SECTION 16420

SERVICE ENTRANCE

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Requirements for electrical service to buildings.

B. Related Sections:

1. Section 16110 – Raceways
2. Section 16120 - Wires and Cables
3. Section 16320 - Transformers - High Voltage
4. Section 16425 – Switchboards
5. Section 16430 – Metering
6. Section 16450 - Secondary Grounding

1.02 SYSTEM DESCRIPTION

A. The UCB Campus is served by a University owned 13.8 kV primary distribution system. In most cases building services will be via primary step-down transformers installed on the system. Service feeders will be underground. Minimize secondary service length.

B. Typically the utilization voltage shall be 120/208V - 3Ø - 60 Hz or 277/480V - 3Ø - 60 Hz wye. In special situations other voltage systems may be requested. Requests must be directed to the Department of Facilities Management.

C. Service entrance conduits and raceways shall conform to Sections 16110 - Raceways and 16120 - Wires and Cables.

D. Electrical vaults and/or main electrical equipment rooms shall be located on an outside wall when possible.

1. They shall have two means of egress, one of which shall be to the outside and sized to allow equipment replacement.

2. Room shall have one coat of off white flat latex paint on walls and ceilings.

3. Rooms shall have two coats of light gray all purpose enamel on floors (KWAL #9817 all purpose master protector or equal.)
4. No equipment which is foreign to the electrical installation shall enter or pass through the electrical vault or main electrical equipment room.

E. The main service ground shall be terminated on a 1/4” X 4” X 2’-0” section of copper bus on stand-off supports, located in main electrical equipment room, adjacent to main switch gear. Verify requirement with UCB engineer.

1. Ground terminations to this bus shall be by means of exothermic welding, in accordance with IEEE-80, Chapter 9, “Selection of Conductors and Joints.”

F. If possible, the main electric room shall be on ground level.

END OF SECTION 16420