INVITATION TO BID

Office of the Hamblen County Mayor
511 West Second North Street
Morristown, TN 37814

ITB TIMELINE: Times listed below are in Eastern Standard Time.

Date Issued:	Monday, June 30, 2025
ITB Title:	Low Voltage Package for Hamblen County Health Department
Project Question Deadline:	Wednesday, July 16, 2025 @ 4 p.m. *All correspondence and communication must be via email to the designated Hamblen County point-of-contact listed on page 4 of this document. Questions submitted by telephone will not be answered. Questions submitted after this deadline will not be answered.*
Posting Responses to Questions:	Wednesday, July 23, 2025 @ 5 p.m.
Bid Submission Deadline Date & Time:	Wednesday, August 6, 2025 @ 2 p.m. *If the Hamblen County Courthouse is closed for business at the time scheduled for bid opening, for whatever reason, bids will be accepted and opened on the next business day of the County, at the originally scheduled hour.*
Bid Submission Opening Location:	Hamblen County Courthouse, West Wing Conference Room, 1st Floor, Administrative Building
Project Award:	Thursday, August 21, 2025 @ 5 p.m.

 Bidder Initials_____

INTRODUCTION:

Hamblen County (hereafter referred to as "County") is soliciting sealed, competitive bids for the low voltage package for its new Health Department located at 1570 BUFFALO TRAIL, MORRISTOWN, TN 37814.

The Contractor shall be bonded and insured for no less than $1 million for General Liability, Auto Liability, and Workers Compensation with statutory limits including $1,000,000 Part B Employers Liability.

Contractor Shall be Responsible for Materials Until Installation is Complete.

The County's selection process will be based on proposers' experience with this size of project, meeting project specifications and competitive pricing.

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 Bidder Initials_____

I. SCOPE OF WORK

Furnish and install low voltage cabling, devices, terminations, patch panels, racks, termination blocks, etc. for all telephone (voice) and computer (data) systems. The contractor shall provide testing and commissioning of these systems. Contractor shall work closely with the Owner's appointed representative for the installation and commissioning of the low voltage systems.

Project #1 is the new health department space and adjacent public hallways. This project is part of a Tennessee Department of Health capital grant program that is overseen by TDH. Project #2 is approximately 9,000 square feet of office space that will house the UT Agriculture Extension Service and other county offices.

The contractor shall supply wiring for the following low voltage (communications) systems:

- Security Camera System
- Audio/Video System
- Intercom System
- VOIP Telephone System
- Computer Network
- Wireless Network

The equipment for these low voltage systems is being furnished and installed by others i.e. telephones, computers, a/v, security cameras, intercom system and wireless devices.

The equipment, wiring and installation of the following systems are excluded from the low voltage package scope of work.

- Fire Alarm System

I. SPECIFICATIONS

PRODUCTS

1.0 PATHWAYS

A. General Requirements: Comply with TIA/EIA-569-A.

B. Cable Support: NRTL labeled. Cable support brackets shall be designed to prevent degradation of cable performance and pinch points that could damage cable. Cable tie slots fasten cable ties to brackets.

1. Comply with NFPA 70 and UL 2043 for fire-resistant and low-smoke-producing characteristics.
2. Support brackets with cable tie slots for fastening cable ties to brackets.
3. Lacing bars, spools, J-hooks, and D-rings.
4. Straps and other devices.

C. Cable Trays:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Cable Management Solutions, Inc.
b. Cablofil Inc.
c. Cooper B-Line, Inc.
d. Cope - Tyco/Allied Tube & Conduit.
e. GS Metals Corp.

2. Cable Tray Materials: Basket type metal, suitable for indoors and protected against corrosion by electroplated zinc galvanizing, complying with ASTM B 633, Type 1, not less than 0.000472 inch (0.012 mm) thick or hot-dip galvanizing, complying with ASTM A 123/A 123M, Grade 0.55, not less than 0.002165 inch (0.055 mm) thick.

D. Conduit and Boxes: Comply with requirements in Division 26 Section "Raceway and Boxes for Electrical Systems." Flexible metal conduit shall not be used.

1. Any outlet boxes provided by low voltage contractors shall be no smaller than 2 inches (50 mm) wide, 3 inches (75 mm) high, and 2-1/2 inches (64 mm) deep.

2.2 BACKBOARDS

A. Backboards: Plywood, fire-retardant treated, 3/4 thick and of size noted and shown on the electrical drawings. Comply with requirements for plywood backing panels specified in the architectural and Division 27 Section 270500 specifications in the project manual.

2.3 EQUIPMENT FRAMES

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. ADC.
2. Aim Electronics; a brand of Emerson Electric Co.
3. AMP; a Tyco International Ltd. company.
4. Cooper B-Line, Inc.
5. Hubbell Premise Wiring.
6. KRONE Incorporated.
7. Leviton Voice & Data Division.
8. Middle Atlantic Products, Inc.
9. Nordex/CDT; a subsidiary of Cable Design Technologies.
10. Ortronics, Inc.

11. Panduit Corp.
12. Siemon Co. (The).

B. General Frame Requirements:

Distribution Frames: Freestanding four post, modular-steel units designed for telecommunications terminal support and coordinated with dimensions of units to be supported. **Provide a minimum of two distribution frames in the I.T. Closet (Room 135)**. Module Dimension: Width compatible with EIA 310 standard, 19-inch (480-mm) panel mounting.
Finish: Manufacturer's standard, baked-polyester powder coat.

