

ADDRESS: 1600-06 E BERKS ST

Proposal: Demolish building owing to necessity in the public interest

Review Requested: Final Approval

Owner: 1600 Berks LLC

Applicant: Matt McClure, Esq., Ballard Spahr

History: 1885-90, St. Laurentius Church, Edwin Forest Durang, architect

Individual Designation: 7/10/2015

District Designation: None

Staff Contact: Jon Farnham, jon.farnham@phila.gov

OVERVIEW

This application proposes the complete demolition of the St. Laurentius church building at 1600-06 E. Berks Street. A small section of the building at the rear extends onto the property at 1608-10 E. Berks Street. Section 14-1005(6)(d) of the historic preservation ordinance stipulates that:

No building permit shall be issued for the demolition of a historic building ... unless the Historical Commission finds that issuance of the building permit is necessary in the public interest, or unless the Historical Commission finds that the building ... cannot be used for any purpose for which it is or may be reasonably adapted.

This application contends that the Historical Commission should approve the demolition as necessary in the public interest to abate a dangerous condition that poses a threat to public safety. The Department of Licenses & Inspections (L&I) has cited the building for being Unsafe.

In June, the applicant submitted an engineer's report to the Historical Commission and Department of Licenses & Inspections that indicates that the two towers or steeples are failing and have an 80% chance of collapse in three years and a 100% chance of collapse in 10 years. In response to the report, the L&I Commissioner, executive director of the Historical Commission, and Historical Commission's attorney met with the property owner, engineer, and attorney to further discuss the engineer's report. At the conclusion of the discussion, the Commissioner requested that the property owner provide a second engineer's report from an independent, qualified structural engineer. The second report was submitted in early July. It concurs with the findings of the first report and also provides a detailed history of the many recent engineering analyses of the building. After the second report confirmed the findings of the first, the L&I Commissioner requested that the Historical Commission consider the application on an expedited basis at its July 10 monthly meeting, without referral to the Architectural Committee, owing to public safety concerns. On July 9, the Commissioner of the Department of Licenses & Inspections sent a letter to the Historical Commission explaining why he requested that the Commission hear the matter on an expedited basis. The letter indicates that the danger posed by the building must be abated as soon as possible, especially before students return to the adjacent school and freeze/thaw cycles begin.

The Department of Licenses & Inspections is the City agency with the expertise and authority to determine when buildings poses threats to public safety. The Department has determined that this church building poses a hazard to public safety and that the hazard must be abated quickly. The Historical Commission should accept the Department's determination on its face, that the building poses a threat that must be abated quickly. The task before the Historical Commission, and now the Architectural Committee, is to determine whether the demolition of the building is necessary in the public interest or whether there are reasonable alternatives to the demolition that would nonetheless protect public health, safety, and welfare.

The Historical Commission considered the application at its July 10 meeting and after a lengthy presentation by the applicant, considerable debate by the Commissioners, and extensive public comment, the Commission voted to refer the application to the Architectural Committee. Although not explicitly enumerated in this way, the Historical Commission in essence has three questions for the Architectural Committee:

1. Are the applicant's engineering assessments that predict failure and prescribe complete demolition to abate the dangerous condition cogent?
2. Can the towers be feasibly stabilized and/or repaired?
3. If the towers must be demolished, can the remainder of the church building be feasibly retained and reused?

The draft minutes of the Historical Commission's July 10 meeting are not yet complete, but will be forwarded to the Architectural Committee before its meeting.

BACKGROUND

The first services were held at St. Laurentius in 1885. The Archdiocese of Philadelphia closed St. Laurentius parish in 2014 and relocated the parishioners to nearby Holy Name of Jesus Church. Sidewalk protection and other measures to protect the public from the building have been in place since 2014. The Department of Licenses & Inspections declared the building Unsafe in April 2015. Community members nominated the church for designation. The Historical Commission designated it in July 2015 over the objections of the owner, who claimed that the building was in very poor condition and repairing it would be a hardship.

After the designation, a developer entered into an agreement with the church to rehabilitate the building for residential use. The developer obtained a zoning permit for the new use in 2016. Community members appealed the zoning permit, holding up the redevelopment project for several years. Eventually, the Commonwealth Court upheld the zoning permit in 2019, but the development project was abandoned. Throughout the litigation, the building suffered from minor collapses of the exterior stone. For example, in January 2019, 700 pounds of stone fell from the façade through the protective barriers to the street. During this period, the Department of Licenses & Inspections inspected the building regularly and required additional sidewalk protection measures and engineering reports. In 2019, the Archdiocese undertook some repairs to stabilize the building's masonry envelope. In early 2020, the current owner purchased the property from the Archdiocese.

