McKnight Crossings Church

Internal Maintenance Memo

Subject	South Canopy Exterior Electrical Conduit Maintenance
Date of Work	June 8, 2026
Prepared by	Bret Blackford
Location	Exterior south canopy roof area

Background

In late 2025, it was noted that portions of the exterior electrical conduit located on top of the south canopy had pulled loose from existing junction boxes. This created visible gaps at the box connections and raised concern that rain, snow, or other moisture could enter the junction boxes. Although the internal conductors did not appear to have exposed copper, the condition created a potential risk of deterioration, water intrusion, electrical fault, or loss of service to the canopy circuit. See https://www.building.mx.mxcoc.xyz/media/MX-electrical-CanopyConduit.pdf.

Maintenance Performed

On Monday, June 8, 2026, maintenance work was performed to correct the noted condition. Power to the canopy electrical circuit was turned off at breaker LP1-18. After power was turned off, the conduit and junction box area on the canopy was tested again using a non-contact voltage tester before work proceeded.

Because there was not sufficient slack in the existing conduit to properly reconnect it to the existing junction boxes, two new junction boxes were added. These new boxes provided the additional slack needed to securely connect the conduit to the junction boxes using appropriate fittings/connectors. The existing boxes were also reviewed, and it was noted that they had not been bonded to the grounding screws. The boxes were then bonded/grounded. Any observed holes or small gaps were filled with silicone caulk to reduce the opportunity for water entry.

After the work was completed, power was restored at breaker LP1-18. An outlet on the canopy conduit circuit was then tested with a basic receptacle tester and was noted to have power and to be wired correctly.

Materials Used

- Commercial Electric Metal 1010 179 213 wet-rated, NEMA 3R-rated junction boxes.
- Southwire 1/2-inch nylon liquid-tight fittings, Type B, Cat. No. 58133601 8403, E197675.
- Southwire Ultratite 1/2-inch LFNC-B conduit, Item #: 240411, Model #: 55094251.
- Silicone caulk applied to observed holes or small gaps as a supplemental weather-sealing measure.

Current Status and Follow-Up

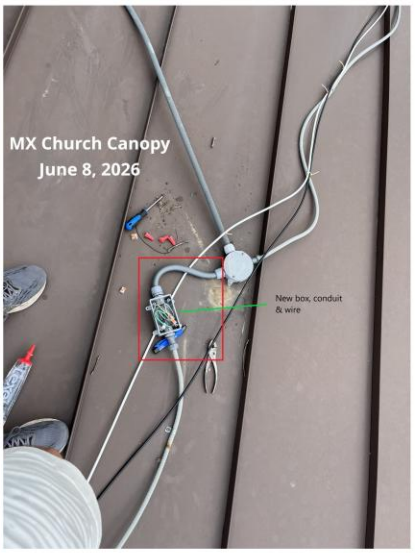
This work appears to have corrected the previously noted issue of conduit pulling free from the junction boxes and reduced the risk of moisture entering the boxes. The canopy conduit and junction boxes should continue to be visually inspected from time to time, especially after severe weather, roof maintenance, or any work performed near the conduit, to confirm that the conduit remains secure and that no boxes, fittings, or caulked areas have opened again.

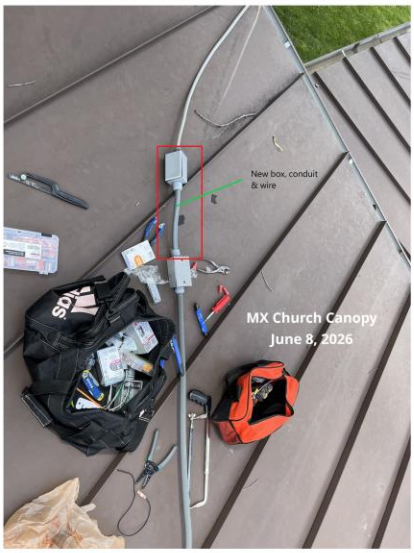
This memo is intended to document internal maintenance performed on the south canopy electrical conduit. It is not intended to serve as a formal electrical inspection or certification. If additional electrical work is performed in this area in the future, or if any concern is observed during future inspections, a licensed electrician should be consulted.

Photo Documentation

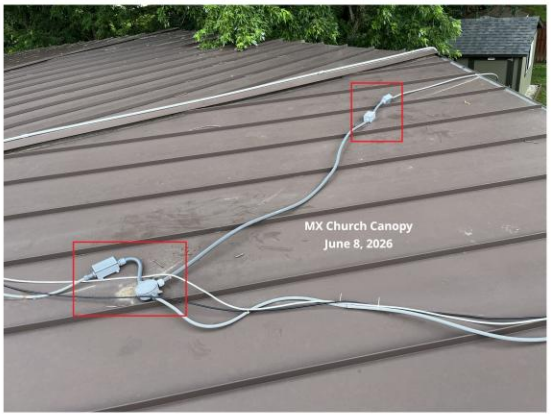
The following photo collage documents the June 8, 2026 maintenance work and the added boxes, conduit, and wire on the south canopy.

