

# ADDENDUM NO. 1

## Bid No. 19-002 CESD Sunnybrook Campus Renovation

CLACKAMAS ESD  
CLACKAMAS, OREGON

15 MAY 2019

PAGE 1 OF 3 (PLUS ATTACHMENTS)

The following additions to, deletions from, modifications of, substitution in, and clarifications of the Bid Documents govern insofar as they apply and take precedence over those portions of the original Bid Documents to which they apply.

Acknowledge receipt hereof by inserting the above Addendum number in the space provided on the Bidder Certification form prior to submitting Bid. Failure to do so may subject Bidder to disqualification. Although the Addendum is in two parts, referencing "Addendum 1" will satisfy this requirement.

NOTIFY ALL SUBCONTRACTORS AFFECTED BY THIS ADDENDUM.

**ADDITIONS – All of the items below are additions to the Bid Documents with the exception of Drawings Item 10 which is a replacement from the previous specifications.**

### **DRAWINGS**

1. Sheet G1, TITLE SHEET; DEFERRED SUBMITTALS; Revise to read as follows:

Mechanical (Note: Mechanical Bidder-Designer to refer to Drawings attached to Addendum No. 2 for HVAC zoning requirements.)

Electrical (Note: In addition to other Electrical Work, Electrical Bidder-Designer to include connecting power to the electrified workstation panels provided by others.)

Acoustical Ceilings

Fire Sprinkler System Modifications

Fire Alarm and Detection Systems Modifications

Emergency Egress Lighting Modifications

2. Sheet G1, TITLE SHEET; Mechanical Bidder-Designer to provide HVAC zones as indicated on attached Drawings showing locations of required HVAC zones (5 sheets).
3. Sheet G2, CODE PLANS; CODE PLAN LEGEND; Add the following:



BUSINESS AREAS; OCCUPANT LOAD  
FACTOR= 1/100 GROSS S.F.

4. Sheet D1.1 DEMOLITION PLANS; Detail 1, FIRST FLOOR DEMOLITION PLAN; See attached Drawing ARA-01 for Ceiling Detail where wall is removed between existing Offices 156 and 157.
5. Sheet A1.1 DEMOLITION REFLECTED CEILING PLANS; Detail 1 FIRST FLOOR DEMOLITION PLAN; See attached Drawing ARA-01 for Ceiling Detail where wall is removed between existing Offices

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- 156 and 157.
6. Sheet A1.2 REFLECTED CEILING PLANS; Detail 1 FIRST FLOOR PLAN; See attached Drawing ARA-01 for Ceiling Detail where wall is removed between existing Offices 156 and 157.
  7. Sheet A5.2 DETAILS; Revise Detail 8/A5.2 TYP. DETAIL WALL TO STRUCTURE to read Detail 10/A5.2 TYP. DETAIL WALL TO STRUCTURE.
  8. Sheet A5.2 DETAILS; Revise Detail 9/A5.2 TYP. CONSTRUCTION FOR ACOUSTIC TILE CEILINGS to read 11/A5.2.
  9. A5.2 DETAILS; Add Detail 12/A5.2 TYP. DETAIL HEADER. See attached Drawing ARA-01 TYP. DETAIL HEADER.
  10. **Replacement:** Sheet A8.2 ELECTRICAL & LOW VOLTAGE PLANS; Replace with Revised Sheet A8.2 ELECTRICAL & LOW VOLTAGE PLANS.

*Revisions include:*

- a. *Revises scale of Drawings to read 1/16" = 1'-0" (not 1/4" = 1'-0").*
- b. *Revisions to Electrical Legend.*
- c. *Location of IDF Room at West portion of Second Floor.*
- d. *Modifies Plans to locate electrical and data junction box locations.*
- e. *Adds New General Notes:*
  3. *Comply with Clackamas ESD Low Voltage Wiring Standards.*
  4. *Contractor to furnish and pull all low voltage data wires from First Floor MDF Room and Second Floor IDF Rooms to all workstations; include provision of data receptacles at base of workstation panels. Furnish and pull low voltage data wires to other Data Junction Boxes where indicated on Drawing and provide data receptacles. Make final terminations at MDF Room. See attached ESD document entitled "Scope of Work - Low Voltage Wiring Installation - Clackamas ESD Remodel 2019" for additional information and requirements.\* Refer to attached Furniture Plans prepared by Pacific Office Furnishings (ESD's furniture vendor) for locations and quantities of data receptacles.*