In 2016 and 2017, the Historical Commission reviewed a nomination proposing to designate the interior of the church, including a series of murals depicting events in Catholic and Polish history. At the January 2017 meeting, the nominator withdrew the interior nomination. Since that time, community members have been seeking to remove the artistically and culturally significant murals and stained glass windows from the church and relocate them for preservation, display, and interpretation at the National Shrine of Our Lady of Czestochowa near Doylestown. The current owner is supportive of that effort. An attorney representing the Holy Name Parish and the adjacent St. Laurentius School has submitted an application requesting that the Historical Commission approve the removal of the stained glass windows and murals and their relocation to the National Shrine. The staff will approve that application administratively because the stained glass windows and murals are in the interior of the building and therefore not under the Historical Commission's jurisdiction. Exterior window systems that are independent of and block all views of the stained glass windows from the exterior of the building render the stained glass interior elements. Setting a precedent, the Historical Commission allowed the removal of stained glass windows with similar exterior window systems at Our Lady of Loretto Church in southwest Philadelphia as interior elements about 15 years ago.

1735 Market Street, 51st Floor
Philadelphia, PA 19103-7599
TEL 215.665.8500
FAX 215.864.8999
www.ballardspahr.com

Matthew N. McClure
Tel: 215.864.8771
Fax: 215.864.8999
mcclure@ballardspahr.com

July 2, 2020

Via E-mail

Jonathan E. Farnham, PhD
Executive Director
Philadelphia Historical Commission
1515 Arch Street, 13th Floor
Philadelphia, PA 19102

Re: Former St. Laurentius Church (the “Church Building”)
1600 East Berks Street, Philadelphia, PA (the “Property”)
“Necessary In the Public Interest” Demolition Application

Dear Dr. Farnham:

We represent 1600 Berks, LLC, the owner of the Property. Pursuant to Section 1005(6)(d) of the Preservation Ordinance, the owner is submitting this application on the basis that the demolition of the Church Building is “necessary in the public interest.” See Phila. Code § 14-1005(6)(d) (providing grounds for demolition of historically-designated structures).

Moreover, this application is being submitted on an expedited basis following direct consultation with the Commissioner of the Department of Licenses and Inspections, the Executive Director of the Historical Commission and the Commission’s legal counsel. We respectfully request that this application be put on the Commission’s July 10, 2020 agenda.

Comprising the application, we include the following documents along with this letter:

1. Building Permit Application to Demolish the Church Building;
2. Photographs of the exterior of the Church Building;
3. June 14, 2020 Structural Condition Appraisal Report, Janis B. Vacca, P.E. of the Harman Group (the “Harman Group Report”); and
4. July 2, 2020 Letter Report, Mark A. Coggin, P.E., Thornton Tomasetti, Inc. (the “Thornton Tomasetti Report”).

Jonathan E. Farnham, PhD
July 2, 2020
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As detailed in the Harman Group Report and the Thornton Tomasetti Report (together, “Structural Condition Reports”), both the northeast and northwest towers pose a “threat of imminent collapse” and “inaction at this time poses a threat to public safety.” Moreover, the Structural Condition Reports both conclude that any attempt at emergency repair or tower stabilization would be infeasible (if not impossible), very time consuming, and extremely dangerous. Each tower weighs approximately 500,000 lbs. and no adequate fall zone protections can be put in place due to the close proximity of neighboring buildings (including an elementary school).

As for the ability to selectively remove the towers, although potentially feasible many years ago, the time necessary to design and install a temporary structural support system to hold up the rest of the Church Building would take several months. Notwithstanding the extraordinary cost (or practicality) of any such temporary structural support system, the time for design and installation would substantially delay the demolition of the towers and, therefore, pose a further substantial (and unnecessary) threat to public safety.

At the July 10 Commission meeting, the following people will be available to provide testimony: Mr. Humberto Fernandini of 1600 Berks, LLC, Janis Vacca, P.E. and potentially Peter Angelides PhD, AICP of Econsult Solutions, Inc.

We recognize that considerable efforts to save the Church Building go back several years and that these efforts have been well known to the Commission and well reported in the media. It was in this context (and with the goal of historic rehabilitation) that the current owner purchased the Property from the Archdiocese of Philadelphia in January 2020. During the years immediately preceding the current owner’s 2020 acquisition, however, the façade and masonry primary structure continued to degrade and, most unfortunately, the towers have become irreversibly unstable.

We hope the Commission will approve this application at its July 10, 2020 meeting to permit sufficient time to work with Commission staff on the removal of the stained glass windows and paintings throughout the Church Building’s interior – in an effort to preserve the same recognizing their importance to Polish American history.

