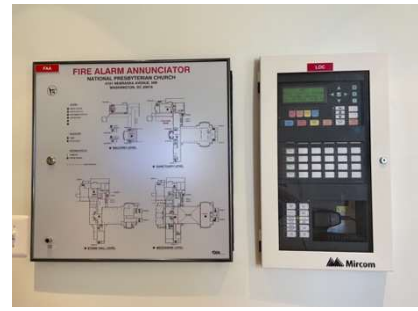




Terrace Waterproofing



Switchgear Equipment



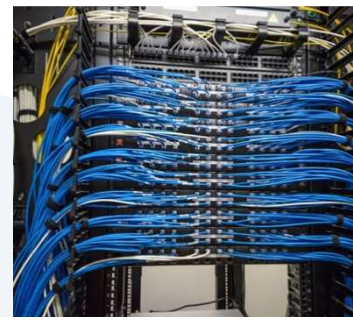
Fire Alarm System



Lighting, Secure Doors & Locks



HVAC Pumps



Campus-wide Fiber Loop

## INFRASTRUCTURE / DEFERRED MAINTENANCE

### *What was the situation before the renovation?*

- Throughout the church building, original equipment from 1968-69, much of which had minimal maintenance in recent years.
- Water penetration in many areas, but especially along the front of the building in the compromised plaza area.
- Old fire alarm system was not monitored and did not alert the fire department automatically but required someone in the building to manually pull the alarm.
- Uneven wi-fi and poor connectivity.

### *NEW and UPGRADED EQUIPMENT:*

- **Switchgear** replacement
- Two new **boilers** and associated pipework; church now has efficient cycling between boilers
- Extensive **ductwork** and **fan coil units** in new spaces
- Installation of **Dedicated Outdoor Air System (DOAS)** to provide air circulation to the garden rooms and renovated areas
- **Walk-in cooler** in flower room
- **Chandelier winch** to raise and lower chandelier over Central Stairs
- Three new **variable frequency drives (VFD)** for interior and perimeter heating system to more efficiently operate the fan coil units and heaters under windows and near entrances
- Installation of underground **air ducts** for intake and exhaust air to / from mechanical rooms
- **Two new elevators!**
- Replacement of several existing **electrical panels**
- All new **exterior doors, hardware and security system** throughout the building
- **Fire alarm system**, including installation of strobes, speakers and smoke detectors in the Sanctuary and throughout the building
- Replacement of **waterproofing system** on upper plaza and new drains
- Upgraded **Building Automation System (BAS)**, including new controller and dedicated server to capture historical records.
- Upgraded **IT system** with low voltage cable installation and campus-wide network fiber loop, providing continuous connection for all campus buildings. (See **Summary 3**)

*And more . . . !*

- New room numbering and signage
- Outdoor lighting and signage
- Extensive mechanical, electrical and plumbing improvements
- Strengthening (“underpinning”) of the garden walls around new planters in fountain garden
- Repairs to water damaged concrete foundation walls near the Columbarium and in the mechanical rooms.
- Many renovated restrooms with new plumbing and fixtures
- Restoration, caulking and cleaning of entire limestone exterior of church building, tower and garden walls

***Interesting tidbits:***

- Installation of switchgear required shutdown of power in main church building for five days.
- Electrical panels in old stage area were served under floor slab, requiring total replacement of wiring in ceilings.
- Alongside walls of elevator shaft on the second floor, major electrical conduits and heating/cooling pipes had to be rerouted to open second floor elevator lobby to central stairs.
- To build the bridge from Central Stairs to Garden Rooms required rerouting major ducts serving the Narthex and Choir Room.

