

SWEETEST HEART OF MARY CATHOLIC CHURCH

T-Mobile site DE04229B

4440 E Canfield Street, d/b/a 4440 Russell Street
Detroit, Michigan 48207
(Landtech #18323064)



Panoramic view of the church from the south side of Canfield Street.

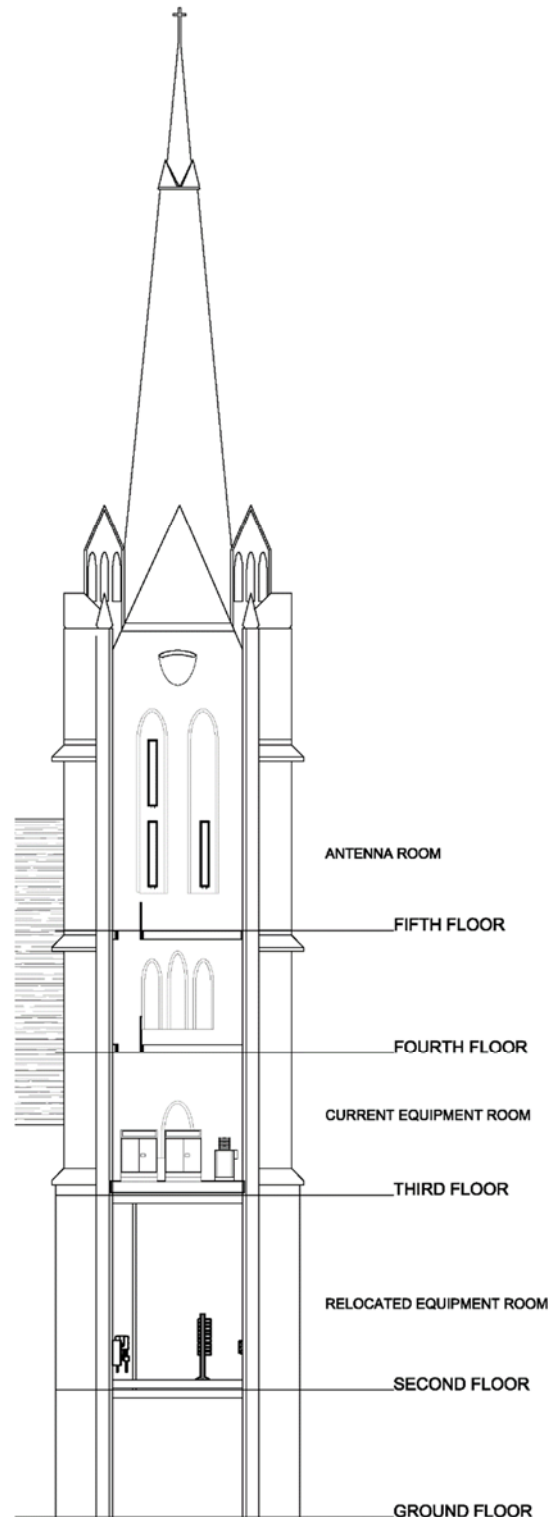
Background

The Sweetest Heart of Mary Catholic church was built in 1893. In 2004 T-Mobile installed their equipment in the south steeple of the church. Antennas are mounted in the open window bays on the fifth floor of the south steeple. The auxiliary T-Mobile telecom equipment are housed on the third floor of the south steeple.

Over time water seeped inside both steeples. Water entered the fifth, fourth, and thirds floors of the south steeple. The water has affected T-Mobile's equipment and operations. As the parish began structural repairs to both steeples, T-Mobile and the church agreed to move the auxiliary equipment from the third to second floor of the south steeple. (The second floor of the steeple did not suffer any water damage.) The following outlines design requirements necessary to relocate T-Mobile's equipment.