We thank you for your attention to this important matter.

Respectfully,

/s/ Matthew N. McClure

Matthew N. McClure

MNM/mpg
Attachment

APPLICATION FOR BUILDING PERMIT

APPLICATION # _____

(Please complete all information below and print clearly)



CITY OF PHILADELPHIA
DEPARTMENT OF LICENSES AND INSPECTIONS
MUNICIPAL SERVICES BUILDING – CONCOURSE
1401 JOHN F. KENNEDY BOULEVARD
PHILADELPHIA, PA 19102
For more information visit us at www.phila.gov/li

ADDRESS OF PROPOSED CONSTRUCTION:

1600 E. Berks Street, Philadelphia, PA 19125

APPLICANT:

Matt McClure, Esq. (Attorney for applicant)

COMPANY NAME

Ballard Spahr LLP

PHONE # (215) 864-8771

FAX #

APPLICANT'S ADDRESS:

1735 Market Street, 51st Floor

Philadelphia, PA 19103

LICENSE #

E-MAIL: mcclure@ballardspahr.com

PROPERTY OWNER'S NAME:

1600 Berks, LLC

PROPERTY OWNER'S ADDRESS:

29 Oak Lane

Mountain Lakes, NJ 07046

PHONE # (973) 703-2990

FAX #

ARCHITECT/ENGINEER IN RESPONSIBLE CHARGE

ARCHITECT/ENGINEERING FIRM:

PHONE #

FAX #

ARCHITECT/ENGINEERING FIRM ADDRESS:

LICENSE #

E-MAIL:

CONTRACTOR:

TBD

CONTRACTING COMPANY ADDRESS:

CONTRACTING COMPANY:

PHONE #

FAX #

LICENSE #

E-MAIL:

USE OF BUILDING/SPACE

Vacant

ESTIMATED COST OF WORK

\$ TBD

BRIEF DESCRIPTION OF WORK:

Demolition of building due to imminent collapse of steeples.

TOTAL AREA UNDERGOING CONSTRUCTION: _____ square feet

COMPLETE THESE ITEMS IF APPLICABLE TO THIS APPLICATION:

OF NEW SPRINKLER HEADS (suppression system permits only): _____ LOCATION OF SPRINKLERS: _____

OF NEW REGISTERS/DIFFUSERS (hvac/ductwork permits only): _____ LOCATION OF STANDPIPES: _____

IS THIS APPLICATION IN RESPONSE TO A VIOLATION? ☐ NO ☒ YES

VIOLATION #: _____

All provisions of the building code and other City ordinances will be complied with, whether specified herein or not. Plans approved by the Department form a part of this application. I hereby certify that the statements contained herein are true and correct to the best of my knowledge and belief. I further certify that I am authorized by the owner to make the foregoing application, and that, before I accept my permit for which this application is made, the owner shall be made aware of all conditions of the permit. I understand that if I knowingly make any false statement herein I am subject to such penalties as may be prescribed by law or ordinance.

APPLICANT'S SIGNATURE: _____

DATE: 07 / 02 / 2020

1600 E. Berks Street
Corner of Memphis St. and E. Berks St.
July 2, 2020



1600 E. Berks Street
Corner of Memphis St. and E. Wilt St.
July 2, 2020



1600 E. Berks Street
Corner of Memphis St and E. Wilt St.
July 2, 2020



1600 E. Berks Street
View from Memphis St.
July 2, 2020



1600 E. Berks Street
Corner of Memphis St. and E. Berks St.
July 2, 2020





STRUCTURAL CONDITION APPRAISAL

ST. LAURENTIUS CHURCH
1608 EAST BERKS STREET
PHILADELPHIA, PA

OWNER:

1600 BERKS LLC

Submitted by:

THE HARMAN GROUP
STRUCTURAL ENGINEERS
150 South Warner Road
Suite 100
King of Prussia, PA 19406

14 JUNE, 2020

STRUCTURAL CONDITION APPRAISAL
ST. LAURENTIUS CHURCH
PHILADELPHIA, PA
JUNE 14, 2020

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**STRUCTURAL CONDITION APPRAISAL
ST. LAURENTIUS CHURCH
PHILADELPHIA, PA
JUNE 14, 2020**

I. EXECUTIVE SUMMARY

The following represents our professional opinion based on the site review completed June 3, 2020:

1. There is near 100% probability of structural collapse of at least portions of the corner northern towers within the next 10 years.
2. There is an 80% probability of structural collapse of at least portions of the corner northern towers within the next 3 years.
3. The 2 northern corner towers will need to be demolished in their entirety at least down to the water table in order to rebuild them. Reinforcing them in place will be challenging and will not provide a long-term solution.
4. Removal and rebuilding of the 2 corner towers will require adding stability structure within the center section (if it is to remain).

