

## ADDENDUM 1

**BID IDENTIFIER: Bid-19.03 DUSD-ERATE-2019-01**

**BID PACKAGE TITLE: DEHLI UNIFIED SCHOOL DISTRICT (DUSD) E-RATE YEAR 2019 REQUEST FOR PROPOSAL**

**ADDENDUM DESCRIPTION: RESPONSES TO QUESTIONS REGARDING THE RFP AND VARIOUS SERVICES**

**The vendors shall submit ALL pages of ADDENDUM 1 with the bid response**

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1. If it is required that proposals be mailed in, please let me know the address and I can send it.

Answer:

Yes, the Proposals all need to be mailed and the address is located within the RFP located on our website at:

<https://www.delhi.k12.ca.us/apps/pages/businessoffice/open-request-proposals>

All the information is in the Request for Bids document located on the district's website on the business webpage.

2. Is DUSD going to dark fiber, if so when?

Answer:

Your question below is in response to the Notice of Request for Bid Proposal for the Delhi Unified School District (DUSD) E-Rate Year 2019 Bid-19.03 DUSD-ERATE-2019-01 RFP.

Dark fiber is NOT being requested in the Delhi Unified School District (DUSD) E-Rate Year 2019 Bid-19.03 DUSD-ERATE-2019-01 RFP. The services that are requested in the RFP are data cabling and network equipment.

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**All other bidding/contract and construction drawing documents, stipulations, dates and times remain unchanged, in full effect and by reference become a part of this addendum.**

### **SPECIAL NOTE**

**It is the responsibility of each Bidder to acknowledge all addenda by signing below and submitting a copy of each addendum with their respective bid.**

I HAVE READ AND UNDERSTOOD ALL PAGES OF ADDENDUM 1 OF THE ABOVE BID: \_\_\_\_\_

**ADDENDUM 2**

**BID IDENTIFIER: Bid-19.03 DUSD ERATE-2019-01**

**BID PACKAGE TITLE: DELHI UNIFIED SCHOOL DISTRICT (DUSD) E-RATE YEAR 2019 REQUEST FOR PROPOSAL**

**ADDENDUM DESCRIPTION: UPDATES TO DUSD E-RATE YEAR 2019 FIBER CABLING & COPPER CABLING SPECIFICATIONS AND FIBER CABLING (470-DW1A-1) SCOPE OF WORK**

**The vendors shall submit ALL pages of ADDENDUM 2 with the bid response**

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The DUSD E-Rate Year 2019 Fiber Cabling & Copper Cabling Specifications and the Delhi Middle School Fiber Cabling (470-DW1A-19) Scope of Work in this addendum shall **REPLACE** the respective documents that were included in the DUSD E-Rate Year 2019 RFP, and/or any addenda that were distributed at the Bidders Meeting that was held on January 22, 2019 at the Delhi Unified School District Business Office, 16491 Schendel Ave, Delhi, CA 95315.

All other issues that were discussed, stipulated, and agreed upon during the Bidders Meeting that was held on January 22, 2019 at the Delhi Unified School District Business Office, 16491 Schendel Ave, Delhi, CA 95315, but not stated in this addendum, shall remain in full effect.

Vendors who are bidding for the DUSD E-Rate Year 2019 Data Cabling shall submit their bid based on the specifications and scope of work that are included in this addendum.

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**All other bidding/contract and construction drawing documents, stipulations, dates and times remain unchanged, in full effect and by reference become a part of this addendum.**

**SPECIAL NOTE**

**It is the responsibility of each Bidder to acknowledge all addenda by signing below and submitting a copy of each addendum with their respective bid.**

I HAVE READ AND UNDERSTOOD ALL PAGES OF ADDENDUM 2 OF THE ABOVE BID: \_\_\_\_\_

## ADDENDUM 2

### APPENDIX 3

#### **Delhi Unified School District (DUSD) E-Rate Year 2019 Fiber Cabling & Copper Cabling Specifications**

**Due to E-Rate bidding rules, DUSD will accept bids that specify items / components that are FUNCTIONAL EQUIVALENT to the part numbers listed in this document. Please refer to the section "APPROVAL OF SUBSTITUTIONS AND ALTERNATIVES FOR "FUNCTIONALLY EQUIVALENT" ITEMS" of the RFP for guidelines on "FUNCTIONAL EQUIVALENT"**

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#### **- GENERAL CONDITIONS AND REQUIREMENTS -**

1. The installer shall attend a project kickoff meeting with Customer's IT staff and the General Contractor prior to the commencement of work.
2. Any work that is disruptive to the learning environment shall be performed during non-school hours.
3. Vendor shall return the classroom to its original state prior to leaving the work site.
4. The vendor shall also provide all items & supplies to complete the installation of items specified in this document.
5. The vendor shall properly seal all outdoor connections and building penetrations against weather.
6. The vendor shall mend/repair/repaint all damages due to the installation of items specified in this document.
7. The vendor shall utilize Panduit certified installers in all cabling installations specified in this document.
8. All cabling shall have a certified 25-year warranty with the cabling manufacturer.
9. The vendor shall provide a hardcopy of the Panduit certification of their installers in the bid response.