Floor-Mounted Racks: Modular-type, aluminum construction.
Vertical and horizontal cable management channels, top and bottom cable troughs, grounding lug, and a power strip.
Baked-polyester powder coat finish.

Cage nuts should be used to mount equipment in racks rather than threaded holes.

D. Cable Management for Equipment Frames:

1. Metal, with integral wire retaining fingers.
2. Baked-polyester powder coat finish.
3. Vertical cable management panels shall have front and rear channels, with covers.
4. Provide horizontal crossover cable manager at the top of each relay rack, with a minimum height of two rack units each.

E. Patch Panel: Modular panels housing multiple-numbered jack units with IDC-type connectors at each jack for permanent termination of pair groups of installed cables.

Number of Jacks per Field: One for each four-pair UTP cable installed plus 20% spares and blank positions.

2.4 POWER STRIPS

A. Power Strips: Comply with UL 1363.

1. Rack mounting, vertically-oriented.
2. Six, 20-A, 120-V ac, NEMA WD 6, Configuration 5-20R receptacles.
3. LED indicator lights for power and protection status.
4. LED indicator lights for reverse polarity and open outlet ground.
5. Circuit Breaker and Thermal Fusing: Unit continues to supply power if protection is lost.
6. Cord connected with 15-foot (4.5-m) line cord.
7. Rocker-type on-off switch, illuminated when in on position.

8. Peak Single-Impulse Surge Current Rating: 33 kA per phase.
9. Protection modes shall be line to neutral, line to ground, and neutral to ground. UL 1449 clamping voltage for all 3 modes shall be not more than 330 V.

2.5 GROUNDING

A. Comply with requirements in Division 26 Section "Grounding and Bonding for Electrical Systems." for grounding conductors and connectors.

B. Telecommunications Main Grounding Busbar (TMGB and TMG):

1. Connectors: Mechanical type, cast silicon bronze, solderless compression-type wire terminals, and long-barrel, two-bolt connection to ground bus bar.
2. Ground Bus Bar: Copper, minimum 1/4 inch thick as detailed on drawing E4.1.
3. Stand-Off Insulators: Comply with UL 891 for use in switchboards, 600 V.

Lexan or PVC, impulse tested at 5000 V. C. Comply with ANSI-J-STD-607-A.

2.6 LABELING

A. Comply with TIA/EIA-606-A and UL 969 for a system of labeling materials, including label stocks, laminating adhesives, and inks used by label printers.

PART 3 - EXECUTION

3.1 ENTRANCE FACILITIES

A. Contact telecommunications service provider and arrange for installation of demarcation point, protected entrance terminals, and a housing when so directed by service provider.

B. New underground pathways shall comply with recommendations in TIA/EIA-569-A, "Entrance
Facilities" Article.

3.2 Install underground entrance pathway complying with Division 26.

A. Comply with NECA 1.

B. Comply with BICSI TDMM for layout and installation of communications equipment rooms.

C. Bundle, lace, and train conductors and cables to terminal points without exceeding manufacturer's limitations on bending radii. Install lacing bars and distribution spools.

3.3 FIRESTOPPING

A. Comply with TIA/EIA-569-A, Annex A, "Firestopping."

B. Comply with BICSI TDMM, "Firestopping Systems" Article.

3.4 GROUNDING

A. Install grounding according to BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.

B. Comply with ANSI-J-STD-607-A.

C. Locate grounding bus bar to minimize the length of bonding conductors. Fasten to wall allowing at least 2-inch (50-mm) clearance behind the grounding bus bar. Connect grounding bus bar with a minimum No. 4 AWG grounding electrode conductor from grounding bus bar to suitable electrical building ground.

D. Bond metallic equipment to the grounding bus bar, using not smaller than No. 6 AWG equipment grounding conductor.

1. Bond the shield of shielded cable to the grounding bus bar in communications rooms and spaces.

3.5 IDENTIFICATION

A. Identify system components, wiring, and cabling complying with TIA/EIA-606-A. Comply with requirements in Division 26. Comply with requirements in Division 09 Section "Interior Painting" for painting backboards. For fire-resistant plywood, do not paint over manufacturer's label.

B. Labels shall be preprinted or computer-printed type.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Construction Contract apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. UTP cabling.
2. Optical fiber cabling.
3. Coaxial cable.
4. Multiuser telecommunications outlet assemblies.
5. Cable connecting hardware, patch panels, and cross-connects.
6. Telecommunications outlet/connectors.
7. Cabling system identification products.
8. Cable management system.

1.3 DEFINITIONS

A. BICSI: Building Industry Consulting Service International.

B. EMI: Electromagnetic interference.

C. IDC: Insulation displacement connector.

D. LAN: Local area network.

E. MUTOA: Multiuser telecommunications outlet assembly, a grouping in one location of several telecommunications' outlet/connectors.

F. Outlet/Connectors: A connecting device in the work area on which cable or outlet cable terminates.

G. RCDD: Registered Communications Distribution Designer.

H. UTP: Unshielded twisted pair.

1.4 CABLING DESCRIPTION

A. Cable and its connecting hardware provide the means of transporting signals between the telecommunications outlet/connector and the cross-connect located in the

communications equipment room. This cabling and its connecting hardware are called "permanent link," a term that is used in the testing protocols.

1. TIA/EIA-568-B.1 requires that a minimum of one dedicated Voice port and three telecommunications outlet/connectors be installed for each work area.
2. Cabling shall contain no more than one transition point or consolidation point between the cross-connect and the telecommunications outlet/connector.
3. Bridged taps and splices shall not be installed in the cabling.
4. Splitters shall not be installed as part of the optical fiber cabling.