Design Requirement Outline

- Structural Design – Provide structural support for new equipment on second floor.
- HVAC – Air exhaust and Intake to maintain proper air flow and temperature control for equipment
- Electric – Provide electric service to T-Mobile equipment
- Fiber Optic – Provide fiber optic service to T-Mobile equipment
- Sound Level – Install low noise AirScale equipment so not to disturb the congregation.
- Grounding – Ground new equipment.

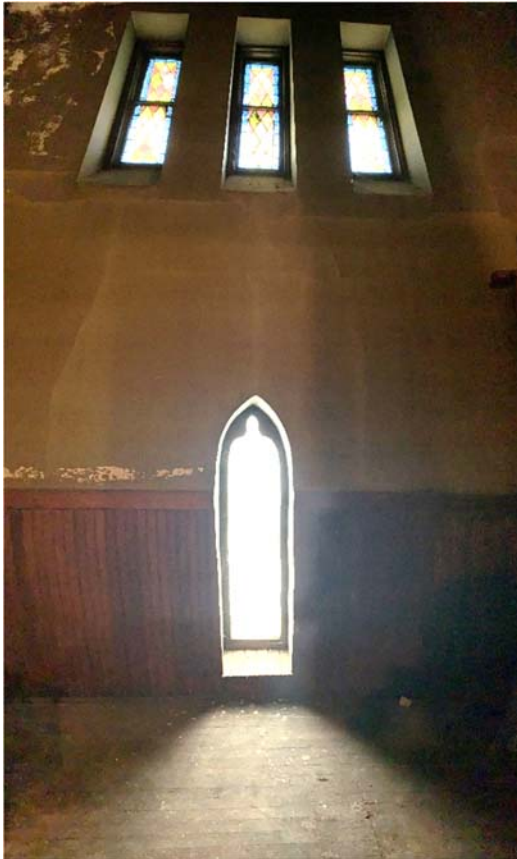
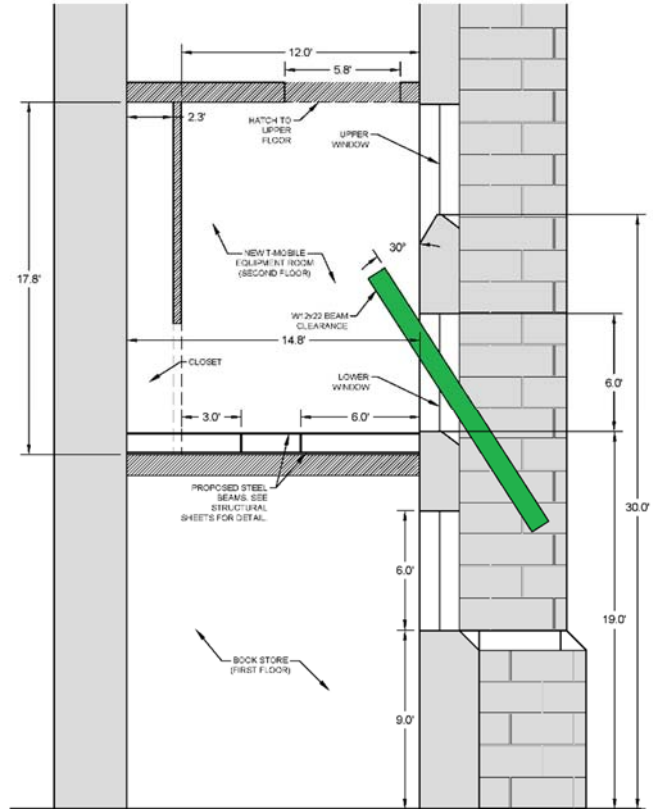


Structural Design

Provide structural support for new equipment on second floor.

- Bolt steel beams into masonry walls of steeple to suspend galvanized steel platform over wood flooring.
- Lower window on the 2nd floor steeple room to be removed temporarily.
- Beams to be hoisted into 2nd floor room through lower window on south wall of steeple (right)
- W10 beam required to penetrate non-load bearing closet wall (see “PROPOSED EQUIPMENT ROOM” sheet 2 of 2 from site sketch) to tie into structural wall.
- Organ air pump & ductwork will not be affected with installation. Platform has been designed around air pump.