#### **- RACEWAY & CABLING ACCESSORIES FOR DATA LOCATIONS -**

1. At locations that require NEW 3-channel raceway, the vendor shall install -
  - a. Wiremold 3-channel raceway with dividers (part number 5500BD3). The vertical Wiremold raceway shall connect to the horizontal raceway via Wiremold Flat 90 degree elbow (part numbers 5511FO).
  - b. ONE (1) Wiremold device bracket (part number 5550) on the horizontal 3-channel Wiremold raceway base (part number 5500BD3) at EACH location for DATA.
  - c. ONE (1) Wiremold duplex faceplate (part number 5507D) and ONE (1) Panduit module frame on EACH Wiremold device bracket that covers the top-most channel of the 3-channel Wiremold raceway at locations requiring cables for DATA or TELEPHONE. The Panduit module frame part number shall be CF1064EIY or CF1062EIY depending on the number of DATA and/or TELEPHONE cables at each location.
  - d. ONE (1) Wiremold blank faceplate (part number 5507B) shall be placed on EACH Wiremold device bracket that covers the middle channel of the 3-channel Wiremold raceway.
  - e. ONE (1) Wiremold blank faceplate (part number 5507B) on EACH Wiremold device bracket that covers the bottom-most channel of the 3-channel Wiremold raceway.

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#### **Delhi Unified School District (DUSD) E-Rate Year 2019 Fiber Cabling & Copper Cabling Specifications**

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- f. Appropriate data jacks
  - i. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA
  - ii. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA
- g. Panduit Category 3 UTP WHITE TELEPHONE jacks (part number CJ64WHY) at locations requiring cables for TELEPHONE.
- h. Panduit blank covers (part number CMBEI-X) shall be installed to cover ALL unused data and telephone receptacles.
- i. Wiremold covers (part number 5500C) to cover ALL opened sections of the 3-channel Wiremold raceway.
- j. Appropriate Wiremold base seam clips (part number 5506B) and/or Wiremold elbows (part numbers 5511, 5511FO, 5517, 5517FO, 5518, 5518FO) to join ALL sections of the 3-channel Wiremold raceway base.

Exact locations of the data jacks and telephone jacks shall be determined during the site walk PRIOR to start of cabling work.

- 2. At locations that require NEW 2-channel raceway, the vendor shall install -
  - a. Wiremold 2-channel raceway with dividers (part number 5400TB). The vertical Wiremold raceway shall connect to the horizontal raceway via Wiremold Flat Elbow (part number 5411FO) or Wiremold Tee (part number 5415FO).
  - b. ONE (1) Wiremold device bracket (part number 5450) on the horizontal 2-channel Wiremold raceway base (part number 5400TB) at EACH location for DATA.
  - c. ONE (1) Wiremold duplex faceplate (part number 5507D) and ONE (1) Panduit module frame on EACH Wiremold device bracket that covers the top-most channel of the 2-channel Wiremold raceway at locations requiring cables for DATA or TELEPHONE. The Panduit module frame part number shall be CF1064EIY or CF1062EIY depending on the number of DATA and/or TELEPHONE cables at each location.
  - d. ONE (1) Wiremold blank faceplate (part number 5507B) on EACH Wiremold device bracket that covers the bottom-most channel of the 2-channel Wiremold raceway.
  - e. Appropriate data jacks
    - i. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA
    - ii. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA
  - f. Panduit Category 3 UTP WHITE TELEPHONE jacks (part number CJ64WHY) at locations requiring cables for TELEPHONE.

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#### **Delhi Unified School District (DUSD) E-Rate Year 2019 Fiber Cabling & Copper Cabling Specifications**

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- g. Panduit blank covers (part number CMBEI-X) shall be installed to cover ALL unused data and telephone receptacles.
- h. Wiremold covers (part number 5400C) to cover ALL opened sections of the 2-channel Wiremold raceway.
- i. Wiremold cover clips (part number 5406A) to cover adjoining pieces of Wiremold covers (part number 5400C).
- j. Wiremold base seam clips (part number 5406TB) to join ALL sections of the 2-channel Wiremold raceway base that are on the same wall.
- k. Appropriate Wiremold elbows (part numbers 5417FO, 5418, 5418FO) to join ALL sections of the 2-channel Wiremold raceway base that are on adjacent walls.

Exact locations of the data jacks and telephone jacks shall be determined during the site walk PRIOR to start of cabling work.

