O'Reilly, Talbot & Okun
ENGINEERING ASSOCIATES

Via email & US Mail

February 9, 2017

Damian J. Cote, Building Commissioner
City Hall Annex
20 Korean Veterans Plaza – Room 300
Holyoke, MA 01040-5019

RE: Notice of Determination for Mater Dolorosa Church Building

Dear Mr. Cote:

Following our site visit meeting on January 31, 2017 in which representatives of the Diocese of Springfield and the City of Holyoke viewed and discussed the dangerous conditions at the Mater Dolorosa church steeple, it was my understanding that you would contact me with your opinion regarding whether the 6 month historical demolition delay ordinance would apply based on the those dangerous conditions. I am not only disappointed in your Determination but was surprised that I had to first learn of it in the local Springfield Republican newspaper.

In your Notice of Determination, you stated that "most if not all of the areas in question are due to a lack of routine maintenance". You also indicated that these conditions are "simple and low cost maintenance issues." These are totally inaccurate statements. You also implied that the dead load from the added weight of five adults during our inspection of the steeple is an indication the steeple is safe, which is also an inaccurate assumption. Although dead loads are always a structural concern, Dr. Hunt identified and described how the brick structure is more robust at the bottom as one would expect at the base of a steeple.

I want to remind you that three professional structural engineers (Barry Engineers and Constructors, Inc, Engineering Design Associates, Inc., and Neal Mitchell Associates) have all identified dangerous conditions in the steeple as defined in the Massachusetts Building Code. These professional engineering assessments were apparently of little value to you in making your Determination.

To clarify and expand on our site visit conversation, Dr. Hunt described how the upper section of the wood steeple and the lower brick section are

structurally connected and designed. A significant concern was the major structural cracks in the wood beams designed to connect the upper wood and lower brick sections. These wood beams are secured using steel rods to create tension and provide lateral support. These major structural components have failed. This structural failure is not the result of lack of maintenance; rather, it is a failure of the original design, age and forces that have been applied to the structure over the past 115 years. (See attached photos.) Although other issues such as water infiltration and brick wall cracking were also discussed and are dangerous conditions, you obviously are focused on the icing on the cake and not the cake itself.

One of the major structural concerns we discussed is lateral forces on the steeple during normal wind events. The structural system designed to support the steeple (wood beams and steel rods) has failed. As we discussed, typical lateral wind forces against the steeple with a failed system increase the risk of a complete or partial structural collapse. You are clearly overlooking this dangerous condition. There is no preventive maintenance that would have prevented or can correct this structural failure. By ignoring the assessments of structural engineers and refusing to recognize these dangerous conditions which would allow immediate demolition of the buildings, you have endangered the public's safety. The Diocese is evaluating its options to address this untenable situation.

On a related issue, you also indicated in your Determination that "they are required to place fencing in an area if they feel the structure is an imminent and substantial danger to the health and safety of the public." For the record, since your Determination we have attempted to obtain permits for the installation of a safety construction fence around the Mater Dolorosa church site as well as the former Immaculate Conception Social Center building located at 94 Ely Street. (This latter building, which we have discussed, also has structural and dangerous conditions and is scheduled for demolition.) Yesterday, I received a copy of an email from your office indicating that the permit for the installation of these safety construction fences has been denied. Your email also states that, due to zoning regulations, we are limited to a fence 4 feet in height. Your verbal conversations with the fence contractor indicate that you feel a 4 foot fence is more than adequate for safety, although you well know that the standard height for such a fence is 8 feet.

Frankly, I am shocked at your responses especially with the history of structural building collapses in the City of Holyoke. As a safety professional, I urge you to reconsider and allow the Diocese of Springfield to install an 8 foot high safety construction fence around both properties

for the protection of the public, and to allow the Diocese to eliminate the dangerous conditions both buildings pose to the public safety by allowing immediate demolition.

Sincerely,

Robert Kirchherr, CSP
Certified Safety Professional
Principal

cc: via email
Dr. Bernard J. Hunt, PE
William LaBroad
Robert L. Quinn, Esquire
Russell Sprague

Main wood structural support beam with significant crack through the entire length and depth. Steel tension rods which pass through the wood beam are loose. This condition is not due to the lack of routine maintenance.

Wood structural support beam with significant cracks the length and depth of both beams. Structural steel tension rods which provide stability and support are loose and not effective. Wood beams are pocketed into brick wall with loose brick and mortar

Main wood structural support beam with steel tension rod. Structural wood beams are pocketed into the brick structure.

Close up photo of brick structure showing crack through the entire thickness of wall. It is important to note the small section of brick at the top of the opening and the location where the main structural wood beam is pocketed into the brick. This condition is not due to the lack of routine maintenance and simply repointing of brick would not be an acceptable repair option. This condition would require rebuilding of exterior brick walls.

Significant cracks in plaster on both sides and ceiling of choir area. Plaster cracks are representative of the brick steeple located directly behind this wall. These cracks reported by parishioners in 2011 and are what prompted the initial structural assessment of the steeple.

Close up photo of plaster crack in choir loft. It is important to note these cracks appeared suddenly and prompted a structural assessment which identified dangerous conditions. This condition documents movement of the church steeple and is consistent with the structural engineering findings of major cracks in structural wood beams, loose steel tension rods and structural damage to the brick exterior walls. It should also be noted this was a sudden event and not due to lack of maintenance.