II. PURPOSE AND SCOPE

The Harman Group performed a visual review of the 2 northern corner towers on June 3, 2020. The purpose was to identify the structural condition of the 2 northern corner towers, and determine structural repairs required. (see page 3 for isometric of the church; see page 4 for an elevation of the northeastern tower)

We had access through the full height of the northeastern tower through the upper platform but similar to other firms, could not access above what we are defining as the mid-level due to the accumulation of bird carcasses and droppings. See page 4 for an elevation of the northeastern tower.

Plaster finishes were removed at the mid-level platform at both the east and west towers.

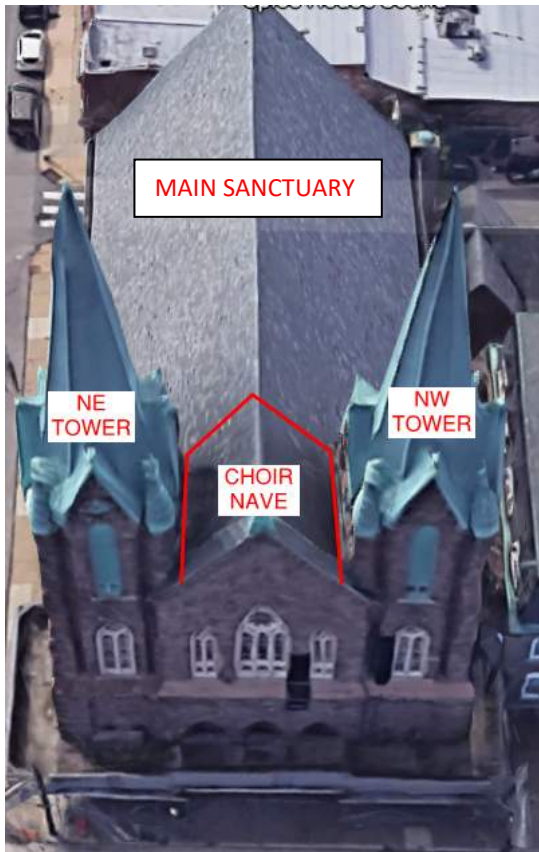
Other areas of survey and recommendations have been documented since 2013 as follows. See those reports for review of the brownstone cladding, mortar, roofing (and water leaks), and window frames.

O'Donnell & Naccarato	10/14/2013
O'Donnell & Naccarato	12/24/2013
Ortega	4/28/2014
Joseph B Callahan	7/28/2016
Joseph B Callahan	1/16/2017
Joseph B Callahan	10/3/2017
Joseph B Callahan	3/16/2018
Joseph B Callahan	1/29/2019
Joseph B Callahan	2/12/2019
Joseph B Callahan	7/10/2019
SDA	12/16/2019

III. GEOMETRY AND CONSTRUCTION

The St. Laurentius Church, built in 1885, is timber framed with load bearing masonry walls.

See below for an overall isometric of the building with a description of the structural system.

