CITY OF BATAVIA

100 N. Island Ave., Batavia, IL 60510

(630) 454-2000 http://www.cityofbatavia.net

COMMUNITY DEVELOPMENT and CITY SERVICES

JOINT MEETING AGENDA

Tuesday, April 23, 2012

7:30 p.m. – City Council Chamber 1st Floor

1. Roll Call
2. Items Removed/Added/Changed
3. Resolution 13-64-R: Authorizing Execution Of A Contract With Denler, Inc., For The 2013 Crack Sealing Program In The Amount Of $50,000.00 (SH 4/17/13)

   Documents: RES. 13-64-R CRACK SEALING .PDF

4. Resolution 13-65-R: Authorizing Execution Of A Contract With Gee Asphalt Systems, Inc., For The 2013 Pavement Preservation Program In The Amount Of $50,000.00 (SH 4/17/13)

   Documents: RES. 13-65-R PAVEPRESER.PDF

5. Resolution 13-66-R: Authorizing Execution Of A Contract With Mondi Construction, Inc., For The 2013 Sidewalk And Curb Replacement Program In The Amount Of $195,000.00 (SH 4/17/13)

   Documents: RES. 13-66-R SIDEWALK.PDF

6. Resolution 13-67-R: Authorization To Purchase A Falcon Hot Patching Trailer Through The Illinois Joint Purchasing Program From Falva Road Equipment, LLC In The Amount Of $23,141.00 (SH 4/17/13)

   Documents: RES. 13-67-R HOT PATCH.PDF

7. Presentation: First Baptist Church Facility Study (Gary Holm, 4/18/13)

   Documents: PRE-FINAL DRAFT BAPTIST CHURCH.PDF

8. Main Street Reconstruction Alternates (Karen Young)
9. Project Status Update
   - Streetscape
   - Others
10. Other
11. Matters From The Public
12. Adjournment

CITY OF BATAVIA

DATE: April 17, 2013

TO: Scott A. Haines, Street Superintendent

FROM: Mayor and City Council

SUBJECT: Resolution 13-64-R: Authorizing Execution of a Contract for the 2013 Crack Sealing Program with Denler, Inc. in the Amount of $50,000

Summary

The City of Batavia has an annual crack sealing program to prevent water and other materials from entering and weakening pavement bases, causing deterioration. This year's budget includes $50,000 for the project.

Background

Staff identifies pavement throughout the city that would benefit from the crack filling application. The contractor must route out and remove loose material from the cracked areas and properly insert a special material to seal the cracked area.

Proposals

Only one bid was received as follows:

Contractor	Cost Per Lineal Foot	# of Lineal Feet to be Sealed
Denler, Inc.	$0.342	146,198

Staff Recommendation

Staff recommends acceptance of the low bid of $0.342 per lineal foot from Denler, Inc., of Mokena, Illinois. The company has worked on this project in past years and performed satisfactorily.

Timeline

The contractor will have 45 days from execution of documents to complete the program. We anticipate that this will occur in May/June.

Recommended Committee / Council Action

Motion: Approve Resolution 13-64-R, authorizing execution of a contract for the 2013 Crack Sealing Program with Denler, Inc., of Mokena, Illinois, for an amount not to exceed $50,000

c: Bill McGrath, Gary Holm, Heidi Wetzel, and Kevin Drendel

CITY OF BATAVIA, ILLINOIS
RESOLUTION 13-64-R

AUTHORIZING THE EXECUTION A CONTRACT WITH DENLER, INC. FOR AN AMOUNT NOT TO EXCEED $50,000

WHEREAS, the City of Batavia wishes to extend the life of pavement in various locations through the application of crack sealing material;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BATAVIA, KANE COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: That the Mayor and City Clerk are hereby authorized to execute the contract with Denler, Inc., attached hereto as EXHIBIT 1.

PRESENTED to the City Council of the City of Batavia, Illinois, on the 6th day of May, 2013.

PASSED by the City Council of the City of Batavia, Illinois, on the 6th day of May, 2013.

APPROVED by me as Mayor of said City of Batavia, Illinois, on the 6th day of May, 2013.

_____
Mayor

Ward	Aldermen	Ayes	Nays	Absent	Abstain	Aldermen	Ayes	Nays	Absent	Abstain
1	O'Brien					Sparks				
2	Callahan					Wolff				
3	Hohmann					Chanzit				
4	Saam					Stark				
5	Vasilion					Thelin Atac				
6	Cerone					Clark				
7	McFadden					Brown				
Mayor Schielke										

VOTE: Ayes 0 Nays Absent 0 Abstention(s) counted as _____
Total holding office: Mayor and 14 aldermen

ATTEST:

_____
Heidi Wetzel, City Clerk

CONTRACT

1. **THIS AGREEMENT**, made and concluded this 6th day of May, 2013, between the **City of Batavia** acting by and through **the City Council of the City of Batavia**, known as the party of the first part, and **"Denler, Inc." of "Mokena, IL"** their executors, administrators, successors, or assigns, known as the party of the second part.

2. **WITNESSETH:** That for and in consideration of the payments and agreements mentioned in the Proposal, attached hereto, to be made and performed by the part of the first part and, according to the terms expressed in the Contract Bond referring to these presents, the party of the second part agrees with said party of the first part, at their own proper cost and expense, to do all the work, furnish all materials, and all labor necessary to construct the **2013 Crack Sealing Program** in accordance with the plans, specifications, and special provisions hereinafter described and in full compliance with all of the parts of this agreement and the requirements of the Engineer under it.

3. And it is also understood and agreed to that the Contract Documents for the **2013 Crack Sealing Program** attached hereto, constitute all essential documents of this contract and are a part thereof.

4. **IN WITNESS WHEREOF**, the said parties have executed these presents on the date above mentioned.

For the Owner,
Party of the First Part **City of Batavia**

_____ By:_____
Attest: Heidi Wetzel, City Clerk Jeffery D. Schielke, Mayor
(Corporate Seal)

For the Contractor,
Party of the Second Part **Denler, Inc., Mokena, IL**

Printed Name:_____

Signature:_____
President, Party of Second Part

_____
Attest: Secretary

CITY OF BATAVIA

DATE: April 17, 2013

TO: Mayor and City Council

FROM: Scott A. Haines, Street Superintendent

SUBJECT: Resolution 13-65-R: Authorizing Execution of a Contract for the 2013 Pavement Preservation Program with Gee Asphalt Systems in the Amount of $50,000

Summary

Staff has identified several streets that are in good condition and could benefit from an application of GSB-88 sealer binder to further extend the service life of the asphalt.

Background

GSB-88 is a Gilsonite-based asphalt that penetrates and revitalizes pavement binder and also serves as a durable topcoat. GSB corrects most surface defects by absorbing into the surface and rebinding loose aggregates back together. GSB penetrates into the surface of the asphalt pavement so vehicles, plows, pedestrians, or any other friction wear do not affect its performance. It is applied with a computerized asphalt spreader truck and typically cures in about two hours. Depending upon conditions, it can last 4-6 years after application. We would like to maintain pavements that are in good condition with the pavement preservation concept to allow more time and resources to be spent on pavements in poor condition.

This method was first used in 2009 on several test areas. Staff has been pleased with the results and believes it is cost effective to continue this program on an annual basis.

Proposals

Only one bid was received as follows:

Contractor	Cost Per Square Yard	# of Square Yards to be Sealed
Gee Asphalt Systems, Inc.	$1.15/S.Y.	43,478 Total S.Y.

Staff Recommendation

Staff recommends acceptance of the low bid of $1.15 per square yard from Gee Asphalt Systems of Cedar Rapids, Iowa. The company has worked on this project in past years and performed satisfactorily.

Timeline

It is anticipated that the work would occur in June.

Recommended Committee / Council Action

Motion: Approve Resolution 13-65-R, authorizing execution of a contract for the 2013 Pavement Preservation Program with Gee Asphalt Systems of Cedar Rapids, Iowa, for an amount not to exceed $50,000

c: Bill McGrath
Gary Holm
Heidi Wetzel
Kevin Drendel

CITY OF BATAVIA, ILLINOIS
RESOLUTION 13-65-R

AUTHORIZING THE EXECUTION A CONTRACT WITH GEE ASPHALT SYSTEMS OF CEDAR RAPIDS, IOWA FOR AN AMOUNT NOT TO EXCEED $50,000

WHEREAS, the City of Batavia wishes to extend the life of pavement in various locations through the application GSB-88 sealer binder;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BATAVIA, KANE COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: That the Mayor and City Clerk are hereby authorized to execute the contract with Gee Asphalt Systems, attached hereto as EXHIBIT 1.

PRESENTED to the City Council of the City of Batavia, Illinois, on the 6th day of May, 2013.

PASSED by the City Council of the City of Batavia, Illinois, on the 6th day of May, 2013.

APPROVED by me as Mayor of said City of Batavia, Illinois, on the 6th day of May, 2013.

