

Lewis-Cass ISD
Brookside Network Cabling RFP 2019
61682 Dailey Rd, Cassopolis, MI 49031
Posted June 6, 2019
Deadline for Submission of Questions – June 21, 2019
Bid Response Due – June 28, 2019 at 12:00 P.M. EST

Introduction:

Lewis Cass ISD would like to add Category 6 Ethernet cable drops to support new access point locations. New CAT6 cabling, modular patch panels and appropriate endpoint terminations are required. Equivalent units must meet or exceed the specifications listed in the cabling section below.

Building Information:

Brookside Learning Center
61662 Dailey Rd., Cassopolis, Michigan 49031

Selection Criteria:

Lewis Cass ISD reserves the right to reject any or all proposals and select the proposal that offers the best overall benefit to the school district and its schools. Along with price, special consideration will be given to proposals of components that match current district network equipment brand and specifications as shown above.

Response Submission:

All responses to this RFP should be submitted via email no later than the date indicated at the top of the page and clearly marked "Brookside Network Cabling RFP 2019" in the subject line. Bids must be submitted to Russ Aspinwall – KRESA Network Team Manager @ russ.aspinwall@kresa.org . It is the respondent's responsibility to verify the receipt of the proposal before the due date and time.

Submission of Questions:

All inquiries must be submitted via e-mail to Russ Aspinwall – KRESA Network Team Manager @ russ.aspinwall@kresa.org. The last day for all inquiries is indicated at the top of this page. The District will not respond to any phone inquiries.

Other:

Oral or telephone bids will not be considered, nor will modifications of proposals by such communication be considered. The customer will not be liable for any cost incurred by the respondents in preparing responses to this RFP or negotiations associated with award of a contract.

Copper Cabling Specifications:

#1 SCOPE

- A. Installation of 56 (fifty six) Category 6 plenum cables for data locations with a 10 ft. service loop at the designated Device Cable Termination (DCT)
- B. Labeling patch panels and wall plate jacks with indelible labels/ink indicating closet location and unique identified port number per ANSI/TIA-606-C standards.
- C. Provide testing with documentation of cable runs per ANSI/TIA-568.2-D standards.
- D. The vendor must supply all supervision, tools, equipment (including ladders and lifts), hardware, material, transportation, and construction, and all other related services unless specific provisioning by the customer has been denoted.

- E. The vendor is responsible for providing all necessary working/building permits required under this contract, which includes, local, state, or federal permits, as needed.
- F. The vendor will be responsible for repair of all damage to the building due to the negligence of its workers.
- G. During the contract period the vendor will abide by all fire and safety regulations. District/School Security Policies must be observed at all times.
- H. Upon completion of any repair, replacement or installation activity, the vendor must provide evidence of the completion with a successful test on said system with results provided to owner in owner specified format (s).
- I. The vendor will be responsible for the prompt correction of all defects in the system.
- J. The vendor must leave the premises clean and neat including having all ceiling tiles in place after each work session.
- K. All work must be coordinated through the KRESA Network Team before the beginning of the installation work, and must be requested by the KRESA Network Team.
- L. Vendor must assume total responsibility for the actions of any/all subcontractors.
- M. Vendor must adhere to all standards and bulletins as listed in #4 – “REFERENCE STANDARDS AND BULLETINS”

#2 - INSTALLER QUALIFICATIONS

- A. The selected Vendor will provide the district with proof of qualified BICSI certifications. Please note that the district has the right to waive the installer qualification requirements if it so chooses, this is solely based on the districts discretion. All certifications shall be maintained throughout the life of the contract. These individuals will be ultimately responsible for district projects as assigned:
 - a. The project designer shall have a current BICSI RCDD and/or FOA CFOS/D Certification.
 - b. On-site vendor copper team leads shall have current BICSI Installer 2, Copper (INSTC), preferably a BICSI Technician (TECH) certification.
 - c. A minimum of one (1) on-site technician for copper plant installation shall have a current BICSI Installer 2, Copper (INSTC) certification.
- B. Should the RCDD assigned to district projects change during the life of this contract, the new RCDD assigned shall also submit prove of these certifications.
- C. The Vendor will be responsible for all fees and expenses associated with this training and certification.

#3 - PROJECT CLOSEOUT AND WARRANTY

- A. The horizontal communications cabling system installed shall be eligible for coverage by a manufacturer’s Limited Lifetime Warranty to the end user.
- B. Installer/Integrator shall provide labor, materials, and documentation in accordance with the manufacturer’s requirements necessary to ensure that the Owner will be furnished Manufacturer’s Warranty.
- C. The installed structured cabling system shall provide a warranty guaranteeing installed channel performance above the ANSI/TIA 568 requirements for Cat 6 cabling systems.