- 3. At locations that require NEW Wiremold single-channel raceway, the vendor shall install -
  - a. Wiremold Eclipse single-channel raceway (part number PN10L10)
  - b. Wiremold transition fitting (part number 5474) to connect the Wiremold Eclipse single-channel raceway (part number PN10L10) to -
    - i. Wiremold 2-channel raceway (part number 5400TB)
    - ii. Wiremold 3-channel raceway with dividers (part number 5500BD3).
  - c. Panduit single-gang low voltage surface mount box (part number JB1E1-A).
  - d. The following types of vertical faceplates
    - i. Panduit single gang vertical faceplate (part number CFPE2E1Y) at locations requiring TWO (2) cables for DATA.
    - ii. Panduit single gang vertical faceplate (part number CFPE4E1Y) at locations requiring THREE (3) or FOUR (4) cables for DATA.
    - iii. Panduit single gang vertical faceplate (part number CFPE6E1Y) at locations requiring SIX (6) cables for DATA.
    - iv. Panduit single gang vertical faceplate (part number CFPE4E1Y) at locations requiring TWO (2) cables for DATA and ONE (1) cable for TELEPHONE cable.
  - e. Appropriate data jacks
    - i. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA
    - ii. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA

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- f. Panduit Category 3 UTP WHITE TELEPHONE jacks (part number CJ64WHY) at locations requiring cables for TELEPHONE.
- g. Panduit blank covers (part number CMBEI-X) to cover unused receptacles.

Exact locations shall be determined during the site walk PRIOR to start of cabling work.

- 4. At locations that require NEW Tyton single-channel raceway, the vendor shall install -
  - a. Single-gang junction box (part number TSRI-JB2) for locations requiring DATA and TELEPHONE.
  - b. Tyton single-channel surface mount raceway (part number TSR21-8A) from the suspended ceiling to the single-gang junction box TSRI-JB2
  - c. Tyton ceiling cap (part number TSR21-36) at the transition point between the ceiling and the surface mount raceway.
  - d. Tyton splice cover (part number TSR21-14) at adjoining sections of surface mount raceway.
  - e. The following types of vertical faceplates
    - i. Panduit single gang vertical faceplate (part number CFPE2EIY) at locations requiring TWO (2) cables for DATA.
    - ii. Panduit single gang vertical faceplate (part number CFPE4EIY) at locations requiring THREE (3) or FOUR (4) cables for DATA.
    - iii. Panduit single gang vertical faceplate (part number CFPE6EIY) at locations requiring SIX (6) cables for DATA.
    - iv. Panduit single gang vertical faceplate (part number CFPE4EIY) at locations requiring TWO (2) cables for DATA and ONE (1) cable for TELEPHONE cable.
  - f. Appropriate data jacks
    - i. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA
    - ii. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA
  - g. Panduit Category 3 UTP WHITE TELEPHONE jacks (part number CJ64WHY) at locations requiring cables for TELEPHONE.
  - h. Panduit blank covers (part number CMBEI-X) to cover unused receptacles.

Exact locations of the data jacks and telephone jacks shall be determined during the site walk PRIOR to start of cabling work.

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#### **Delhi Unified School District (DUSD) E-Rate Year 2019 Fiber Cabling & Copper Cabling Specifications**

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5. At locations where EXISTING multi-channel raceway (2-channel and/or 3-channel) is AVAILABLE, the vendor shall install -
- a. The appropriate device bracket, if necessary, on the EXISTING multi-channel at EACH location.
  - b. The appropriate faceplate and Panduit module frame on the device bracket that covers the top-most channel of the multi-channel raceway.
  - c. The appropriate blank faceplate to cover unused / opened sections of the device bracket.
  - d. Appropriate data jacks
    - i. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA
    - ii. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA
  - e. Panduit Category 3 UTP WHITE TELEPHONE jacks (part number CJ64WHY) at locations requiring cables for TELEPHONE.
  - f. Panduit blank covers (part number CMBEI-X) to cover ALL unused data and telephone receptacles.
  - g. The appropriate covers to cover ALL opened sections of the multi-channel raceway.

All device brackets, faceplates, module frames, covers, accessories, fittings, etc. shall be installed to make a fully functional system and MATCH EXISTING. The exact data locations shall be determined during the site walk PRIOR to start of cabling work.

6. At locations where in-wall conduit IS AVAILABLE, the vendor shall install –
- a. ONE (1) Panduit module frame (part number CF1062EIY or CF1064EIY depending on the number of DATA and/or TELEPHONE cables at the location) in the recessed low voltage junction box, with a faceplate that matches the existing electrical receptacles.
  - b. Appropriate data jacks
    - i. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA
    - ii. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA
  - c. Panduit Category 3 UTP WHITE TELEPHONE jacks (part number CJ64WHY) at locations requiring cables for TELEPHONE.
  - d. Panduit blank covers (part number CMBEI-X) to cover ALL unused DATA and TELEPHONE receptacles.

Exact locations of the data jacks and telephone jacks shall be determined during the site walk PRIOR to start of cabling work.

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7. At locations specified at the CEILING, the vendor shall install –
  - a. ONE (1) Panduit surface mount box
    - i. Part number CBX1EI-AY at locations requiring ONE (1) cable for DATA.
    - ii. Part number CBX2EI-AY at locations requiring TWO (2) cables for DATA.
    - iii. Part number CBX4EI-AY at locations requiring THREE (3) or FOUR (4) cables for DATA.
    - iv. Part number CBXD6EI-AY at locations requiring SIX (6) cables for DATA.
  - b. Appropriate data jacks
    - i. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA.
    - ii. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA.
  - c. Panduit blank covers (part number CMBEI-X) to cover ALL unused receptacles.