*\*Areas to be served by MDF and IDF Rooms:*

    - i. *First floor north from elevator/electrical room is coming from MDF 148 (this includes the big conf. rooms).*
    - ii. *First floor south from elevator/electrical room is coming from IDF 239.*
    - iii. *Second Floor South is coming from IDF 239.*
    - iv. *Second Floor North is coming from IDF 268.*
    - v. *Third Floor is coming from IDF 306.*
- d. *Other changes (clouded).*

### ATTACHMENTS TO THIS ADDENDUM NO. ONE (1)

1. CESD Document entitled "Clackamas ESD Low Voltage Wiring Standards" (9 Sheets).

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## **Bid No. 19-002 CESD Sunnybrook Campus Renovation**

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**PAGE 3 OF 3 (PLUS ATTACHMENTS)**

2. CESD Document entitled "Scope of Work - Low Voltage Wiring Installation" (1 Sheet).
3. Drawings showing locations of required HVAC zones (5 sheets); for Mechanical Bidder-Designer reference.
  - Zones AC-1 and AC-6.
  - Zones AC-1 and AC-7.
  - Zones AC-2, AC-5 and AC-6.
  - Zones AC-3 and AC-6.
  - Zones AC-4 and AC-8.
4. Drawing ARA-01 TYP. DETAIL HEADER.
5. Revised Sheet A8.2 ELECTRICAL & LOW VOLTAGE PLANS.
6. Furniture Plans prepared by Pacific Office Furnishings (CESD's furniture vendor).

### **SPECIFICATIONS**

#### **Surety Bond 00 6113**

Add: The Surety Bond requirement may be waived on a case-by-case basis at the sole discretion of Clackamas ESD based on demonstrated past performance of Bidder.

**END OF ADDENDUM ONE (1)**

Clackamas ESD  
Low Voltage Wiring Standards  
Bid No. 19-002

General

- District requirements & preference is specified where system compatibility is required
- Where specified equipment model numbers used as the basis of design have been changed or discontinued, substitutions shall be the current equivalent and shall be approved by District staff
- Failure to follow these procedures will result in replacement at Contractor's expense to meet the District requirements

Applicable Standards

- Low Voltage installations for the district are to comply with the following current industry standards:
  - NTIA and BICSI standards
  - NFPA-70 National Electric Code (NEC)
  - ANSI/TIA-526-7 Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant OFSTP-7
  - ANSI/TIA-526-14-B-1998 Optical Power Loss Measurements of Installed Multimode Fiber Cable Plant OFSTP-14A
  - TIA/EIA-569-A (and all addendums) Commercial Building Telecommunications Cabling Standard
  - TIA/EIA-569-B (and all addendums) Commercial Building Standard for Telecommunications Pathways and Spaces
  - ANSI/TIA-568-C.0 Generic Telecommunications Cabling for Customer Premises
  - ANSI/TIA-568-C.1 General Requirements
  - ANSI/TIA-568-C.2 Balanced Twisted Pair Cabling
  - ANSI/TIA-568-C.3 Fiber Optic Cabling Components Standards
  - ANSI/TIA-568-C.4 Broadband Coaxial Cabling and Components
  - ANSI/TIA-598 Color Coding of Fiber Optic Cables
  - ANSI/TIA-606 Administration Standard for Commercial Telecommunications Infrastructure
  - ANSI/TIA-607 Commercial Building Grounding and Bonding Requirements for Telecommunications
  - ANSI/TIA-758 (and all addendums) Customer Owned Outside Plant Telecommunications Cabling
  - ANSI/TIA-TSB series of Guidelines for Testing

Submittals

- District review and approval is required on all shop drawing submittals

- Engineering submittals are to be reviewed and coordinated to avoid conflicts with the architectural design (example – floor boxes in second floor slabs or in conflict with specified floor finishes)
- Contractor shall submit copies of the certification of the company and names of staff that will be performing the installation and terminations.
- All substitutions or deviations from spec must receive approval from district staff.