D. Installer shall ensure that the Owner receives the manufacturer issued project warranty certificate within 60 calendar days of warranty registration.

E. Test Reports shall be delivered to Owner within 30 days upon completion of project. One hard copy and one electronic copy via e-mail or a USB flash drive shall of color test reports for individual cable tests shall be delivered. Summary sheets are not acceptable.

F. As-Built Drawings shall be delivered to Owner within 30 days upon project completion. Provide (1) hard copies to owner and (1) electronic copy in PDF format on via e-mail or a USB flash drive. Drawings shall include all cable pathway routes and work area outlets nomenclature. Provide a laminated copy for each closet Work Area Space. Install the laminated copy in each MDF and IDF closets.

#4 - REFERENCE STANDARDS AND BULLETINS

ANSI/TIA-568.0-D: Generic Communications Cabling for Customer Premises.

ANSI/TIA-568.1-D: Commercial Building Telecommunications Cabling

ANSI/TIA-568.2-D: Balanced Twisted-Pair Telecommunications Cabling and Components

ANSI/TIA-568.3-D: Optical Fiber Cabling Components

ANSI/TIA-569-D: Commercial Building Standard for Telecommunications Pathways and Spaces.

ANSI/TIA-606-C: Administration Standard for the Commercial Telecommunications Infrastructure.

ANSI/TIA-607-C: Commercial Building Bonding and Grounding (Earthing) Requirements for Telecommunications.

ANSI/TIA-758-B: Customer-Owned Outside Plant Telecommunications Infrastructure Standard.

ANSI/TIA-942-A: Telecommunications Infrastructure Standard for Data Centers

ANSI/TIA-440-C: Fiber Optic Terminology

ANSI/TIA-1152-A: Requirements for Field Test Instruments and Measurements for Balanced Twisted-Pair Cabling

ANSI/TIA-4966: Telecommunications Infrastructure Standard for Educational Facilities

TSB-140: Additional Guidelines for Field-Testing Length, Loss and Polarity of Optical Fiber Cabling Systems

TSB-184-A: Guidelines for Supporting Power Delivery Over Balanced Twisted-Pair Cabling

TSB-190: Guidelines on Shared Pathways and Shared Sheaths

National Electrical Code (NEC) 2017

NFPA 70E 2018

H. BICSI – TDMM, Building Industries Consulting Services International, Telecommunications Distribution Methods Manual 13th edition

#5 - APPROVED MANUFACTURERS AND PART NUMBERS

All products shall be new and brought to the site in the original packaging. Electrical components shall bear all UL labels. Products shall be installed per manufacturer's instructions.

A. Acceptable Cat 6 copper cable manufacturers:

- a. Panduit
- b. General Cable

B. Acceptable Cat 6 copper patch panels, jacks, surface mount boxes and faceplates manufacturers and products:

Panduit CP48BLY 48-port all metal modular patch panel, 2 RU.

Panduit CJ688TGBU Category 6 RJ45 UTP Mini-Com Jack, Blue (standard data drops)

Panduit CJ688TGVL Category 6 RJ45 UTP Mini-Com Jack, Violet (Video Surveillance or card access drops)

Panduit CJ688TGYL Category 6 RJ45 UTP Mini-Com Jack, Yellow (Access point drops)

Panduit CBX1WH-A Surface mount box, 1-port, White.

Panduit CBX2WH-AY Surface mount box, 2-port, White.

Panduit CFPL2IWY Classic faceplate single gang with label, 2-port.

Panduit CFPL4IWY Classic faceplate single gang with label, 4-port.

#6 - STATION CABLING

A. Category 6 Unshielded Twisted Pair:

- a. 100 ohm, Category 6, 24 AWG, 4-pair unshielded twisted pair, CMP rated.
- b. Color: Blue.
- c. Electrical Characteristics: Characterized to 250 MHz.