Exact locations of the data jacks and telephone jacks shall be determined during the site walk PRIOR to start of cabling work.

**ALL NEW SURFACE MOUNTED RACEWAY, RACEWAY FITTINGS, MODULE FRAMES, FACEPLATES, AND COVERS SHALL BE THE SAME COLOR AND MATCH THE COLOR OF THE EXISTING RACEWAY AND RACEWAY ACCESSORIES.**

#### **- RACEWAY & CABLING ACCESSORIES FOR OUTSIDE WIRELESS –**

At locations with OUTSIDE WIRELESS, the vendor shall install –

1. One (1) Panduit 2-port surface mount box (part number UICBX2IW-A).
2. Appropriate data jacks
  - a. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA
  - b. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA
3. Two (2) Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU).
4. Panduit blank covers (part number CMBEI-X) shall be installed to cover unused receptacles



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5. Tyton single-channel surface mount raceway (part number TSR2I-8A) from the suspended ceiling to the Panduit 2-port surface mount box UICBX2IW-A.
6. Tyton ceiling cap (part number TSR2I-36) at the transition point between the ceiling and the single-channel surface mount raceway TSR2I-8A.
7. Tyton splice cover (part number TSR2I-14) shall be installed at adjoining sections of surface mount raceway.
8. At locations where the Category 6/6A penetrates the wall, vendor shall install -
  - a. ONE (1) 6 x 6 x 6 inch (HxWxD) NEMA-3R screw-covered wall mount lockable outdoor enclosure with 3 knockouts of ½"-¾", ¾"- 1", and ½" – ¾" in size.
  - b. TWO (2) 2-inch conduits penetrating the back of the NEMA 3-R enclosure into the building attic space
9. ONE (1) NEW 2-inch diameter mast, securely attached to building, with a minimum of 1foot of clearance between the bottom of the TerraWave Solutions enclosure assembly (customer provided) and the roof line.
10. TerraWave Solutions enclosure (provided by customer) shall be securely mounted on the mast (provided by the vendor) using the TerraWave Solutions 2-inch pole mount kit (part number PMK-210, provided by customer) per manufacturer's specifications.
11. ONE (1) ¾ - inch sealtite flex conduit between 6 x 6 x 6 inch NEMA-3R enclosure and TerraWave Solutions enclosure. Sealtite flex conduit shall be properly secured and sealed at BOTH ends.
12. ONE (1) Category 6 Outside Plant (OSP) patch cable between the network device located inside the TerraWave Solutions enclosure and the Category 6 DATA jack located inside the NEMA-3R enclosure.

**ALL NEW SURFACE MOUNTED RACEWAY, RACEWAY FITTINGS, MODULE FRAMES, FACEPLATES, AND COVERS SHALL BE THE SAME COLOR AND MATCH THE COLOR OF THE EXISTING RACEWAY AND RACEWAY ACCESSORIES.**

#### **- FLOOR BOXES -**

1. At locations with floor mounted boxes, the vendor shall install the following inside the floor box -
  - a. Panduit module frames (part number CF1064EIIY) for data receptacles -
    - i. Part number CF1062EIIY at floor boxes requiring TWO (2) cables for DATA.
    - ii. Part number CF1064EIIY at floor boxes requiring THREE (3) or FOUR (4) cables for DATA.
  - b. Appropriate data jacks
    - i. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA

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- ii. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA
- c. Panduit blank covers (part number CMBEI-X) to cover unused receptacles.
- d. FULL complement of mounting hardware and fittings to make a FULLY functional system.

#### **- DATA POLES -**

1. At locations that require NEW DATA POLES, the vendor shall install -
  - a. Dual channel Panduit Pan-Pole Screw-On pole in electrical ivory color. Panduit Pan-Pole Snap-On pole shall be installed from floor to ceiling. Both channels shall accept Panduit module frames (part number CF1064EIY).
  - b. ONE (1) standard faceplate bracket (part number T70SDB-X) with EACH Panduit module frame.
  - c. Panduit module frames (part number CF1064EIY) for data receptacles -
    - i. Part number CF1062EIY at floor boxes requiring TWO (2) cables for DATA.
    - ii. Part number CF1064EIY at floor boxes requiring THREE (3) or FOUR (4) cables for DATA.
  - d. Appropriate data jacks
    - i. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA
    - ii. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA
  - e. Panduit blank covers (part number CMBEI-X) to cover unused receptacles.
  - f. Appropriate fasteners and hardware to secure data poles to floor and ceiling.
  - g. FULL complement of mounting hardware and fittings to make a FULLY functional system.
2. At locations with EXISTING data poles, the vendor shall install -
  - a. Standard faceplate bracket(s).
  - b. Panduit module frames (part number CF1064EIY) for data receptacles -
    - i. Part number CF1062EIY at floor boxes requiring TWO (2) cables for DATA.
    - ii. Part number CF1064EIY at floor boxes requiring THREE (3) or FOUR (4) cables for DATA.
  - c. Appropriate data jacks
    - i. Panduit Category 6 UTP BLUE DATA jacks (part number CJ688TGBU) at locations requiring Category 6 cables for DATA