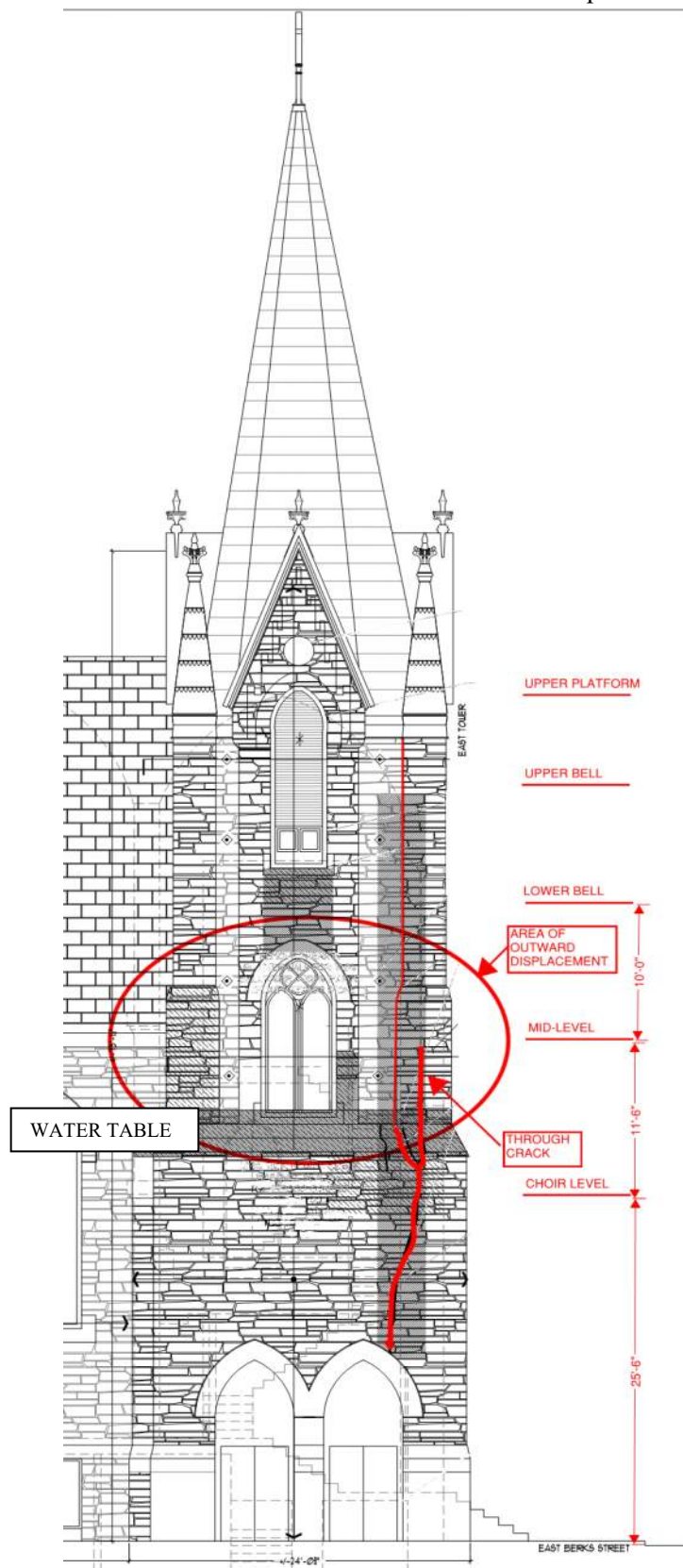


Main sanctuary: Timber trusses supported by cast iron columns and exterior load bearing masonry

Choir nave: Timber framing supported on load bearing masonry

Towers: Timber framing supported on load bearing masonry (see next)

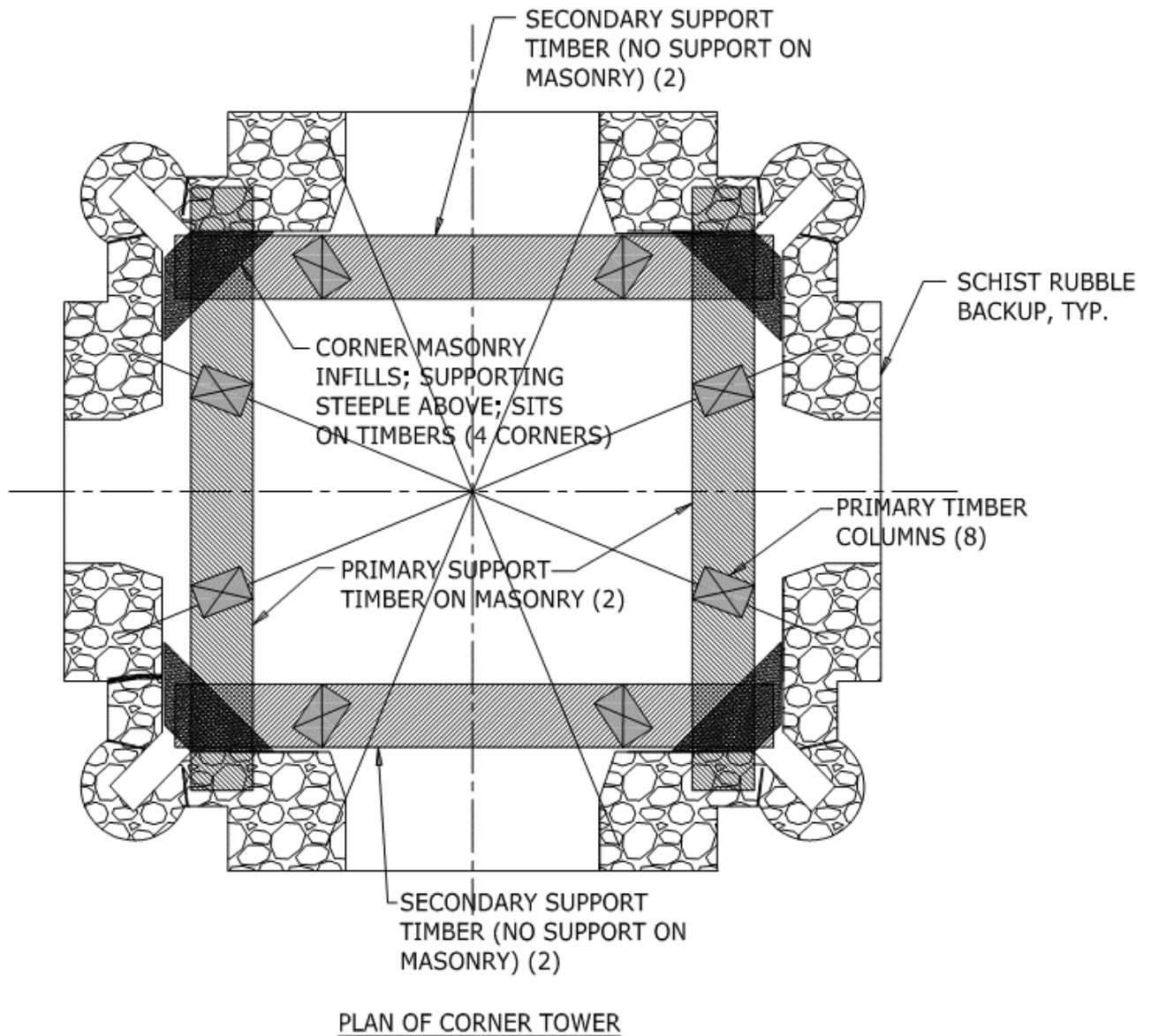
Below is an eastern elevation of the northeastern tower.
See labels for identification of different timber platform levels.



