum.
- v. **Delete** sheet C402, CIVIL UTILITY PLAN and replace with the one issued in this Addendum.
- w. **Delete** sheet C403, CIVIL UTILITY PLAN and replace with the one issued in this Addendum.
- x. **Delete** sheet C404, CIVIL UTILITY PLAN and replace with the one issued in this Addendum.
- y. **Delete** sheet C405, CIVIL UTILITY PLAN and replace with the one issued in this Addendum.
- z. **Delete** sheet C406, CIVIL UTILITY PLAN and replace with the one issued in this Addendum.
- aa. **Delete** sheet C901, CIVIL DETAILS and replace with the one issued in this Addendum.
- bb. **Delete** sheet C902, CIVIL DETAILS and replace with the one issued in this Addendum.
- cc. **Delete** sheet C903, CIVIL DETAILS and replace with the one issued in this Addendum.
- dd. **Delete** sheet C904, CIVIL DETAILS and replace with the one issued in this Addendum.
- ee. **Delete** sheet C905, CIVIL DETAILS and replace with the one issued in this Addendum.
- ff. **Delete** sheet C906, CIVIL DETAILS and replace with the one issued in this Addendum.
- gg. **Delete** sheet A211, CANOPY ELEVATIONS and replace with the one issued in this Addendum.
- hh. **Delete** sheet A512, CANOPY DETAILS and replace with the one issued in this Addendum.
- ii. **Delete** sheet L104, SOUTH RECREATION MALL HARDSCAPE PLAN and replace with the one issued in this Addendum.
- jj. **Delete** sheet E101, SITE ELECTRICAL PLAN and replace with the one issued in this Addendum.
- kk. **Delete** sheet E102, SITE ELECTRICAL PLAN and replace with the one issued in this Addendum.
- ll. **Delete** sheet E103, SITE ELECTRICAL PLAN and replace with the one issued in this Addendum.
- mm. **Delete** sheet E104, SITE ELECTRICAL PLAN and replace with the one issued in this Addendum.
- nn. **Delete** sheet E105, SITE ELECTRICAL PLAN and replace with the one issued in this Addendum.

- oo. **Delete** sheet E106, SITE ELECTRICAL PLAN and replace with the one issued in this Addendum.
- pp. **Delete** sheet E401, SINGLE LINE DIAGRAM and replace with the one issued in this Addendum.
- qq. **Delete** sheet E401B, SINGLE LINE DIAGRAM and replace with the one issued in this Addendum.
- rr. **Delete** sheet E402, TRANSFORMER AND FEEDER SCHEDULES and replace with the one issued in this Addendum.
- ss. **Delete** sheet E402B, MEDIUM VOLTAGE CABLE SCHEDULE and replace with the one issued in this Addendum.
- tt. **Delete** sheet E403, PANEL SCHEDULES and replace with the one issued in this Addendum.
- uu. **Delete** sheet E501, LIGHTING FIXTURE SCHEDULES and replace with the one issued in this Addendum.
- vv. **Delete** sheet EG106, A02 DESIGN DETAILS and replace with the one issued in this Addendum.

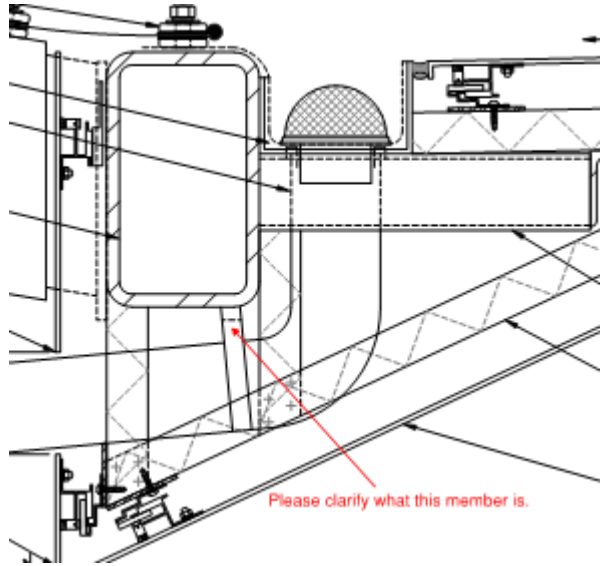
**4. SPECIFICATIONS**

- a. **Delete** Specification Section 01 2300 and replace with the one issued in this Addendum.
- b. **Delete** Specification Section 05 1213 and replace with the one issued in this Addendum.

**5. REQUESTS FOR CLARIFICATION**

RFI No.	QUESTIONS / ANSWERS
1-1	<p><b>Question:</b> Please confirm that ultimate design responsibility for the fabric structures is on the fabric structures sub-contractor and that member sizes, connection designs and their locations, and other structural call-outs as specified within the contract documents, are for reference purposes only.</p> <p><b>Answer:</b> Per S001, General section note 12, the fabric covering and the attachment to the structure is the design responsibility of the fabric sub-contractor. The University will consider alternatives where the entire fabric structure can be designed by the fabric sub-contractor. This alternative needs to consider all aspects of the project including design review, construction schedule and other issues as identified by the University.</p>
1-2	<p><b>Question:</b> Please advise the elevations to which the top of each of the 12 fabric structure piles are to be set. There is a conflict between the note on Drawing S303, Detail 1, “set top of pile the same for all piles”, the grades specified (as it relates to the canopy areas) on Drawings C301 and C302, and the elevation work points as specified on A211, Detail 2 (the ‘Shared Datum’ work point is set to 0 and ‘Slab on Grade’ work point is set to 4’7”)</p> <ul style="list-style-type: none"> <li>a. Drawing S303, Detail 1 - Please also clarify what is meant by the “+/-” call out as it relates to the 18” dimension from the top of the slab on grade to the top of the pile. Is there an allowable tolerance to this 18” dimension? If so, to what extent?</li> </ul> <p><b>Answer:</b> The note on 1/S303 regarding the top of pile; this note is meant to set the top of pile elevations for the piles in one canopy structure at one elevation for ease of construction. Because the grade elevations at one canopy can vary, the +/- 1’-6” dimension is to allow the all pile tops to be set at one elevation, and allowing the top of pile to top of grade to vary.</p>

1-3	<p><b>Question:</b> Please provide the Section 01 78 00 (Closeout Submittals) specification.</p> <p><b>Answer:</b> See Specification Section 01 7700, Contract Closeout.</p>
1-4	<p><b>Question: AESS Clarifications</b></p> <p>a. Please note there are conflicting references to AESS 3 and 4. For example, A211 and A111, along grid line 1, showcase contrasting AESS categories. A111 requires Category 4 whereas A211 requires Category 3. This conflict is found elsewhere in the contract documents. Please clarify which AESS Category prevails over this project (Note: Section 05 12 13 only provides characteristics specific to Category 3).</p> <p><b>b. Section 05 12 13 (AESS Framing)</b></p> <p>i. Clause 1.08.B – AESS Category C is mentioned. Please define what characteristics comprise this category and indicate where, via drawing call-outs, Category C is applicable.</p> <p>ii. Clause 1.05.4 ('a' and 'b') – please clarify what AESS Categories the samples required in 'a' and 'b' must be fabricated to.</p> <p><b>Answer:</b> Steel should be AESS Category 3. Spec 05 1213 and drawings A211 updated accordingly.</p>
1-5	<p><b>Question: Mock Ups</b></p> <p>a. Drawings A211 (Details 1 and 2) and A511 (Detail 4)</p> <p>i. Please provide a drawing clearly defining the requirements and design (e.g. AESS) for the mock up.</p> <p><b>Answer:</b> Per Spec 01-4339 3.2B, construct mock-ups as shown on Drawings. AESS to be same in mock-up as in finished product.      For the mock-up boundary highlighted in details 1 &amp; 2/A211 we are looking for a mock-up of the material assembly, see spec section 01 4339-3.6-2      -For AESS mock-ups see spec section 05 1213 – 1.05.B.4 &amp; 1.08.      -For larger items, such as column assemblies, we would like to approve an in-field mock-up of a completed assembly.</p>
1-6	<p><b>Question: DBE Requirements</b></p> <p>“Information Available to Bidders” states that specific project DOES NOT have a DBE requirement. However, the “Federal Transit Administration Required Clauses”, Article 19, seems to require DBE participation. Please clarify whether there is a DBE requirement for this project or not.</p> <p><b>Answer:</b> DBE participation is highly encouraged, though is not a requirement.</p>

