

## SECTION 27 0 100

### OPERATION AND MAINTENANCE OF COMMUNICATIONS SYSTEMS

#### PART 1 GENERAL

##### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. This section is inclusive to all Division 27 sections.

##### 1.02 DRAWINGS

- A. The drawings show the general arrangement and extent of the work only. Determine the exact location and arrangement of all parts as the work progresses.
- B. All work shall be subject to the Owner's direction and approval.

##### 1.03 SUMMARY

- A. This project consists of providing a complete structured cabling system for the LSU Med Center Interim Hospital Sim Center building. The structured cabling system includes voice and data cabling locations as shown on the drawings for this building. This building will be connected to the campus network via copper and fiber cables.
- B. The scope of work includes:
  - 1. Provide all voice and data throughout as a total end-to-end solution as described within the division 27 documents and as shown on the "T" series drawing sheets.
    - a. Provide the necessary parts and supplies whether specifically mentioned or not to turn over to the owner a complete system.

##### 1.04 QUALITY ASSURANCE

- A. In addition to procedures stated in Division 1:
  - 1. Cutting and Patching
    - a. Perform required cutting, drilling and chasing to receive new equipment. In general, perform all patching and repairing necessary to restore to original condition, all surfaces that may become damaged during the installation. All work shall be executed by persons normally employed in the type of work to which they are assigned.
    - b. Paint all structural steel and all steel parts used for hangers and for supporting conduits, junction boxes and technology equipment with one (1) coat of "red" oxide primer before erection. After steel is in place, paint again with a minimum of one (1) coat of paint, color as directed by the Architect.
    - c. The contractor is responsible for all cutting, patching, plastering and painting associated with the new installation.
  - 2. Clean Up
    - a. The job-site shall be cleaned at the end of each day.

- b. Upon completion of the contract, remove all workmen’s appurtenances from the premises. Clean the premises of all debris caused by the work and leave the installation clean and in first-class operating condition.
3. Storage of Material and Equipment
  - a. Store materials and equipment in a location approved by the Owner.
  - b. Be responsible for securing all equipment and materials employed in the installation until final acceptance by the Owner. The Owner will not be responsible for loss reimbursement to the Contractor.
  - c. Be responsible for the replacement of all damaged or defective work, materials or equipment. Do not install sensitive or delicate equipment until major construction work is completed. Ensure that equipment is protected from all construction site activities.
  - d. Observe and conform to all applicable safety regulations required by the Owner and O.S.H.A.

#### 1.05 INTERPRETATION AND CONFLICTS

- A. Bring any discrepancies determined or omissions found lacking in the Contract Documents to the Technology Consultant’s attention before submitting the bid. After award of Contract, the Owner or Technology Consultant will make the interpretation of any conflict.
- B. The failure to question any controversial item will constitute acceptance by the Bidder who shall execute it to the satisfaction of the Owner after being awarded the Contract.
- C. If mention has been omitted pertaining to details, items or related accessories required for the completion of any system, it is understood such item and accessories are included in the Contract. After the Contract is awarded, claims based on insufficient data or incorrectly assumed conditions, or claims based on misunderstanding the nature of the work, will not be recognized.
- D. The General Conditions, Requirements, and Special Provisions, of any larger body of specifications, of which this Specification may be a part, are hereby made a part of this Specification. In the event that any clauses or provisions of the larger body of specification conflict with the letter or intent of this Specification, the Contractor shall immediately notify the Architect and the Technology Consultant for clarification and direction.
- E. All work shown shall be new work provided under this Contract except that work labeled “present to remain” and that equipment labeled “to be furnished by others but installed by the Contractor”.

#### 1.06 LABELING AND IDENTIFICATION

- A. Clearly Label all new equipment, devices and miscellaneous apparatus for easy identification and for safety.
- B. Owner will identify and provide labeling schemes for all patch panels, wall plate end point locations, 110 blocks, fiber termination cabinets, and backbone cables according to Owners standards.

#### 1.07 LOCATION OF EQUIPMENT AND RACEWAY

- A. The drawings are diagrammatic and indicate the general arrangement of equipment to be installed.

- B. Coordinate the structural, electrical/electronic and finished conditions of work accordingly.
- C. Coordinated locations of all equipment, raceways, junction boxes, cable runs, conduit runs, etc., shall be determined at the site. Install all items to accommodate the various conditions in the building and make deviations necessary without additional cost.

#### 1.08 WIRING METHODS

- A. Install all wire and cable located in finished areas in new or existing raceways as indicated on Drawings.
- B. Install new raceways in the locations shown on the drawings and as specified.

#### 1.09 ORDINANCES AND CODES

- A. Nothing contained in the Specifications or shown on the drawings shall be construed as to conflict with any local, municipal or state laws and regulations, governing the installation or other contract work, and all such ordinances and regulations, including the latest: National Electric Code, ANSI/TIA/EIA standards and the National Electric Safety Code, are hereby incorporated and made a part of these Specifications, and shall be satisfied by the contractor at no additional expense to the Owner.
- B. Secure all permits and inspection certificates for submission to the owner.

#### 1.10 SYSTEM CONTINUITY

- A. Reconnect all existing items that remain in use. Provide all materials and labor required to retain continuity of existing circuits or systems that are disrupted by these alterations even though not indicated on the drawings.