Note: lower windowpane replacement to be discussed under HVAC.



HVAC

Air exhaust and intake to maintain proper air flow and temperature control for equipment

- Replace lower windowpane with intake and exhaust louvers.
- Upper Windows are stained glass and are not to be touched or affected by the relocation. (see left)
- Lower Window (to be replaced) has opaque glass (see left).
- From the street outside the window appears milky white against a light beige stone (below)



HVAC (cont.)

- Normally there are no lights turned on in the proposed emits through the upper or lower windows outside.
- New ductwork to be installed overhead and suspended from overhead ceiling with Unistrut and hanging spring isolators.
- Lower window glass to be replaced with (2) 13"x22" intake and exhaust louvers. Louver color to match beige stonework (Greenheck manufacturer, color: sierra tan/ color code: GF118.)
- Proposed louver color match building color/style better than existing louver in the same window symmetrical to the proposed window exhaust on the north steeple (right) and above the North facing Rose Window (below).
- Exhaust fan rated at 6.4 Sones (approx. 55 dB)



Sierra Tan

GF118



Electric

Provide electric service to T-Mobile equipment

- Existing 200A service on 3rd floor to be relocated to 2nd floor, including: 200A Tap Box & 50 KVA stepdown transformer (right). Existing disconnect and meter to remain. Existing Power from disconnect runs up access (ladder) room from 2nd to 3rd floor. Power to be rerouted through existing conduit to 2nd floor room. All utility equipment to be installed in existing closet.

Fiber Optic

Provide fiber optic service to T-Mobile equipment

- Existing Ciena Fiber demarcation box to be relocated with Electric equipment in closet of 2nd floor. Fiber to follow similar path with power conduit rerouted from 3rd floor to 2nd floor.



Sound Level

Install low noise AirScale equipment so not to disturb the congregation.

- All new T-Mobile equipment to be installed shall be 5G AirScale equipment (or newer) from Nokia. Nokia equipment to be installed on Equipment FIF racks. Due to the organ air intake located in the new equipment room, all equipment is rated at or below 65 dB.

Grounding

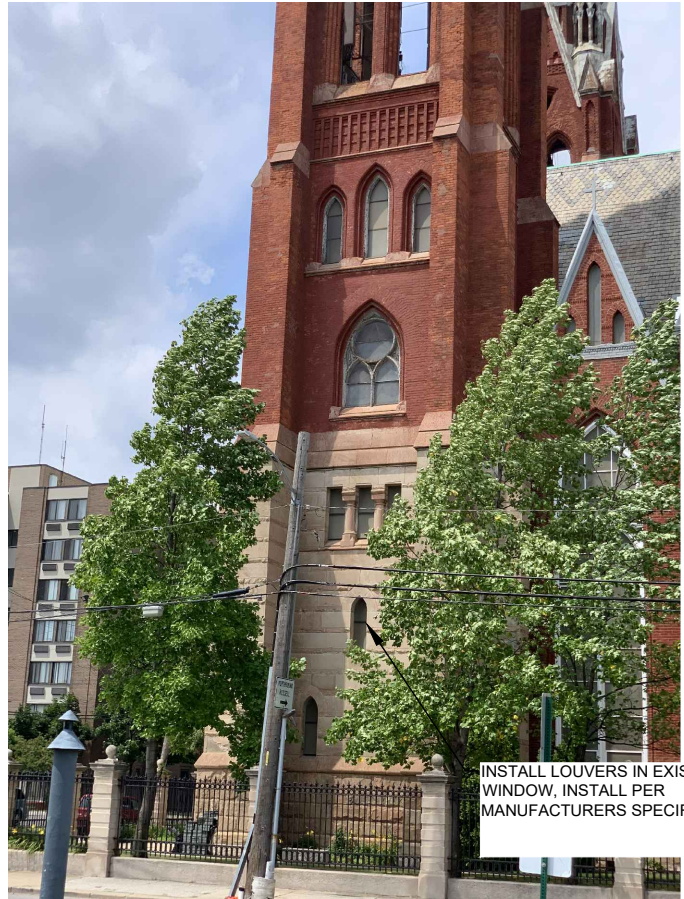
- All Equipment shall be grounded to a master ground bar on the 2nd floor. The master ground bar shall be grounded to the existing building ground on the 3rd floor following the conduit chase up in the 3rd floor access (ladder) room.