<p><b>1-7</b></p>	<p><b>Question:</b> Scope Delineation – Canopy Sub-Contractor Scope</p> <p>a. Drawing A512, Detail 1 – Extract (please reference attached)</p> <ol style="list-style-type: none"> <li>i. We understand that what is highlighted in green is within the scope of the canopy sub-contractor. Please confirm our understanding is correct.</li> <li>ii. Please provide the definition of “PT-3”.</li> <li>iii. It appears as if the “gutter liner” is to tie in to the canopy sub-contractor’s aluminum extrusion. Please clarify the material specification of this “gutter liner” (which is assumed to be provided by Others).</li> <li>iv. Please identify the member attaching to the drain pipe, see below extracted from A512, Detail 1</li> </ol>  <p><b>Answer:</b></p> <ol style="list-style-type: none"> <li>i. Drawings do not define what is the responsibility of the canopy sub-contractor; definition of contractual responsibility should be directed to the General Contractor.</li> <li>ii. PT-3 is paint color: PPG, Bone White (UC43350). See sheet A641.</li> <li>iii. Answer coming in next Addendum.</li> <li>iv. That member is a stainless steel “U” bracket used to fasten the drain pipe to the structural member. Detail 1/A512 has been updated to include this callout.</li> </ol>
<p><b>1-8</b></p>	<p><b>Question:</b> Concealed Connections</p> <p>a. EG106, Detail 5 Please clarify if concealed bolted connections are required at all bolted locations. If so, please provide the material specification and finish details for these covers.</p> <p><b>Answer:</b> This note is out of date. Sheet EG106 has been revised to remove it.</p>
<p><b>1-9</b></p>	<p><b>Question:</b> With reference to our question #2 below, I thought providing the attached elevation drawing and following narrative would help to further clarify our question.</p> <p>In the attached, the top green line is representative of the slab on grade. In approach #1, if we follow the dimension stipulated in S303, Detail 1, we would extend each canopy column +/- 1’6” below this sloped green line. However, in approach #2, if we have to abide by the call out within the same drawing detail – “set top of pile the same for all piles” – we would have to use the horizontal red line specified in the attached drawing as the “grade” and then drop our columns down 1’6” below. The attached elevation drawing is indicative of approach #2.</p>

	<p><b>Please confirm if we are to take approach #1 or #2 above. In line with point #2 in the email below, please specify what the elevations are for each of the 12 canopy piles.</b></p> <p><i>NOTE: Please be aware that the clearance distance between the top of the columns and the top of the slab on grade is variable between and within each canopy structure, as is referenced in the construction drawings (e.g. Drawing A211). This variability will be found regardless of what approach is selected from the above.</i></p> <p><b>Answer:</b> Please see the answer to question 1-2.</p> <p>All pilings for each individual canopy are set at one elevation. Each separate canopy has its pilings set to a separate elevation. All canopies are set to the same elevation. We will provide more clarification in the next addendum.</p>
1-10	<p><b>Question:</b> VE Options</p> <p>a. Please confirm if the Owner is open to VE alternatives for the 3 canopy structures. If so, please identify if there is any particular way such should be presented in the bid.</p> <p><b>Answer:</b> Please bid as per plans and specifications.</p>
1-11	<p><b>Question:</b> Structural Outrigger</p> <p>a. With reference to S302, Detail 1, we see at the end of the structural outrigger a ¼” bent plate is specified. However, on A512, Detail 1, the bent plate appears to be an off the shelf AISC steel angle. Please confirm the specification.</p> <p>b. Please clarify if the angle/bent plate referenced in 2.a is continuous between the structural outriggers.</p> <p><b>Answer:</b> a. The angle is a bent plate.  b. The bent plate is continuous between outriggers.</p>
1-12	<p><b>Question:</b> Section 05 12 13 – Architecturally Exposed Structural Steel Framing</p> <p>a. Clause 1.05.4 – please clarify what AESS category the samples must be fabricated to.</p> <p><b>Answer:</b> AESS Category 3</p>
1-13	<p><b>Question:</b> Section 13 31 00 – Fabric Structures</p> <p>a. Please confirm that the prevailing paint spec, Section 09 96 00, exclusively applies to the Fabric Structures.</p> <p><b>Answer:</b> The high performance coatings referred to in Section 09 9600 are only being used at the canopy on the following items; formed metal panels, gutter and down spout.</p>
1-14	<p><b>Question:</b> Section 05 12 13 – Architecturally Exposed Structural Steel Framing</p> <p>Are City of Los Angeles certified fabricators acceptable in addition to AISC certified fabricators in specification section 051213 1.07A?</p> <p><b>Answer:</b> Yes</p>
1-15	<p><b>Question:</b> Section 05 5000 – Steel</p>

	<p>Are City of Los Angeles certified fabricators acceptable in addition to a fabricator accredited by IAS AC172 in specification section 055000 1.05A?</p> <p><b>Answer:</b> Yes</p>
<p><b>1-16</b></p>	<p><b>Question:</b> Section 05 1213 - Architecturally Exposed Structural Steel Framing</p> <p>Are AWS and LA Certified Welders acceptable in addition to AISC Certified erector in section 051213 1.07B?</p> <p><b>Answer:</b> Yes</p>
<p><b>1-17</b></p>	<p><b>Question:</b> Drawing A102 – Site Plan</p> <p>With reference to the “TYP” callout on the left most fabric structure, please explicitly confirm that all 3 fabric structures are <u>identical</u>; i.e. all details will be exactly the same on all 3 fabric structures.</p> <p><b>Answer:</b> The fabric structures of all three canopies are identical. The only difference between the three canopies is the height of their column clusters.</p>

**END OF ADDENDUM**



**BID FORM**

FOR: MOBILITY HUB  
PROJECT NUMBER: 950549  
CONTRACT NUMBER: 950549-LF-2019-53  
UNIVERSITY OF CALIFORNIA, RIVERSIDE  
RIVERSIDE, CALIFORNIA

**March 27, 2019** ~~February 28, 2019~~ ~~February 25, 2019~~

BID TO:

**Planning, Design & Construction** ~~Architects and Engineers~~  
UNIVERSITY OF CALIFORNIA, RIVERSIDE  
1223 University Avenue, Suite 240  
Riverside, CA 92521

(951) 827-1269

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 **330** 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.)

Bidder includes in the Lump Sum Base Bid the following allowances:

**Allowance No. 1:** Include an allowance of **\$300,000.00** for unforeseen utility relocation, repair, realignment, or remediation., as specified in Specification Section 01 2100 Allowances.

**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 - NOT USED

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:

\$   ,            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.

**BIDDER'S NAME:** \_\_\_\_\_

8.0 ALTERNATES

In order for a Bid to be responsive, Bidder must submit an additive bid, a deductive bid, or a "no change" bid, for each Alternate listed below. The failure to do so shall result in the Bid being rejected as non-responsive. The failure to quote an amount, unless the bidder marks the "no change" box, will result in the bid being rejected as non-responsive.

The Contract Time will change by the number of days, if any, specified for each accepted Alternate.

**Alternate No. 1**

**Flex Space**, as specified in Specification Section 01 2300.

Bid for Alternate No. 1

~~If "Add" or "Deduct" is intended, indicate by placing figures in the corresponding boxes. If "No Change" is intended, indicate by marking the "No Change" box~~

-Add	\$	-	,	-	-	,	-	-	,	-	-
Deduct	\$		,			,			,		

No Change: Bidder will perform this Alternate without change to Contract Sum.