#### Contractor

- Installers must have current certification from the Manufacturer on the system to be installed so the customer may benefit from the best warranty available from the manufacturer
- Vendor to be certified required on installed structured cabling systems
- 50% of the crew onsite at any time must be certified by installed product vendor.
- TE350: BICSI certified technician training is also required
- Hours of work
  - All work to be conducted during business hours 7:30 AM to 4:30 PM unless otherwise authorized by district staff
- Workmanship
  - All work to be completed in neat and workmanlike manner
  - All work spaces to be broom clean at end of work day

#### Network Infrastructure

##### Equipment Racks, Patch Panels, Wire Managers, Ladder Racks, Cable Trays

- District standard are as follows
  - Two Post Racks - Chatsworth Products Inc. (CPI)
  - Four Post Racks - Chatsworth Products Inc. (CPI)
  - Patch Panels - AMP NETCONNECT Category 6 System
  - Horizontal Wire Management - AMP
  - Vertical Wire Management - Chatsworth Products Inc. (CPI)
  - Ladder Racks - To match existing
  - Cable Trays - To match existing
- Color is to be black or match existing with district approval
- Parts to match existing components and design for compatibility where possible
- Part specifications are to be approved by district staff

##### MDF/IDF Rooms

- Design of rooms, equipment locations and required clear floor areas at equipment shall follow requirements of NTIA/BICSI standards.
- Final design to be approved by district
- Minimum dimensions for MDF room = 10-feet by 12-feet clear.
- Minimum dimensions for IDF room = 8-feet by 10-feet clear.

- 100% Completion of MDF/IDF rooms is required 3-weeks prior to Substantial Completion for District staff to make system operational.
- 100% completion includes, but not limited to flooring, painting, plywood backer panels, operational HVAC system, finish ceiling, lights, electrical outlets, permanent door and hardware and final cleaning, etc.

#### MDF/IDF Air Conditioning

- System and controls are to be independent from the ECC HVAC Controls system and should have remote monitoring.
- Monitoring MDF/IDF rooms is to include both CESD Technology Services and CESD Facilities
- Temperature set point shall be for 75 degrees
- System shall function at spec with a 10 degrees OAT
- System shall be wall-mount split-system (Mitsubishi or Daikin preferred) where possible
- A/C units only preferred where possible

#### Structured Cabling

##### Twisted Pair Data Cabling

- Cabling is to be CAT6 or better
- Cabling must be AMP or equivalent
- Color coding for structured cabling to follow the color scheme below:
  - Wire for wall outlet - Blue
  - Wire for cameras - Grey
  - Wire for ceiling outlet - White
- Termination hardware is to be AMP
- Termination is to be done to CAT6 standard or better
- Use of J hooks, Saddles, or Cable Trays above ceiling required
- All structured cables shall be labeled on both ends using mechanical printed wrap around labels
- All cable runs shall have minimum 15' service loop at the closet and 10' at the station end.
  - Exceptions must be in writing and approved prior to cable installation.
- Plenum rated cabling to be used where required by code

##### Fiber Optic Cabling

- Minimum 24 strand cable to be used
- From MDF to IDF or as risers within a building shall be single mode
- From MDF to MDF between buildings shall be single mode.
- Connectors and bulkheads connectors must be LC
- All cable runs shall have minimum 15' service loop at the closet and 10' at the station end.

- ■ Exceptions must be in writing and approved prior to cable installation.
- District IT staff to approve exact pair count

#### Copper Voice Cabling

- Minimum 25 pair
- All structured cables shall be labeled on both ends using mechanical printed wrap around labels
- District IT staff to approve exact pair count and termination hardware required.

#### Horizontal Station Cable

- Cabling is to be CAT6 or better
- Cabling must be AMP or equivalent
- Station side termination will match MDF/IDF.
- Cables will be sequentially numbered for ease of outlet identification.
- Patch panels to be AMP NETCONNECT Category 6 System
- All patch panel labels shall be labelled per District standards
- Color coding for patch cabling to follow the color scheme below:
  - Data - Green
  - Voice - Purple
  - Security - Black
  - Wireless - Yellow

#### Data Outlets

##### Wall Outlets

- Outlets shall be flush the wall with single gang mud ring. A 1" conduit or pull string shall be installed from the outlet box to an accessible ceiling space.
- Faceplates shall be 4 port nylon with label windows
- Faceplate color is to be grey
- Faceplate jack color shall be black
- All faceplates to be label per district standard
  - If label holder is present on faceplate labels are to be placed into this area, if not they are to be securely attached to the faceplate.
  - Labels are to be removable
- All locations shall have a minimum of two (2) cables per location
- Parts to match existing components and design where possible
- Part specifications are to be approved by district staff
- Under Counter, Desk, Table or Inside Cabinet installation shall provide grommet for access