SITE SKETCH



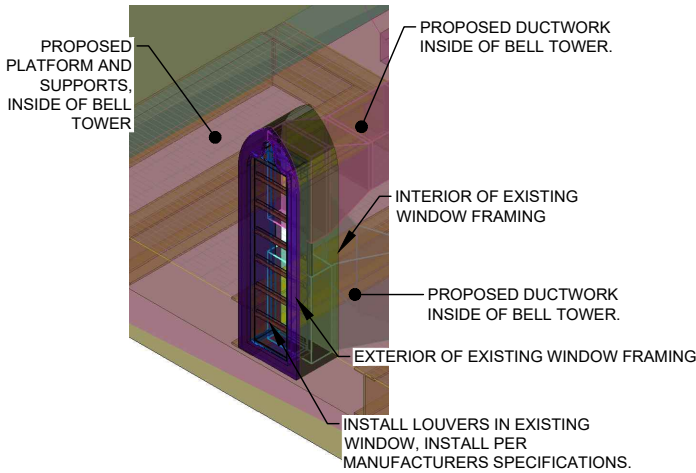
INSTALL LOUVERS IN EXISTING WINDOW, INSTALL PER MANUFACTURERS SPECIFICATIONS.

EXISTING WINDOW



INSTALL LOUVERS IN EXISTING WINDOW, INSTALL PER MANUFACTURERS SPECIFICATIONS.

