

Scope of Work – Rev 2

IT Infrastructure to Bldg 205 and CLC Building (VAMC Temple, TX)

Project Number: 674-011-127

SCOPE:

Visit site prior to bid in order to be fully acquainted with existing site conditions and scope of work. It is Contractor's responsibility to field verify prior to bid all existing condition, devices, equipments, cable distance, cable route; measurements and areas provided in scope of work. It is contractor responsibility to locate underground utilities.

Provide all labor, equipment, materials, tools, and supervision to installation of underground single mode fiber strand, fire alarm main cables, telephone cables and fire caulking. Installation of the cables shall be in according with NFPA 70, NFPA 70 -760, 770 and 800, VA Specifications, " EIA/TIA-568A Commercial Building Telecommunications Cabling Standard "compliant.

CLC Building 1 & 2 to Building 3 & 4:

1. Install 4 (four) – 50 pairs telephone cable from CLC Bldg 1 telephone room to CLC Bldg 1, 2, 3 and 4 telephone rooms (1st FL) approximately **350ft each**
2. Provide and install 110 blocks, plywood, and label all phone cables at both ends in each room (total 4 – Building 1, 2, 3, 4)
3. Install ~~8 (eight)~~ 7 (Seven) - 12 pairs strands single mode underground fiber cables in inner ducts from CLC Building 1 to CLC Bldg 1, 2, 3 and 4 IT 1st floor closets and 2nd floor IT closets
4. Terminate both ends using ST connectors in 48 12 port fiber patch panels and rack. Label and test all strands
5. Install backbone Cable TV wires from CLC Building 1 to CLC Bldg 1, 2, 3 and 4 telephone closets
6. All cable should be install in existing 4" conduits.

CLC Building 1to Room 1R40-Bldg 205 :

1. Provide and install 4 (four) - 4" PVC conduit from CLC - IT/Communication room to a Bldg 205 RM 201-10 fire alarm room through Bldg 205 craw space. Install 4" EMT under the Bldg 205 craw space.
2. All 4 PVC conduits shall be approx 30" deep with caution tape, sand bedding and compact backfill per drawing from CLC Building 1 to Bldg 205
3. Provide 4 (Four) 30"x40"x30" or larger precast concrete handhole boxes and metal covers
4. Repave road and repair concrete curve at two road crossing in front of Bldg 205
5. Provide road crossing metal plate and temporary fence during trenching and construction
6. Provide and installation approximately **1200ft** of UL Listed 48 strands single mode underground fiber cables from CLC Building to Bldg 205 Room 1R40.
7. Provide and install 48 strands fiber cable in inner duct

8. All fiber strands shall be terminated both ends using ST connectors in 2 - 48 port fiber patch panels and rack, labeled and tested
9. Provide and install UL listed under ground 200 pairs copper telephone cables from CLC telephone room to Room 1R40 Bldg 205 Fire alarm room and label/terminate both ends with cable protections
10. Provide fire rated plywood and 110 telephone blocks on the both ends of the locations
11. The drawings has been provided.

Bldg 205 to Bldg 163 through Bldg 203:

1. Install 2 (two) 4 inch EMT conduits from Room 1R40 Bldg 205 to Bldg 163 (approximately 1350 ft).
2. Trench/saw cut rod way (approx. 100 ft) and provide 6 - 4" PVC Schedule 80 in duct bank. Cap 4 - 4" PVC at the both ends. Use 2 - 4" PVC for communication cables.
3. Provide the safety cones, temporary fence, tape at the trench and steel plates on the road trench
4. Provide and install approximately 1500ft of 144 strands single mode underground rated fiber cable from a Room 1R40 at Bldg 205 and Bldg 205 basement space to Bldg 203 in tunnel, Bldg 203 tunnel to Build 163 and Building 163 IT room/Telephone Room B111
5. Install fiber cable in a HDPE inner duct with a 4 inch EMT conduit from Room 1R40 Bldg 205 to Bldg 203, 163 and IT/Tele Room
6. Terminate fiber strands at both ends Room B111 and 1R40 using ST connectors in 4 - 48 port fiber patch panels and a rack, labeled and tested
7. Install UL Listed 600 pairs copper telephone cables from Room 1R40 Bldg 205 to Bldg 203 and IT/phone room at Bldg 163. No more than two splices will be allowed from Bldg 203 to Bldg 163 craw space. All cable pairs shall be tested for connection and signal. Provide data all test data.
8. Install 600 pairs telephone in a 4" conduit form Bldg 205 to Bldg 163 IT/Phone room
9. Provide fire rated plywood and 110 telephone blocks on the both ends of the room locations and cable protections.
10. Provide 30"x30" or larger junction boxes at least 5
11. Follow the VA infection control guide line in the Hospital Bldg 163 Basement
12. Building 163 cable pull will be weekend work
13. Replace broken ceiling tiles

CLC Building 4/3 to Building 220 through Boiler Plant

1. Install 3" PVC conduit (30 in deep with detector tape, sand, compact backfill) from CLC Building 3&4 to Boiler plant fire alarm panel (install 4" ridge conduit in steam tunnel)
2. Provide/install 2 (Two) 30"x40"x30" or larger precast concrete handhole boxes
3. Provide and connect fire alarm cable 12 strands single mode fiber cable from CLC Bldg 1&2 fire alarm panel to CLC Bldg 3&4 fire alarm panel (approximately 800ft). Use the existing 4" conduit from Bldg 1&2 to Bldg 3&4.
4. Replace broken ceiling tiles

5. Provide and connect fire alarm cable 12 strands single mode fiber cable from each CLC Bldg 3&4 fire alarm panel to Bldg 220 fire alarm panel (approximately 5,00ft).
6. Provide and connect fire alarm cable one -12 strands single mode fiber cable from Building 220 fire alarm panel to Boiler plant fire alarm panel (approximately 500ft)
7. Terminate all fiber cables. Connect and test the fire alarm communications from CLC Bldg 1&2 and 3&4, and Bldg 220 fire alarm panels to the main fire alarm panel at Boiler Plant (Simplex)

General Requirements

1. All fiber and communication shall be home run one termination location to another termination location.
2. All conduit shall have a pull string. If a pull string is used, a replacement should be left in the its place.
3. All cable shall be UL Listed underground rated fiber and communication cables
4. All cable runs shall be tested in accordance with TSB-67 (Telecommunications Systems Bulletin) and the contractor will provide to CTVHCS a printed and electronic document for each run install. The electronic form should be in MS Excel format. The installing contractor should be held liable in this case for a period of one (1) year from the date in which the non-compliant portion of the cable infrastructure test results documentation.
5. All fiber cables and telecommunication cables shall be installed per manufacturer installation guidelines, NFPA 70 and VA Specifications. All testing data shall be witness by VA employee and provide the test data and certification.
6. All conduits and inner ducts shall be labeled with tape marker every 100 ft (from Room / to Room)
7. In every manhole, the weather proof cable name plates or tags shall be provided on each optical fiber cable. On the cable name plates or tags, the cable type, size and gauge, cable name, name of manufacturer, cable routing to/from and date of installation shall be indelibly inscribed as follows :
 - a) In case where optical fiber cables are pulled through without splicing in manhole :
 1. Cable nameplate or tag shall be provided on the cable.
8. Cable pulling tension shall not exceed the manufacturer limit requirement and must be recorded. It will be verified by VA employee.
9. The cables bend radius shall not exceed the cable manufacturer requirement.
10. All open trenches shall be covered with metal plate at the road crossing at end of the day and fenced along the trench. Provide the traffic cones and sign at the road crossing area.
11. Provide an accident prevention safety plan, project schedule and project milestone documents