#7 - PATHWAYS FOR COMMUNICATION SYSTEM

- A. Bidder is responsible for inspecting all existing structures, cableways, IDF/MDFs, wiring closets and fiber infrastructure to determine if they are adequate for the purpose. Cableways must be utilized where available.
- B. If a sleeve does not exist in the existing corridor walls a new (minimum size is 1") conduit should be installed for penetrations through walls or floors and shall be sealed with intumescent firestop system in accordance with the UL testing detail. Grout mixture or firestop system should be used to seal the perimeter of the new conduit installed in the corridor walls.
- C. Cabling shall not be laid on ceiling grid structure, ceiling tiles or supported on any structure not specifically designed for supporting cables. If a cable tray is not present, provide cable supports at intervals of every 4-6 feet. Cable supports shall be "J" hooks or other supporting devices with a minimum 1-inch cable resting surface. Cable support devices shall be independently suspended from or attached to building structure or walls. Cable sag between supports shall not exceed 12 inches. All cables shall be neatly bundled and secured with appropriately rated fasteners.
- D. Cables should not be installed within 4-feet of transformers/motors, when running parallel of power conduits or fluorescent light fixtures maintain a 1 foot separation.
- E. Velcro Tie Wraps: Velcro tie wraps shall be used for bundle cables in pathways and in MDF and IDF closets. **NYLON TIE WRAPS (ZIP TIES) ARE NOT PERMITTED** for bundling cables either temporarily or permanently. If found during any inspections, cables WILL be required to be removed and new cable re-pulled at contractor's expense.

#8 - MODULAR JACKS FOR WORKSTATION LOCATIONS

A. Category 6 Modular Jacks:

- a. 8-position modular jack, Category 6, IDC terminals, T568A/B wiring scheme.
- b. Component-rated jack.
- c. Each Jack: Identified on its face as CAT 6.
- d. Color (Colors to be verified with owner before ordering):
 - Blue on both ends for standard data drops
 - Yellow on both ends for all access point drops.
 - Purple on both ends for video surveillance cameras and access control devices.

#9 - MODULAR PATCH PANELS

A. Modular Patch Panels:

- a. 48-port, 1RU, flat metal, patch panel, empty.

Fiber Cabling Specifications:

#1 SCOPE

A. Brookside MDF to new Brookside IDF (Blue path in drawing below)

- a. Approximately 250 total foot of 12 strand single mode OS2, armored fiber from Brookside MDF to the new IDF
- b. Indoor fiber must be plenum rated

- c. All terminations shall be SC
 - d. All splices shall be fusion spliced only, no mechanical splices.
- B. Labeling patch panels and wall plate jacks with indelible labels/ink indicating closet location and unique identified port number per ANSI/TIA-606-C standards.
- C. Provide testing with documentation of cable runs per ANSI/TIA-568.3-D standards.
- D. The vendor must supply all supervision, tools, equipment (including ladders and lifts), hardware, material, transportation, and construction, and all other related services unless specific provisioning by the customer has been denoted.
- E. The vendor is responsible for providing all necessary working/building permits required under this contract, which includes, local, state, or federal permits, as needed.
- F. The vendor will be responsible for repair of all damage to the buildings and grounds due to the negligence of its workers.
- G. During the contract period the vendor will abide by all fire and safety regulations. District/School Security Policies must be observed at all times.
- H. Upon completion of any repair, replacement or installation activity, the vendor must provide evidence of the completion with a successful test on said system with results provided to owner in owner specified format (s).
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- a. The project designer shall have a current BICSI RCDD and/or FOA CFOS/D Certification.
 - b. On-site vendor fiber team leads shall have current BICSI Installer 2, Optical Fiber (INSTF), preferably a BICSI Technician (TECH) certification.
 - c. A minimum of one (1) on-site technician for inside plant and outside plant fiber installation shall have a current BICSI Installer 2, Optical Fiber (INSTF) certification.
- B. Should the RCDD assigned to district projects change during the life of this contract, the new RCDD assigned shall also submit prove of these certifications.
- C. The Vendor will be responsible for all fees and expenses associated with this training and certification.

#3 - PROJECT CLOSEOUT AND WARRANTY

- A. The fiber optic cabling system installed shall be eligible for coverage by a manufacturer's Limited Lifetime Warranty to the end user.
- B. Installer/Integrator shall provide labor, materials, and documentation in accordance with the manufacturer's requirements necessary to ensure that the Owner will be furnished Manufacturer's Warranty.
- C. Installer shall ensure that the Owner receives the manufacturer issued project warranty certificate within 60 calendar days of warranty registration.
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- ANSI/TIA-568.3-D: Optical Fiber Cabling and Components Standard
- ANSI/TIA-569-D: Commercial Building Standard for Telecommunications Pathways and Spaces.
- ANSI/TIA-606-C: Administration Standard for the Commercial Telecommunications Infrastructure.
- ANSI/TIA-607-C: Commercial Building Bonding and Grounding (Earthing) Requirements for Telecommunications.
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- TSB-184-A: Guidelines for Supporting Power Delivery Over Balanced Twisted-Pair Cabling
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#5 - APPROVED MANUFACTURERS AND PART NUMBERS

All products shall be new and brought to the site in the original packaging. Electrical components shall bear all UL labels. Products shall be installed per manufacturer's instructions.

- a. Corning, Panduit or General armored fiber cable only
- b. Fiber Optic rack mounted splice trays are to be provided by bidder.