_____
Mayor

Ward	Aldermen	Ayes	Nays	Absent	Abstain	Aldermen	Ayes	Nays	Absent	Abstain
1	O'Brien					Sparks				
2	Callahan					Wolff				
3	Hohmann					Chanzit				
4	Saam					Stark				
5	Vasilion					Thelin Atac				
6	Cerone					Clark				
7	McFadden					Brown				
Mayor Schielke										

VOTE: Ayes 0 Nays Absent 0 Abstention(s) counted as _____
Total holding office: Mayor and 14 aldermen

ATTEST:

_____
Heidi Wetzel, City Clerk

CONTRACT

1. **THIS AGREEMENT**, made and concluded this 6th day of May, 2013, between the **City of Batavia** acting by and through **the City Council of the City of Batavia**, known as the party of the first part, and "**Gee Asphalt Systems" of "Cedar Rapids, Iowa**," their executors, administrators, successors, or assigns, known as the party of the second part.

2. **WITNESSETH:** That for and in consideration of the payments and agreements mentioned in the Proposal, attached hereto, to be made and performed by the part of the first part and, according to the terms expressed in the Contract Bond referring to these presents, the party of the second part agrees with said party of the first part, at their own proper cost and expense, to do all the work, furnish all materials, and all labor necessary to construct the **2013 Pavement Preservation Program** in accordance with the plans, specifications, and special provisions hereinafter described and in full compliance with all of the parts of this agreement and the requirements of the Engineer under it.

3. And it is also understood and agreed to that the Contract Documents for the **2013 Pavement Preservation Program** attached hereto, constitute all essential documents of this contract and are a part thereof.

4. **IN WITNESS WHEREOF**, the said parties have executed these presents on the date above mentioned.

For the Owner,
Party of the First Part **City of Batavia**

_____ By:_____
Attest: Heidi Wetzel, City Clerk Jeffery D. Schielke, Mayor
(Corporate Seal)

For the Contractor,
Party of the Second Part **Gee Asphalt Systems, Cedar Rapids, Iowa**

Printed Name:_____

Signature:_____
President, Party of Second Part

_____
Attest: Secretary

CITY OF BATAVIA

DATE: April 18, 2013
TO: City Services Committee
FROM: Scott A. Haines, Street Superintendent
SUBJECT: Resolution 13-66-R: Authorizing Execution of a Contract with Mondi Construction, Inc. for the 2013 Sidewalk and Curb Replacement Program for $195,000.00

Summary

Every year, staff identifies sidewalks that are in need of replacement due to trip hazards, cracks, or poor condition; these are addressed in the 2013 Sidewalk and Curb Replacement Program. In addition, the 2013 program continues efforts to improve the walkability of our community. Staff recommends approval of the low bid, submitted by Mondi Construction, Inc. of West Chicago, Illinois.

Background

The budgets for the annual Sidewalk Replacement Program, Curb Replacement Program, and New Sidewalk Program were combined into one program in the amount of $195,000.00. A list of locations for new sidewalks was reviewed and approved by the City Services Committee earlier this year and includes portion of Hamlet St., Branford Ave., Cleveland Ave., Larkspur Ln., and First St.

Since the bid for the proposed project was higher than budgeted, staff intends to reduce the quantities down to the budgeted amount of $195,000.00. Spring St. and College St. have been removed from this year's New Sidewalk Program, and various other locations were removed from the Replacement Program in order to stay within the total budgeted amount.

Proposals

Bids were opened on April 11, 2013, with the following results.

1.	Mondi Construction Inc.	Bid:	$223,225.37
2.	Schroeder & Schroeder Inc.	Bid:	$257,119.30
3.	Geneva Construction Co.	Bid:	$306,107.64
4.	Elliott & Wood, Inc.	Bid:	$355,785.05

The low bidder for the Annual Sidewalk and Curb Replacement Program was Mondi Construction, Inc. References were checked and found to be satisfactory.

Alternatives

Pros

Continue to maintain sidewalks in the safest condition possible for our residents by accepting the bid for the 2013 Sidewalk and Curb Replacement Program Mondi Construction, Inc. Staff has reduced the plan quantities to not exceed $195,000.00.

Cons

Not approving this project would delay the repairs needed to several locations where unsafe conditions exist and delay the plan to improve the walkability of the community.

Budget Impact

Funds were budgeted at $100,000.00 for sidewalk repairs; $20,000.00 for miscellaneous curb repairs; and $75,000.00 for the new sidewalk program for a total of $195,000.00.

Timeline

It is anticipated that the project will begin in June/July.

If you have any questions, please feel free to contact me at 630-454-2400. Thank you for your consideration.

Recommended Committee / Council Action

Approve Resolution 13-66-R, authorizing execution of a contract for the 2013 Sidewalk and Curb Replacement Program with Mondi Construction, Inc. of West Chicago, Illinois, for an amount not to exceed $195,000.00.

Attachments

c: Mayor and City Council
William McGrath
Jason Bajor
Kevin Drendel

CITY OF BATAVIA, ILLINOIS
RESOLUTION 13-66-R

A RESOLUTION AUTHORIZING EXECUTION OF A CONTRACT WITH MONDI CONSTRUCTION, INC. OF , ILLINOIS, FOR THE 2013 SIDEWALK AND CURB REPLACEMENT PROGRAM IN THE AMOUNT OF $195,000.00

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BATAVIA, KANE COUNTY, ILLINOIS, as follows:

SECTION 1: that the Mayor and City Clerk are hereby authorized to execute the contract between the City and Mondi Construction, Inc. attached hereto as **EXHIBIT 1**.

PRESENTED to and **PASSED** by the City Council of the City of Batavia, Illinois, this 6th day of May, 2013.

APPROVED by me as Mayor of said City of Batavia, Illinois, this 6th day of May, 2013.

_____

Jeffery D. Schielke, Mayor

Ward	Aldermen	Ayes	Nays	Absent	Abstain	Aldermen	Ayes	Nays	Absent	Abstain
1	O'Brien					Sparks				
2	Callahan					Wolff				
3	Hohmann					Chanzit				
4	Saam					Stark				
5	Vasilion					Thelin Atac				
6	Cerone					Clark				
7	McFadden					Brown				
Mayor Schielke										

VOTE: Ayes Nays Absent Abstentions
Total holding office: Mayor and 14 aldermen

ATTEST:

_____

Heidi Wetzel, City Clerk

1 page excluding Exhibit 1

CONTRACT

1. **THIS AGREEMENT**, made and concluded this 6th day of May, 2013, between the **City of Batavia** acting by and through **the City Council of the City of Batavia**, known as the party of the first part, and **Mondi Construction, Inc. of West Chicago, Illinois,** their executors, administrators, successors, or assigns, known as the party of the second part.

2. **WITNESSETH:** That for and in consideration of the payments and agreements mentioned in the Proposal, attached hereto, to be made and performed by the party of the first part and, according to the terms expressed in the Contract Bond referring to these presents, the party of the second part agrees with said party of the first part, at their own proper cost and expense, to do all the work, furnish all materials, and all labor necessary to construct the **2013 Sidewalk and Curb Replacement Program** in accordance with the plans, specifications, and special provisions hereinafter described and in full compliance with all of the parts of this agreement and the requirements of the Engineer under it.

3. And it is also understood and agreed to that the Contract Documents for the **2013 Sidewalk and Curb Replacement Program** attached hereto, constitute all essential documents of this contract and are a part thereof.

4. **IN WITNESS WHEREOF**, the said parties have executed these presents on the date above mentioned.

For the Owner,
Party of the First Part **City of Batavia**

_____ By:_____
Attest: Heidi Wetzel, City Clerk Jeffery D. Schielke, Mayor
(Corporate Seal)

For the Contractor,
Party of the Second Part **Mondi Construction, Inc. of West Chicago, Illinois**

Printed Name:_____

Signature:_____
President, Party of Second Part

_____
Attest: Secretary

CITY OF BATAVIA

DATE: April 17, 2013
TO: Mayor and City Council
FROM: Scott A. Haines, Street Superintendent
SUBJECT: Resolution 13-67-R: Authorization to Purchase a 2013 Falcon Hot Patching Trailer from Galva Road Equipment, LLC for $23,141.00

Summary

The Street Division is recommending the purchase of a 2013 Falcon hot patching trailer through the State of Illinois Joint Purchasing Program from Galva Road Equipment of Galva, Illinois.

Background

The unit will replace our existing patch trailer that has become very expensive to maintain. There is $15,000.00 in the 2013 budget for the purchase of this replacement unit. In other capital purchases thus far in 2013, we have saved over $22,000.00 so we will not be over budget in that fund.

Proposals

Purchase of the truck will be made through the State of Illinois Joint Purchasing Program. The vendor is Galva Road Equipment, LLC of Galva, Illinois. The price includes an overnight heater, dump option, LED lighting upgrade, battery charger kit, 24-hour timer, tool holder, solvent sprayer bracket, plate compactor/hoist, and frame extension.

Staff Recommendation

Staff recommends the purchase of a 2013 Falcon hot patching trailer through the State of Illinois Joint Purchasing Program from Galva Road Equipment of Galva, Illinois.