~~No extension of time will be granted if this Alternate is accepted.~~

University reserves the right to accept this Alternate within **30** calendar days after the date University signs the Agreement.

**Alternate No. 2**

**North Recreation Mall**, as specified in Specification Section 01 2300.

Bid for Alternate No. 2

~~If "Add" or "Deduct" is intended, indicate by placing figures in the corresponding boxes. If "No Change" is intended, indicate by marking the "No Change" box~~

-Add	\$	-	,	-	-	,	-	-	,	-	-
Deduct	\$		,			,			,		

No Change: Bidder will perform this Alternate without change to Contract Sum.

~~No extension of time will be granted if this Alternate is accepted.~~

University reserves the right to accept this Alternate within **30** calendar days after the date University signs the Agreement.

**BIDDER'S NAME:** \_\_\_\_\_

**Alternate No. 3**

**Scoreboard**, as specified in Specification Section 01 2300.

Bid for Alternate No. 3

If "Add" or "Deduct" is intended, indicate by placing figures in the corresponding boxes. If "No Change" is intended, indicate by marking the "No Change" box

Add      \$     ,  ,  .

Deduct    \$     ,  ,  .

No Change: Bidder will perform this Alternate without change to Contract Sum.

No extension of time will be granted if this Alternate is accepted.

University reserves the right to accept this Alternate within **30** calendar days after the date University signs the Agreement.

**Alternate No. 4**

**AESS Fence Posts**, as specified in Specification Section 01 2300.

Bid for Alternate No. 4

If "Add" or "Deduct" is intended, indicate by placing figures in the corresponding boxes. If "No Change" is intended, indicate by marking the "No Change" box

Add      \$     ,  ,  .

Deduct    \$     ,  ,  .

No Change: Bidder will perform this Alternate without change to Contract Sum.

No extension of time will be granted if this Alternate is accepted.

University reserves the right to accept this Alternate within **30** calendar days after the date University signs the Agreement.

**BIDDER'S NAME:** \_\_\_\_\_

**Alternate No. 5**

**Integrated Fabrication Mock-Ups**, as specified in Specification Section 01 2300.

Bid for Alternate No. 5

If "Add" or "Deduct" is intended, indicate by placing figures in the corresponding boxes. If "No Change" is intended, indicate by marking the "No Change" box

-Add	\$	<input type="text" value="-"/>	,	<input type="text" value="-"/>	<input type="text" value="-"/>	<input type="text" value="-"/>	,	<input type="text" value="-"/>	<input type="text" value="-"/>	<input type="text" value="-"/>	.	<input type="text" value="-"/>	<input type="text" value="-"/>
Deduct	\$	<input type="text"/>	,	<input type="text"/>	<input type="text"/>	<input type="text"/>	,	<input type="text"/>	<input type="text"/>	<input type="text"/>	.	<input type="text"/>	<input type="text"/>

No Change: Bidder will perform this Alternate without change to Contract Sum.

~~No extension of time will be granted if this Alternate is accepted.~~

University reserves the right to accept this Alternate within **30** calendar days after the date University signs the Agreement.

**Alternate No. 6**

**North Campus Drive Mall**, as specified in Specification Section 01 2300.

Bid for Alternate No. 6

If "Add" or "Deduct" is intended, indicate by placing figures in the corresponding boxes. If "No Change" is intended, indicate by marking the "No Change" box

-Add	\$	<input type="text" value="-"/>	,	<input type="text" value="-"/>	<input type="text" value="-"/>	<input type="text" value="-"/>	,	<input type="text" value="-"/>	<input type="text" value="-"/>	<input type="text" value="-"/>	.	<input type="text" value="-"/>	<input type="text" value="-"/>
Deduct	\$	<input type="text"/>	,	<input type="text"/>	<input type="text"/>	<input type="text"/>	,	<input type="text"/>	<input type="text"/>	<input type="text"/>	.	<input type="text"/>	<input type="text"/>

No Change: Bidder will perform this Alternate without change to Contract Sum.

~~No extension of time will be granted if this Alternate is accepted.~~

University reserves the right to accept this Alternate within **30** calendar days after the date University signs the Agreement.

**BIDDER'S NAME:** \_\_\_\_\_

9.0 LIST OF SUBCONTRACTORS

Bidder will use Subcontractors for the Work:

No  Yes

If “yes”, provide in the spaces below (a) the name, the location of the place of business, and the California contractor license number of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement, or a subcontractor licensed by the state of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime contractor's total bid, (b) the portion of the work which will be done by each subcontractor. The prime contractor shall list only one subcontractor for each such portion as is defined by the prime contractor in its bid.

Portion of the Work Activity (e.g. electrical, mechanical, concrete)	Subcontractor			
	Name of Business	Location of Business (City)	License No.	DIR Registration No.

(Note: Add additional pages if required.)

**BIDDER’S NAME:** \_\_\_\_\_

**10.0 LIST OF CHANGES IN SUBCONTRACTORS DUE TO ALTERNATES**

The information below must be provided for all changes in first-tier Subcontractors if University selects Alternates. List changes in Subcontractors only for those portions of the Work valued in excess of one-half of 1 percent of prime contractor’s total bid.

Portion of the Work Activity (e.g. electrical, mechanical, concrete)	Subcontractor			
	Name of Business	Location of Business (City)	License No.	DIR Registration No.

(Note: Add additional pages if required.)



**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)

**2. FTA Documents signed by General and listed subcontractors.**

**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)

### LIST OF DRAWINGS

SHEET NO.	TITLE	DATE
	COVER SHEET AND TITLE PAGE	02/20/2019
<b><u>G001</u></b>	<b><u>SHEET INDEX</u></b>	02/20/2019 <b><u>03/22/2019</u></b> <b><u>Addendum 4</u></b>
G002	PROJECT INFO & ABBREVIATIONS	02/20/2019
G003	REFERENCE SYMBOLS	02/20/2019
G004	ACCESSIBILITY NOTES	02/20/2019
G005	GENERAL NOTES	02/20/2019
G006	GENERAL NOTES	02/20/2019
G007	ACCESSIBLE PATH PLAN	02/20/2019
G101	ACCESSIBLE PATH PLAN	02/20/2019
G102	ACCESSIBLE PATH PLAN	02/20/2019
G103	ACCESSIBLE PATH PLAN	02/20/2019
G104	ACCESSIBLE PATH PLAN	02/20/2019
G105	ACCESSIBLE PATH PLAN	02/20/2019
G106	ACCESSIBLE PATH PLAN	02/20/2019
G260	MOUNTING HEIGHT DETAILS	02/20/2019
G300	EMERGENCY VEHICLE ACCESS DIAGRAM	02/20/2019
<b><u>C001</u></b>	<b><u>TITLE SHEET</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C100</u></b>	<b><u>OVERALL KEY MAP</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C101</u></b>	<b><u>SITE DEMOLITION PLAN</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C102</u></b>	<b><u>SITE DEMOLITION PLAN</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C103</u></b>	<b><u>SITE DEMOLITION PLAN</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C104</u></b>	<b><u>SITE DEMOLITION PLAN</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C105</u></b>	<b><u>SITE DEMOLITION PLAN</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C106</u></b>	<b><u>SITE DEMOLITION PLAN</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C201</u></b>	<b><u>HORIZONTAL CONTROL AND STRIPING PLAN</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C202</u></b>	<b><u>HORIZONTAL CONTROL PLAN AND STRIPING</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>