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- ii. Panduit Category 6A UTP BLUE DATA jacks (part number CJ6X88TGBU) at locations requiring Category 6A cables for DATA
- d. Panduit blank covers (part number CMBEI-X) to cover unused receptacles.
- e. Appropriate fasteners and hardware to secure data poles to floor and ceiling.
- f. FULL complement of mounting hardware and fittings to make a FULLY functional system.

**ALL NEW SURFACE MOUNTED RACEWAY, RACEWAY FITTINGS, DATA POLES, MODULE FRAMES, FACEPLATES, AND COVERS SHALL BE THE SAME COLOR AND MATCH THE COLOR OF THE EXISTING RACEWAY AND RACEWAY ACCESSORIES.**

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#### **- CONDUIT INSTALLATION SPECIFICATIONS -**

1. Where required, 2" conduit sleeves to be placed through any firewalls or existing walls located between rooms to allow the cabling to be pulled back to the IDF located within the building. Fire resistant material shall be used to insulate around the 2" conduit and in the remaining air space within the conduit to plug the holes.
2. Where required, NEW exterior pathways shall be installed
  - a. NEW exterior pathways shall consist of TWO (2) 2-inch conduits
3. All conduits installed shall have full sweeps -
  - a. Where applicable; new exposed exterior conduit shall be metal.
  - b. Where applicable; new exterior conduit shall be secured using appropriate fasteners to secure conduit to appropriate surface.
  - c. Where applicable; new NEMA 3R junction pull boxes or Christy boxes shall be placed every 100 feet.
  - d. New conduits going underground shall be PVC with minimum rating of Schedule 40.
  - e. All underground runs shall be continuous, without splices or taps. Underground boxes shall be used for pulling purposes only.
  - f. Where applicable; new saw cuts in concrete or asphalt shall be filled, packed, and resurfaced to match existing surface.
  - g. Each end of the conduit shall be labeled with the location (e.g, building, pull box number) of the opposite end.
4. Pull boxes and/or Christy boxes shall -
  - a. sit on 6-inch gravel base.
  - b. be filled with 1-inch of concrete from the bottom to prevent destruction of cabling by burrowing animals.
  - c. be installed with extension rings (where required)
  - d. be installed with lockable covers -
    - i. traffic rated covers shall be installed where required
    - ii. all covers shall be labeled as "Communications"
    - iii. underside of cover shall be labeled with pull box number
5. Vendor shall install 18" x 18" x 6" or larger terminal cans to terminate conduits sweeping below ground up the exterior wall of buildings.

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6. Vendor shall utilize a minimum quantity of TWO (2) 2-inch conduit sleeves to penetrate from the terminal cans into the building.

#### **- CABINETS, RACKS, & ACCESSORIES SPECIFICATIONS -**

1. ALL 2-post relay racks shall
  - a. be bolted or screwed to the existing floor
  - b. be seismically braced at the top of the relay rack to the nearest wall(s) using
    - i. ladder rack (part number 10250-712)
    - ii. cable runway-to-wall rack kit (part number 11911-712)
    - iii. protective end caps (part number 10642-001)
  - c. be grounded/bonded to the nearest earth
    - i. provide grounding of LAN equipment racks with one (1) #6 copper ground in metal conduit. Metal ground conductor to be run from LAN rack to nearest continuous cold water pipe or existing ground, ground resistance shall be 25 ohms or less and shall be verified by ground resistance test.
  - d. include ONE (1) package of mounting screws (part number 40605-005)
  - e. include ONE (1) 75 ft. roll of Hook & Loop cable ties (part number HLM-75R0)
  - f. include ONE (1) 7 ft Panduit VERTICAL cable management unit (part number WMPVHC45E) on EITHER SIDE of the 2-post relay rack.
  - g. include ONE (1) 2U Panduit HORIZONTAL cable management unit (part number WMP1E) at the TOP of the 2-post relay rack.
  - h. include ONE (1) 2U Panduit HORIZONTAL cable management unit (part number WMP1E) at the BOTTOM of the 2-post relay rack.
2. ALL NetShelter enclosures shall -
  - a. include ONE (1) plywood backboard. The plywood backboard shall be installed inside the Netshelter AR3140 enclosure to IF 25-pair Category 5 feeder cables are specified
  - b. include ONE (1) 75 ft. roll of Hook & Loop cable ties (part number HLM-75R0)
  - c. include ONE (1) 2U Panduit HORIZONTAL cable management unit (part number WMP1E) at the TOP of the NetShelter enclosure.
  - d. include ONE (1) 2U Panduit HORIZONTAL cable management unit (part number WMP1E) at the BOTTOM of the NetShelter enclosure.
  - e. be grounded/bonded to the nearest earth ground

