

## **Building Statistics Part 2**

### Construction:

The construction consisted of the renovation of the main building space of the Memorial Reception Building. Architecturally, it did not include the catacombs, first and second floors or the amphitheater except maybe for some masonry cleaning or repairing. The entire mechanical system was updated as well as some of the lighting fixtures. The construction delivery method that was used for the renovation was design-build.

### Electrical:

The existing primary service is a 15KV, 3-PH service which is connected to the building through an H.V. switch board. There are two transformers for the exterior electrical distribution with the capacity of 150 KVA and 300 KVA, both of which are connected to the primary service switch board. These transformers are 3 phase, 4-wire type with secondary a voltage of 208Y/120V. There are two panel boards, with the capacity of 1600A and 1200A, which distribute power throughout the rest of the building.

### Lighting:

In the design analysis that I have received, it states the exterior lighting consists of only 5 exterior light fixtures. As for the interior lighting, the existing building prior to the renovation was using all PCB ballasts for the fluorescent lighting fixtures and the foot-candle levels did not comply with the newest IES standards.

The renovation gave the opportunity to change out all the PCB ballast, some of the fixtures, and re-lamp the fixtures that were to stay. Compact fluorescent and fluorescent sources are being used in the majority of the building's basement level's general spaces except for some halogen track lighting fixtures used in the tomb guard's practice room. Incandescent, halogen, and low voltage lamps are also being used in the crypt chapel which is also located on the basement level. The first floor is equipped with new incandescent candelabra or incandescent globe lamps in the sconces and chandeliers which were re-lamped and the second floor lighting consists of just halogen track lighting. All lighting in building is operating off of 120V.

### Mechanical:

The cooling system for The Main Reception Building consists of two separate 12.5 ton rooftop units located on the amphitheater roof. There is also a 4000 CFM cooling unit which serves the Tomb Guard's Quarters and the VIP room located in the North mechanical room. Heating for the building in its entirety is provided by a hot water system heated by a boiler. There are unit heaters, convectors, finned tube radiators and hot water coils in the ductwork which all circulate the hot water through the building. There are two existing exhaust fans, one is a 1500 CFM and the other is a 900 CFM, to serve the building.

#### Fire Protection:

The plumbing design analysis states that the design-build team performed a detailed code analysis which indicated that fire sprinklers are not required to be provided by code. After reviewing the existing municipal domestic water system and finding it lacks both sufficient flow and pressure and also knowing smoke detector coverage was being provided throughout the building, the owner decided to not place a sprinkler system in the building. So currently there is no sprinkler system in the building.

The fire alarm system is a zoned, noncoded, addressable, microprocessor based system. It is located in the electrical closet on the basement level. The system includes: a fire alarm control panel, graphic annunciator panel, pull stations, visual devices audio/visual devices, smoke detectors, heat detectors, dust detectors, and tamper switches and flow switches on sprinkler piping system.

#### Structural System:

The roof of the existing structure is constructed with poured in place reinforced concrete roof deck and concrete encased steel beams which are supported on load bearing walls. The floor is constructed with poured in place reinforced concrete floor slabs and concrete encased steel beams. It is supported on interior and exterior load bearing masonry walls and interior load bearing masonry piers. The exterior walls are all 21" thick load bearing masonry walls. Some of the interior walls are load bearing masonry walls and some others are either clay tile or stud partitions. The construction type for the Memorial Reception Building is type 2A, protected noncombustible.

#### Transportation:

There is one elevator located on the south side of the main building which should be accessing all three floors. Any other info on the elevator equipment was not given in the electrical portion design analysis.

#### Telecommunications:

The telephone system is a typical system where the telephone cable; which is a category 3, 4 pair telephone cable; is distributed throughout the building from a 66 clip connecting block located in the telephone closet on the basement level. Eleven cables service the basement level, while three cables service the first floor level. The data system is also a typical system where the data cable; which is a category 5e, 4 pair data cable; is distributed through the building from the LAN terminal, which is a 16 port category 5 patch panel, located in the LAN closet on the basement level. Nine cables service the basement level, while four cables service the first floor level.

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#### Special:

The security system is made up of fiber optic cabling connected to two site cameras, four cameras located around the amphitheater, and one camera located on the roof. The terminal cabinet for the security cameras is located in the telephone room, while the fiber optic termination by Arlington National Cemetery is located in the LAN closet, and the TV that is used to view these security cameras is located in the Sergeant of Guard's office. All three of which are located on the basement level.