<u>C203</u>	<u>HORIZONTAL CONTROL AND STRIPING PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C204</u>	<u>HORIZONTAL CONTROL AND STRIPING PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C205</u>	<u>HORIZONTAL CONTROL AND STRIPING PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C206</u>	<u>HORIZONTAL CONTROL AND STRIPING PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C301</u>	<u>GRADING AND PAVING PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C302</u>	<u>GRADING AND PAVING PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C303</u>	<u>GRADING AND PAVING PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C304</u>	<u>GRADING AND PAVING PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C305</u>	<u>GRADING AND PAVING PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C306</u>	<u>GRADING PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C401</u>	<u>CIVIL UTILITY PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C402</u>	<u>CIVIL UTILITY PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C403</u>	<u>CIVIL UTILITY PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C404</u>	<u>CIVIL UTILITY PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C405</u>	<u>CIVIL UTILITY PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C406</u>	<u>CIVIL UTILITY PLAN</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C901</u>	<u>CIVIL DETAILS</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>
<u>C902</u>	<u>CIVIL DETAILS</u>	02/20/2019 <u>03/19/19</u> <b>Addendum 4</b>

<b><u>C903</u></b>	<b><u>CIVIL DETAILS</u></b>	<del>02/20/2019</del> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C904</u></b>	<b><u>CIVIL DETAILS</u></b>	<del>02/20/2019</del> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C905</u></b>	<b><u>CIVIL DETAILS</u></b>	<del>02/20/2019</del> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>C906</u></b>	<b><u>CIVIL DETAILS</u></b>	<del>02/20/2019</del> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
R-4473 1of2	TITLE SHEET	
R-4473 2of2	UNIVERSITY & CANYON CREST	
XL780	SIGNAGE & STRIPING PLAN	02/20/2019
X559	TRAFFIC SIGNAL PLAN	02/20/2019
S001	GENERAL NOTES	02/20/2019
S002	GENERAL NOTES	02/20/2019
S100	TYPICAL CONCRETE DETAILS	02/20/2019
S101	TYPICAL CONCRETE DETAILS	02/20/2019
S102	TYPICAL CONCRETE DETAILS	02/20/2019
S120	TYPICAL STEEL DETAILS	02/20/2019
S121	TYPICAL STEEL DETAILS	02/20/2019
S200	CANOPY FOUNDATION AND ROOF FRAMING PLANS	02/20/2019
S201	KIOSK FOUNDATION AND ROOF FRAMING PLANS	02/20/2019
S202	HARDSCAPE FRAMING PLAN AND DETAILS	02/20/2019
S301	CANOPY ELEVATIONS AND SECTIONS	02/20/2019
S302	CANOPY DETAILS	02/20/2019
S303	CANOPY DETAILS	02/20/2019
S401	RETAINING WALLS	02/20/2019
A101	SITE PLAN	02/20/2019
A102	SITE PLAN	02/20/2019
A111	CANOPY PLAN	02/20/2019
A112	CANOPY PLAN	02/20/2019
A121	KIOSK PLANS	02/20/2019
A122	KIOSK PLANS	02/20/2019
<b><u>A211</u></b>	<b><u>CANOPY ELEVATIONS</u></b>	<del>02/20/2019</del> <b><u>03/22/19</u></b> <b><u>Addendum 4</u></b>
A221	KIOSK ELEVATIONS	02/20/2019
A222	KIOSK ELEVATIONS BEYOND RAIN SCREEN	02/20/2019
A321	KIOSK SECTIONS	02/20/2019
A322	KIOSK WALL SECTIONS	02/20/2019
A323	KIOSK WALL SECTIONS	02/20/2019
A421	KIOSK INTERIOR ELEVATIONS	02/20/2019
A501	KIOSK WATER PROOFING	02/20/2019
A511	CANOPY DETAILS	02/20/2019
<b><u>A512</u></b>	<b><u>CANOPY DETAILS</u></b>	<del>02/20/2019</del> <b><u>03/22/19</u></b> <b><u>Addendum 4</u></b>
A513	CANOPY DETAILS	02/20/2019
A521	KIOSK DETAILS	02/20/2019
A522	KIOSK DETAIL PLANS	02/20/2019
A523	KIOSK DETAILS	02/20/2019
A524	KIOSK ROOF DETAILS	02/20/2019

A525	KIOSK DETAILS	02/20/2019
A531	PLANTER DETAILS	02/20/2019
A541	FENCE DETAILS	02/20/2019
A542	REC. MALL ALTERNATIVE SECTIONS & ELEVATIONS	02/20/2019
A543	GATE DETAILS	02/20/2019
A544	KIOSK BOLLARD DETAILS	02/20/2019
A601	DOOR AND WINDOW SCHEDULE	02/20/2019
A602	DOOR DETAILS	02/20/2019
A603	WINDOW DETAILS	02/20/2019
A604	WINDOW DETAILS	02/20/2019
A611	PARTITION TYPES	02/20/2019
A621	KIOSK PANEL PATTERNS	02/20/2019
A622	KIOSK PANEL PATTERNS	02/20/2019
A623	KIOSK PANEL PATTERNS	02/20/2019
A624	KIOSK PANEL PATTERNS	02/20/2019
A625	MEDIAN FENCE PERFORATION PATTERN	02/20/2019
A626	RAMP GUARD PERFORATION PATTERN	02/20/2019
A627	RAMP GUARD PERFORATION PATTERN	02/20/2019
A641	ROOF FINISH SCHEDULE	02/20/2019
A872	ACOUSTIC TILE CEILING DETAILS	02/20/2019
A873	ACOUSTIC TILE CEILING DETAILS	02/20/2019
L001	OVERALL SITE PLAN	02/20/2019
L002	ABBREVIATIONS AND NOTES	02/20/2019
L003	MATERIALS SCHEDULE	02/20/2019
L101	MOBILITY HUB HARDSCAPE PLAN	02/20/2019
L102	MOBILITY HUB HARDSCAPE PLAN	02/20/2019
L103	NORTH CAMPUS MALL HARDSCAPE PLAN	02/20/2019
<b><u>L104</u></b>	<b><u>SOUTH RECREATION MALL HARDSCAPE PLAN</u></b>	<b><u>02/20/2019</u></b> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
L105	NORTH RECREATION MALL HARDSCAPE PLAN	02/20/2019
L106	NORTH RECREATION MALL HARDSCAPE PLAN	02/20/2019
L110	ENLARGED PLAN	02/20/2019
L111	ENLARGED PLAN	02/20/2019
L112	ENLARGED SOUTH PARKLET ENLARGED PLAN	02/20/2019
L113	ENLARGED NORTH PARKLET ENLARGED PLAN	02/20/2019
L114	RAMP AND STAIRS ENLARGED PLAN	02/20/2019
L120	MOBILITY HUB ENTRY SECTION AND ELEVATIONS	02/20/2019
L121	MOBILITY HUB ENTRY SECTIONS AND ELEVATIONS	02/20/2019
L122	REC. MALL ALTERNATIVE SECTIONS AND ELEVATIONS	02/20/2019
L123	MOBILITY HUB MEDIAN FENCE PLAN	02/20/2019
L124	MOBILITY HUB SECTIONS AND ELEVATIONS	02/20/2019
L125	MOBILITY HUB SECTIONS AND ELEVATIONS	02/20/2019
L126	MOBILITY HUB ENTRY SECTION AND ELEVATIONS	02/20/2019
L201	HARDSCAPE DETAILS	02/20/2019
L202	HARDSCAPE DETAILS	02/20/2019
L203	HARDSCAPE DETAILS	02/20/2019
L204	HARDSCAPE DETAILS	02/20/2019
L205	HARDSCAPE DETAILS	02/20/2019
L206	HARDSCAPE DETAILS	02/20/2019
L401	IRRIGATION PLAN	02/20/2019
L402	IRRIGATION PLAN	02/20/2019

