DIVISION 16 - ELECTRICAL

SECTION 16725 - FIRE COMMAND CENTER (FCC)

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes administrative, construction, equipment, power, environmental, security, and testing requirements for the Fire Command Center (FCC) for this Project.

The FCC is a dedicated room that centralizes emergency control functions for the Fire Department and emergency responders.

B. Related Sections:

1. Tab B – Administrative Requirements; Closeout Procedures; Commissioning.
2. Division 08 – Doors, Frames, and Hardware [keying/security, stair re-entry].
3. Division 10 – Signage [room identification, directional].
4. Division 14 – Elevators [emergency communication system].
5. Division 15 – Fire Suppression [waterflow/tamper monitoring/fire pump monitoring].
6. Division 15 – HVAC [environmental control and smoke control interfaces].
7. Division 16 – Electrical [normal and emergency power to FCC].
8. Division 16 – Electrical [UPS system for FCC].
9. Division 16 – Communications [FD telephone].
10. Division 16 – Fire Detection and Alarm; Emergency Voice/Alarm Communication; Firefighter Telephone; Elevator and Smoke Control Interfaces.

1.2 REFERENCES

A. International Building Code (IBC), **Section 911 – Fire Command Center**

B. International Fire Code (IFC), **Section 508 – Fire Command Center**

C. NFPA 72 – National Fire Alarm and Signaling Code

D. NFPA 5000 – Building Construction and Safety Code

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate FCC layout and component locations with Architecture, Electrical, Mechanical, Elevator, Fire Alarm, Security, UFS Fire Services, and UFS Project Manager early in design; obtain AHJ review/approval prior to installation.

B. Regulatory Requirements: Provide FCC in compliance with IBC Section 911 and IFC Section 508 and integrate devices and controls per NFPA 72.

C. Accessibility and Location: Provide FCC on the same elevation of Fire Department entry near the main entrance or other location approved by AHJ, the use of stairs or ramps is prohibited as emergency responders may be wearing protective gear and this would create a hazard; provide clear identification signage and unobstructed access.

1.4 SUBMITTALS

A. Product Data: For all FCC panels, annunciators, switches, telephone, work surfaces, racks, UPS [if used], lighting, power distribution, HVAC, and security.

B. Shop Drawings:

1. Room layout showing clearances, worktable, equipment, and wall elevations with device mounting heights.

2. One-line diagrams showing power (normal and emergency) to FCC equipment and interconnections to fire alarm, elevators, HVAC/smoke control, fire pump, generator, stair door unlock controls, and communications.

C. Building Information Card and Schematic Floor Plans for FCC, formatted per AHJ.

D. Operation & Maintenance (O&M) Manuals and Training Plan for responders and facility.

E. Closeout Submittals: As-builts reflecting final device locations and labeling; acceptance test reports; AHJ approval letter.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Components listed and labeled for their intended use and compatible with the building's fire alarm and auxiliary systems.

B. Installer Qualifications: Factory-authorized, NICET-certified (Level [III/IV] Fire Alarm) personnel for FCC-related fire alarm interfaces.

C. Mockups/Pre-Functional Walkthrough: Conduct with AHJ to verify access, layout, and function prior to final connections.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect sensitive electronics from temperature extremes and moisture, store per manufacturer.

1.7 WARRANTY

A. Provide manufacturers' standard warranty on all panels and devices, minimum [2] years from Substantial Completion.

PART 2 – PRODUCTS

2.1 ROOM CONSTRUCTION

A. Size and Dimensions:

1. Provide minimum **200 sq. ft.** with **10 ft** minimum dimension for high-rise FCCs per IBC 911 requirements.

B. Fire-Resistance:

1. Enclose FCC with walls, floor, and ceiling providing **1-hour fire-resistance rating**, including protective openings.

C. Doors and Hardware: Provide self-closing, latching fire door assembly with appropriate rating; keyed access for emergency responders only.

D. Signage: Provide conspicuous “FIRE COMMAND CENTER” signage per AHJ—high-visibility (commonly red lettering).

E. Environmental Controls:

1. Provide HVAC to maintain equipment-operating conditions; interlock where required for smoke control functionality.

F. Power:

1. Provide **normal** and **emergency/standby** power to FCC lighting and equipment; provide status indication within FCC.

2. Provide dedicated branch circuits and panelboard labeling for FCC equipment.

G. Lighting and Receptacles: Provide code-compliant illumination and convenience receptacles; connect to emergency power.