Below is the framing plan for the main platform at the Lower Bell (see elevation page 4).

All timber above the Lower Bell that frames out the platforms (Upper Bell, Upper Platform and the steeple above) are supported by the girders at this Lower Bell Platform. There are no other ties between the timber and the masonry above. The main timbers that span to the northern and southern walls are supported by the masonry walls. The secondary timbers spanning east west are supported by the north south girders but do not tie into the masonry walls.

The method of framing the towers means that it the tower masonry above the water table (where the masonry projects out) is entirely dependent on the integrity of the corners for its stability.



IV. OBSERVATIONS

The following is a list of our observations for the northern towers.

STRUCTURAL ISSUE #1 – GEOMETRY



Corner masonry infills supported by timbers at the Lower Bell level



Corner steeple support supported on corner masonry infills



Gap between timber framing and masonry above the lower bell level; no anchors between timber framing and masonry above the lower bell level

STRUCTURAL DISTRESS #2 – MOVEMENT OF CORNERS @ MID-LEVEL FULL DEPTH CRACKS



**INTERIOR THROUGH CRACK –
CHOIR TO MID-LEVEL NE TOWER**



EXTERIOR VIEW OF SAME CRACK

The through crack reflects that the corners of the masonry walls have become disconnected from each other. There is no structural integrity at the corners due to this cracking.



Open 2" gap between diagonal infill masonry and eastern wall indicating movement.



Open 2" gap between wood framing and eastern wall further indicating movement of the eastern wall.

STRUCTURAL DISTRESS #3 – FAILURE OF ARCHES



Northern wall eastern tower below mid-level (wood window frame cracked)



Eastern wall eastern tower below mid-level (wood window frame cracked)

Notice that the plaster (and masonry) cracking indicates that the corner is pulling away from the tower.

STRUCTURAL DISTRESS #4 – POOR QUALITY OF SCHIST BACK UP MASONRY



Note smaller stones, lack of mortar



Boroscope readings behind the diagonal infill wall indicates a void originally built. Based on the boroscope readings, the void was filled with dust, remnants of former mortar (damaged through age and freeze/thaw).

V. SUMMARY OF STRUCTURAL DISTRESS

See below for a summary of structural distress evident in the northern towers:

Structural Issue #	Title	Description	Impact on Stability of Northern Towers
#1	Geometry	All weight of steeples (50,000 pounds each) is supported on 2 primary timber girders resting on the lower bell level, northern and southern walls only; all gravity and lateral loads from the steeple are supported at this level.	Moderate impact. No stability gained between masonry and steeple; stability/bracing from timber girders gained on northern and southern walls only. Eastern and western walls rely on the corners for stability.
		Corner rounded turrets gain no bracing from corner masonry infills; Cracking evident	Significant impact. No stability of masonry at corners due to cracking.
		Steeple additionally supported on corner masonry infills	Moderate impact.
#2	Masonry Movement - Mid-level	Up to 2" outward movement evident at northeastern and northwestern tower	Significant impact. Cracking creates lack of masonry continuity and lack of stability of the towers
#3	Failure of arches	Although the interior of the plaster was not removed, it appears apparent that the head of most of the monumental windows have failed	Failure may cause movement of the masonry noted in #2 or vice versa
#4	Schist backup quality and degradation of mortar	Original construction of the schist stone backup was smaller stones. The mortar has been impacted through age and freeze thaw.	Significant impact. Smaller stones create extra reliance on mortar. Mortar has significantly degraded between turrets and corner masonry infills. Cracking evident. Lack of maintenance has allowed increased impact from moisture penetration and freeze thaw. Poor quality of backup stone has allowed for geometry (#2) to have a greater impact on the masonry movement and the arch failure. We do not believe pointing is a viable option.

VI. CONCLUSION

Based on the results of our review and the table listed above, we believe the nature of the structural distress is critical and will lead to at least partial collapse of the northeastern or northwestern towers within the next 10 years and an 80% probability of partial collapse within 3 years.

Repair options are not possible due to accessibility issues and the degradation of the masonry materials. Any attempt at partial or whole demolition or rebuilding must be accompanied by stabilizing the center portion of the north tower.

VII. LIMITATIONS

This report was prepared based a review completed by The Harman Group on June 3, 2020. Further changes in the condition of the building may have occurred since then may affect the information presented in this report and should be accounted for when preparing cost estimates.

Scope of the review was limited to the northern towers on the east and west side.

Thornton Tomasetti

Via email: humbertofernandini@yahoo.com

July 2, 2020

Mr. Humberto Fernandini
1600 BERKS LLC
29 Oak Lane
Mountain Lakes, NJ 07046

RE: 1600 EAST BERKS STREET
PHILADELPHIA, PA
TT Project No. L20059.00

Humberto:

We are providing this letter report in fulfillment of our agreement for engineering services dated June 25, 2020. Per the agreement, we reviewed the existing conditions on Monday, June 29, 2020. We also reviewed the previous reports prepared by five other engineering firms. These previous reports date from 2013.

We understand that the most recent report, prepared by Ms. Jan Vacca of the Harman Group, stated that the masonry steeples were in a state of imminent collapse. We also understand that you submitted this report to the City of Philadelphia Department of Licenses and Inspection. The response from the City was a request for you to retain the services of another engineer to evaluate the condition in order to corroborate Ms. Vacca's opinions. You have retained Thornton Tomasetti to provide that additional evaluation.

Background

Constructed in 1885, St. Laurentius Church was owned by the Archdiocese of Philadelphia prior to 1600 Berks, LLC taking over ownership. The brownstone clad masonry church has a timber framed roof and twin steeple structures on the north façade. The steeple structures have been the focus of concern due to the obvious visible deterioration of the stone. Engineering reports dating to 2013 documented the poor condition of the structure. It is readily apparent that this deterioration was ongoing prior to 2013 given that the first report notes previous repairs to the masonry. A brief summary of the previous reports follows:

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October 14, 2013 – O'Donnell & Naccarato

The report identifies deteriorated brownstone over 70-80% of the north, east and west facades, vertical cracks up to 1-1/2" wide, displaced stones, failed and improper repairs, deteriorated or improper mortar joints as well as other deterioration. The report recommended immediate installation of sidewalk protection below the steeples. Repairs required within one year included repointing all masonry joints, removal of loose brownstone, cracked joint repairs, and replacement of cracked masonry. Long-term repairs included cleaning and sealant replacement.

December 24, 2013 - O'Donnell & Naccarato

The report notes additional review following installation of the sidewalk protection. Recommendations updated to include three options: demolition and replacement of both steeples; demolition of the steeples with no replacement; and demolition of the entire church. The report includes a sketch noting cracked brownstone headers resulting in loss of face stone bond to the rubble stone masonry backup. Cost of removal and replacement of the steeples projected in the range of \$2.5 - \$3.5 million.

April 24, 2014 – Ortega Consulting

Regarding the steeples, the report confirms deterioration identified in the previous reports. It further identifies significant cracking at corners, lack of masonry ties between the steeple masonry and the timber framing of the steeple roofs and intermediate platforms and bowing of the steeple walls. Mr. Ortega notes that more studies are required but confirms that the building is dangerous, recommends shutting the building and confirms the need to demolish towers.

July 28, 2016 – Joseph B. Callahan

The report confirms deterioration identified in previous reports. Report states that there is not an imminent structural concern given the current installation of measures of sidewalk protection and netting, which protects the public from any stone that falls. Report notes that without tower demolition or rehabilitation, ongoing monitoring is required.