## ADDENDUM 2

### APPENDIX 3

#### **Delhi Unified School District (DUSD) E-Rate Year 2019 Fiber Cabling & Copper Cabling Specifications**

**Due to E-Rate bidding rules, DUSD will accept bids that specify items / components that are FUNCTIONAL EQUIVALENT to the part numbers listed in this document. Please refer to the section "APPROVAL OF SUBSTITUTIONS AND ALTERNATIVES FOR "FUNCTIONALLY EQUIVALENT" ITEMS" of the RFP for guidelines on "FUNCTIONAL EQUIVALENT"**

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- i. provide grounding of LAN equipment racks with one (1) #6 copper ground in metal conduit. Metal ground conductor to be run from LAN rack to nearest continuous cold water pipe or existing ground, ground resistance shall be 25 ohms or less and shall be verified by ground resistance test.
    - f. be keyed the same.
- 3. ALL wall-mounted enclosures (WME) shall -
  - a. include ONE (1) fan kit (part number E2-FA-2H-210-AC FAN)
  - b. include ONE (1) filter kit (part number E2WMFK)
  - c. include ONE (1) bushing kit (part number 79903821893)
  - d. include ONE (1) ¾" x 24" x 36" or larger fire-rated plywood. The plywood shall be painted to match the existing wall and secured to the studs to support each wall mount enclosure (WME), and/or Telco 66-Blocks (IF specified)
  - e. be dual hinged, vented on four sides, smoke Plexiglas front, and lockable.
  - f. be secured to the plywood and studs to support a minimum of 150 pounds of weight
  - g. be grounded/bonded to the nearest earth ground
    - i. provide grounding of LAN equipment racks with one (1) #6 copper ground in metal conduit. Metal ground conductor to be run from LAN rack to nearest continuous cold water pipe or existing ground, ground resistance shall be 25 ohms or less and shall be verified by ground resistance test.
  - h. be keyed the same.

## **ADDENDUM 2**

### **APPENDIX 3**

#### **Delhi Unified School District (DUSD) E-Rate Year 2019 Fiber Cabling & Copper Cabling Specifications**

**Due to E-Rate bidding rules, DUSD will accept bids that specify items / components that are FUNCTIONAL EQUIVALENT to the part numbers listed in this document. Please refer to the section "APPROVAL OF SUBSTITUTIONS AND ALTERNATIVES FOR "FUNCTIONALLY EQUIVALENT" ITEMS" of the RFP for guidelines on "FUNCTIONAL EQUIVALENT"**

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#### **- GENERAL CABLING GUIDELINES -**

1. Caddy "J" hooks shall be installed every 5 feet, above suspended ceiling, to support all cabling.
2. All cabling above suspended ceiling shall be properly secured, but not attached to the support wire of T-bar ceiling, and not laid across ceiling boards.
3. All fiber cabling shall be installed in strict accordance to the cable manufacturer installation best practices.

#### **- FIBER CABLING SPECIFICATIONS -**

1. Indoor-Outdoor rated single mode fiber optic cables shall be used in all fiber optic installations. All fiber optic strands shall be terminated as specified.
2. The vendor shall leave a 15' slack loop, in addition to the fiber loop inside the enclosure, at both ends of the single mode fiber cable. The slack loop should be "dressed" in a fashion to fit inside the enclosure.
3. Inside conduits may be filled with existing cables and/or water. An additional quote will be required as an option if any additional underground work is required. Vendor shall be responsible for any/all repairs to damage caused by underground work.
4. Each end of the single mode fiber shall be fusion-spliced to Panduit pre-polished SC pigtails (part number F912D3-NM1Y) and terminated inside a Panduit 19" rack mount fiber enclosure (part number FRME4) on Panduit SC bulkheads (fiber adapter panels) (part number FAP6WBUDSCZ).
5. Sufficient Panduit fiber splice tray kit(s) shall be installed in the wiring closet(s) MDF to hold all fiber splices.
6. Sufficient Panduit blank fiber adapter panels (part number FAPB) shall be installed to cover unused fiber adapter panels..

#### **- FIBER CABLING TESTING, CERTIFICATION, & DOCUMENTATION -**

1. The vendor shall perform the required tests on the single mode fiber installation as identified in the TIA/EIA 568-B standard. Specifically,
2. The vendor shall test each fiber strand in a fiber optic link at TWO (2) wavelengths as identified in the TIA/EIA 568-B standard. This testing process shall be executed in one test operation without making or breaking connections (i.e. without moving tested units).
3. The vendor shall perform Tier 1 and Tier 2 tests on the single mode fiber installation in strict accordance to TIA TSB-140 guidelines.