B. The maximum allowable cable length is 295 feet (90 m). This maximum allowable length does not include an allowance for the length of 16 feet (4.9 m) to the workstation equipment. The maximum allowable length does not include an allowance for the length of 16 feet (4.9 m) in the cross-connect.

1.5 SUBMITTALS

A. Shop Drawings:

1. System Labeling Schedules: Electronic copy of labeling schedules, in software and format selected by Owner.
2. Cabling administration drawings and printouts.
3. Cross-connects and patch panels. Detail mounting assemblies and show elevations and physical relationship between the installed components.
4. Cable tray layout, showing cable tray route to scale, with relationship between the tray and adjacent structural, electrical, and mechanical elements. Include the following: a. Vertical and offsets and transitions.
   b. Clearances for access above and to side of cable trays.
   c. Vertical elevation of cable trays above the floor or bottom of ceiling structure.
   d. Load calculations to show dead and live loads as not exceeding manufacturer's rating for tray and its support elements.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Test cables upon receipt at Project site.

1. Test optical fiber cables to determine the continuity of the strand end to end. Use optical fiber flashlight or optical loss test set.
2. Test optical fiber cables while on reels. Use an optical time domain reflectometer to verify the cable length and locate cable defects, splices, and connector; including the loss value of each. Retain test data and include the record in maintenance data.
3. Test each pair of UTP cable for open and short circuits.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install cables and connecting materials until wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

1.8 COORDINATION

A. Coordinate layout and installation of audio visual, intercom, security, surveillance, telecommunications pathways and cabling with Owner's telecommunications and LAN equipment and service suppliers.

B. Coordinate telecommunications outlet/connector locations with location of power receptacles at each work area.

1.9 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Patch-Panel Units: 20% of project total of each type.
2. Connecting Blocks: 20% of project total of each type.
3. Device Plates: 20% of project total of each type.

PART 2 - PRODUCTS

2.1 UTP CABLE

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Belden CDT Inc.; Electronics Division.
2. Berk-Tek; a Nexans company.
3. CommScope, Inc.
4. Draka USA.
5. Genesis Cable Products; Honeywell International, Inc.
6. KRONE Incorporated.
7. Mohawk; a division of Belden CDT.
8. Nordex/CDT; a subsidiary of Cable Design Technologies.
9. Superior Essex Inc.
10. SYSTIMAX Solutions; a CommScope, Inc. brand.

11. 3M.
12. Tyco Electronics/AMP Netconnect; Tyco International Ltd.

B. Description: 100-ohm, 4-pair UTP, formed into 25-pair, binder groups covered with a thermoplastic jacket.

1. Comply with ICEA S-90-661 for mechanical properties.
2. Comply with TIA/EIA-568-B.1 for performance specifications.
3. Comply with TIA/EIA-568-B.2, Category 6.
4. Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 444 and NFPA 70 for the following types:
a. Communications, Plenum Rated: Type CMP, complying with NFPA 262.

2.2 UTP CABLE HARDWARE

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. American Technology Systems Industries, Inc.
2. Dynacom Corporation.
3. Hubbell Premise Wiring.
4. KRONE Incorporated.
5. Leviton Voice & Data Division.
6. Molex Premise Networks; a division of Molex, Inc.
7. Nordex/CDT; a subsidiary of Cable Design Technologies.
8. Panduit Corp.
9. Siemon Co. (The).
10. Tyco Electronics/AMP Netconnect; Tyco International Ltd.

B. General Requirements for Cable Connecting Hardware: Comply with TIA/EIA-568-B.2, IDC type, with modules designed for punch-down caps or tools. Cables shall be terminated with connecting hardware of same category or higher.

C. Patch Panel: Modular panels housing multiple-numbered jack units with IDC-type connectors at each jack for permanent termination of pair groups of installed cables.

1. Number of Jacks per Field: One for each four-pair UTP cable installed plus 20% spares and blank positions.

D. Jacks and Jack Assemblies: Modular, color-coded, eight-position modular receptacle units with integral IDC-type terminals.

2.3 OPTICAL FIBER CABLE

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Berk-Tek; a Nexans company.
2. CommScope, Inc.
3. Corning Cable Systems.
4. General Cable Technologies Corporation.
5. Mohawk; a division of Belden CDT.
6. Nordex/CDT; a subsidiary of Cable Design Technologies.
7. Optical Connectivity Solutions Division; Emerson Network Power.
8. Superior Essex Inc.
9. SYSTIMAX Solutions; a CommScope, Inc. brand.
10. 3M.
11. Tyco Electronics/AMP Netconnect; Tyco International Ltd.

B. Description: Singlemode, 12-fiber, tight buffer, optical fiber cable.*ADD1

1. Comply with ICEA S-83-596 for mechanical properties.
2. Comply with TIA/EIA-568-B.3 for performance specifications.
3. Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 444, UL 1651, and NFPA 70 for the following types:
    a. Plenum Rated, Nonconductive: Type OFNP, complying with NFPA 262.
    b. Riser Rated, Nonconductive: Type OFNR, complying with UL 1666.

4. Conductive cable shall be armored type.
5. Maximum Attenuation: 3.50 dB/km at 850 nm; 1.5 dB/km at 1300 nm.
6. Minimum Modal Bandwidth: 160 MHz-km at 850 nm; 500 MHz-km at 1300 nm.