L403	IRRIGATION PLAN	02/20/2019
L404	IRRIGATION PLAN	02/20/2019
L405	IRRIGATION PLAN	02/20/2019
L406	IRRIGATION PLAN	02/20/2019
L407	IRRIGATION PLAN	02/20/2019
L408	IRRIGATION PLAN	02/20/2019
L409	IRRIGATION PLAN	02/20/2019
L410	IRRIGATION LEGEND & NOTES	02/20/2019
L411	IRRIGATION DETAILS	02/20/2019
L412	IRRIGATION DETAILS	02/20/2019
L413	IRRIGATION DETAILS	02/20/2019
L414	IRRIGATION DETAILS	02/20/2019
L501	MOBILITY HUB PLANTING PLAN	02/20/2019
L502	MOBILITY HUB PLANTING PLAN	02/20/2019
L503	FLEX SPACE PLANTING PLAN	02/20/2019
L504	MOBILITY HUB PLANTING PLAN	02/20/2019
L505	NORTH CAMPUS MALL PLANTING PLAN	02/20/2019
L506	SOUTH RECREATION MALL PLANTING PLAN	02/20/2019
L507	NORTH RECREATION MALL PLANTING PLAN	02/20/2019
L508	NORTH RECREATION MALL PLANTING PLAN	02/20/2019
L600	PLANT SCHEDULE	02/20/2019
L601	LANDSCAPE DETAILS	02/20/2019
L602	LANDSCAPE DETAILS	02/20/2019
E001	SYMBOLS LIST	02/20/2019
<b><u>E101</u></b>	<b><u>SITE ELECTRICAL PLAN</u></b>	<del>02/20/2019</del> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>E102</u></b>	<b><u>SITE ELECTRICAL PLAN</u></b>	<del>02/20/2019</del> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>E103</u></b>	<b><u>SITE ELECTRICAL PLAN</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>E104</u></b>	<b><u>SITE ELECTRICAL PLAN</u></b>	<del>02/20/2019</del> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>E105</u></b>	<b><u>SITE ELECTRICAL PLAN</u></b>	<b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>E106</u></b>	<b><u>SITE ELECTRICAL PLAN</u></b>	<del>02/20/2019</del> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
E107	CANOPY LIGHTING INSTALLATION DETAILS	02/20/2019
E108A	SITE ELECTRICAL KIOSK PLANS	02/20/2019
E108B	SITE ELECTRICAL KIOSK ELEVATIONS AND SECTIONS	02/20/2019
E108C	SITE ELECTRICAL KIOSK SECTION DETAILS	02/20/2019
<b><u>E401</u></b>	<b><u>SINGLE LINE DIAGRAM</u></b>	<del>02/20/2019</del> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
E401A	SINGLE LINE DIAGRAM	02/20/2019
<b><u>E401B</u></b>	<b><u>SINGLE LINE DIAGRAM</u></b>	<del>02/20/2019</del> <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>



<b><u>E402</u></b>	<b><u>TRANSFORMER AND FEEDER SCHEDULES</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
E402A	PAD-MOUNTED TRANSFORMER	02/20/2019
<b><u>E402B</u></b>	<b><u>MEDIUM VOLTAGE CABLE SCHEDULE</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
<b><u>E403</u></b>	<b><u>PANEL SCHEDULES</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
E404	DISTRIBUTED LIGHTING CONTROL SPECIFICATIONS	02/20/2019
E405	DMX LIGHTING CONTROL DIAGRAM	02/20/2019
E406	LIGHTING CONTROL PANEL	02/20/2019
<b><u>E501</u></b>	<b><u>LIGHTING FIXTURE SCHEDULES</u></b>	02/20/2019 <b><u>03/19/19</u></b> <b><u>Addendum 4</u></b>
E502	TITLE 24 EXTERIOR	02/20/2019
E503	TITLE 24 EXTERIOR	02/20/2019
E504	TITLE 24 EXTERIOR	02/20/2019
E701	MISCELLANEOUS DETAILS (EXTERIOR)	02/20/2019
M001	LEGEND, SCHEDULES & NOTES	02/20/2019
M002	TITLE 24 COMPLIANCE FORMS	02/20/2019
M003	TITLE 24 COMPLIANCE FORMS	02/20/2019
M004	TITLE 24 COMPLIANCE FORMS	02/20/2019
M201	MECHANICAL FLOOR PLAN	02/20/2019
M501	DETAILS	02/20/2019
P001	LEGEND, SCHEDULES & NOTES	02/20/2019
P101	PLUMBING FLOOR PLAN	02/20/2019
EG100	SIGN LOCATIONS	02/20/2019
EG101	SIGN LOCATIONS	02/20/2019
EG102	SIGN LOCATIONS	02/20/2019
EG103	DESIGN STANDARDS REFERENCE	02/20/2019
EG104	CODE COMPLIANCE REFERENCE	02/20/2019
EG105	A01 DESIGN DETAILS	02/20/2019
<b><u>EG106</u></b>	<b><u>A02 DESIGN DETAILS</u></b>	02/20/2019 <b><u>03/22/19</u></b> <b><u>Addendum 4</u></b>
EG107	A03, A04, A05, C03, DESIGN DETAILS	02/20/2019
EG108	B01, B02, D01 DESIGN DETAILS	02/20/2019
EG109	C01, DESIGN DETAILS	02/20/2019
EG110	C02, DESIGN DETAILS	02/20/2019

END OF LIST OF DRAWINGS



**SECTION 01 2300  
ALTERNATES**

**PART 1 – GENERAL**

**1.1. SUMMARY**

- A. This Section includes:
  - 1. Procedures
  - 2. Alternate Descriptions
- B. This Section identifies each Alternate and describes basic changes to the Work only when that Alternate is made a part of the Work by specific provision in the Agreement.
- C. Definition: Refer to the Instructions to Bidders, 1.2 for the term “Alternate.”

**1.2. PROCEDURES**

- A. The Lump Sum Base Bid and Alternates shall include the costs of all supporting elements required, so that the combination of the Lump Sum Base Bid and any Alternates shall be complete. The scope of Work for all Alternates shall be in accordance with applicable Drawings and Specifications.
- B. Except as otherwise specifically provided by University, the Work described in Alternates shall be completed with no increase in Contract Time.
- C. This Section includes only the non-technical descriptions of the Alternates. Refer to the specific Sections of Divisions 2-33 of the Specifications for technical descriptions of the Alternates.
- D. Coordinate related Work and modify surrounding Work as required to properly and completely integrate the Alternates into the Work.

**1.3. ALTERNATE DESCRIPTIONS**

- A. Alternate No. 1: **Deduct**, Flex Space

Identify all costs associated with the Flex Space. Location and boundary as identified on sheet L102.

~~No extension of the Contract Time will be granted if this Alternate is accepted.~~

University reserves the right to accept this Alternate within **30** 40 calendar days after the commencement date per the Notice to Proceed.

- B. Alternate No. 2: **Deduct**, North Recreation Mall

Identify all costs associated with the North Recreation Mall. Boundary as identified on sheet L105 and L106.

~~No extension of the Contract Time will be granted if this Alternate is accepted.~~

University reserves the right to accept this Alternate within **30** 40 calendar days after the commencement date per the Notice to Proceed.

C. Alternate No. 3:, Scoreboard

In lieu of removing, salvaging, and providing to the Owner, the existing scoreboard shall be reinstalled in a location approximately 30 ft. from its existing location. Include new foundation, relocation of utilities serving the scoreboard, and repair of any affected adjacent surfaces. Scoreboard is identified on sheet C104.

No extension of the Contract Time will be granted if this Alternate is accepted.

University reserves the right to accept this Alternate within 30 40 calendar days after the commencement date per the Notice to Proceed.

D. Alternate No. 4:, AESS Fence Posts

In lieu of the stich welds called out on bent plat fence posts, provide a continuous weld ground flush and consistent with AESS level 3 standards.

No extension of the Contract Time will be granted if this Alternate is accepted.

University reserves the right to accept this Alternate within 30 40 calendar days after the commencement date per the Notice to Proceed.

E. Alternate No. 5: Deduct, Integrated Fabrication Mock-ups

a. Identify all costs associated with the performance of the fabrication mock-up of the Kiosk Corner Condition as identified in Section 01 4339.

b. Identify all costs associated with the performance of the fabrication mock-up of the Canopy Soffit Corner Condition as identified in Section 01 4339.

~~No extension of the Contract Time will be granted if this Alternate is accepted.~~

University reserves the right to accept this Alternate within 30 10 calendar days after the commencement date per the Notice to Proceed.