## ADDENDUM 2

### APPENDIX 3

#### **Delhi Unified School District (DUSD) E-Rate Year 2019 Fiber Cabling & Copper Cabling Specifications**

**Due to E-Rate bidding rules, DUSD will accept bids that specify items / components that are FUNCTIONAL EQUIVALENT to the part numbers listed in this document. Please refer to the section "APPROVAL OF SUBSTITUTIONS AND ALTERNATIVES FOR "FUNCTIONALLY EQUIVALENT" ITEMS" of the RFP for guidelines on "FUNCTIONAL EQUIVALENT"**

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4. The vendor shall utilize launch and receive test cables in the OTDR test to measure the end-to-end loss of the optical fiber links.
5. The vendor shall provide a softcopy and a hardcopy of ALL fiber test results, the Power Meter Report, and the OTDR Report to DUSD upon completion of the job.
6. The vendor shall update a copy of the site drawing with information showing the fiber cabling paths and lengths, conduit paths and lengths. DUSD shall provide the vendor will a base drawing of the site in Visio or CAD format.
7. The fiber shall be labeled to easily identify location and quantity. Final labeling shall be determined during project kickoff meeting.
8. The customer reserves the right to have a representative present during all or a portion of the testing process. If the customer elects to be present during testing, test results will only be acceptable when conducted in the presence of the customer.

#### **- CATEGORY 6A CABLING SPECIFICATIONS -**

1. All Category 6A cabling shall be terminated to BLUE Panduit Mini-Com Category 6A T568B data jacks (part number CJX688TGBU).
2. All Category 6A cabling terminations at the MDF or IDF shall be mounted onto Panduit 48-port switch patching kit(s) with blue patch cords and strain relief bar. The Panduit part number for the switch patching kit is CPP48KFVPCBU. Each switch patching kit includes ONE (1) Panduit 48-port flush mount patch panel (part number CPP48FMVNSWBLY), Forty-Eight (48) 8-inch Cat 6 small diameter BLUE patch cords (part number UTP28SP8INBU), and ONE (1) Strain Relief Bar (part number SRB19D5BL).
3. All Category 6A cabling terminations at the specified locations shall be mounted on the appropriate faceplates or surface mount boxes as specified in this document.
4. All INSIDE Category 6A cabling shall be BLUE in color and shall be either General (part number 7133849 for riser cabling or part number 7133849 for plenum cabling) or Panduit cabling (part number PUR6A04BU-UG for riser cabling and/or PUP6004BU-UY for plenum cabling).
5. All OUTSIDE Category 6A cabling shall be BLACK in color.
6. Vendor shall provide ONE (1) 8-foot Category 6 patch cable (WHITE color) for each Category 6 cable drop that is specified under the "**NEW COPPER CABLING INSTALLATION SCOPE OF WORK**" section.



## **ADDENDUM 2**

### **APPENDIX 3**

#### **Delhi Unified School District (DUSD) E-Rate Year 2019 Fiber Cabling & Copper Cabling Specifications**

**Due to E-Rate bidding rules, DUSD will accept bids that specify items / components that are FUNCTIONAL EQUIVALENT to the part numbers listed in this document. Please refer to the section "APPROVAL OF SUBSTITUTIONS AND ALTERNATIVES FOR "FUNCTIONALLY EQUIVALENT" ITEMS" of the RFP for guidelines on "FUNCTIONAL EQUIVALENT"**

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#### **- COPPER CABLING TESTING, CERTIFICATION, & DOCUMENTATION -**

1. All Category 6A cabling shall be tested and cleared of all defects.
2. Category 6A cabling installations shall be tested and certified to meet TIA Category 6/6A per TIA/EIA-568-B.2-1 (Addendum #1 to TIA/EIA-568B.2).
3. Category 6A cabling installations shall be tested for wiremap, length, propagation delay, delay skew, DC loop resistance, insertion loss (IL), return loss (RL), NEXT, PSNEXT, ACR, PSACR, ELFEXT and PSELFEXT.
4. Soft and hard copy of the copper test results shall be provided to customer upon completion of the job.
5. All Category 6A cabling shall be labeled to easily identify location and port number.
6. The vendor shall update a copy of the site drawing with information showing the locations of the DATA cable terminations and station labels. The updated document shall be posted at the MDF/IDF and provided to customer in hardcopy and softcopy. Customer shall provide the vendor will a base drawing of the site in Visio or CAD format.
7. The customer reserves the right to have a representative present during all or a portion of the testing process. If the customer elects to be present during testing, test results will only be acceptable when conducted in the presence of the customer.

## ADDENDUM 2

### APPENDIX 3

**Delhi Unified School District (DUSD)  
Delhi Middle School  
Fiber Cabling (470-DW1A-19)  
Scope of Work**

#### PROVIDE SEPARATE QUOTATION

**Due to E-Rate bidding rules, DUSD will accept bids that specify items / components that are FUNCTIONAL EQUIVALENT to the part numbers listed in this document. Please refer to the section "APPROVAL OF SUBSTITUTIONS AND ALTERNATIVES FOR "FUNCTIONALLY EQUIVALENT" ITEMS" of the RFP for guidelines on "FUNCTIONAL EQUIVALENT"**

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#### - CONTINGENCY COST -

Vendor shall include a contingency for this cabling project 470-DW1A-19. The contingency shall be **10% of the total actual cost of the project**. The contingency shall be stated as a separate line item in the quotation. If work is needed to complete the project, it will be charged on a Time and Material basis. Funds remaining in the contingency account at the end of the project will be returned to the Delhi Unified School District (DUSD).

