ADDITIONUM NUMBER 2

DATE: February 16, 2017

PROJECT: MSU Barnard Hall Room 105 Cleanroom Installation
PPA# 16-0002
(Consulting Design Solutions, Inc. Project # 1613)

BID DATE: February 23, 2017
2:00 PM, MST
Facilities Planning, Design and Construction
Plew Building, 6th & Grant
Bozeman, Montana

Bidders for the above project are hereby informed that the drawings and/or specifications are modified, corrected or supplemented as follows:

**DRAWINGS:**

I. **DRAWING SHEET CVR – SITE PLAN**
   A. Refer to the staging area: Locate staging area on the north side of the cooling tower in lieu of the east side.

II. **DRAWING SHEET A1 – Demolition Plan**
   A. Modify note near center of drawing to read: “REMOVE EXISTING FLOORING, INTEGRAL COVE & EDGING- PATCH & REPAIR WALLS AS NEEDED”

III. **DRAWING SHEET A1 – Floor Plan (Lab)**
    A. Modify note near Hallway Door to read: “CONCRETE FLOOR w/ NEW CLEAR SEALER and RESILIENT BASE AT ALL WALLS- TYP”

IV. **DRAWING SHEET MD1.1 DEMOLITION FIRST FLOOR PLAN – PIPING AND FIRE SPRINKLER**
    A. Refer to note on chilled water removal: Revise note to read: "Remove/relocate filter and valves".

V. **DRAWING SHEET M2.1 – HVAC PLANS**
   A. Refer to Fume Hood duct connection: Hood will be provided with a 10” diameter duct connection. Provide a 10” to 14” diameter transition at the outlet of the hood. Disregard 36”x4-1/2” transition note. This transition is provided with the hood.

   B. Refer to AHU1-1 sensor: Sensor is shown in the cleanroom. Install sensor on the outside of the cleanroom in the return air stream.

VI. **DRAWING SHEET M2.2 – HVAC PLANS – ALTERNATE BID**
A. Refer to Fume Hood duct connection: Hood will be provided with a 10” diameter duct connection. Provide a 10” to 14” diameter transition at the outlet of the hood. Disregard 36”x4-1/2” transition note. This transition is provided with the hood.

B. Refer to AHU1-1 sensor: Sensor is shown in the cleanroom. Install sensor on the outside of the cleanroom in the return air stream.

VII. DRAWING SHEET M3.1 – DETAILS AND SCHEDULES
A. Refer to plumbing fixture schedule: Mixing Valve MV-1: Provide mixing valve rated for 31 gpm at 30 psi pressure drop. Provide with inlet check stops.

VIII. DRAWING SHEET ED1.1 – OVERALL MAIN LEVEL PLAN – ELECTRICAL DEMOLITION
a. Revise the existing note regarding removing a section of cable tray to read, “CUT BACK CABLE TRAY TO SURFACE OF NEW WALL.” Instead of “REMOVE THE SECTION FROM THE END OF THE CALBE TRAY SYSTEM TO ALLOW SPACE FOR THE RELOCATED WALL.”

IX. DRAWING SHEET E2.1 – ENLARGED CLEANROOM PLAN – LIGHTING
a. Type A1 light fixtures are to be provided by the electrical contractor and shall be an LED striplight with wireguard. Provide one of the following approved make/models:
   i. HE Williams ‘76-4-L53/840-DIM-UNV-WG-7614’
   ii. Lithonia ‘ZL1N L48 5000LM L/LENS MVOLT 40K 80CRI WH WGZ48’
   iii. Columbia ‘LCS4-40ML-EDU-PAF-CSWG4’

b. Clarification: Light Fixtures outside the cleanroom may be fed with EMT conduit which 6’-0” MC cable whips. Suspend to 9’-0” AFF.

c. Add an exit sign centered over the host room doorway leading in to the corridor. Power the exit sign from the lighting circuit within the space. Provide one of the following approved make/models:
   i. Dual-Lite: SESRWEI
   ii. Lithonia: LE S W I R EL N
   iii. Mule Ltg: MD-B-1-R-WW

X. DRAWING SHEET E2.1 – ENLARGED CLEANROOM PLAN – POWER
a. The mechanical equipment ‘WSHP1-1’ shall be fed by a 45A/2P circuit breaker from ‘EPS105-17,19’ instead of a three pole breaker as originally shown.

b. Keynote #10 shall refer to the direct connect labeled ‘Mechanical Controls’ with circuit ‘1E1L-10’.

c. Clarification: Keynote #5 does not require floor cutting and is copper grounding tape laid on top of the existing floor, directly below the new Cleanroom flooring. Refer to flooring manufacturer’s installation instructions.
SPECIFICATIONS:

I. SPECIFICATION 237313 – AIR HANDLING UNIT
   A. Provide the variable frequency drive (VFD) for air handling unit with a bypass, mounted on side of unit above return air inlet.

PRIOR APPROVALS:
Approval is given for the following items for general conformance to the project requirements. It is the responsibility of the contractor and equipment supplier to provide equipment and products that meet all the requirements of the plans and specifications. The Mechanical Engineer reserves the right to reject any product that does not fully meet the project requirements regardless of prior approval.

<table>
<thead>
<tr>
<th>Specification Section</th>
<th>Item</th>
<th>Approved Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>224200</td>
<td>Emergency Showers</td>
<td>Bradley</td>
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<tr>
<td></td>
<td>Mixing Valve</td>
<td>Bradley</td>
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<tr>
<td>237313</td>
<td>Air Handling Unit</td>
<td>Titus, Inc.*</td>
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<tr>
<td>238123</td>
<td>Computer Room Air Conditioner</td>
<td>CompuAire, Inc.*</td>
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</table>

- *Provided equipment meets all performance, filtration and dimensional requirements.

Curtis L. Smit, PE, Consulting Design Solutions, Inc.