C. Jacket:

1. Jacket Color: Yellow ~~Orange~~.
2. Cable cordage jacket, fiber, unit, and group color shall be according to TIA/EIA-598-B.
3. Imprinted with fiber count, fiber type, and aggregate length at regular intervals not to exceed 40 inches (1000 mm).

2.4 OPTICAL FIBER CABLE HARDWARE

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. ADC.
2. American Technology Systems Industries, Inc.
3. Berk-Tek; a Nexans company.
4. Corning Cable Systems.
5. Dynacom Corporation.
6. Hubbell Premise Wiring.
7. Molex Premise Networks; a division of Molex, Inc.
8. Nordex/CDT; a subsidiary of Cable Design Technologies.
9. Optical Connectivity Solutions Division; Emerson Network Power.
10. Siemon Co. (The).

B. Patch Cords: Factory-made, dual-fiber cables in 36-inch (900-mm) lengths.

C. Cable Connecting Hardware:

1. Comply with Optical Fiber Connector Intermate ability Standards (FOCIS) specifications of TIA/EIA-604-2, TIA/EIA-604-3-A, and TIA/EIA-604-12. Comply with TIA/EIA-568B.3.
2. Quick-connect, simplex and duplex, connectors. Insertion loss not more than 0.75 dB.

3. Type SFF connectors may be used in termination racks, panels, and equipment packages.

2.5 TELECOMMUNICATIONS OUTLET/CONNECTORS

A. Jacks: 100-ohm, balanced, twisted-pair connector; four-pair, eight-position modular. Comply with TIA/EIA-568-B.1.

B. Workstation Outlets: Four-port-connector assemblies mounted in single faceplate.

1. Faceplate: Four port Stainless Steel.
2. For use with snap-in jacks accommodating any combination of UTP jacks. Provide a minimum of three network data jacks per workstation outlet and one jack for VOIP telephone system.
3. Legend: Clear-labels.
4. Provide blank in un-used openings.

2.6 IDENTIFICATION PRODUCTS

A. Comply with TIA/EIA-606-A and UL 969 for labeling materials, including label stocks, laminating adhesives, and inks used by label printers.

B. Comply with requirements in Division 26 Section "Identification for Electrical Systems."

2.7 SOURCE QUALITY CONTROL

A. Factory test UTP and optical fiber cables on reels according to TIA/EIA-568-B.1.

B. Factory test UTP cables according to TIA/EIA-568-B.2.

C. Cable will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 ENTRANCE FACILITIES

A. Coordinate backbone cabling with the protectors and demarcation point provided by communications service provider.

3.2 WIRING METHODS

A. Wiring Method: Install cables in raceways and cable trays except within consoles, cabinets, desks, and counters and except in accessible ceiling spaces, where unenclosed wiring method may be used. Conceal raceway and cables except in unfinished spaces.

1. Install plenum cable in all spaces whether plenum or not.

2. Comply with requirements for raceways and boxes specified in Division 26 Section "Raceway and Boxes for Electrical Systems."

B. Wiring Method: Conceal conductors and cables in accessible ceilings, walls, and floors where possible.

C. Wiring within Enclosures: Bundle, lace, and train cables to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools.

3.3 INSTALLATION OF CABLES

A. Comply with NECA 1.

B. General Requirements for Cabling:

1. Comply with TIA/EIA-568-B.1.

2. Comply with BICSI ITSIM, Ch. 6, "Cable Termination Practices."
3. Do not use consolidation point as a cross-connect point.

4. Terminate conductors; no cable shall contain unterminated elements. Make terminations only at indicated outlets, terminals, cross-connects, and patch panels.
5. Cables may not be spliced. Secure and support cables at intervals not exceeding 30 inches (760 mm) and not more than 6 inches (150 mm) from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
6. Install lacing bars to restrain cables, to prevent straining connections, and to prevent bending cables to smaller radii than minimums recommended by manufacturer.
7. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIM, "Cabling Termination Practices" Chapter. Install lacing bars and distribution spools.
8. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
9. Cold-Weather Installation: Bring cable to room temperature before de-reeling. Heat lamps shall not be used for heating.
10. In the communications equipment room, install a 10-foot- (3-m-) long service loop on each end of cable.
11. Pulling Cable: Comply with BICSI ITSIM, Ch. 4, "Pulling Cable." Monitor cable pull tensions.

C. UTP Cable Installation:

1. Comply with TIA/EIA-568-B.2.
2. Do not untwist UTP cables more than 1/2 inch (12 mm) from the point of termination to maintain cable geometry.
3. Cable jacket color code should be as follows:
a. VoIP shall be Blue
b. Data shall be Black
c. Security shall be Yellow
d. Access Control shall be Purple
e. Intercom Speakers shall be Gray
f. Consult the owner for color of other systems not covered.

D. Optical Fiber Cable Installation:

1. Comply with TIA/EIA-568-B.3.
2. Cable may be terminated on connecting hardware that is rack or cabinet mounted.

E. Open-Cable Installation:

1. Install cabling with and vertical cable guides in telecommunications spaces with terminating hardware and interconnection equipment.
2. Suspend UTP cable not in a wireway or pathway a minimum of 8 inches (200 mm) above ceilings by cable supports not more than 60 inches (1524 mm) apart.
3. Cable shall not be run through structural members or in contact with pipes, ducts, or other potentially damaging items.