#### - CABLING PATHWAYS -

1. Vendors shall use existing pathways.

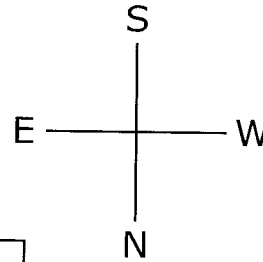
#### - FIBER CABLING SCOPE OF WORK -

1. Fiber to be pulled at the following locations:
  - a. 12-strand (6-pair) single mode shall be pulled from the Building A (MDF) to Building B IDF.
  - b. 12-strand (6-pair) single mode shall be pulled from the Building A (MDF) to Building C IDF.
  - c. 12-strand (6-pair) single mode shall be pulled from the Building A (MDF) to Building D IDF.
  - d. 12-strand (6-pair) single mode shall be pulled from the Building A (MDF) to Building E IDF.
2. Provide
  - a. **24** – 2m SC-LC duplex 9um single mode fiber patch cords
  - b. Sufficient Panduit pre-polished pigtailed to fusion splice all fiber strands at both ends of the single mode fiber cable in Buildings A, B, C, D, and E.
  - c. Sufficient Panduit SC bulkheads (fiber adapter patch panels) to hold all fiber strands at both ends of the single model fiber cable in Buildings A, B, C, D, and E.
  - d. Sufficient Panduit blank fiber adapter patch panels to cover all unused fiber adapter patch panels in Buildings A, B, C, D, and E.
  - e. Sufficient Panduit 19" rack mounted fiber enclosures in Buildings A, B, C, D, and E.
  - f. Sufficient Panduit splice tray kit(s) to hold all fiber splices in Buildings A, B, C, D, and E.

# ADDENDUM 2

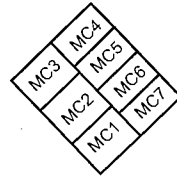
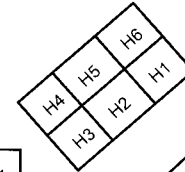
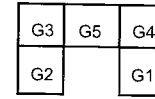
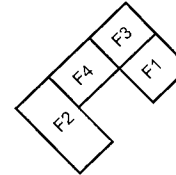
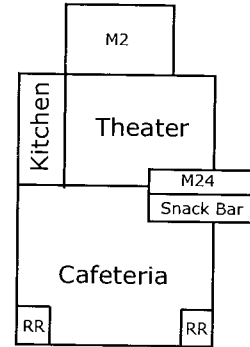
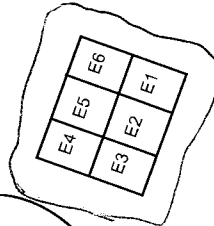
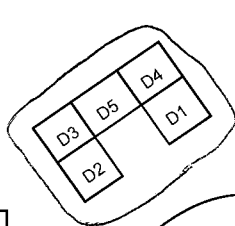
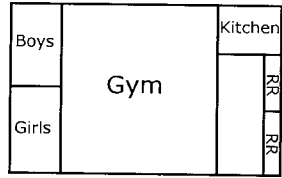
## Site Plan

**Welcome to  
Delhi High School**

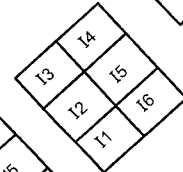
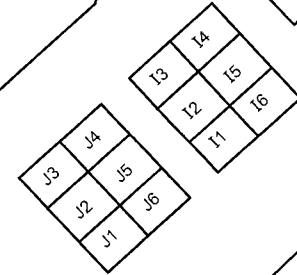
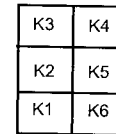
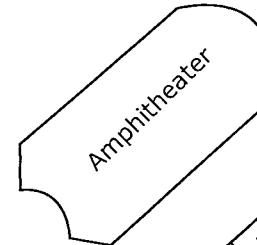
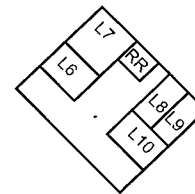
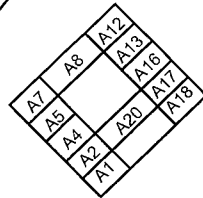
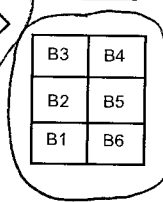
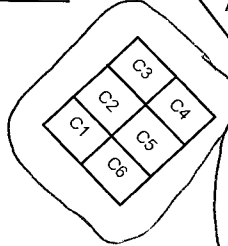
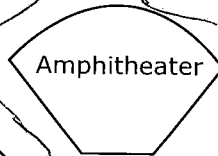


Soccer Fields

Tennis Courts



Soccer Fields



Parking Lot

Parking Lot

Parking Lot