Photo Documentation - South Canopy Electrical Conduit Maintenance

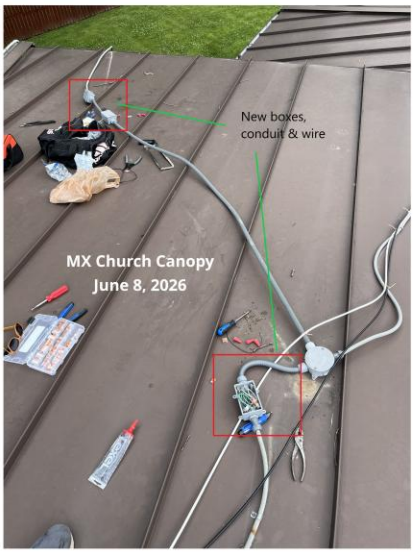












McKnight Crossings Church
South Canopy Exterior Electric

On September 19, 2025, two 200' Cat6 ethernet lines were installed along the south canopy to the cross area in the circle:

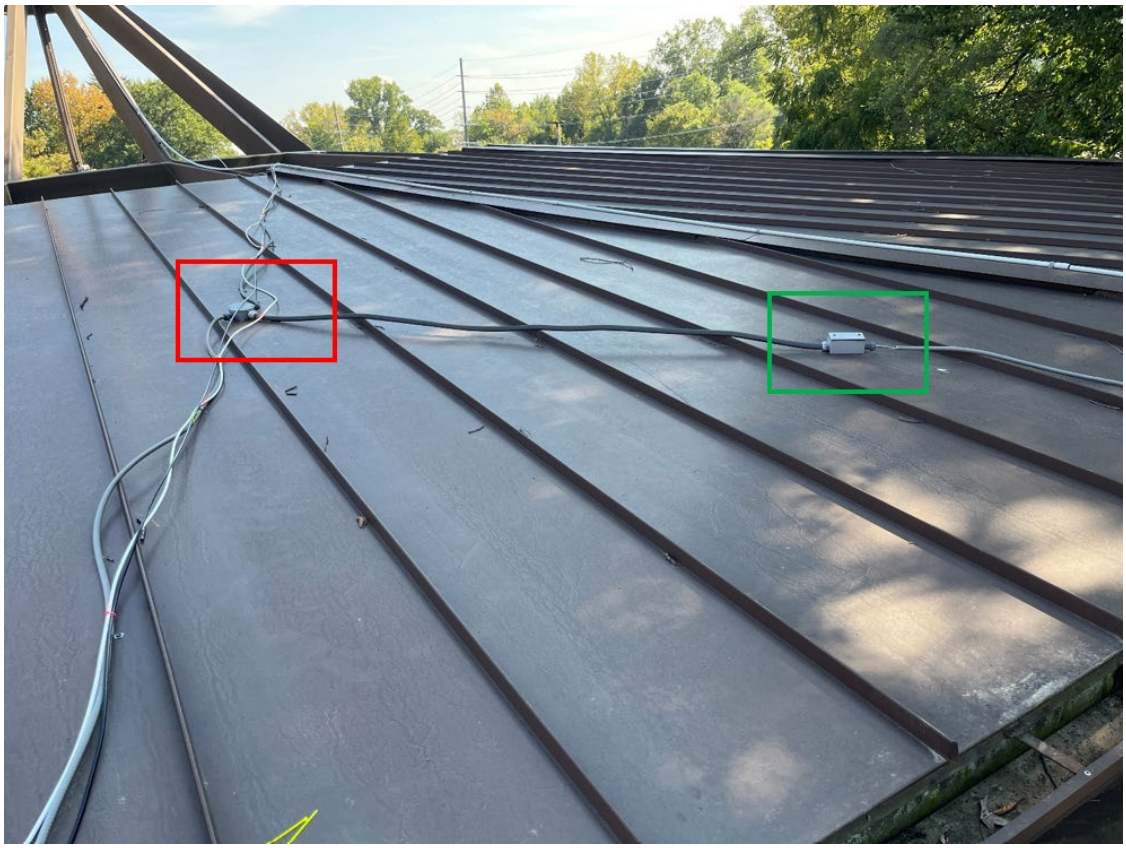
- White Ethernet Cable → Terminates at the new Ubiquity Unifi G6 PTZ camera.
- Black Ethernet Cable → Terminates at the Ubiquity AC Mesh external Wi-Fi access point.