Recommended Committee / Council Action

Motion: Approve Resolution 13-67-R, authorizing the purchase of a 2013 Falcon Hot Patching Trailer from Galva Road Equipment, LLC for $23,141.00

c: Bill McGrath
Gary Holm
Heidi Wetzel
Kevin Drendel

CITY OF BATAVIA, ILLINOIS
RESOLUTION 13-67-R

AUTHORIZING THE PURCHASE OF A 2013 FALCON HOT PATCHING TRAILER FROM GALVA ROAD EQUIPMENT, LLC OF GALVA, ILLINOIS FOR AN AMOUNT NOT TO EXCEED $23,141.00

WHEREAS, the City of Batavia has determined that it has the need for a replacement hot patching trailer; and

WHEREAS, it is in the best interests of the City of Batavia to purchase this unit through the State of Illinois Joint Purchasing Program;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BATAVIA, KANE COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: That the Mayor and City Clerk are authorized to purchase one 2013 Falcon hot patching trailer from Galva Road Equipment, LLC of Galva, Illinois for an amount not to exceed $23,141.00.

PRESENTED to the City Council of the City of Batavia, Illinois, on the 6th day of May, 2013.

PASSED by the City Council of the City of Batavia, Illinois, on the 6th day of May, 2013.

APPROVED by me as Mayor of said City of Batavia, Illinois, on the 6th day of May, 2013.

_____
Mayor

Ward	Aldermen	Ayes	Nays	Absent	Abstain	Aldermen	Ayes	Nays	Absent	Abstain
1	O'Brien					Sparks				
2	Callahan					Wolff				
3	Hohmann					Chanzit				
4	Saam					Stark				
5	Vasilion					Thelin Atac				
6	Cerone					Clark				
7	McFadden					Brown				
Mayor Schielke										

VOTE: Ayes 0 Nays Absent 0 Abstention(s) counted as _____
Total holding office: Mayor and 14 aldermen

ATTEST:

_____
Heidi Wetzel, City Clerk

CITY OF BATAVIA

DATE: April 19, 2013
TO: Community Development / City Services Joint Committees
FROM: Gary Holm
SUBJECT: Pre-Final Draft Feasibility Study for the Potential Rehabilitation and Adaptive Reuse of the First Baptist Church Facility

In late 2012 Staff was directed to evaluate the Baptist Church facility for potential re-use. Staff developed specifications for a feasibility study and requested qualifications from the firms who proposed for the N. River St. project. Following a review of the firm's qualifications and proposals, staff recommended award of the feasibility study to Wiss, Janney Elstner Associates, Inc. (WJE).

The goal of the feasibility study was to answer the following basic questions:

> What are the significant issues associated with the structures? and what are the planning level cost estimates to address those issues so that the structure(s) can potentially be reused?

WJE was tasked with the following scope of services:

1. Perform interior and exterior inspections of church structure, north addition and classroom wing to identify significant issues that could have a material impact on the ability to rehabilitate and reuse the structures
2. Develop planning level cost estimates of improvements necessary for adaptive reuse.
3. Participate in staff meetings and/or phone conferences to coordinate the process.
4. Summarize inspection results and cost estimates into a comprehensive pre-final report document that can be disseminated to City Council Committees for their consideration. The report should be written in layman's terms and understandable by the general public.
5. Appear at an evening public meeting to present the pre-final report to Committee and address any comments/questions they may have.
6. Compile and present the final report document to City Council.

WJE has completed their comprehensive inspections of the Baptist Church Facility. Their findings, estimates and recommendations are summarized in the attached pre-final feasibility study report.

Staff is seeking questions, comments and direction from the Committees which WJE can then use to finalize the report.

FIRST BAPTIST CHURCH
Facility Feasibility Study

15 North Washington Avenue
Batavia, Illinois 60501

Draft Report
April 18, 2013
WJE No. 2013.0286

Prepared for:
City of Batavia
200 North Raddant Road
Batavia, Illinois 60510

Prepared by:
Wiss, Janney, Elstner Associates, Inc.
330 Pfingsten Road
Northbrook, Illinois 60062
847.272.7400 tel | 847.480.9534 fax

FIRST BAPTIST CHURCH
Facility Feasibility Study

15 North Washington Avenue
Batavia, Illinois 60501

DRAFT

Kenneth M. Itle

DRAFT

Jamie Morris

Draft Report
April 18, 2013
WJE No. 2013.0286

Prepared for:
City of Batavia
200 North Raddant Road
Batavia, Illinois 60510

Prepared by:
Wiss, Janney, Elstner Associates, Inc.
330 Pfingsten Road
Northbrook, Illinois 60062
847.272.7400 tel | 847.480.9534 fax

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS

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WJE | ENGINEERS ARCHITECTS MATERIALS SCIENTISTS

FIRST BAPTIST CHURCH
Facility Feasibility Study

15 North Washington Avenue
Batavia, Illinois 60501

INTRODUCTION

At the request of the City of Batavia, Wiss, Janney, Elstner Associates, Inc. (WJE) has performed a feasibility study of the First Baptist Church complex located at 15 North Washington Avenue in Batavia, Illinois. The building has been unoccupied since circa 2004. In 2006, ownership transferred from the First Baptist Church to the City of Batavia. The purpose of this study is to identify the functional potential of the building and estimate the associated order of magnitude costs of recommended repairs. This information will be used by the City of Batavia for future master planning for the site.

Description

The First Baptist Church facility is composed of the 1889 original church, a 1930s north addition, and a circa 1959 classroom wing. General views of the complex are shown in Figure 1 through Figure 4.

The original 1889 church has a rectangular shaped plan with a tower located at the southeast corner. It has load-bearing masonry exterior walls and wood timber floor and roof framing. The base of the building from the foundation up to the water table is stone masonry, with brick masonry and limestone accents above. The south facade includes the primary entrance at the east tower and a centered three-part stained glass window over a sign that reads “Baptist.” The east and west facades are similar with window bays separated by brick and stone buttresses with concrete copings. The bays include non-original double-hung windows at the basement level and paired or single rectangular stained glass windows at the first floor. The rectangular stained glass windows have fixed upper portions and an operable hopper unit at the base. The ridge of the asphalt shingled gable roof runs north-south. The tower is topped with a pyramid shaped asphalt shingle roof.

The 1930s addition connects to the north elevation of the 1889 church. The addition is a 2-story rectangular building of wood balloon frame construction on a concrete foundation, with exterior brick veneer and an asphalt shingle hipped roof. At the peak of the roof of the addition, there is a wood frame extension that connects to the original church; this extension was added circa 1969 to accommodate the organ pipe chamber. The 1930s addition includes non-original double-hung windows at the basement level and original wood three-over-one double-hung windows at the first floor.

The L-shaped 1959 classroom addition is located on the west side of the church and 1930s addition. It is a rectangular 2-story steel frame building with load-bearing exterior masonry walls. The building is supported by a concrete foundation and has precast concrete decking at the first floor. The roof structure mainly consists of wood rafters supported by steel framing and the exterior walls; at the fellowship hall, the roof is supported by glulam beams. The exterior is brick with punched window openings with limestone sills or limestone window surrounds. On the south elevation a portion of the facade is clad in limestone. The 1959 addition has a flat roof surrounded by a masonry parapet wall.

Figure 1. General view of the south facade. The 1959 addition is at left, the 1889 church is at right.

Figure 2. Partial view of the east facade, 1889 church. A portion of the 1930s addition is at far right.

Figure 3. General view of the north facade. 1930s addition is at left, 1959 addition is at right.

Figure 4. General view of the west facade, 1959 addition.

Document Review

The following documents were provided to WJE for review.

- Cornerstone Inspection Services, Inc., Letter to Mr. Bill McGrath dated November 10, 2004

  This letter reports the results of radon tests conducted in the building in November 2004. The test recorded average radon concentrations of 11.5 pCi/l, 13.7 pCi/l, 17.5 pCi/l, at the three test locations (two locations were in the 1959 school wing at the basement level, and one location was in the 1930s wing at the basement level). These readings are above the guideline level of 4.0 pCi/l established by the Illinois Emergency Management Agency, Division of Nuclear Safety. Therefore, follow up testing was recommended.

- Cornerstone Inspection Services, Inc., Letter to Mr. Richard Watts dated November 22, 2004

  The inspection report is nearly nine years old; however, many of the conditions observed remain present and have continued to contribute to distress. The 2004 reports no evidence of current roof leakage; however, significant leakage has occurred at both the 1959 addition and the main church since the previous inspection date. Openings at the church gutters were not reported in 2004. Based on our observations, this area has been a source of water infiltration for a significant duration. Corrosion at the steel window lintels was observed and reported in 2004. The report recommends repointing at the north chimney at the church and capping the north chimney at the 1959 addition. Note that the 1959 north chimney is likely still actively used for the existing gas-fired boiler and hot water heater.

