

## SECTION 16421 UTILITY SERVICE ENTRANCE

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Provide new incoming electrical utility service entrances.
- B. Provide new incoming telephone utility service entrances.
- C. Provide new incoming cable television utility service entrances.
- D. Provide new incoming fire alarm cabling – tied to City of Portland fire alarm system.

#### 1.2 RELATED SECTIONS

- A. Section 16111 - Conduit.
- B. Section 16123 - Wire and Cable.
- C. Section 16450 - Grounding.
- D. Section 16470 - Panelboards.
- E. Section 16721 – Fire Alarm System.
- F. Section 16742 - Telephone System.
- G. Section 16745 - Cable Television

#### 1.3 ELECTRICAL SYSTEM DESCRIPTION

- A. Electrical Service Description: A new underground electrical service shall be provided as shown on the Contract Drawings. The contractor shall coordinate with the utility company all the work required to complete this project.
- B. Work associated with the new electrical services shall be coordinated with:  
*Central Maine Power Company*  
162 Canco Road  
Portland, Maine 04103
- C. Arrange with *CMP* to modify the existing overhead utility line along Oxford Street in front of the project site as required. Also, arrange with *CMP* to provide a new underground primary service onto the site from Oxford Street. Arrange with *CMP* to provide a new pad mounted service transformer. 208/120 volt, 3-phase secondary service shall be extended underground by the Contractor from the new pad mounted service transformer to each of the two modular meter centers (one located at each new building). Secondary service conductors shall be extended from the modular meter centers to new single-phase load centers located in each living unit of each building.

- D. Work by *CMP*: The Contractor shall make all necessary arrangements with *CMP* to provide the following:
1. Modifications to the existing overhead utility line along Oxford Street.
  2. New primary underground electrical system.
  3. Pad mounted service transformers as required.
  4. Replacement of an existing secondary service drop to an existing building on the north side of Oxford Street.
- E. Work by Contractor: The Contractor shall provide the following:
1. All Conduit (for both primary and secondary services) and service conductors from the transformer to the meter centers at each building.
  2. Service meter centers at each building.
  3. Service grounding.
- F. Work by General Contractor:
1. Concrete pad for service transformer.

#### 1.4 TELEPHONE SYSTEM DESCRIPTION

- A. Telephone Service Description: A new underground telephone service shall be provided as shown on the Contract Drawings. The contractor shall coordinate with the utility company all the work required to complete this project.
- B. Arrange with *Verizon* to modify the existing overhead utility line along Oxford Street in front of the project site as required. Also, arrange with *Verizon* to provide a new underground service from Oxford Street to Building #2. A new *Verizon* service shall be extended from Building #2 to Building #1. Telephone service cable shall be extended underground to new telephone service termination equipment for each building.
- C. Work associated with new telephone services shall be coordinated with:
- Verizon*  
5 Davis Farm Road  
Portland, Maine 04103
- D. Work by *Verizon*: The Contractor shall make all necessary arrangements with *Verizon* to provide the following:
1. Modification of existing overhead telephone service line pole on Oxford Street as required.
  2. Provide new underground telephone service cables from a service utility pole at Oxford Street.
  3. Service entrance connections for individual living units, including wiring termination means, and service cables from exterior connection point on buildings.
- E. Work by Contractor: The Contractor shall provide the following:
1. Riser conduit at the service utility pole.
  2. Underground conduits between the service pole and the service termination equipment at each building.

## 1.5 CABLE TELEVISION SYSTEM DESCRIPTION

- A. Cable Television Service Description: A new underground cable television service shall be provided as shown on the Contract Drawings. The contractor shall coordinate with the utility company all the work required to complete this project.
- B. Arrange with *Time-Warner* to modify the existing overhead utility line along Oxford Street in front of the project site as required. Also, arrange with *Time-Warner* to provide a new underground service Oxford Street to Building #2. A new *Time-Warner* service shall be extended from Building #2 to Building #1. Cable TV service cable shall be extended underground to new cable TV termination equipment for Building #2.
- C. Work associated with new telephone services shall be coordinated with:  
*Time-Warner Cable of Maine*  
118 Johnson Road  
Portland, Maine 04102
- D. Work by *Time-Warner*: The Contractor shall make all necessary arrangements with *Time-Warner* to provide the following:
  - 1. Modification of existing overhead cable TV service line pole on Oxford Street as required.
  - 2. Provide new underground cable TV service cables from a service utility pole at Oxford Street.
  - 3. Service entrance connections for individual living units (on a Contract basis), including wiring termination means, and service cables from exterior connection point on buildings.
- E. Work by Contractor: The Contractor shall provide the following:
  - 1. Riser conduit at the service pole.
  - 2. Underground conduits between the existing service pole and the service termination equipment at each building.

## 1.6 FIRE ALARM SYSTEM DESCRIPTION

- A. Fire Alarm service Description: Provide fire alarm service cable to connect to the municipal fire alarm reporting system. Extend underground conduit and wire to the existing utility line at Oxford Street.
- B. Fire alarm service cable shall be as specified in Section 16721.

## 1.7 QUALITY ASSURANCE

- A. Conform to the requirements of ANSI/NFPA 70 - National Electrical Code.
- B. Conform to the requirements of:
  - 1. *Central Maine Power Company.*
  - 2. *Verizon.*
  - 3. *Time Warner*

1.8 UTILITY SERVICE CHARGE ALLOWANCE

- A. The Contractor shall include under Division 16 an allowance of \$25,000.00 to cover the cost of utility service charges. This allowance will be paid according to actual utility company invoices received.

PART 2 - PRODUCTS

2.1 UTILITY SERVICES MATERIALS

- A. Conduit shall be as specified in Section 16111.
- B. Electrical service conductors shall be as specified in Section 16123.
- C. Service grounding shall be as specified in Section 16450.

2.2 MODULAR METER CENTERS

- A. Manufacturers:
  - 1. *Square D*
  - 2. *Anchor*
  - 3. *Landis & Gyr*
  - 4. *Milbank*
  - 5. *Murray*
- B. UL listed, multi-gang meter center with ringless meter sockets and main circuit breaker service sections as detailed on the Drawings.
- C. Meter Centers shall be NEMA Type 3R construction, rated for use on a three-wire 240/120-volt system. Meter sockets shall have a fifth terminal in the 6 o'clock position, and shall include a simple handle lever operated by-pass. Meter sockets shall be rated as indicated on the Drawings. Main devices shall have 100K AIC ratings.
- D. All meters shall be supplied with an output branch circuit breaker, in sizes as indicated on the Drawings.
- E. Approval: Meter centers shall be approved by the *Central Maine Power Company*.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install all service related work in conformance with the standards and requirements of the serving utility.

END OF SECTION