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Construction Option
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Louis at 14th
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Building Statistics Part 2: System Descriptions

Construction

A tight project site demands the closing of the public sidewalk of 14th St to the east of the building for the majority of the project. A public alley allows access from the west side, while existing buildings border the north and south property lines. Additional storage and parking are available after the underground parking garage is complete. Excavation of the building foundation involves soldier pile & lagging, along with major temporary dewatering systems to combat unforeseen groundwater conditions. A historical façade at the east side of the footprint is required to be protected, supported, and restored at the conclusion of construction. A tower crane anchored at the east footprint is utilized for the duration of the cast-in-place concrete work. The excavation/dewatering and cast-in-place concrete are critical elements of the schedule, as well as the window systems reoccurring throughout the building enclosure. Floors are to be turned over to tenants as they are completed from the ground level up to the penthouse.

Structural System

Louis sits on a foundation consisting of auger-grouted mini piles, piles caps, and a 5" slab-on-grade. The parking garage suspended slabs utilize flat slab construction at 8" thick with a two-way bottom reinforcing mat. Above grade, 7" thick unbounded two-way post-tensioned slabs supports the residential units up to the roof. The roof at the ninth level is a 4" thick lightweight concrete topping with bottom mat reinforcing. Hollow structural steel (6x6x1/4) is utilized in the penthouse framing. The elevator shafts contain 8x18 tubular steel, 8x15 wide flange beams, and concrete shear walls throughout its support system.

Electrical System

Three incoming utilities feed Louis at 14th. Two each connect to 4000A 120/208V main switches that feed tap boxes and distribute power the main switch on each floor of the residential spaces. Each apartment has a typical 125A unit panel. The third utility feeds the ground level retail spaces more specifically the demands of each tenant. A diesel engine driven 265/460V emergency generator is housed in the underground parking garage, as well as the main electrical room.

Mechanical System

Louis is conditioned by a water-to-air system with the main mechanical room located in the penthouse. It shelters two boilers, two main pumps, one closed circuit cooling tower, and the building automation system station, all of which are accompanied by several rooftop units outside the penthouse. Each apartment unit contains a 1.5-2 ton split system heat pump with supply registers and return grilles. Wall & ceiling-mounted ductless split systems are utilized in hallways common areas throughout the building.

The building's fire protection system contains a dry-pipe sprinkler system and an automatic we-type, class III standpipe system with the fire pump room located in the parking garage.

Lighting

Below grade, 4' tubular fluorescent fixtures primarily light the parking garage spaces. At the ground level, 4' fluorescent utility fixtures occupy the main retail spaces with compact fluorescent recessed downlights in vestibules and smaller spaces. Common areas in the above residential floors contain 24" & 42" linear fluorescent lights as well as incandescent pendant light fixtures in areas open to multiple floors. Typical apartment units utilize compact fluorescent downlight fixtures, vanity fixtures, utility fixtures, and recessed pinhole lights in the closets.

Transportation

The parking garage houses two stairwells and two elevator lobbies with five elevators total. Two of which serve the parking garage and retail spaces while the remaining three serve the entirety of the building. The residential apartments above ground level contain three stairwells allowing access from all areas of each level.

Teledata

Teledata systems in the retail spaces are to be provided by the tenants. There are two to three teledata/electrical closets per floor in the residential units.