- Aires Consulting Group, Letter to Mr. Bill McGrath dated December 20, 2004

  The Aires Consulting Group letter presents the results of survey and sampling performed to identify asbestos-containing materials. Flooring materials, including tiles and mastics at both exposed locations as well as under existing carpet, tested positive for asbestos. Also, linoleum flooring also tested posted for asbestos.

- Limited Asbestos Inspection, Innerspace Environmental Assessment, Inc., dated December 6, 2012

  The Innerspace Environmental Assessment letter presents the result of survey and sampling performed to identify asbestos-containing insulation in the building. The older gray-colored insulation in the attic above the main sanctuary of the church tested negative for asbestos; the insulation was identified as mineral wool.

- Drawings. A number of drawings and related documents were also provided for review. The drawings included:

  - Various 1950s drawings, showing preliminary design concepts for the school addition.

  - Technical specification for the school addition prepared by Michaelsen, Rabig and Ramp, Architects and Engineers, dated December 27, 1955.

- Construction drawings for the school addition prepared by Michaelsen, Rabig and Ramp, Architects and Engineers, dated January 16, 1956. Some structural sheets are marked as revised on December 28, 1958. Based on these revised drawings, it is assumed that construction of the school addition was not completed until 1959. Note that as constructed, the school wing was shifted approximately six feet south relative to the original church and 1930s addition compared to the location shown on the drawings. This results in the south wall of the school wing intersecting the second masonry pilaster off the northwest corner of the original church, rather than the northwest corner pilaster as shown on the drawings.

- Several sheets prepared by Kleb, Shelp & Associates, Architects, dated July 9, 1969, for the new pipe organ and baptismal pool and related remodeling of the chancel in the main sanctuary of the church.

- An aerial survey photograph of the church and vicinity, circa 1960s or 1970s, showing the former wood-framed house with detached garage that was located directly adjacent and to the north of the church complex in what is now a grass lawn area. Two additional houses and a garage were located in the north half of the block in what is now the church parking lot.

- A legal plat of the church parcel prepared in 1978 showing a small corner of the parcel to be taken for street improvements.

- Various 1970s drawings related to street and sidewalk work adjacent to the church.

- Reference floor plans of the complex prepared by Joseph-Murphy and dated March 21, 1994. These plans generally show the interior layout that exists today. However, note that these plans were apparently developed with reference to the 1956 drawings for the school addition and do not adjust for the six-foot offset in the as-built location of the school addition.

OBSERVATIONS

Methodology

On March 21 and 22, 2013, Kenneth Itle, Timothy Penich, and Jamie Clapper Morris of WJE performed an inspection of the facility consisting of a visual survey of exterior and interior materials, and select openings to review and document structural framing. Observations of exterior materials were conducted from grade and accessible roof areas. Interior observations were conducted from accessible attic spaces, rooms, and crawlspaces, and access hatches. Observations were recorded with notes, photographs, and sketches.

Exterior

The following is a description of notable conditions observed at the exterior of each area of the building.

1889 Church

Masonry. The building exterior walls are stone masonry up to a continuous watertable aligned to the window sills of the main sanctuary. Above this level, the walls are brick masonry, with stone used for architectural details such as sills and stringcourses. The exterior walls incorporate projecting piers; each pier is capped by a concrete coping. Based on a historic photograph of the church (Figure 5), these copings were likely originally stone. Most of the masonry is intact from original construction. Where the

1930s and 1959 additions abut original exterior walls of the church, the original masonry is generally intact behind the newer wall construction, except for new door openings and a larger opening created in the original north wall of the church for the 1969 organ pipe chamber (Figure 6 and Figure 7). The original front entrance facing Wilson Street has been reconfigured many decades ago. An original exterior staircase was removed, and the exterior door opening was shifted down. The original opening was partially infilled with brick and a new stone surround was installed (Figure 8). Masonry distress conditions include the following:

- **Open, eroded, and cracked mortar joints.** Open, eroded, and cracked mortar joints were observed in zones and in isolated locations throughout the stone and brick masonry church exterior. One particular zone of mortar distress was observed on the west elevation at the upper portion of the wall near the interface with the 1959 addition (Figure 9 through Figure 11).

- **Isolated cracks in exterior masonry.** Cracks through masonry units were observed in isolated locations throughout the stone and brick masonry church exterior. The cracks observed are minor and are not structural in nature (Figure 12).

- **Deteriorated sealant joints.** Areas of missing sealant and distress caused by typical weathering were observed at the sealant joints present at window perimeters and throughout the facade.

- **Erosion of stone sills.** Erosion was observed at limestone sills located under first story stained glass windows. The distress is relatively minor under the east and west stained glass windows. The distress is most apparent under the three-part stained glass window at the south elevation (Figure 13). Similar distress was also observed at the sills of the louvered openings at the tower.

Roofing. The roof of the original church is covered with asphalt shingles. At least two layers of asphalt shingles are present, installed over an older, possibly original, layer of cedar shingles nailed to the original spaced wood sheathing. The existing exposed shingles are likely at least thirty years old. The elaborate decorative roof cresting visible in the historic photograph no longer exists (refer to Figure 5). However, the metal finial atop the tower roof appears to be original (Figure 14). Along the east and west walls of the church, there is a built-in gutter. This gutter is lined with copper; the copper liner is likely twenty to thirty years old. There is also a continuous cornice below the built-in gutter and continuing on the eaves at the north and south gables. The original cornice is painted wood; this cornice has been overclad with prefinished sheet metal textured to resemble wood, also likely twenty to thirty years old. Roofing distress conditions include the following:

- **Deterioration of Asphalt Shingle Roofing.** Missing, delaminated, cracked, and broken asphalt shingles were observed throughout the gabled roof of the church and the pyramid roof of the tower (Figure 15 and Figure 16). Asphalt shingle fragments were observed at grade and within the gutter.

- **Deteriorated downspouts.** There are only two existing downspouts, one on the west wall and one on the east. The existing downspouts are galvanized steel, which is corroding due to a galvanic reaction with the copper gutter liner and sleeves. Significant soil erosion was observed at the base of the east downspout which is white-painted galvanized steel (Figure 17 and Figure 18).

- **Gaps between segments of copper gutter liner.** The copper sheet metal segments that compose the gutter liner are lapped and connected with pop-rivets, and the exposed edge of the copper is not

sealed. Openings that likely permit significant water entry into the masonry wall below were observed (Figure 19).

- **Non-original sheet metal cornice cover.** A non-original painted sheet metal cover has been placed over the original wood cornice. Open gaps were observed in the connections of the sheet metal segments (Figure 20). The original painted wood cornice below appeared intact, although the paint coating is cracked and partially debonded.

Windows and Doors. The main sanctuary has stained glass windows in steel frames. The bottom panel of each window is an operable hopper window. The basement level has non-original double-hung windows. The exterior doors facing Wilson Street are non-original anodized aluminum-framed glass doors.

- **Non-original replacement windows and doors.** Non-original replacement windows of an unknown vintage were observed in the basement level of the church (Figure 21). The entrance doors at the southeast corner of the church are also non-original and of an unknown vintage.

- **Discoloration of stained glass window cover panels.** Plastic coverings have previously been installed over the exterior surface of the stained glass windows. The coverings were observed to be discolored and no longer clear (Figure 22 and Figure 23). At windows on the east and west, the coverings stop short of the operable lower portion of the window.

- **Tower infill.** As seen in the historic photograph, the tower openings were originally open and included wood railings (refer to Figure 5). Non-original wood louvers have previously been installed at the second level of the tower where an open railing was originally present (Figure 24). In addition, metal straps previously placed at the stone sills below the louvered openings have corroded.

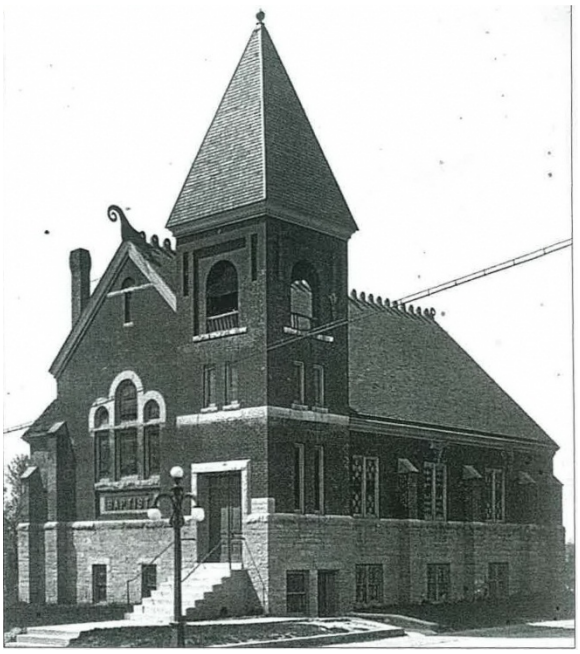


Figure 5. Historic view of church as completed circa 1889. Note main entrance, masonry exterior, and wood shingle roof with ridge cresting.

Figure 6. Intact exterior stone masonry at the original north wall of the church, now located at the interior of the 1930s addition.