##### Ceiling Outlets

- Faceplate jack color shall be black

- Faceplates shall be 4 port nylon with label windows
- Faceplate color is to be white
- All faceplates to be labeled per district standard
  - If label holder is present on faceplate labels are to be placed into this area, if not they are to be securely attached to the faceplate.
  - Labels are to be removable
- All locations shall have a minimum of two (2) cables per location
- Parts to match existing components and design where possible
- Part specifications are to be approved by district staff

#### Floor Boxes

- Part specifications are to be approved by district staff for application, function and floor finish.

#### Labeling

- Labeling will be done by means of a mechanical device (i.e. printer, P-Touch, or other printing device).
- Handwritten labels are not acceptable.
- Labels will be black on white or as requested by district
- The district label system is as follows:
  - Racks:
    - Racks to be numbered sequentially per room starting with 1
  - MDF/IDF Patch Panels:
    - Panels to be numbered sequentially, top-down, starting with 1
  - Data Outlet Faceplates:
    - MDF/IDF Room Number in upper left corner of outlet plate
    - Rack Number.Panel Number.Jack Number
- Labels are to match existing where possible
- District to approve prior to labeling

#### Outlet Locations

##### 4' Cubicles

- Minimum one one (1) jack outlet each workstation location.
- Actual room distribution is determined by project design.

##### 6' Cubicles

- Minimum one two (2) jack outlets each workstation location.
- Outlets shall be located on two sides immediately adjacent to workstation furniture

##### 8' and Larger Cubicles



- Minimum two two (2) jack outlets at each workstation location.
- 2 two (2) jack outlets shall be located on two sides immediately adjacent to workstation furniture
- Optional 1 two (2) jack or four (4) jack outlet shall be located on the opposite of side of workstation to support future expansion or additional workstation
- Actual distribution is determined by project design.

#### Standard Offices

- Minimum two two (2) jack wall outlets at each office location.
- Outlets shall be located on two walls immediately adjacent to workstation furniture

#### Large Offices

- Minimum two two (2) jack wall outlets at each office location.
- 2 wall outlets shall be located on two walls immediately adjacent to workstation furniture placement
- Optional one wall outlet shall be located opposite of workstation furniture to support placement of future workstation furniture
- Optional one two (2) jack wall or ceiling outlet to support audio-visual & display equipment
- Actual room distribution is determined by project design.

#### Workroom

- Minimum three two (2) jack wall outlets at each workroom location.
- 2 wall outlets shall be located on walls immediately adjacent to work locations
  - If counters are present then outlets to be located at counter height
- 1 wall outlet shall be located on an empty wall location to support placement of multifunction printer
- Actual room distribution is determined by project design.

#### Storage Room

- Minimum one two (2) jack wall outlets each storage location.
- Actual room distribution is determined by project design.

#### Small Conference Room (Seats 4-12 People)

- Minimum one two (2) jack table top, wall, or floor outlet located to facilitate use of room
- Minimum one two (2) jack wall or ceiling outlet to support audio-visual & display equipment
- Minimum one two (2) jack outlet located on wall adjacent to primary entry/exit door
- Actual room distribution is determined by project design.

#### Medium Conference Room (Seats 12-35 People)

- Minimum one two (2) jack outlet located on wall adjacent to primary entry/exit door
- Minimum one two (2) jack outlet on each wall
- Optional four (4) jack tabletop or floor outlet located to facilitate use of room
- Minimum one four (4) jack wall or ceiling outlet to support audio-visual & display equipment
- Actual room distribution is determined by project design.

#### Large Conference Room (Seats 35-100+ People)

- Minimum one two (2) jack outlet located on each wall adjacent to each primary entry/exit door
- Minimum two two (2) jack outlets on each wall with an outlet being located no less than every 16' from corner to corner
- Minimum one four (4) jack wall or ceiling outlet to support audio-visual & display equipment
- Optional four (4) jack tabletop or floor outlet located to facilitate use of room
- Actual room distribution is determined by project design.