F. Group connecting hardware for cables into separate logical fields.

G. Separation from EMI Sources:

1. Comply with BICSI TDMM and TIA/EIA-569-B for separating unshielded copper voice and data communication cable from potential EMI sources, including electrical power lines and equipment.
2. Separation between open communications cables or cables in nonmetallic raceways and unshielded power conductors and electrical equipment shall be as follows:

a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 5 inches (127 mm).
b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 12 inches (300 mm).
c. Electrical Equipment Rating More Than 5 kVA: A minimum of 24 inches (610 mm). 3. Separation between communications cables in grounded metallic raceways and unshielded power lines or electrical equipment shall be as follows:

1) Electrical Equipment Rating Less Than 2 kVA: A minimum of 2-1/2 inches (64 mm).
2) Electrical Equipment Rating between 2 and 5 kVA: A minimum of 6 inches (150 mm).
3) Electrical Equipment Rating More Than 5 kVA: A minimum of 12 inches (300 mm).

3. Separation between communications cables in grounded metallic raceways and power lines and electrical equipment located in grounded metallic conduits or enclosures shall be as follows:

a. Electrical Equipment Rating Less Than 2 kVA: No requirement.

b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 3 inches (76 mm).
c. Electrical Equipment Rating More Than 5 kVA: A minimum of 6 inches (150 mm).

4. Separation between Communications Cables and Electrical Motors and Transformers, 5 kVA or HP and Larger: A minimum of 48 inches (1200 mm).

5. Separation between Communications Cables and Fluorescent Fixtures: A minimum of 5 inches (127 mm).

3.4 FIRESTOPPING

A. Comply with requirements in Division 07 Section "Penetration Firestopping."

B. Comply with TIA/EIA-569-B, Annex A, "Firestopping."

C. Comply with BICSI TDMM, "Firestopping Systems" Article.

3.5 GROUNDING

A. Install grounding according to BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.

B. Comply with ANSI-J-STD-607-A.

C. Locate grounding bus bar to minimize the length of bonding conductors. Fasten to wall allowing at least 2-inch (50-mm) clearance behind the grounding bus bar. Connect grounding bus bar with a minimum No. 4 AWG grounding electrode conductor from grounding bus bar to suitable electrical building ground.

D. Bond metallic equipment to the grounding bus bar, using not smaller than No. 6 AWG equipment grounding conductor.

3.6 IDENTIFICATION

A. Identify system components, wiring, and cabling complying with TIA/EIA-606-A. Comply with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."

1. Color-code cross-connect fields. Apply colors to voice and data service backboards, connections, covers, and labels.

B. Using cable management system software, develop Cabling Administration Drawings for system identification, testing, and management. Use unique, alphanumeric designation for each cable and label cable, jacks, connectors, and terminals to which it connects with same designation. At completion, cable and asset management software shall reflect as-built conditions.

C. Cable Schedule: Post in prominent location in each equipment room and wiring closet. List incoming and outgoing cables and their designations, origins, and destinations. Protect with rigid

frame and clear plastic cover. Furnish an electronic copy of final comprehensive schedules for Project.

D. Cabling Administration Drawings: Show building floor plans with cabling administration-point labeling. Identify labeling convention and show labels for telecommunications closets, backbone pathways and cables, entrance pathways and cables, terminal hardware and positions, cables, work areas and workstation terminal positions, grounding buses and pathways, and equipment grounding conductors. Follow convention of TIA/EIA-606-A. Furnish electronic record of all drawings, in software and format selected by Owner. E. Cable and Wire Identification:

1. Label each cable within 4 inches (100 mm) of each termination and tap, where it is accessible in a cabinet or junction or outlet box, and elsewhere as indicated.
2. Each wire connected to building-mounted devices is not required to be numbered at device if color of wire is consistent with associated wire connected and numbered within panel or cabinet.
3. Exposed Cables and Cables in Cable Trays and Wire Troughs: Label each cable at intervals not exceeding 15 feet (4.5 m).
4. Label each terminal strip and screw terminal in each cabinet, rack, or panel.

a. Individually number wiring conductors connected to terminal strips, and identify each cable or wiring group being extended from a panel or cabinet to a building mounted device shall be identified with name and number of particular device as shown.
b. Label each unit and field within distribution racks and frames.

5. Identification within Connector Fields in Equipment Rooms and Wiring Closets: Label each connector and each discrete unit of cable-terminating and connecting hardware. Where similar jacks and plugs are used for both voice and data communication cabling, use a different color for jacks and plugs of each service.
6. Uniquely identify and label work area cables extending from the MUTOA to the work area. These cables may not exceed the length stated on the MUTOA label.

F. Labels shall be preprinted or computer-printed type with printing area and font color that contrasts with cable jacket color but still complies with requirements in TIA/EIA-606-A.

1. Cables use flexible vinyl or polyester that flexes as cables are bent.

3.7 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:

1. Visually inspect UTP and optical fiber cable jacket materials for NRTL certification markings. Inspect cabling terminations in communications equipment rooms for compliance with color-coding for pin assignments and inspect cabling connections for compliance with TIA/EIA-568-B.1.

2. Visually confirm Category 6, marking of outlets, cover plates, outlet/connectors, and patch panels.
3. Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cords, and labeling of all components.

4. Optical Fiber Cable Tests:

a. Test instruments shall meet or exceed applicable requirements in TIA/EIA-568-B.1. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
b. Link End-to-End Attenuation Tests:

1) and multimode backbone link measurements: Test at 850 or 1300 nm in 1 direction according to TIA/EIA-526-14-A, Method B, One Reference Jumper.
2) Attenuation test results for backbone links shall be less than 2.0 dB. Attenuation test results shall be less than that calculated according to equation in TIA/EIA-568-B.1.