January 16, 2017 and October 3, 2017 - Joseph B. Callahan

These reports note a worsening of the previously identified deterioration and recommend further study including a 3D laser scan.

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March 6, 2018 - Joseph B. Callahan

This report provides the results of a 3d laser scan for use as a baseline for continued future evaluation.

January 29, 2019 - Joseph B. Callahan

This report documents that multiple stones dislodged at the northwest corner of the building on January 24, 2019. It further reports that a masonry contractor performed work including re-securing netting, installing additional netting and anchoring displaced stones.

February 12, 2019 - Joseph B. Callahan

Findings in the report include results of a second 3D laser scan and observations of the towers performed using a drone. The second scan found no significant movement since the previous scan. The drone observations include failures of previous repairs, open joints, freeze/thaw damage, water intrusion into the masonry and joint deterioration. The Conclusions state that the north façade requires rehabilitation or demolition.

December 16, 2019 – Structural Design Associates

The report states the author performed multiple inspections of the property, most recently on September 18, 2019. Findings are consistent with previous reports. The report concludes that 100% of the church should be demolished.

June 14, 2020 – The Harman Group

The report provides a detailed assessment of the condition of the towers. Findings include lack of structural ties between the timber steeple and the masonry tower, cracking at the round turrets, 2 inches of outward movement of the towers, cracks at the heads of the arched windows, and degradation of the backup masonry. The report concludes that the towers are in danger of imminent collapse and should be demolished.

Mr. Humberto Fernandini
RE: 1600 EAST BERKS STREET
PHILADELPHIA, PA
TT Project No. L20059.00

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Findings

I performed a review of the existing conditions on June 29, 2020. My review consisted of visual observations of exposed conditions that were accessible without staging or uncovering. Locations noted below are identified on the elevations on page 4 of the Harman Group report. During my review, I observed the following:

- At the mid-level of west tower, significant cracking and out of plane displacement of opposing cracked surfaces at the head of the arch window openings.
- At the mid-level of the west tower, the removed interior plaster exposed backup masonry. Mortar was cracked, deteriorated, and easily removed. The mortar had little to no bond to the stones.
- At the lower bell level of the west tower, significant cracking at the diagonal corner masonry. The remainder of the tower is inaccessible due to the bird carcasses and guano.
- At both towers, the timber framing of the steel is in good condition although not tied to the exterior masonry.
- At east tower, there is no bond between diagonal infill masonry and the exterior walls. This is typical at all four corners, full height of the masonry walls.
- At the mid-level of east tower, significant cracking at the head of the arch window openings.
- At the upper bell level of the east tower, large cracks and gaps are visible in the backup rubble stone at multiple locations and within the arched openings.
- At the exterior of the towers and north façade, the bedding plane of the brownstone cladding is vertical and parallel to the exposed face. Delamination of the stone is pervasive.
- Improper joint pointing exists throughout the brownstone cladding. The joint material is harder than the face stone, which accelerates the delamination of the face of the masonry.
- Moisture intrusion into the choir loft at the south interior corner of each tower.
- At the north façade, visible bowing of the masonry piers between the windows and racking of the northwest tower.

Mr. Humberto Fernandini
RE: 1600 EAST BERKS STREET
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Conclusion

It is apparent from reading the reports referenced above that the deterioration of the masonry has been an ongoing problem for many years. The reports prepared by O'Donnell & Naccarato, Ortega Consulting and Joseph B. Callahan all identify significant problems that needed immediate attention yet no action was taken to repair the conditions. This inaction of the previous owner allowed this deterioration to accelerate.

We concur with the conclusions stated in Harman Group report, specifically that the towers in their current condition pose a threat of imminent collapse. Although we cannot confirm the timeframe stated in the report, it is our opinion that inaction at this time poses a threat to public safety.

At this time, due to the deterioration of both the brownstone cladding and the rubble stone backup, attempts to repair are not reasonably feasible. Simply tying the walls together to prevent further outward movement will not address the overall instability resulting from the deterioration of the masonry joints. Furthermore, attempts to replace the cladding and tie the cladding to the backup could result in failures of the backup masonry.

Possibly, through thoughtful engineering, a method of rebuilding the masonry of the towers could be determined. However, we estimate that the design process may take a year or more to document. Escalating the 2013 engineer's estimate of probably construction cost for rebuilding the towers, the current cost for this work would most likely exceed \$4.5 million.

We trust that this information adequately addresses your concerns at this time. Please contact us should you have any questions or require further discussion.

Very truly yours,

THORNTON TOMASETTI, INC.



Mark A. Coggin, PE
Senior Principal