F. Alternate No. 6: Deduct, North Campus Drive Mall

Identify all costs associated with the North Campus Drive Mall. Location and boundary as identified on sheet L103.

~~No extension of the Contract Time will be granted if this Alternate is accepted.~~

University reserves the right to accept this Alternate within 30 10 calendar days after the commencement date per the Notice to Proceed.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

## SECTION 05 1213

### ARCHITECTURALLY-EXPOSED STRUCTURAL STEEL FRAMING

#### PART 1 - GENERAL

##### 1.01 SECTION INCLUDES

- A. Additional requirements for structural steel members designated as architecturally-exposed structural steel (AESS).
  - 1. Requirements in Section 05 1200 - Structural Steel Framing also apply to AESS.

##### 1.02 DEFINITIONS

- A. Architecturally-Exposed Structural Steel: Structural steel complying with designated AESS category as defined in AISC 303.
  - 1. AESS: Structural steel designated as "Architecturally Exposed Structural Steel" or "AESS" in the Contract Documents.
- B. Category AESS 1: Structural steel that is categorized by ANSI/AISC 303, Section 10, as AESS 1 and may be designated AESS 1 or Category AESS 1 in the Contract Documents.
- C. Category AESS 2: Structural steel that is categorized by ANSI/AISC 303, Section 10, as AESS 2 and is designated as AESS 2 or Category AESS 2 in the Contract Documents.
- D. Category AESS 3: Structural steel that is categorized by ANSI/AISC 303, Section 10, as AESS 3 and is designated as AESS 3 or Category AESS 3 in the Contract Documents.
- E. Category AESS 4: Structural steel that is categorized by ANSI/AISC 303, Section 10, as AESS 4 and is designated as AESS 4 or Category AESS 4 in the Contract Documents.
- F. Category AESS C: Structural steel with custom characteristics that is categorized by ANSI/AISC 303, Section 10, as AESS C and is designated as AESS C or Category AESS C in the Contract Documents.
- G. SEAC/RMCSA Guide Specification: SEAC/RMCSA's "Sample Specification, Section 05 02 13: Architecturally Exposed Structural Steel."

##### 1.03 REFERENCE STANDARDS

- A. AISC 303 - Code of Standard Practice for Steel Buildings and Bridges; 2016.
- B. AISC 360 - Specification for Structural Steel Buildings; 2010.
- C. ASTM A6/A6M - Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling; 2017.
- D. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2013.
- E. ASTM A1085/A1085M - Standard Specification for Cold-Formed Welded Carbon Steel Hollow Structural Sections (HSS); 2015.
- F. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.
- G. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015 (Errata 2016).
- H. SSPC-SP 1 - Solvent Cleaning; 2015.
- I. SSPC-SP 6 - Commercial Blast Cleaning; 2007.

#### 1.04 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Schedule and conduct a preinstallation meeting at project site one week prior to start of work of this section; require attendance by all affected installers. Coordinate requirements for shipping, special handling, storage, attachment of safety cables and temporary erection bracing, final coating, touch-up painting, mock-up coordination, Architect's observations, and other requirements for AESS.
- B. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

#### 1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Action Submittals:
  - 1. Product Data:
    - a. Submit paint systems in accordance with Section 09 9600.
    - b. Tension-control, high-strength, bolt-nut-washer assemblies.
    - c. Corrosion-resisting (weathering steel), tension-control, high-strength, bolt-nut-washer assemblies.
    - d. Filler.
    - e. Primer.
  - 2. Shop Drawings: Detailing for fabrication of AESS components.
    - a. Provide erection documents clearly indicating which members are AESS members and the AESS category of each part.
    - b. Include details that clearly identify AESS requirements found in this specification. Provide connections for AESS consistent with concepts shown on drawings.
    - c. Indicate welds by AWS A2.4 symbols, distinguishing between shop and field welds, and show size, length and type of each weld. Identify grinding, finish and profile of welds as defined by the designated AESS category.
    - d. Indicate orientation of hollow structural section (HSS) seams and mill marks (where applicable).
    - e. Indicate type, size, finish and length of bolts, distinguishing between shop and field bolts. Identify high-strength bolted slip-critical, direct-tensioned shear/bearing connections. Indicate orientation of bolt heads.
    - f. Indicate which surfaces or edges are exposed and what class of surface preparation is being used.
    - g. Indicate special tolerances and erection requirements as noted on drawings or defined by the designated AESS category.
    - h. Indicate vent or drainage holes for HSS members.
  - 3. AESS 3 Samples: Provide samples of specific AESS characteristics. Samples may be small size samples or components of conventional structural steel demonstrating specific AESS characteristics, including surface preparation, sharp edges ground smooth, continuous weld appearance, weld show through, and fabrication mark removal.
  - 4. Samples: Submit Samples of AESS to set quality standards for exposed welds.
    - a. Two steel plates, 3/8 inch (9.53 mm) by 8 inches (203.20 mm) by 4 inches (101.6 mm), with long edges joined by a groove weld and with weld ground smooth.
    - b. Steel plate, 3/8 inch (9.53 mm) by 8 inches (203.20 mm) by 8 inches (203.20 mm), with one end of a short length of rectangular steel tube, 4 inches (101.6 mm) by 6 inches (150 mm) by 3/8 inch (9.53 mm), welded to plate with a continuous fillet weld and with weld ground smooth and blended.
- C. Informational Submittals:

1. Qualification data for fabricator and erector to demonstrate their capabilities and experience. Include lists of completed projects names and address, names and addresses of architects and owners, photographs showing detail of installed AESS, and other information specified.


#### **1.06 SUSTAINABILITY SUBMITTALS**

- A. CAL-Green documentation and verification data as specified in Section 01 8114 - Sustainable Design Requirements – CAL-Green, for the following measures:
  1. 4.504.2.2 and 5.504.4.3 Paints and coatings.
  2. 4.504.2.3 and 5.504.4.3.1 Aerosol paints and coatings.

#### **1.07 QUALITY ASSURANCE**

- A. Fabricator Qualifications: In addition to those qualifications listed in Section 05 1200, engage an AISC Certified Fabricator, experienced in fabricating AESS similar to that indicated for this project with a record of successful in-service performance, as well as sufficient production capacity to fabricate AESS without delaying the work.
- B. Erector Qualifications: In addition to those qualifications listed in Section 05 1200, engage an AISC Certified Erector, experienced in erecting AESS work similar in material, design, and extent to that indicated for this project and with a record of successful in-service performance.
- C. Comply with applicable provisions of AISC 303, Section 10 for the designated AESS category.

#### **1.08 MOCK-UP**

- A. Mockups: At least four weeks prior to fabricating AESS, construct mockups to demonstrate aesthetic effects as well as qualities of materials and execution.
-  B. Provide mock-ups for AESS 3, AESS 4, and AESS C of nature and extent indicated in contract documents.
- C. Locate mock-ups in fabricator's shop. Mock-ups to be full-size unless Architect approves smaller models. Alternatively, when a mock-up is not practical, the first piece of an element or connection can be used to determine acceptability.
- D. Notify Architect one week in advance of dates and times when mock-ups will be available for review.
- E. Demonstrate applicable AESS characteristics for specified category of AESS on elements and joints in mock-up.
- F. Build mock-ups using member sizes and materials indicated for final work.
- G. Mock-up to demonstrate weld quality, contouring of welds at aligned walls of members, specified surface preparation, and finish coating.
- H. HSS members to extend at least 6 inches (152.4 mm) from joint in mock-up.
- I. Obtain Architect's written approval of mock-ups before starting fabrication.
- J. Retain and maintain mock-ups during construction in an undisturbed condition as a standard for judging completed work.
- K. Approved mock-ups in an undisturbed condition at Date of Substantial Completion may become part of completed work.

#### **1.09 DELIVERY, STORAGE, AND HANDLING**

- A. Handle finished pieces in accordance with Section 10 of AISC 303, using nylon-type slings, or chains with softeners, or wire ropes with softeners such that they are not damaged.