5. UTP Performance Tests:

a. Test for each outlet and MUTOA. Perform the following tests according to TIA/EIA-568-B.1 and TIA/EIA-568-B.2:

1) Wire map.
2) Length (physical vs. electrical, and length requirements).
3) Insertion loss.
4) Near-end crosstalk (NEXT) loss.
5) Power sum near-end crosstalk (PSNEXT) loss.
6) Equal-level far-end crosstalk (ELFEXT).
7) Power sum equal-level far-end crosstalk (PSELFEXT).
8) Return loss.
9) Propagation delay

10) Delay skew.

6. Optical Fiber Cable Performance Tests: Perform optical fiber end-to-end link tests according to TIA/EIA-568-B.1 and TIA/EIA-568-B.3.
7. Final Verification Tests: Perform verification tests for UTP and optical fiber systems after the complete communications cabling and workstation outlet/connectors are installed.

 Bidder Initials_____

a. Voice Tests: These tests assume that dial tone service has been installed. Connect to the network interface device at the demarcation point. Go off-hook and listen and receive a dial tone. If a test number is available, make and receive a local, long distance, and digital subscription line telephone call.

b. Data Tests: These tests assume the Information Technology Staff has a network installed and is available to assist with testing. Connect to the network interface device at the demarcation point. Log onto the network to ensure proper connection to the network.

C. Document data for each measurement. Data for submittals shall be printed in a summary report that is formatted similar to Table 10.1 in BICSI TDMM, or transferred from the instrument to the computer, saved as text files, and printed and submitted.

D. End-to-end cabling will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

END OF SECTION

 Bidder Initials_____

GENERAL INFORMATION:

Project Administrator:

The County Finance Department is the sole point of contact for this procurement. All communication between prospective bidders and the County upon receipt of this ITB shall be in email form to the County Finance Department as follows:

Barbara Horton
511 West Second North Street
Morristown, TN 37814
Telephone: 423-586-1931
Email: barbara.horton@co.hamblen.tn.us
(*DO NOT submit bids to this email address – read the document for instructions on how to submit electronically*)

Any other communication will be considered unofficial and non-binding on the County. Communication directed to parties other than the County Finance Department may result in disqualification of the prospective proposer.

Site Visit:

There is not a scheduled pre-bid site visit. Nor is a site visit mandatory. However, Hamblen County recommends interested bidders contact the general contractor's job superintendent Nate Logan by email nate@constructionparntersllc.com, or by phone at (315) 679-0394, to schedule a site visit. Site visits are meant to help prospective bidders in preparing an accurate proposal. Site visits carry no weight in awarding this project.

ITB Questions and Answers:

Questions regarding this bid should be emailed to the contact listed above by Wednesday, July 16, 2025 @ 4:00 p.m.

Questions and answers will be posted on the Hamblen County website at hamblencountytn.gov under the bids and proposals tab and emailed to all prospective bidders known to the County by 5:00 p.m., Wednesday July 23, 2025.

All correspondence and communication must be via email to the contact listed above. Questions submitted by telephone will not be answered. Questions submitted after the deadline will not be answered.

Proprietary Information and Public Disclosure:

Materials submitted in response to this competitive procurement shall become the property of Hamblen County. All bids submitted will remain sealed until the deadline

for submission of bids has expired. Once a bid is submitted to Hamblen County Government and is opened, it constitutes a public record and is subject to the open records request pursuant to the Tennessee Open Records Act.

Cost of Bid Submission:

The County will not be liable for any costs incurred by any respondent in preparation of a response to this ITB or any other activities related to responding to this ITB.

Revisions to the ITB:

In the event it becomes necessary to revise any part of this ITB, addenda will be produced in writing and submitted to all prospective respondents known to the County and will be listed on the Hamblen County website, www.hamblencountytn.gov, under the Bids and Proposals Tab.

The County reserves the right to cancel or to reissue this ITB in whole or in part prior to the execution of a contract.

Period of Performance:

The period of performance of any work resulting from this ITB is to be: a) scheduled through the general contractor and b) following the issuance of purchase order(s) by Hamblen County.

Subcontract Terms:

If a subcontractor is to be used, the subcontractor section of the Bid Proposal located on page 46, Section IV.a. of this document **must** be completed. Copies of the necessary license for the subcontractor **must** also be submitted with the bid packet.

Contract Terms:

All items in this ITB must be included with the bid submission. All contracts between parties as a result of this ITB shall be governed by and enforced in accordance with the laws of the State of Tennessee. In the event a dispute arises, the venue shall be in Hamblen County, Tennessee. The County shall require the person with authority to bind the company to sign all agreement(s) with the County.

Contract Termination:

The County reserves the right to cancel the contract at any time for breach of contractual obligations without penalty or recourse by giving the contracted firm a written notice of such termination of at least fifteen (15) calendar days prior to said cancellation. Prior to issuing such a notice, the County will, if appropriate, provide the contracted firm with an opportunity to cure the breach within a reasonable period. Should the County exercise its right to terminate the contract for such reasons, the

termination shall be effective on the date as specified in the notice of termination sent to the contracted firm.

The contracted firm shall be entitled to receive just and equitable compensation for the work provided pursuant to the contract prior to the effective date of cancellation.

No Obligation:

The County reserves the right to accept or reject any or all bid submissions at its sole discretion without penalty and to not issue a contract as a result of this ITB. The County also has the right to waive any formal defects in submissions when deemed in the best interest of the County. Further, the County reserves the right to negotiate with any respondent concerning matters which the County determines require clarification or changes not in conformity with the specific requirements set forth herein.