Figure 7. Intact exterior masonry wall construction at the original west wall of the 1930s addition (left) and 1889 church (right), now located inside the 1959 addition.

Figure 8. Wilson Street entrance at the southeast corner of the church. Note non-original brick masonry infill and new stone surround. Compare to the original entrance as shown in Figure 5.

Figure 9. Open, eroded, and cracked mortar joints at the church upper wall and buttress.

Figure 10. Detail of open, eroded, and cracked mortar joints at the buttress.

Figure 11. Open, eroded, and cracked mortar joints in the zone outlined in yellow.

Figure 12. Yellow arrow indicates an isolated crack in a stone masonry unit.

Figure 13. General view of eroded stone sill surface (outlined in yellow) below the stained glass windows.

Figure 14. Original sheet metal cap and finial at the top of the tower roof.

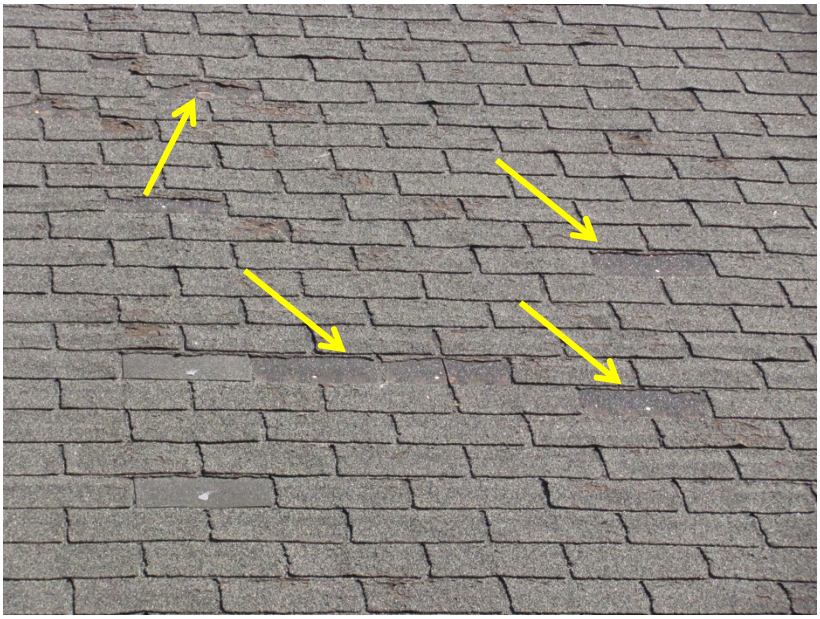


Figure 15. Detail view of missing asphalt shingles (indicated by arrows) in the field of the church roof.

Figure 16. General view of church roof with missing asphalt shingles (indicated by arrows) at the tower.

Figure 17. Detail of galvanic corrosion at the surface of the galvanized connection to the copper downspout

Figure 18. Eroded grade at the base of the east church downspout.

Figure 19. The pencil indicates a typical gap in the lapped sections of the copper gutter liner.

Figure 20. Gap in the non-original painted sheet metal cornice cover. A painted wood cornice is located under the cover.

Figure 21. Non-original replacement windows at the church basement level.

Figure 22. General view of the discolored plastic panels over the stained glass windows.

Figure 23. Discolored plastic panels over the stained glass windows. Note the partial coverage of the panels due to the operable lower portions of the windows.

Figure 24. Non-original louver infill at the tower. Note the metal straps on the stone sill (indicated by arrows).

1930s Addition

Masonry. The exterior walls of the 1930s addition are a single wythe brick veneer over the wood structure. Window sills are brick rowlock courses, and painted steel lintels support the brick masonry over basement level window openings. The top of the cast-in-place concrete foundation is visible on the exterior at grade. Masonry distress conditions include the following:

- **Open, eroded, and cracked mortar joints.** Open, eroded, and cracked mortar joints were observed in zones (such as areas adjacent to window lintels) and in isolated locations throughout the brick masonry exterior (Figure 25). At the joint between the 1930s veneer and the original church, irregular brick were butted against the 1889 wall, and the joint is cracked and separated (Figure 26).

- **Isolated cracks in exterior masonry.** Cracks through masonry units were observed in isolated locations throughout the stone and brick masonry church exterior. The cracks observed are minor and are not structural in nature.

- **Corroding lintels above windows.** Localized areas of corrosion and paint coating deterioration were observed on the surface of the steel lintels (Figure 27).

- **Isolated cracks in foundation.** A few isolated cracks were observed in the concrete foundation near the west window. The cracks are relatively narrow and they are not associated with any displacement (Figure 28).

Roofing. The roof of the 1930s addition is a hipped, asphalt shingle covered roof. An aluminum hanging gutter is present along the north and east walls of the addition. The gutter is drained by a single downspout near the northeast corner. Roofing distress conditions include the following:

- **Wear at downspout and gutter.** The existing aluminum gutter and downspout are non-original and of an unknown vintage. Both are showing signs of wear including loosening of fasteners, corrosion of fasteners, deformation, and abrasion markings (Figure 29 and Figure 30).

- **Roofing.** Minor wear related to general weathering was observed at the asphalt shingle roof over the 1930s addition. The asphalt shingle roof is of an unknown vintage and, based on the architectural styling of the shingles, appears newer than the asphalt shingle roof at the church (Figure 31).

Windows and Doors. The basement floor level has non-original aluminum-clad wood double-hung windows (Figure 32). The first floor level windows are original wood three-over-one light double-hung windows with exterior aluminum triple-track storm windows.

- **Windows.** The basement level windows are in fair condition. The existing windows on the first floor are original to the addition. These windows were observed to be in fair condition; with localized loss of paint and cracking of glazing putty. The existing triple-track storm windows at these windows are no longer functional, with missing and broken components.

- **Deteriorated sealant joints.** Areas of missing sealant and weathering of sealant were observed at the sealant joints present at window perimeters (Figure 33).

Organ Pipe Enclosure. In 1969, a wood-framed shed-roof lean-to was added to the roof of the 1930s addition to accommodate an enlarged organ pipe chamber.

- The walls of the organ pipe enclosure are clad with vertical wood siding. The paint on the siding is faded and missing from some areas (Figure 34).

- The roof of the organ pipe enclosure is asphalt shingle; these shingles are significantly weathered, with erosion of granules and cupping of shingles. The sheet metal flashings where the pipe enclosure roof meets the north wall of the church, and where the walls of the pipe enclosure meet the roof of the 1930s addition, are deteriorated, with splits and debonded sealant.

- During the construction of the pipe enclosure, the original north masonry wall of the church was partially removed, to allow for an enlarged organ pipe chamber; a steel beam was installed to span across the new opening and support the brick masonry above. Similarly, the roof rafters of the 1930s addition were cut short at the walls of the pipe enclosure. The walls of the pipe enclosure extend down through the attic and first floor of the addition; this new partition wall is a bearing wall for the cut rafters. Due to these previous structural changes, removal of the pipe enclosure would require significant rebuilding of the 1889 and 1930s elements. Therefore, it assumed that the walls and roof of the pipe enclosure will be retained even if the organ pipes are removed.

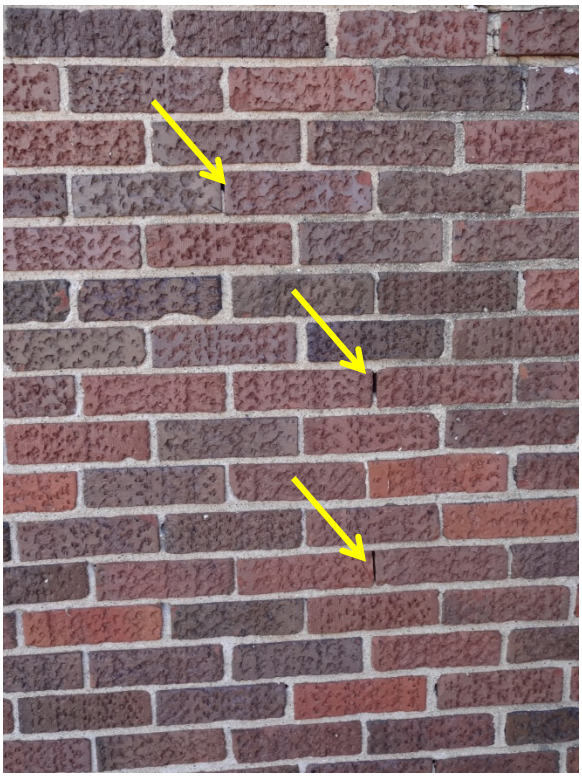


Figure 25. Arrows indicate open mortar joints in the field of the brick masonry at the 1930s addition.

Figure 26. Arrow indicated the cracked mortar joint at the interface of the 1889 church and the 1930s addition.

Figure 27. Spot corrosion and areas of missing paint coating at the steel lintel above the window.

Figure 28. Isolated foundation crack indicated by arrow.