- B. Store materials to permit easy access for inspection and identification. Keep steel members off ground by using pallets, platforms, or other supports. Protect steel members and packaged materials from erosion and deterioration. Use special care in handling to prevent twisting or warping of AESS members.

#### **1.10 FIELD CONDITIONS**

- A. Field Measurements: Where AESS is indicated to fit against other construction, verify actual dimensions by field measurements before fabrication.

### **PART 2 - PRODUCTS**

#### **2.01 PERFORMANCE REQUIREMENTS**

- A. Comply with requirements of ANSI/AISC 303, Sections 1 through 9 and as modified in Section 10, "Architecturally Exposed Structural Steel."

#### **2.02 STEEL**

- A. Steel Members: As indicated in Section 05 1200 - Structural Steel Framing.

#### **2.03 BOLTS, CONNECTORS, AND ANCHORS**

- A. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F 1852, Type 1, round-head assemblies, consisting of steel structural bolts with splined ends, heavy-hex carbon-steel nuts, and hardened carbon-steel washers.
  - 1. Finish: Plain.

#### **2.04 FILLER**

- A. Filler: Polyester filler intended for use in repairing dents in automobile bodies.

#### **2.05 PRIMER**

- A. Paint Maximum Product Emissions Limits: Top coat and primer interior paints must meet current requirements for VOC (Volatile Organic Compounds) limits of South Coast Air Quality Management District (SCAQMD) Rule No. 1113 and CAL-Green Table 5.504.4.3 for VOC Content Limits for Architectural Coatings.
  - 1. CAL-Green Requirements for typical paint coatings:
    - a. Primers, Sealers, and Undercoaters: 100 grams per liter of product minus water.
- B. Zinc-Rich Primer
  - 1. Inorganic, zinc-rich, capable of providing sound foundation for field applied top coats despite prolonged exposure, cathodic protection and corrosion resistance. Similar to galvanizing.
  - 2. Maximum Allowable Dry Time: 1 hour to touch; 12 hours to top coat.
  - 3. Pigment Content: Minimum 63% zinc in dry film by weight.
  - 4. Compatible with finish paint system specified in 099000.
  - 5. Product:
    - a. Carboline Company, Carbo-Zinc 859 VOC.
    - b. Tnemec Company, Inc.;90-97 Tneme-Zinc, 2.5 to 3.5 mils total dry film thickness.
    - c. ZRC Products Company, ZRC Zero VOC Galvanizing Compound.

#### **2.06 FABRICATION**

- A. Fabricate and assemble AESS in shop to greatest extent possible. Locate field joints in AESS assemblies at concealed locations or as approved by Architect. Detail AESS assemblies to minimize field handling and expedite erection.
  - 1. Use special care handling and fabricating AESS before and after shop painting to minimize damage to shop finish.

- B. Permissible tolerances for member depth, width, out of square, and camber and sweep to be as specified in ASTM A6/A6M, ASTM A500/A500M, and ASTM A1085/A1085M.
- C. Use special care in handling and shipping of AESS both before and after shop painting to minimize damage to any shop finish. Use nylon-type slings or softeners when using chains or wire rope slings.
- D. Fabricate AESS in accordance with categories defined in AISC 303, as follows:
  - 1. Category AESS 3:
    - a. Comply with overall profile dimensions of AWS D1.1/D1.1M for welded built-up members. Keep appearance and quality of welds consistent. Maintain true alignment of members without warp exceeding specified tolerances.
    - b. Prepare surfaces according to Part 2 "Shop Priming" Article and SSPC-SP 6 (WAB)/NACE WAB-3.
    - c. Grind sheared, punched, and flame-cut edges to remove burrs and provide smooth surfaces and eased edges.
    - d. Make intermittent welds appear continuous, using filler or additional welding.
    - e. Seal weld open ends of hollow structural sections with 3/8 inch (9.53 mm) closure plates.
    - f. Limit butt and plug weld projections to 1/16 inch (1.58 mm).
    - g. Install bolt heads on the same side of each connection and maintain orientation consistently from one connection to another.
    - h. Remove weld spatter, slivers, and similar surface discontinuities.
    - i. Remove blemishes and surface irregularities resulting from temporary braces or fixtures by filling or grinding, before cleaning, treating, and shop priming.
    - j. Grind tack welds smooth unless incorporated into final welds.
    - k. Remove backing and runoff tabs, and grind welds smooth.
    - l. Limit as-fabricated straightness tolerance to one-half that permitted for structural-steel materials in ANSI/AISC 303.
    - m. Limit as-fabricated curved structural steel tolerance to that permitted for structural-steel materials in ANSI/AISC 303.
    - n. Limit as-fabricated straightness tolerance of welded built-up members to one-half that permitted by AWS D1.1/D1.1M.
    - o. Conceal fabrication and erection markings from view in the completed structure.
    - p. Make welds uniform and smooth.
    - q. Cut out mill marks from mill material or hide these markings from view in the completed structure. Where neither method is possible, remove mill marks by grinding and filling surfaces as approved by Architect.
    - r. Grind butt and plug welds smooth or fill, removing weld splatter exposed to view.
    - s. Orient HSS seams as indicated or away from view.
    - t. Align and match abutting member cross sections.
    - u. At visible open joints of copes, miters, and cuts, maintain uniform clear gaps of 1/8 inch (3.2 mm). At closed joints, maintain uniform contact within 1/16 inch (1.6 mm).
    - v. Fabricate with exposed surfaces smooth, square, and of surface quality approved by Architect.
    - w. Base Bid: Stitch welds as indicated on Drawings.
    - x. Alternate Bid: Continuous welds.

## **2.07 SHOP CONNECTIONS**

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using High-Strength Bolts" for type of bolt and type of joint specified.
  - 1. Joint Type: Snug tightened.
- B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work. Assemble

and weld built-up sections by methods that will maintain alignment of members without warp exceeding the tolerance of this section.

## **2.08 PAINT SYSTEM**


- A. Compatibility: All components/procedures of AESS paint system to comply with coating system specified, submitted, and approved per Section 09 9600. As a minimum, identify required surface preparation, primer, intermediate coat (if applicable), and finish coat. Primer, intermediate coating, and finish coating to be from a single manufacturer combined in a system documented by manufacturer with adequate guidance for fabricator to procure and execute.
- B. Finish Coating: Field apply intermediate and top coats per Section 09 9113, 09 9123, and 09 9600.

## **2.09 SHOP PRIMING**

- A. Shop prime steel surfaces, except the following:
  - 1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of 2 inches (50.8 mm).
  - 2. Surfaces to be field welded.
  - 3. Surfaces to be high-strength bolted with slip-critical connections.
  - 4. Corrosion-resisting (weathering) steel surfaces.
  - 5. Galvanized surfaces unless indicated to be painted.
- B. Surface Preparation:
  - 1. Provide surface preparations to meet SSPC-SP 6.
  - 2. Coordinate required surface profile with approved paint submittal prior to beginning surface preparation.
  - 3. Prior to blasting, remove any grease and oil using solvent cleaning to meet SSPC-SP 1.
  - 4. Remove weld spatter, slivers and similar surface discontinuities.
  - 5. Ease sharp corners resulting from shearing, flame cutting or grinding.
- C. Priming: Immediately after surface preparation, apply primer according to manufacturer's instructions to provide a dry film thickness of not less than 1.5 mils (0.038 mm). Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.
  - 1. Stripe paint corners, crevices, bolts, welds, and sharp edges.
  - 2. Apply two coats of shop primer to surfaces that are inaccessible after assembly or erection.

## **2.10 SOURCE QUALITY CONTROL**

- A. Structural Requirements:
  - 1. Comply with quality control requirements per AISC 360, Chapter N and AISC 303, Section 10. Refer to Section 05 1200 for additional requirements.

