

Building Information

Architecture

Burt Hill Kosar Rittelmann Associates will transform the Thomas Jefferson University campus with the Dorrance H. Hamilton Building. The medical education complex will include an expansive grassy plaza which will become the new focal point of campus. The building will house a technologically-advanced auditorium, small and large group classrooms and a two-floor clinical skills center featuring virtual diagnostic and surgical suites. The entrance faces the grassy plaza which provides an interaction area among students and professors. Other areas of interaction include common meeting areas on each floor and a rooftop terrace and lounge for special events. The curved façade features large expanses of glass that will open onto the plaza to highlight the "new heart of campus," the Thomas Jefferson University President Robert L. Barchi, M.D., PhD said. The transparency of the façade carries through the entire ground floor, which allows people on the street to look into the lobby, through the building and out to the plaza.

Electrical

The source of the electrical system for the Dorrance H. Hamilton Building starts with the existing 13.2 kV switchgear in the Jefferson Alumni Hall. Two 13.2 kV Philadelphia Electric Company (PECO) feeders supply six existing 13.2 kV feeders. Four of the feeders are to substations in Jefferson Alumni Hall, while the other two feeders will supply the Dorrance H. Hamilton Building. The electrical service is distributed to two 15 kV load interrupter switches integral for the unit substation. From the closed load interrupter switch, the 13.2 kV service is fed through a dry-type transformer rated at 480Y/277 volt, 3 phase, and 2500 kVA. After the 2500 kVA transformer, the service is supplied to the main bus system with TVSS located in Substation No. 1. A 4000 draw amp low voltage circuit breaker protects the main bus. The main distribution panels are located on the parking level P2 and fed up through the building into the electrical room of each floor into sub-distribution panels. From the sub-distribution panels, lighting and receptacle loads are distributed to each floor and served by 150 kVA dry-type transformers and 208Y/120V panelboards.

The emergency power is produced with a 1000 kW, 408Y/277V diesel generator. The generator provides emergency

power to the automatic transfer switches of the Life Safety, Elevator, and the Standby Distribution panels.

Lighting

The lighting of the Dorrance H. Hamilton Building mostly consists of recessed fluorescent light sources powered by 277 and 120 volt services. Linear and compact fluorescent recessed fixtures are specified in most of the classrooms and corridors. The main lobby includes vast daylighting via a curved glass façade, fluorescent fixtures and HID sources. Compact fluorescent downlights are utilized in the auditorium along with some of the higher end classrooms. Accent lighting with MR16 and wall wash luminaires provides a striking design and ample illuminance. The plaza area consists of LED strip lighting, HID, and fluorescent sources of light.

Mechanical

A 480-ton cross-flow cooling tower located in the penthouse of the building provides the building will cool air. Along with the cooling tower, six air cooled AC units are employed throughout the building to remove heat and provide environmental control. The building is heated by one 750 cfm and four 350 cfm electric unit heaters located throughout the building. The building also includes three 40,000 cfm air handling units located in the penthouse. Most of the mechanical load is provided with 480 volt, three phase power.

Fire Protection

The building will have manual fire alarm pull stations and an addressable automatic fire detecting device. Alarm signal devices will activate if system detects a fire. The system includes an automatic voice evacuation sequence, a manual voice paging sequence, a device to send an alarm to the University's on-site central monitoring station, sprinkler system tamper switch, smoke detectors in elevator lobbies, machine rooms, and hoist ways, addressable heat detectors, duct mounted smoke detectors, among other items. A supervised, two-way communication system between the fire command center/main fire alarm control panel and the emergency phones throughout the building is also included.

Transportation

There are two passenger elevators and one service elevator in the Dorrance H. Hamilton Building. The passenger

elevators serve the ground floor through the sixth floor, where as the service elevator serves the ground floor through the mechanical room on the seventh floor. The elevators run on a 480 volt, three phase system with an automatic transfer switch for switching to emergency power if the normal distribution system shuts down.

Telecommunications

The security system of the building has surveillance television systems, security door access control, and security intrusion detection devices. The security system will provide perimeter security of the areas around the building during off peak hours.

The building has various other communications systems that are to be issued at a later date. These include the nurses call system, sound system, audio visual equipment, and a clock system.