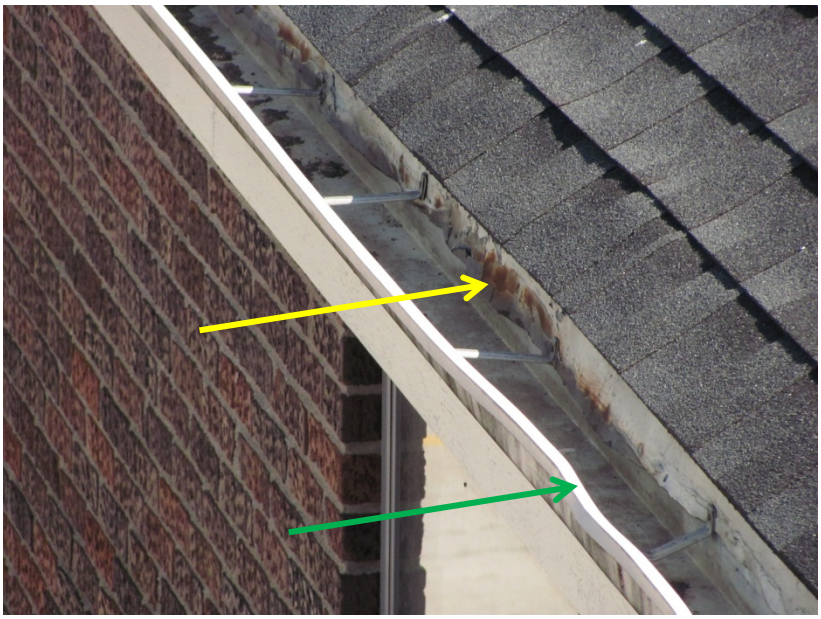


Figure 29. Spot corrosion (yellow arrow) and deformation (green arrow) at the gutter.

Figure 30. Corrosion of fasteners at downspout (yellow arrow).

Figure 31. General view of the roof over the 1930s addition.

Figure 32. Non-original replacement windows and door at the 1930s addition.

Figure 33. Typical window perimeter sealant joint.

Figure 34. General view of the organ pipe enclosure at the 1930s addition. Note the wear of the paint coating on the wood cladding and the lack of visible flashing at the location of the yellow arrow.

1959 Addition

Masonry. The exterior walls of the 1959 addition consist of an outer wythe of brick masonry with some stone details, an air cavity, and a back-up wythe of concrete unit masonry, for a total wall thickness of 13 inches. Limestone is used for copings, window sills, and for a decorative projecting area of wall on the south facade. Painted steel lintels are present above all window and door openings. Masonry distress conditions include the following:

- **Corroding lintels above windows.** Loss of paint, significant corrosion, and cracking and displacement of adjacent brick were observed at many steel lintels (Figure 35 and Figure 36). Similar corrosion was observed on the lintels that support the projecting stone masonry bay on the south facade (Figure 37). Other lintels appeared generally intact with more limited corrosion and loss of paint (Figure 38).

- **Open, eroded, and cracked mortar joints.** Open, eroded, and cracked mortar joints were observed in zones (such as areas adjacent to window lintels or at the parapet wall) and in isolated locations throughout the brick masonry exterior. An example of a zone of mortar deterioration was observed on the north elevation at the upper portion of the wall west of the entrance (Figure 39).

- **Isolated cracks in exterior masonry.** Cracks through masonry units were observed in isolated locations throughout the stone and brick masonry exterior. The observed cracks are relatively minor but may allow water infiltration into the wall construction (Figure 40). Cracked and open mortar joints were also observed at the interface between the 1959 addition and the 1930s addition (Figure 41).

Roofing. The roof of the 1959 addition is divided into two areas: an upper roof with a shallow gable shape over the first floor fellowship hall, and a lower low-slope roof at the remainder of the addition. All roof areas are covered with built-up roofing, but of various ages and configurations. The roof areas are surrounded by masonry parapet walls and drain to through-wall scuppers and downspouts mounted to the exterior walls. Roofing distress conditions include the following:

- **Membrane Roofing**. Membrane roofing includes smooth-surface built-up roofing with an aluminum coating at the fellowship hall; smooth-surface built-up roofing above the office/lobby area; and gravel-surfaced built-up roofing above the women's parlor/kitchen area. All of these roof areas are significantly deteriorated. Observed distress conditions include rippling and buckling of the membrane surface, ponding water, crazed coatings, and multiple previous patches. At each roof area, the membrane extends up and over the surface of the stone coping (Figure 42 through Figure 45).

- **Downspout and scuppers.** The roof drains to grade through through-wall scuppers which are connected to exterior wall-mounted downspouts (Figure 46). The existing downspouts are showing signs of wear including loosening of fasteners, corrosion of fasteners, and abrasion markings. The existing through-wall scuppers were observed to be partially blocked with debris (Figure 47).

Windows and Doors. All windows in the 1959 addition have been replaced with aluminum-framed fixed and double-hung windows with insulating glazing (Figure 48). Based on a numerical code stamped into the insulating glazing spacers, it is possible that these windows were installed circa 1992. The existing exterior doors appear to be original to construction of the building, and include aluminum-framed glass doors at the north entrance and painted hollow metal doors at emergency exit locations on the north and west elevations.

- **Deteriorated sealant joints.** Areas of missing sealant and distress caused by typical weathering were observed at the sealant joints present at window perimeters, at the north entrance area, between coping units, and throughout the facade (Figure 49).

Figure 35. Corrosion and missing paint on the surface of the steel lintel. Note step cracking in brick masonry associated with lintel corrosion.

Figure 36. Corrosion of window lintel and step cracking in adjacent brick masonry.

Figure 37. Corrosion of lintels at the base of the stone masonry bay on the south facade.

Figure 38. Lintel with surface corrosion.

Figure 39. Zone of eroded mortar joints at the top of the wall.

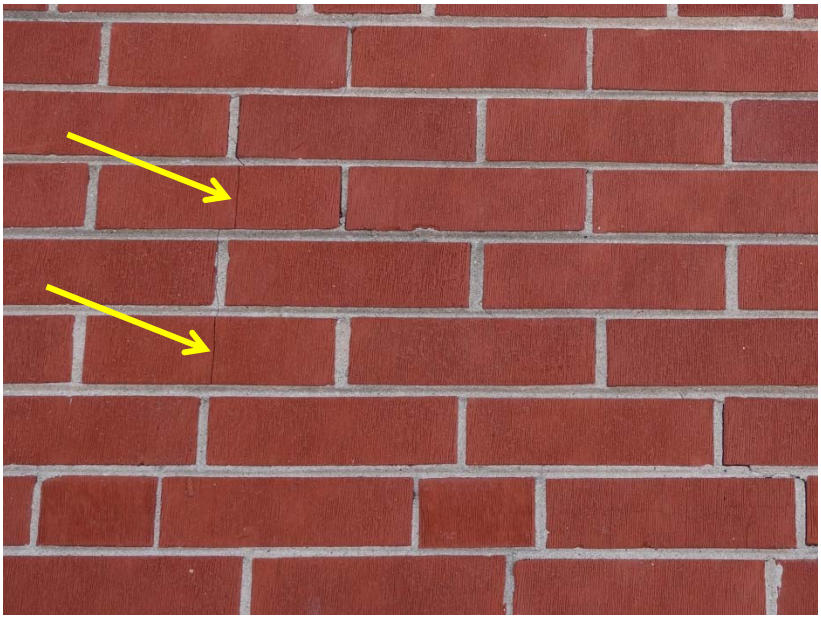


Figure 40. Isolated cracked brick units indicated by arrows.

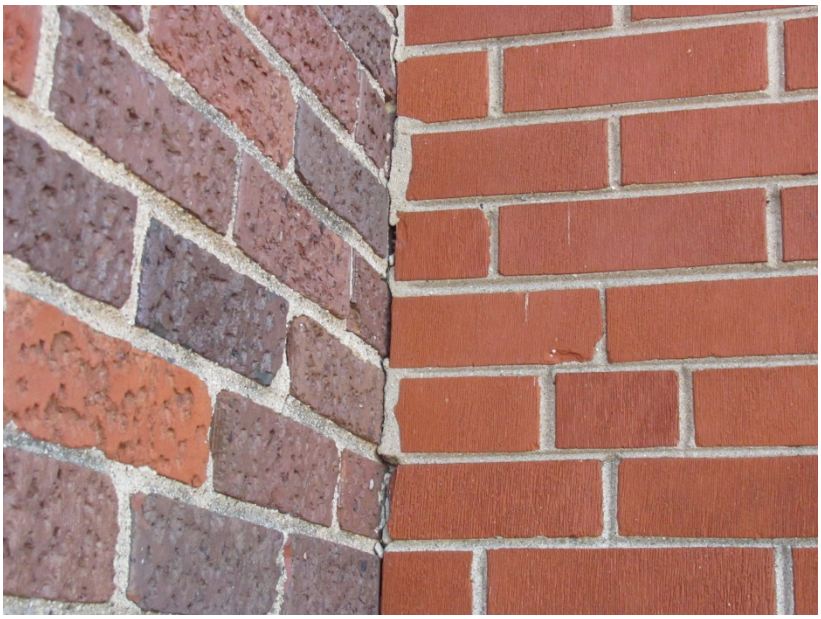


Figure 41. Cracked mortar joint between the 1930s addition and the 1959 addition.