Right To Withdraw:

Respondents have the right to request a withdrawal of their bids from consideration due to error by giving notice at any time before and not later than two (2) days after submissions are publicly opened.

Commitment of Funds:

The Hamblen County Legislative Body are the only individuals who may legally commit the County to the expenditures of funds for a contract resulting from this ITB. No cost chargeable to the proposed contract may be incurred before receipt of a fully executed contract.

Purchase Order:

The County will issue a purchase order for the proposed amount once the Hamblen County Legislative Board has awarded the project. This purchase order number must be referenced on the invoice that is submitted.

Payment Terms:

Terms of Payment are negotiable with award of contract.

The invoices will include the following:

1. Purchase order number assigned by the County per project;
2. A description of the work performed;
3. An account, separated by project and PO number, for how much of the work performed is for Project # 1 (Health Department) and/or Project #2 (County Space); and
4. The date(s) the work was performed.

III. SUBMISSION REQUIREMENTS:

Respondents are required to submit one (1) complete bid packet either electronically or in a sealed envelope based on the instructions below. Bids, whether mailed, hand-delivered, or electronically submitted must arrive no later than 2:00p.m. Eastern Standard Time on Wednesday, August 6, 2025.

Instructions for Submitting Bids Electronically:

PLEASE READ THOROUGHLY Electronic submissions should **NOT** be sent directly to anyone at the County Mayor's Office, but addressed to barbara.horton@co.hamblen.tn.us, **VIA 'WETRANSFER.COM**, an internet-based computer file transfer service. The message line of the WeTransfer page should state: **LOW VOLTAGE PACKAGE FOR HAMBLEN COUNTY HEALTH DEPARTMENT (ITB #2025-03, August 6, 2025 @ 2:00p.m.** Please note: Bids should be submitted no earlier than August 1, 2025, as the documents are only available for download for seven (7) days and we cannot access them for any reason prior to August 1, 2025 @ 2:00p.m.

Instructions for Submitting Hard Copies of Bids:

Envelopes **must** arrive **sealed** and clearly **marked** with **LOW VOLTAGE PACKAGE FOR HAMBLEN COUNTY HEALTH DEPARTMENT (ITB 2025-03) August 6, 2025 @ 2:00p.m.** on the outside of the envelope to the Hamblen County Mayor's Office, 511 West Second North Street, Morristown, TN 37814, Attention: Barbara Horton.

Respondents assume the risk for the method of delivery chosen. The County assumes no responsibility for delays caused by any delivery service whether in person or electronically. Late bids will not be accepted.

Submission Content:

All items listed below **must** be included in your submission.

1. Complete Original ITB packet signed and initialed and any addenda issued
2. Bid Proposal Form (attached)
3. Exceptions Form (attached)
4. Anti-Collusion Statement (attached)
5. Certificate of Compliance with Iran Divestment Act (attached)

Bid Proposal Form:

The respondent must complete the bid proposal form on pages 28 & 29 of this document. This includes the respondent's contact information, lists of licenses and proposed cost. Also included is the subcontractor section. Respondents should complete the information requested for any subcontractor to be used in this project. If there will not be a subcontractor used, then the "No Subcontractors" section should be marked.

Insurance Requirements:

a. Certificates of Insurance

Upon award of the contract for this bid, the chosen firm **must** provide to the County certificates of the insurance requirements listed below **before** the contract is executed and duties commence. Policies must be endorsed to provide the County at least 30 days written notice of reduction, cancellation, or intent not to renew coverages as listed below. If insurance is canceled, reduced, non-renewed or otherwise is not in effect to the minimum required coverage, the contracted firm **must** cease work on this project.

b. Liability Coverages

1. The chosen firm must furnish at their own expense and keep in full force during the terms of this contract the following coverages which **must** list Hamblen County Government as an additional insured:

- Insurance covering bodily injury in the minimum sum of $1,000,000 for each occurrence.
- Insurance covering property damage in the minimum sum of $1,000,000 for each occurrence, $2,000,000 aggregate
- Automobile liability insurance in the minimum of $1,000,000 combined single limit for bodily injury and property damage.

2. The Contractor's commercial general liability policy shall not contain an exclusion or restriction of coverage for the following:

- Claims for property damage to the Contractor's work arising out of the products-completed operations hazard where the damaged

work or the work out of which the damage arises was performed by a subcontractor.

c. Worker's Compensation Compliance

The chosen firm must also comply with all requirements of the Workers' Compensation Law and must at their own expense, maintain such insurance including employer's liability, as will protect him from claims under said law and from any other claims for personal injuries, including death which may arise from the operations under the contract, whether operations be by himself, or anyone directly or indirectly employed by him.

d. Subcontractor Insurance

Contractor shall cause each subcontractor employed by the Contractor to purchase and maintain insurance of the type specified above. When requested by the County, Contractor shall furnish copies of certificates of insurance evidencing coverage for each subcontractor.

Exceptions Form:

The exceptions form listed on page 30 of this document give options of "NO EXCEPTIONS TAKEN" **or** "BIDDER TAKES EXCEPTIONS'. One of these should be selected and submitted with the sealed bid.

If a bidder **has** exceptions to the scope of services listed in this document, they must be listed on the exceptions form on page 30 of this document.

If the bidder **has no** exceptions to the scope of services listed in this document, they should indicate so by selecting, "NO EXCEPTIONS ARE TAKEN" on the exceptions form on page 30 of this document.