-  B. ~~AESS 3, 4, and C Acceptance:~~ Architect to observe AESS in the shop at a viewing distance consistent with final installation and determine acceptability based on approved mock-up. Quality assurance agency has no responsibility for enforcing requirements related to aesthetic effect.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Verify, with steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
  - 1. Prepare a certified survey of bearing surfaces, anchor rods, bearing plates, and other embedments, showing dimensions, locations, angles, and elevations.



- B. Erector to check AESS members upon delivery for twist, kinks, gouges or other imperfections which may result in rejection of appearance of member. Coordinate remedial action with fabricator prior to erecting steel.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Provide connections for temporary shoring, bracing and supports only where noted on approved fabrication documents. Temporary connections not shown are to be made at locations not exposed to view in final structure or as approved by Architect.
- B. Handle, lift and align pieces using nylon straps or chains with softeners required to maintain appearance of AESS through process of erection.

### 3.03 ERECTION

- A. Take special care during erection to avoid marking or distorting the AESS and to minimize damage to shop painting. Set AESS accurately in locations and to elevations indicated and according to ANSI/AISC 303 and ANSI/AISC 360.
  1. Remove welded tabs that were used for attaching temporary bracing and safety cabling and that are exposed to view in the completed Work. Take care to avoid any blemishes, holes, or unsightly surfaces resulting from the use or removal of temporary elements.
  2. Grind tack welds smooth.
  3. Remove backing and runoff tabs, and grind welds smooth.
  4. Orient bolt heads on the same side of each connection and maintain orientation consistently from one connection to another.
  5. Remove erection bolts in Category AESS 4 AESS, fill holes with weld metal or filler, and grind or sand smooth to achieve surface quality approved by Architect.
  6. Fill weld access holes in Category AESS 4 AESS with weld metal or filler and grind, or sand smooth to achieve surface quality as approved by Architect.
  7. Conceal fabrication and erection markings from view in the completed structure.



~~B. AESS Category AESS 1 and Category AESS 2: Basic elements; feature elements not in close view:~~

- ~~1. Employ special care to handle and erect AESS. Erect finished pieces using nylon straps or chains with softeners such that they are not damaged.~~
- ~~2. Place weld tabs for temporary bracing and safety cabling at points concealed from view in completed structure or where approved by Architect during pre-installation meeting. Obtain Architect approval of methods for removing temporary devices and finishing AESS members prior to erection.~~
- ~~3. AESS Erection Tolerances: Erect to standard frame tolerances for structural steel per Chapter 7 of AISC 303.~~
- ~~4. Set AESS accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.~~
- ~~5. Remove blemishes or unsightly surfaces resulting from temporary braces or fixtures.~~
- ~~6. Remove all backing and run out tabs.~~
- ~~7. When temporary braces or fixtures are required to facilitate erection, take care to avoid any blemishes, holes or unsightly surfaces resulting from use or removal of such temporary elements.~~
- ~~8. Bolted Connections: Align bolt heads on same side of connection as indicated on approved fabrication documents.~~
- ~~9. Welded Connections: Comply with AWS D1.1/D1.1M and Section 05 1200. Appearance and quality of welds to be consistent. Employ methods that will maintain alignment of members without warp exceeding tolerance of this section.~~
- ~~10. Remove weld spatter exposed to view.~~
- ~~11. Grind off projections larger than 1/16 inch (1.5875 mm) at field butt and plug welds.~~

12. ~~Continuous Welds: Where continuous welding is noted on drawings, provide continuous welds of a uniform size and profile.~~
13. ~~Do not enlarge holes in members by burning or by using drift pins. Use of drift pins or burning is not permitted. Ream holes that must be enlarged to admit bolts. Replace connection plates that are misaligned where holes cannot be aligned with acceptable final appearance.~~
14. ~~Splice members only where indicated.~~
15. ~~No torch cutting or field fabrication is permitted.~~

C. AESS 3: Feature elements in close view:

1. Erect AESS to the standard frame tolerances specified in ANSI/AISC 303 for non-AESS.
2. Comply with AWS D1.1/D1.1M. Keep appearance and quality of welds consistent. Maintain true alignment of members without warp exceeding specified tolerances.
3. Remove weld spatter, slivers, and similar surface discontinuities.
4. Grind off butt and plug weld projections larger than 1/16 inch (1.5875 mm).
5. Continuous welds shall be of uniform size and profile.
6. Ream holes that must be enlarged. Use of drift pins or burning is not permitted. Replace misaligned connection plates where holes cannot be aligned with acceptable appearance.
7. Splice members only where indicated on Drawings.
8. No torch cutting or field fabrication is permitted.
9. Weld profiles, quality, and finish shall be as approved by Architect.
10. Make joint welds, including tack welds, appear continuous by filling intermittent welds.
11. Field Welding: Weld profile, quality, and finish to be consistent with mock-ups approved prior to fabrication.
12. Provide a continuous appearance to all welded joints including tack welds. Provide joint filler at intermittent welds.



~~D. AESS 4: Showcase elements:~~


1. ~~Erect AESS to the standard frame tolerances specified in ANSI/AISC 303 for non-AESS.~~
2. ~~Comply with AWS D1.1/D1.1M. Keep appearance and quality of welds consistent. Maintain true alignment of members without warp exceeding specified tolerances.~~
3. ~~Remove weld spatter, slivers, and similar surface discontinuities.~~
4. ~~Grind off butt and plug weld projections larger than 1/16 inch (1.5875 mm).~~
5. ~~Continuous welds shall be of uniform size and profile.~~
6. ~~Ream holes that must be enlarged. Use of drift pins or burning is not permitted. Replace misaligned connection plates where holes cannot be aligned with acceptable appearance.~~
7. ~~Splice members only where indicated on Drawings.~~
8. ~~No torch cutting or field fabrication is permitted.~~
9. ~~Weld profiles, quality, and finish shall be as approved by Architect.~~
10. ~~Make joint welds, including tack welds, appear continuous by filling intermittent welds.~~
11. ~~Grind welds smooth.~~
12. ~~Minimize Weld Show Through: At locations where welding on far side of an exposed connection creates distortion, grind distortion and marking of steel to a smooth profile with adjacent material.~~
13. ~~Filling of Weld Access Holes: Where holes must be cut in web at intersection with flanges on W shapes and structural tees to permit field welding of flanges, fill holes with joint filler.~~
14. ~~Where welds are indicated to be ground, contoured, or blended, oversize welds as required and grind to provide a smooth transition and match profile on approved mock-up.~~


### 3.04 FIELD CONNECTIONS

- A. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using High-Strength Bolts" for type of bolt and type of joint specified.
  1. Joint Type: Snug tightened.
- B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

### 3.05 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Testing Agency: Owner will engage a qualified testing agency to inspect AESS as specified in Section 051200 "Structural Steel Framing." The testing agency is not responsible for enforcing requirements relating to aesthetic effect.
- C. Architect will observe AESS in place to determine acceptability relating to aesthetic effect.
- D. Structural Requirements:
  - 1. Comply with quality control requirements per AISC 360, Chapter N and AISC 303, Section 10. Refer to Section 05 1200 for additional requirements.
  - 2. Quality assurance agency to review work for compliance with requirements of AISC 360, Chapter N and AISC 303, Section 10.

 E. ~~AESS 1 and 2 Acceptance: Architect to observe AESS in place and determine acceptability based on qualification data and submittals. Quality assurance agency has no responsibility for enforcing requirements related to aesthetic effect.~~

 F. ~~AESS 3,4, and C Acceptance: Architect to observe AESS in place and determine acceptability based on qualification data and submittals as well as on approved mock- up. Quality assurance agency has no responsibility for enforcing requirements related to aesthetic effect.~~

### 3.06 CLEANING

- A. Touch-up Painting: Complete cleaning and touch-up painting of field welds, bolted connections, and abraded areas of shop paint to blend with adjacent surfaces of AESS. Perform touch-up work in accordance with manufacturer's instructions and as specified in Section 09 9113, 09 9123, and 09 9600.
- B. Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting, to comply with SSPC-PA 1 for touching up shop-painted surfaces.
  - 1. Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.

**END OF SECTION**