Figure 42. The roof above the fellowship hall. Note previous patches, standing water, and rippling of membrane surface.

Figure 43. The roof area over the fellowship hall, showing previous patches and standing water.

Figure 44. Overview of the office/lobby roof (foreground) and the women's parlor/kitchen roof (beyond). A series of non-original vents have been added to the women's parlor/kitchen roof.

Figure 45. View of the gravel-surface built-up roof at the women's parlor/kitchen.

Figure 46. View of typical scupper inlet.

Figure 47. General view of debris at scupper.

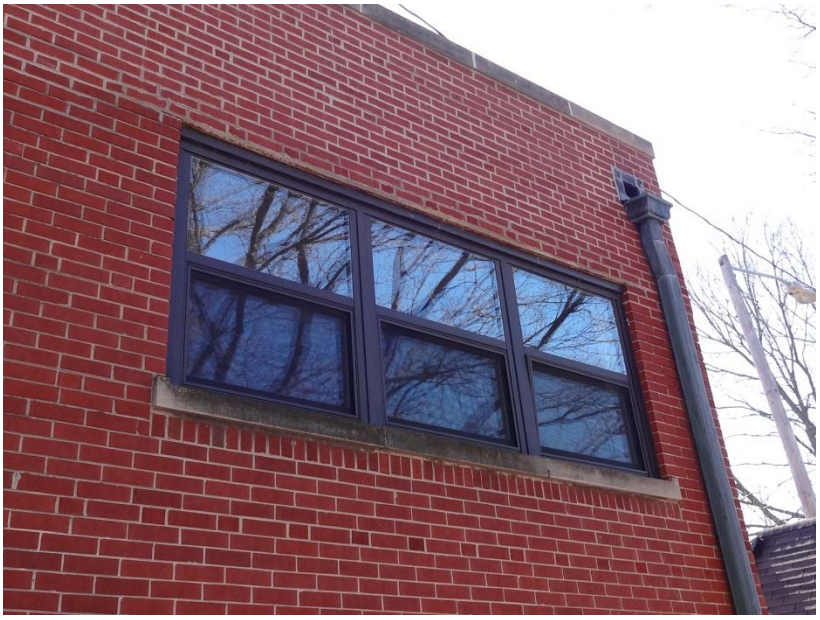


Figure 48. Typical window at the 1959 addition.

Figure 49. Typical deteriorated sealant joint at the perimeter of the entrance storefront system.

Structural Framing and Interior Finishes

1889 Church

Basement Level. The basement level of the original church is defined by the perimeter load-bearing masonry walls. The floor structure is wood-framed and consists of 2x10 (full) joists at 16 inches on center spanning east-west from the east or west exterior wall to a major girder running north-south at the centerline of the building. The major girder is a 8x10 (full) wood timber which spans between stone footings, with a maximum span of 15 feet 4 inches. The joists support 1-inch-thick tongue-and-groove wood decking.

Finish flooring, consisting of underlayment and linoleum, is adhered to the decking, and carpet has been installed over the linoleum. The space below the wood framing is a dirt floor crawlspace; two vents through the floor provide limited air circulation between this crawlspace and the basement level. At the exterior, the walls are finished with gypsum board supported on wood blocking attached to the masonry; rigid insulation is present between the wood blocking. Other partition walls are gypsum board on wood studs. The basement level ceiling is a 1-inch plaster system consisting of 1/2-inch-thick rock lath (gypsum board) and 1/2-inch-thick two-coat finish plaster. This ceiling finish is directly attached to the underside of the first floor joists above (Figure 50). Observations related to the basement level structure and finishes are as follows:

- **Moisture infiltration at foundation.** Evidence of moisture infiltration through the below-grade portions of the foundation walls was observed in the form of crumbling and powdering of gypsum board and peeling paint (Figure 51). At an inspection opening through the wall finish, the stone foundation wall was found to be damp, with deteriorated and crumbled mortar.

- **Floor framing modification.** Previous floor framing repairs were observed along the east and west foundation walls. Based on our observations, it appears that the last 24 inches (approximately) of the original joists were cut back from the exterior perimeter wall. A new wood 4x6 (nominal) wood girder was installed running north-south inboard of and parallel to the east and west exterior walls. These girders are supported by 4x4 (nominal) wood posts which are apparently placed directly into earth. New joists were spliced onto the original joists to span from the new girder line to the exterior wall (Figure 52). The reason for this alteration is not clear. Possibly, wood decay compromised the integrity of the original wood joists where they were in contact with the exterior masonry wall. Water staining was observed on some wood elements in this area.

- **Finishes.** The existing interior finishes at the basement level are not historic, and no underlying historic finish materials were observed where portions of newer finishes were removed for inspection. The finish materials shown typical wear. Isolated cracks were observed in the gypsum board finishes (Figure 53 and Figure 54).

Main Level. The first floor of the 1889 portion consists of 2x13 wood joists spaced at 12 inches on center, spanning east-west between the exterior masonry walls and an 8x12 wood girder running north-south at the centerline of the building. The girder is supported on wood posts at the basement level, with a maximum span of 15 feet 4 inches on center. Each post has a carved wood capital (Figure 55). A unique notching condition was observed at inspection openings where each joist frames into the girder. The joist and girder are notched in a sawtoothed fashion, such that the joist has two tenons that sit on two ledges at mortises within the girder (Figure 56). The joists support 1-inch-thick diagonal tongue-and-groove decking.

Carpeting has been installed over linoleum at the floors. The sanctuary walls (above a wood wainscot) and ceiling are finished with painted pressed metal cladding (Figure 57). This metal cladding was installed over earlier plaster on wood lath wall and ceiling finishes. Although not original, the metal cladding is a historically significant character-defining feature of this space. The sanctuary has fixed wood seating, perhaps dating to the 1950s or 1960s. The north end of the sanctuary was completely renovated in 1969, including a new raised platform, new wood and wood-pattern plastic laminate wall cladding at the east and west sides and north wall, a new suspended organ pipe chamber, a new built-in baptismal pool, and new gypsum board ceiling finish. These 1969 elements and finish materials are not considered historically significant. At the south end of the sanctuary, the area of the southeast corner tower is partitioned from the rest of the sanctuary as a closet. Also, stairs descend to the level of a vestibule at grade in the southeast corner tower. The vestibule has carpeted floors, wallpapered walls, and a gypsum board ceiling. Observations related to the first floor level structure and finishes are as follows:

- **Water infiltration at the west wall, first floor.** Significant previous leakage has occurred at the head of one window on the west wall of the sanctuary. The leakage location is at the second window from the north end (Figure 58). The pressed metal cladding has completely corroded through, and the underlying plaster finish has disintegrated. The heavy timber lintel was observed to be completely saturated with substantial decay. The most likely source of this moisture infiltration is from the unsealed laps in the built-in copper gutter liner, described under Roofing, above.

- **Supplementary structure.** In the basement and at the first floor framing, structural elements including steel tube columns, footings, and beams have been added to support the weight of the baptismal pool. These structural elements are independent of the building structure.

Roof Framing**.** The church roof is framed with a series of scissors trusses at 16 inches on center. The main rafters are 2x6 members that span continuously from the exterior walls up to the ridgeline of the roof at a 12:12 slope. Below each rafter are 2x6 ceiling joists, sloped at 6:12, that span from the exterior wall across the center of the building to the midpoint of the rafter on the opposite face. Diagonal 1x6 kickers from each rafter to the ceiling joist below and vertical 1x6 ties from the ridgeline of the roof to the peak of the ceiling at alternate rafters complete the truss. Spaced 1-inch-thick sheathing is nailed to the top of the rafters. The seven ceiling rafters at the north end of the church include modifications which were likely implemented in 1969 when the current organ system was installed. The lumber in the modified area is nominally sized and follows the same design of the original full sized lumber. The roof framing was observed to be in good condition with little observed staining or other distress (Figure 59). Loose mineral wool and fiberglass insulation is present on top of the sanctuary ceiling.

Figure 50. Typical view of basement level interior, 1889 church.

Figure 51. Plaster distress at the basement level related to water infiltration at the foundation.

Figure 52. Supplementary support beam added under church basement floor and spliced floor joists adjacent to the foundation wall.

Figure 53. Line indicates a crack at the basement window head.

Figure 54. Line indicates a crack through the gypsum board covering a timber column in the church basement.

Figure 55. Carved wood capital (painted green) at the top of the timber post supporting the girder of the first floor framing.

Figure 56. Joist (arrow) notched to bear into girder at the first floor framing. Note longitudinal splits in girder.

Figure 57. Interior view of the sanctuary showing the green carpeted platform at the baptistery area.