H. Work Surfaces and Storage:

1. Provide **worktable** and space for **schematic building plans** and the **Building Information Card**.

I. Communications Security:

1. Access control restricting authorized personnel and emergency responders; provide means for immediate FD access.

2.2 FIRE ALARM & LIFE SAFETY INTERFACES (PER NFPA 72/IFC)

A. Fire Alarm/EVACS:

1. Emergency voice/alarm communication system control unit located in FCC.

2. Fire detection and alarm system annunciator with full building status.

B. Firefighter Communications:

1. Fire Department telephone (dedicated) or firefighter telephone system, as applicable.

C. Sprinkler/Waterflow:

1. Sprinkler valve supervisory and waterflow annunciators. *** This is accomplished through the fire alarm monitoring, so no separate equipment is required. See DSS 16720 ***

D. Power Systems:

1. Emergency and standby power **status indicators** (including generator and automatic transfer switch if provided). *** This is accomplished through the fire alarm monitoring and control of the generator and automatic transfer switches, so no separate equipment is required. Refer to DSS 16720 ***
2. Fire pump status indicators. *** This is accomplished through the fire alarm monitoring of the fire pump controller, so no separate equipment is required. ***

E. Elevators:

1. Visual annunciation of elevator **location** and **operating status**.
2. Elevator **emergency/standby power selector switches** (where emergency/standby power is provided).
3. Emergency communication system, control point shall be installed in the FCC. *** Coordinate with DSS section 14000 ***

F. HVAC/Smoke Control: *** This is accomplished through the fire alarm, coordinate with DSS section 16720 ***

1. Status indicators and **controls for air distribution systems**.
2. **Firefighter's smoke control panel** for any smoke control systems (IBC 909.16).

G. Egress/Stair Re-Entry: *** This is accomplished through the fire alarm, coordinate with DSS section 16720 ***

1. Controls for **simultaneous unlocking of interior exit stairway doors**.
2. Posted **exit stairway information**: the number and designation of stairways, floors serviced, discharge locations, pressurization, emergency lighting, and reentry provisions.

2.3 PANELS, RACKS, AND ACCESSORIES

A. Mounting: Provide backboards, racks, and structured cable management to neatly mount all annunciators, switches, and communication devices on **one primary wall elevation**, with working clearances.

B. Labeling: Engraved labels for all controls, indicators, and panels consistent with fire alarm documentation and AHJ conventions.

C. [UPS/Inverter]: Provide local UPS to ride through transfer events for designated FCC electronics if required by AHJ or Owner. ***Coordinate with DSS section 16610

2.4 DOCUMENTS MAINTAINED IN FCC

A. **Schematic building plans**, **Building Information Card**, and emergency procedures, updated to current as-built conditions.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify location, size, and construction of FCC prior to device installation; confirm clear floor area and working clearances.

3.2 INSTALLATION

A. Construct enclosure to required minimum **1-hour fire-resistance**; seal penetrations; provide rated door/frame assembly.

B. Arrange panels and controls per **approved layout** to present a coherent, single point of control and annunciation for responders.

C. Provide dedicated **emergency power** to required lighting and equipment; verify **status indicators** are functional.

D. Provide and test **FD telephone** connectivity; label jacks/handsets.

E. Coordinate and test **elevator annunciation and power selector switches** with elevator contractor and AHJ.

F. Integrate **HVAC/smoke control** status and controls per IBC 909 and NFPA 72; provide firefighter's smoke control panel where applicable.

G. Provide **stair door unlocking** control capability and verify function on all applicable doors.

H. Post **exit stairway information** placard(s) inside FCC.

I. Install **worktable** and storage for plans and documentation; keep materials current.

J. Provide conspicuous **room identification signage** and ensure **restricted access** with immediate FD availability.

3.3 FIELD QUALITY CONTROL

A. Pre-Functional Testing: Functionally test each FCC feature (annunciation, control, communications, power monitoring) with respective trade contractors.

B. Integrated Systems Testing: Conduct end-to-end integrated test of fire alarm, elevators, HVAC/smoke control, fire pump, generator/ATS, stair door unlocking, and FD comms in presence of AHJ.

C. Training: Provide training to Owner's operations staff; review alarm priorities, system control sequences, and FCC procedures.

3.4 CLOSEOUT

A. Submit as-built drawings reflecting final device locations and labels; deliver updated building information card and schematic plans to remain in FCC.

B. Provide AHJ approval/acceptance documentation prior to Substantial Completion.

END OF SECTION 16725