Anti-Collusion Statement:

The respondent certifies by signing the anti-collusion statement on page 31 of this ITB that this bid is made without prior understanding, agreement, or accord with any other person submitting bids for the same service and that this submission is in all respects bona fide, fair and not the result of any act of fraud or collusion with another person engaged in the same line of business or commerce.

Iran Divestment Act:

The respondent must certify on page 32 of this ITB that neither they nor any of their successors, parent companies, subsidiaries or companies under common ownership or control certifies, under penalty of perjury, that to the best of their knowledge and belief that they are not on the list created pursuant to Tennessee Code Annotated § 12-12-106.

Signatures:

The Exceptions Form, Anti-Collusion Statement, Certification of Compliance with the Iran Divestment Act, and all ITB Amendments **must** be signed and dated by a person authorized to legally bind the respondent to a contractual relationship.

Bidder Initials_____

FORMS:

a) BID PROPOSAL

Information of company or individual with whom the contract would be written	
Company Legal Name:	
Address:	
Phone:	
Primary Point-of-Contact Email Address:	
State of Tennessee General Contractor License Number – **Include copy of license with bid**	

If any subcontractors are to be used on this project, their information **must** be listed below. If no subcontractors will be used indicate that below by selecting the option, "NO SUBCONTRACTORS WILL BE USED IN THIS PROJECT".

Subcontractor Information:	
Company Legal Name:	
Address:	
Phone:	
Primary Point-of-Contact Email Address:	
List any Tennessee license held relevant to this project:	

NO SUBCONTRACTORS WILL BE USED IN THIS PROJECT:	

Bidder Initials_____

BID PROPOSAL continued…

Total Cost Proposed for Scope of Services:

Project #1 & Project #2 as Listed in this Document

PROJECT #1 – Health Department: $_____

PROJECT #2 – County Space: $_____

TOTAL COST PROPOSED: $_____

Costs proposed MUST include all material and all labor

 Bidder Initials_____

b) EXCEPTIONS FORM

Bidder MUST sign the appropriate statement below, as applicable.

☐ Bidder understands and agrees to all terms, conditions, requirements and specifications stated herein. NO EXCEPTIONS ARE TAKEN.

FIRM NAME:	
AUTHORIZED REPRESENTATIVE: (printed)	
AUTHORIZED REPRESENTATIVE: (signature)	
DATE:	

☐ Bidder takes exception to the following terms, conditions, requirements and specifications stated herein.

FIRM NAME:	
AUTHORIZED REPRESENTATIVE: (printed)	
AUTHORIZED REPRESENTATIVE: (signature)	
DATE:	
EXCEPTIONS TO NOTE:	

c) ANTI-COLLUSION STATEMENT

By signing this form, the respondent agrees that he/she has not divulged to, discussed, or compared his/her submission with other respondents and has not colluded with any other respondent whatsoever. Note: no premiums, rebates or gratuities to any employee or agent are permitted with, prior to, or after any delivery of service. Any such violation will result in any contract related to this ITB being null and void and could constitute a felony and result in a fine, imprisonment and civil damages.

The undersigned certifies that he/she has read, understands, and agrees to all terms, conditions, and requirements of this ITB, and is authorized to enter into a contract with Hamblen County Government. This form must be signed personally by the respondent or the respondent's authorized agent. All signatures must be original.

Signature	Title
Printed Name	Date

By signing this form, the respondent signifies understanding and agreement with Hamblen County Government's Terms and Conditions.

 Bidder Initials_____

d) CERTIFICATION OF COMPLIANCE WITH IRAN DIVESTMENT ACT
Tenn. Code Ann. § 12-12-101 et seq.

Comes _____, for and on behalf of
(Printed name of Principal Officer of Company)

_____, (the "Company") and, after being duly authorized by the Company so to do, makes oath that:

By submission of these qualifications, each respondent certifies, and in the case of a joint submission each party certifies, under penalty of perjury, that to the best of their knowledge and belief that each respondent is not on the list created pursuant to the Iran Divestment Act, Tenn. Code Ann. § 12-12-106.

_____
Signature

_____
Title

_____
Date

V. ITB SUBMISSION CHECKLIST:

- ☐ Bid packet is labeled on the outside of the envelope or in the message line if submitted electronically, **LOW VOLTAGE PACKAGE FOR HAMBLEN COUNTY HEALTH DEPARTMENT ITB #2025-03, AUG 6, 2025 @ 2:00p.m,** as instructed on page 24 Section III of this document.
- ☐ Complete ORIGINAL signed and initialed ITB packet
- ☐ Bid Proposal Form completed (pages 28 & 29 Section IV.a. of this document)
- ☐ Exceptions Form completed and signed (page 30 Section IV.b. of this document)
- ☐ Anti-Collusion Statement Signed (page 31 Section IV.c. of this document)
- ☐ Certification of Compliance with Iran Divestment Act completed and signed (page 32 Section IV.d. of this document)

 Bidder Initials_____

VI. EXHIBITS

Construction Plans / Health Department Drawings:

https://bma1915-my.sharepoint.com/:b:/p/ljohnston/EfsUa7bS40xCjaP-Tq-TS68Bape_U-bzBXrrxCpBUE-WDw?e=ASi68A

Health Department Project Manual / Specifications:

2207600 Hamblen Co. Health Dept PM.pdf

Future Addenda:

https://www.hamblencountytn.gov/

Bids & Proposals Tab -> Scroll Down to Find ITB 2025-03 -> Additional Information Column

 Bidder Initials_____