#### Wireless Access Point Location (WAP)

- Minimum one four (4) jack ceiling outlet per WAP location
- Optional drop ceiling installation kit to be specified to match existing where possible
- Actual WAP distribution is determined by project design.

#### Digital Signage

- Minimum one four (4) jack wall or ceiling outlet to support audio-visual & display equipment
- Actual room distribution is determined by project design.

#### Testing

- Testing will be completed per the latest BICSI Industry Standard for cable type to be tested at time of testing.
- Test equipment shall be current in calibration with certificate.
- TIA/EIA-568-B.1 (current category 5e) and TIA/EIA-568-B.2-1 (current category 6) TIA/EIA-568-B.2-10 (current category 6A) ISO/IEC 11801:2002 2nd Edition (classes D, E and F) (current category 7).
- All results to be provided electronically.
- Re-tests to be conducted at contractor expense.

#### Documentation

- Upon completion of the installation, the Contractor shall provide two full documentation sets to the district staff for approval.
- Both documentation sets to include As-Built Drawings.
  - The As-Built Drawings are to include cable routes and outlet locations. Outlet locations shall be identified by their sequential number as defined in this standard. For renovation work in existing buildings, the district staff will provide floor plans in paper and electronic (current AutoCAD version) formats on which As-Built construction information can be added.
  - Contractor to supply As-Builts in both electronic (.DWG files) and paper copies.
  - Test results generated for each cable by the wire (or fiber) test instrument shall be submitted as part of the documentation package. The Contractor must furnish this information in electronic form.
- When repairs and re-tests are performed, the problem found and corrective action taken shall be noted. Both the failed and passed test data shall be documented.
- Test results shall be clearly marked as “Test Documentation” with the Project name and the date of completion (month and year). The results shall include a record of test frequencies, cable type, conductor pair and cable (or outlet) I.D., measurement direction, reference setup, and crew member name(s). The test equipment name, manufacturer, model number, serial number, software version, and last calibration date will also be provided at the end of the document.
- All documentation including warranty information to be supplied to district within 30 days of end of finished installation.

## Warranty

- All cabling work to be delivered with vendor warranty

## Security

### Access Control System

- Access control system: Lenel
- Parts to match existing components and designed for compatibility where possible
- Design and part specifications are to be approved by district staff

### Security System:

- Alarm system: Bosch
  - All exterior doors to be installed with door contacts
  - Dual technology motion sensors as needed
  - Glass-break sensors not required
- Parts to match existing components and design for compatibility where possible
- Design and part specifications are to be approved by district staff

### Security Cameras

- If cameras to be specified then consult with district staff
- Use of multi-camera body housings (180 or 360 degree cameras) or multiple cameras is preferred to PTZ cameras
- Installation must include all components for a functional system. Including but not limited to:
  - Camera installation
  - 5 year software license if required
  - System programming
- Labelling to match existing
- Parts to match existing components and design for compatibility where possible
- Design and part specifications are to be approved by district staff

### HVAC ECC/Controls Interface

- Vendor to coordinate with ECC and Controls vendor and any specifications provided
- Design and part specifications are to be approved by district staff

## Scope of Work

### Low Voltage Wiring Installation

Bid No. 19-002

#### Project Goal:

The goal of this project is to support the remodel in select areas of the Clackamas Education Service District main office.

#### Project Location:

Clackamas ESD, 13455 SE 97th Ave, Clackamas, OR 97015

#### Project Work Hours:

7:00 AM - 5:00 PM (Exceptions to be authorized by Clackamas ESD management)

#### Any contractor proposal must include all of the following:

- Installation of new low voltage wiring to support the remodel of CESD facilities
- Any installation permits as required by code
- Support of the required specifications listed in the "Clackamas ESD Low Voltage Wiring Specification"
- Technical design, project management, and installation per specifications
- Collaboration with CESD staff during of the installation process
- Submittal of complete project and system drawings and documentation as per specification.

#### Items out of contractor scope:

- All electronics to be supplied by Clackamas ESD
- All removal and reinstallation of electronic shall be performed by Clackamas ESD staff

#### Project Areas (Please see architectural drawings for further information)

- I. Low voltage wiring installation on 1st floor - North Wing
- II. Low voltage wiring installation on 2nd floor - North & South Wing
- III. Low voltage wiring installation on 3rd floor - West Wing