#### 1.11 SUBMITTALS

- A. Shop drawings shall be checked, corrected and approved by the contractor before being submitted to the Owner/Technology Consultant for approval. Before submitting shop drawings, the Contractor shall carefully examine them and shall certify by his stamp/signature that, to the best of his knowledge, they comply with the Contract Documents. The Contractor must receive written approval from the Owner or an authorized representative of the Owner, in writing, prior to fabricating or installing any materials. Approval will be given based upon shop drawings. The shop drawings shall indicate complete details of work to be performed. Drawings shall include a title block naming the Project, Architect, Technology Consultant, Contractor, drawing title, drawing number, revision number if applicable and date. Submit all Shop Drawings complete as a single submission. Isolated items will not be accepted, except with prior approval.
- B. Where the shop drawings deviate from the requirements of the Contract documents, the Contractor shall (1) correct the shop drawings as required, or (2) where the deviations do not necessarily require correction, notify the Owner/Technology Consultant of the deviations.
- C. Submit to the Architect four (4) sets of shop drawings or otherwise documents/equipment for the following equipment and obtain written approval before ordering materials. See the drawings and scope information for applicability of product to phase and project.

- D. The contractor shall provide product submittals for all system components as defined in Part 2 of all associated communication specification sections related to this project. These components shall include:
1. Patch Panels (UTP and Fiber)
  2. Cables (UTP and Fiber)
  3. Patch Cables (UTP and Fiber)
  4. Faceplates and Jacks
  5. Proposed Labeling Scheme
  6. Cable Management Devices
  7. Innerduct
  8. Punch Down Blocks
  9. Protection Devices
  10. Grounding and Bonding Equipment
  11. Racks and Cabinets
  12. Nameplates and Identification Devices
  13. Basket Style Cable Tray
  14. Ladder Style Cable Tray
  15. Hangers and Supports
  16. Strain Relief Products
  17. Security Equipment including Door Devices and Power Supplies
  18. All other equipment identified or inferred as may be required by the Architect, Technology Consultant or Owner.
- E. Submit complete submittal list for Architect/Technology Consultant approval prior to purchasing any equipment.
- F. The selected contractor will allow sufficient time in project scheduling for client and review by the Architect's Technology Consultant.
- G. In some cases, manufacturer warranty may call for the review of system documentation to assure that the system design meets manufacturer warranty requirements. In such instance, with prior approval of the Owner, the contractor shall provide a complete set of Project Documents and product data to the system manufacturer for review. The system manufacturer shall review the complete system package and provide documentation attesting to the system compliance with manufacturer warranty requirements. This documentation shall be included with the Contractor Shop Drawings submittal. The Technology Consultant will not review the Contractor Shop Drawings submittal, which does not include the manufacturer warranty compliance review documentation.
- H. Isolated items will not be accepted, except with prior approval
- I. Each shop drawing shall contain reference to the applicable drawing and specification section and verification of compatibility with the systems involved.
- J. All nameplate data shall be submitted with equipment submittals – refer to other sections for complete identification requirements.
- K. Shop drawings shall show conformance with specified performance characteristics, or the Contractor shall assume responsibility for all deviations including all additional costs as a result of the deviations.

1.12 STANDARDS OF MATERIAL AND WORKMANSHIP

- A. All work shall be executed by persons skilled in the work to which they are assigned. This shall include all copper and fiber connections including testing, and all plastering and painting.
- B. All materials and equipment in the work shall be new and of first quality, produced by manufacturers of recognized reputation for each line of material and equipment. The fact that materials or equipment offered have been recently developed or are untried may be sufficient justification for their rejection.

1.13 PROTECTION OF WORK AND EQUIPMENT

- A. This Contractor shall use the required safety precautions, methods and skills to prevent possible unsafe conditions or conditions unduly susceptible to fire.
- B. When this Contractor is working in areas in which the building occupants have access, contractor shall provide suitable barriers around his operation.
- C. This contractor is responsible for containing the undue spread of vapors or odors from his work area.

1.14 TESTS AND INSTRUCTIONS

- A. Upon completion of the work, and upon the request of the Architect, the Contractor shall be prepared to test all systems in the presence of the Owner, Architect, or Technology Consultant. Such testing shall occur at a time that is mutually acceptable to all parties. The Contractor's representatives assisting in the performance of these tests shall be thoroughly familiar with the details of the system and shall include the field supervisor responsible for installing the system.
- B. The contractor will provide the owner with all manufacturers' systems certifications within 60 days of completion of work. Contractor's final retention payment will not be released until all manufacturers' system certifications have been received, reviewed and approved by the Architects Technology Consultant.
- C. Correct all failures or improper conditions.
- D. Demonstrate to the Owner the proper care and maintenance of all new items.

1.15 GUARANTEE

- A. Unless stated otherwise in Division 1:
  - 1. The contractor and his surety shall guarantee in writing for a minimum period of one (1) year from the date of final acceptance that all materials, equipment and labor furnished by contractor are free from defects.
    - a. Refer to cable system warranty for additional requirements.
  - 2. The Contractor shall further guarantee that if any piece of material or equipment is found to be defective within the guarantee period because of faulty manufacture or faulty installation, in the opinion of the Owner, contractor will replace and install and test such material or equipment without any further expense to the Owner.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END OF SECTION