Both ethernet lines were zip-tied to the existing 110AC electrical conduit running along the same path.

During installation, the following issues were observed with the existing electrical conduit:

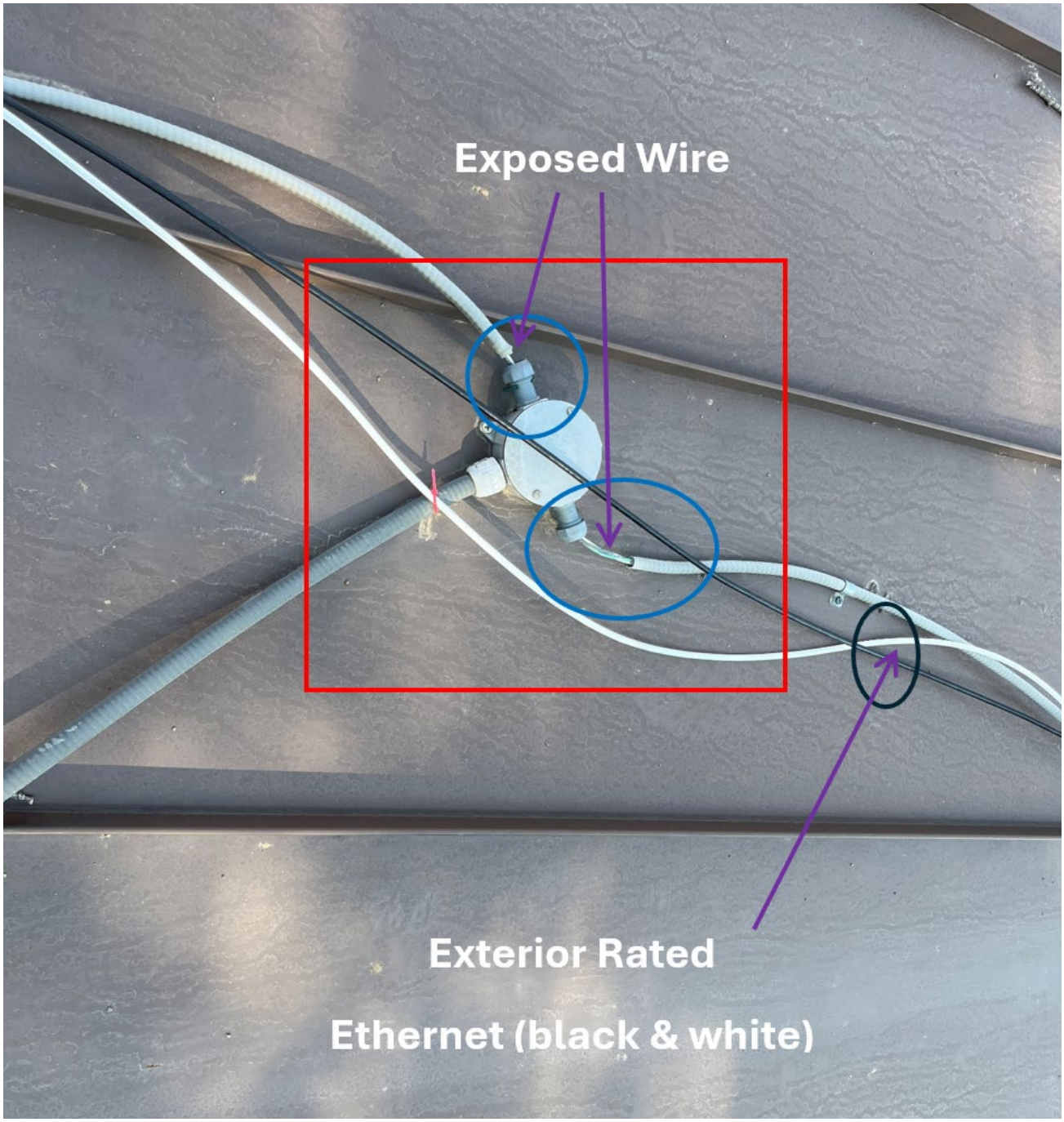
1. Conduit Separation: The conduit has pulled free from the junction box connectors, leaving gaps where it should be sealed.
2. Wire Exposure Risk: Only the outer sheathing of the three internal electrical wires is exposed, not the copper conductor. However, UV damage and weather could deteriorate this sheathing over time, exposing the copper to the elements.
3. Water Intrusion Risk: Gaps in the junction boxes could allow rain or snow to enter, potentially causing short circuits inside the boxes.

Below shows the two junction boxes that have the electrical conduit pulling free from the junction box connectors, exposing the 3 internal electric wires and opening the junction boxes to the elements – rain and snow – which could cause shorts in the boxes where the wires are joined. These exposed wires are noted in better detail in close-up photos later in this document.