EXISTING WINDOW LOCATION



PROPOSED LOUVERS



28505 SCHOOLCRAFT RD, BLDG#6
LIVONIA, MICHIGAN 48150

SITE NAME:
SWEETEST HEART OF MARY

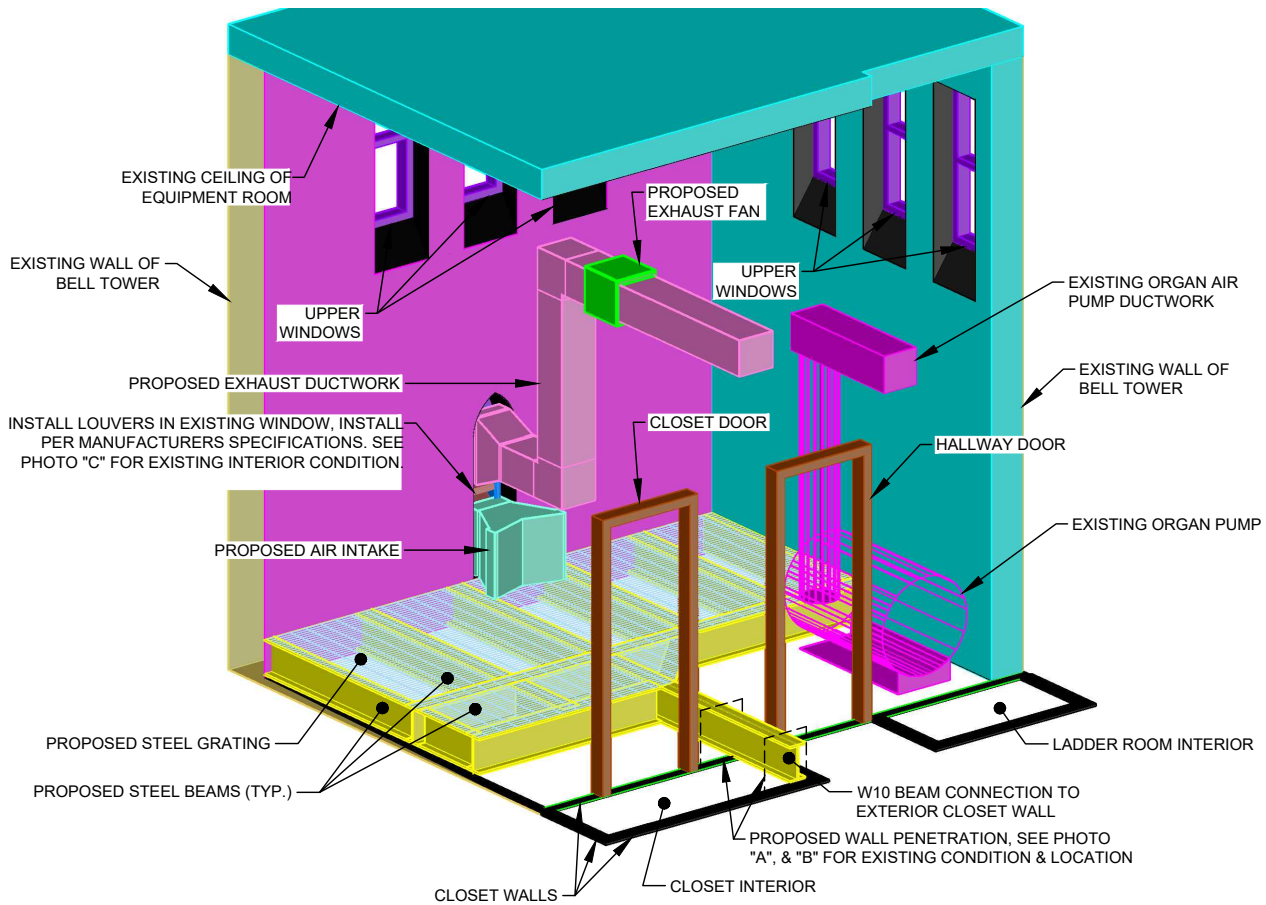
SITE NUMBER:
DE04229B

STREET ADDRESS:
4440 E. CANFIELD D/B/A 4440 RUSSELL ST.
DETROIT, MICHIGAN 48207

| REV | DESCRIPTION | BY | DATE |
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| 0 | PRELIMINARY | CDR | 08/20/19 |
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SITE SKETCH



PROPOSED EQUIPMENT ROOM

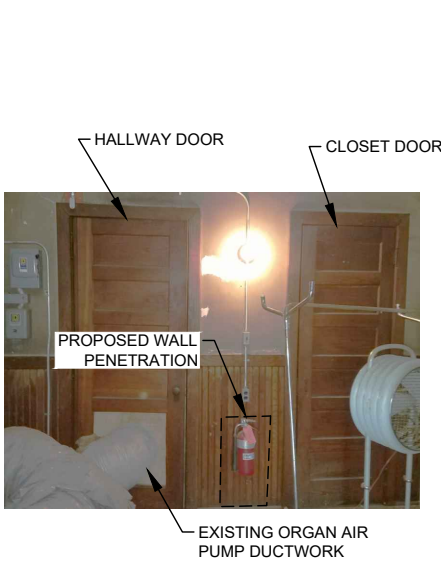


PHOTO "A"

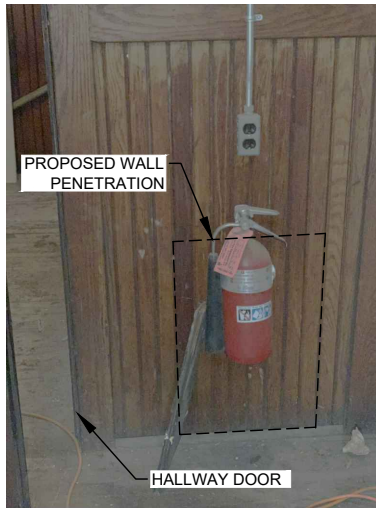


PHOTO "B"



PHOTO "C"

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