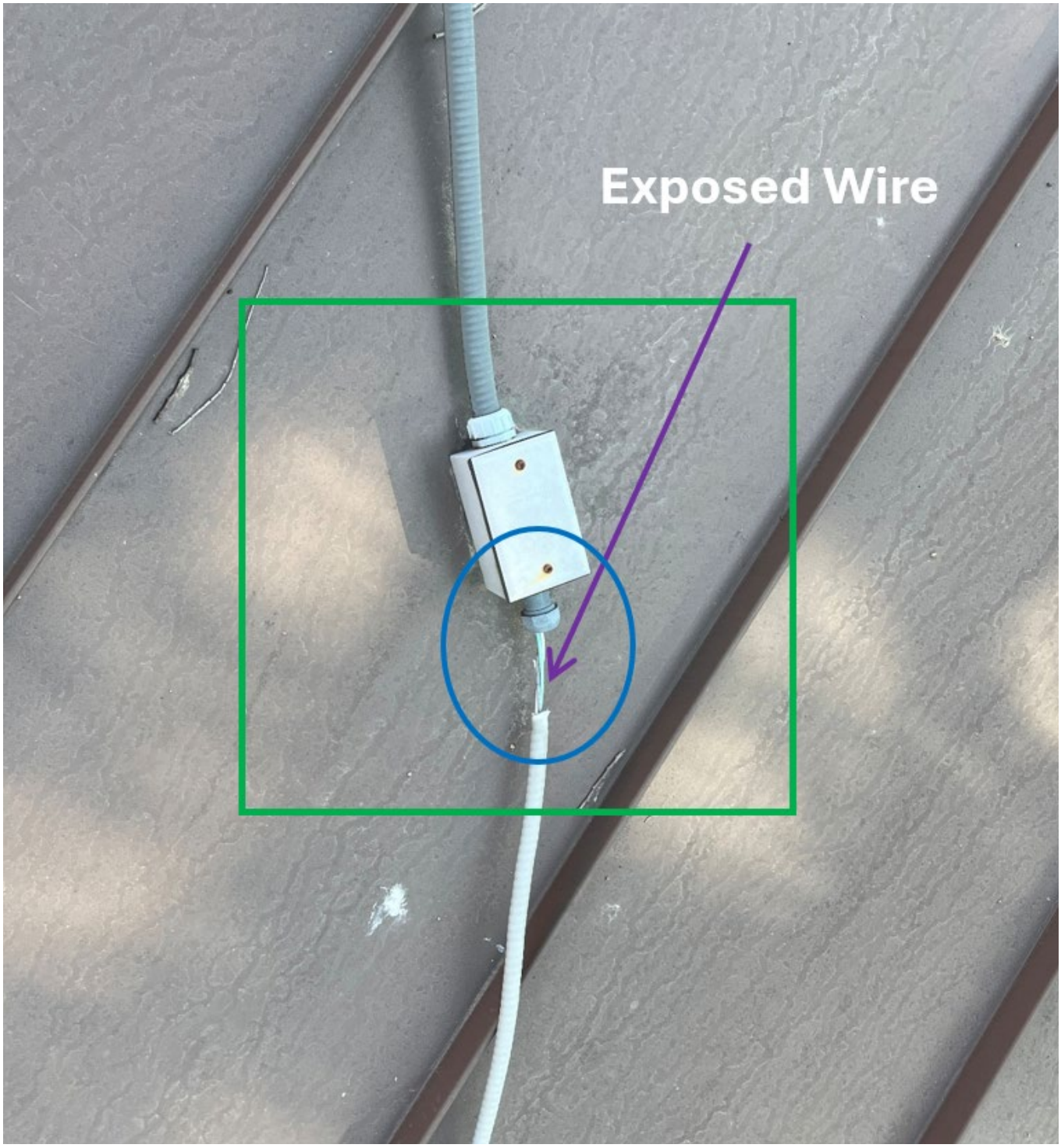


Below is a close up of the two electrical junction boxes noting how the conduit has pulled free from the box exposing the 3 internal wires (which are still individually sheathed).

The opening in the junction box can allow water from rain and snow to enter and possibly short on the internal wire connections.



Close up of the other junction box where conduit is pulling away from the box.



Recommendation
The conduit should be terminated to the junction boxes with no visible wire showing and eliminating any possible water penetration into the junction boxes. There does not appear to be enough slack in the existing conduit to reach and reconnect fully to the junction boxes and it may be necessary to cut the conduit short, add another junction box to the existing conduit and add new conduit from the new junction box to the existing junction box.

Covering the exposed inner wire with electrical tape is discouraged.

This issue has probably been in existence for months if not years so no immediate rush to correct. However, this should be put on the **ToDo list** and prioritized.