Figure 58. Corroded metal panel at the head of a window on the west wall of the sanctuary.

Figure 59. Church attic framing showing 1969 nominal lumber (foreground) and original full sized lumber beyond.

1930s Addition

Basement level. The basement level of the 1930s addition is defined by the cast-in-place concrete foundation wall, which extends up to grade. The floor framing within the basement level is subdivided into three zones. The westernmost third, corresponding to an abandoned boiler room, has a concrete slab on grade floor. The former boiler room is partitioned from the remainder of the basement level by a concrete wall. The middle third has 2x6 (nominal) wood joists spaced at 16 inches on center, spanning east-west between concrete footings. The basement floor level in the eastern third is elevated higher than the remainder of the basement (Figure 60). The floor in this area is framed with 2x8 (nominal) wood joists spaced at 16 inches on center in the east bay, supported on the concrete foundation wall at their east end and a load-bearing wood-framed wall at their west end. The crawl space below this area has a dirt floor. In both the middle and eastern portions, the decking is tongue-and-groove wood decking.

Interior finishes at the basement level include gypsum board walls, suspended acoustic ceiling tile, and carpet. None of the existing finishes are historic. Finishes are in fair condition with normal wear.

First floor. The first floor framing of the 1930s addition spans between wood-framed interior and exterior bearing walls, except for the concrete partition wall at the former boiler room which supports floor joists at the west half of the addition. The floor joists are 2x10 (nominal) wood joists spaced at 12 inches on center, spanning east-west.

The interior finishes at this portion of the first floor are mostly original to the construction of the addition. Historic finishes include plaster walls and ceiling, stained and varnished millwork including baseboard, chair rail, and window and door surrounds, and multi-panel wood folding partitions that can be used to subdivide the space into three rooms (Figure 61). Floors are carpeted. The second floor interior is in fair condition, with normal wear of finishes and some cracking of plaster at the ceiling.

Roof framing. The second floor ceiling is framed with wood joists running east-west. In the middle third, the joists are 2x6, while in the eastern and western portions, the joists are 2x4. The north-south walls with folding partition doors in the first floor below are loadbearing walls; a wood truss in the attic supports the folding partition and ceiling framing (Figure 62). The hip roof is framed with wood rafters that vary from 2x4 to 2x8 in size, depending upon span length. The hip rafters are formed by 1-1/2 inch by 9 inch members that are spliced near midspan and reinforced by 6-foot-long 1x10s nailed to both sides. The roof sheathing is 1x6 tongue-and-groove wood decking.

When the 1969 organ pipe chamber addition was built, the hip rafters and many of the regular rafters were cut short at the walls of the pipe chamber (Figure 63). As a result, the walls of the pipe chamber are bearing walls. The north wall of the pipe chamber is continuous down through the first floor but rests atop the first floor framing. It is not clear if the first floor joists at this location were reinforced to accommodate this additional load.

Figure 60. Arrow indicates room with raised flooring platform in the 1930s addition.

Figure 61. Interior of the 1930s addition at the first floor.

Figure 62. 1930s addition showing truss supporting the north-south walls below.

Figure 63. 1930s attic framing showing the rafter cut at the organ pipe chamber (red arrow). The cut portion of the rafter was moved and reused (green arrow).

1959 Addition

Basement level. The basement level of the 1959 addition is a concrete slab on grade. Steel columns and the exterior walls support the floor structure above.

First floor. The first floor is constructed of precast concrete slabs (known as "Flexicore") spanning either to the exterior masonry walls or interior steel beams. Different areas of the plan span east-west or north-south. Based on a review of Flexicore Corporation literature published in the 1950s and the designations given on the original first floor framing plan, sheet S1 dated January 16, 1956, most areas of the first floor appear to be designed to provide in excess of 100 psf live load capacity. The two exceptions are the area of the women's parlor and the two offices; in these areas, the allowable live load capacity is likely closer to 50 psf.

Roof framing. Steel columns extend up from the first floor to support the roof framing. In the fellowship hall area of the first floor, the exterior walls and the steel columns support sloped glulam girders that span east-west, which in turn support timber purlins that span north-south. The purlins support a tongue-and-groove wood deck which is exposed as the ceiling finish on the interior (Figure 64). At the remainder of the first floor, the steel columns and exterior walls support steel girders. The steel girders support 2x10 wood roof rafters. The first floor ceiling construction is framed with 2x4 joists that are suspended from the wood rafters (Figure 65).

Finishes. Throughout the 1959 addition, interior partition walls are built of non-load-bearing 4-inch concrete masonry units (Figure 66). In most areas, the concrete masonry is exposed and painted as the wall finish; the first floor offices and the women's parlor have a plaster wall finish applied directly to the concrete masonry. Floors are carpet over the original asphalt tile flooring. Basement level ceilings are the painted underside of the precast concrete floor structure above. At the first floor, the fellowship hall has a wood ceiling (the exposed roof decking). Most other areas have painted gypsum board ceilings. The women's parlor has an acoustic tile ceiling adhered to gypsum board.

It is notable that even at the fellowship hall, the interior partition walls are constructed on 4-inch-thick non-load-bearing masonry. Above the ceiling of the adjacent kitchen and lobby spaces, steel girders are embedded in the wall to support the roof framing and the masonry parapet walls that extend above the main roof surface at the perimeter of the fellowship hall. Because of this configuration of the original construction, the existing concrete masonry partition walls can be readily removed or altered as required to adapt the building to a new use.

Notable interior distress conditions include the following:

- **Moisture infiltration.** Significant staining and deterioration related to roof leakage were observed throughout the first floor of the 1959 addition. Water staining is visible on the roof deck and exposed wood roof framing in the fellowship hall (Figure 67). Past localized water leakage has damaged ceilings in the northwest corner of the kitchen (Figure 68) and in the offices (Figure 69).

- **Cracking of concrete unit masonry.** Cracking of the mortar joints and concrete masonry units was observed at multiple locations throughout the interior of the 1959 addition. Cracking was observed adjacent to the upper corners of window openings (Figure 70 and Figure 71); this cracking may be related to corrosion of the window lintels. Vertical cracking was observed in the fellowship hall walls (Figure 72); this cracking may represent normal shrinkage of the concrete masonry and/or

unaccommodated thermal movements (since the building was constructed without control joints). Also, cracking of mortar, bond separations, and step cracking were observed in non-load-bearing partitions and between non-load-bearing partitions and other adjacent materials or elements. These cracks and separations represent normal shrinkage of the concrete masonry.

Figure 64. Interior of the fellowship hall showing glulam girders and other roof framing.

Figure 65. View of typical roof framing in 1959 addition, showing steel girder, wood rafters, wood deck, and suspended wood-framed ceiling.

Figure 66. Typical non-structural 4 inch concrete masonry unit partition wall in the 1959 addition.

Figure 67. Water staining on wood roof framing in fellowship hall.

Figure 68. Water related distress at the kitchen ceiling in the 1959 addition.

Figure 69. Water related distress in the ceiling of an office in the 1959 addition.

Figure 70. Cracking of concrete masonry adjacent to a window lintel in the kitchen of the 1959 addition.

Figure 71. Cracking of concrete masonry above a window lintel in the basement level of the 1959 addition.

Figure 72. Vertical cracking at the wall of the fellowship hall. The location of the surface-mounted electrical conduit corresponds to the transition between non-structural 4-inch-thick concrete masonry partition wall and the upper parapet portion of the wall.

Preliminary Structural Evaluation

A preliminary structural evaluation was performed to determine a general superimposed live load capacity for the ground and first floors of the 1889 and 1930s portions of the First Baptist Church in Batavia, Illinois.

A number of assumptions were made for the purpose of this evaluation. Wood samples taken from the ground floor and first floor framing at both the 1889 and 1930s portions of the building established that the wood species vary from longleaf pine to black spruce to mixed yellow pine, as shown in Table 1. Strength properties of the wood were based on values published in the 2005 *National Design Specification for Wood Construction* (NDS 2005) for number 1 grade sawn lumber and timber. Number 1 grade was chosen based on the age of the structure as well as general experience with this type of wood framing. It was assumed that all connections are adequate to transfer the required demands and that no significant defects or notching exist in the wood that would compromise the capacity of the members. Additionally, the joists and girders are considered to govern the floor capacity, under the assumption that posts, foundations, and all other supporting elements having adequate capacity to support the demands of these members. It was also assumed that all members are adequately braced according to the requirements specified in NDS 2005. Finally, the framing was analyzed for both bending and shear action.

The existing dead load values were approximated using typical values published in the *ASCE Standard 7: Minimum Design Loads for Buildings and Other Structures* (ASCE 7-05). The dead load was subtracted from the total allowable uniform load capacity to determine the allowable superimposed live load.

Based on the preliminary analysis, both the reserve capacities of the framing at the 1889 ground floor and the 1930s ground and first floors are governed by bending. Under the stated assumptions, the 1889 ground floor framing can support an allowable uniform superimposed live load in the range of 24 psf. Additionally, the 1930s ground floor framing in the vicinity of the 2x6 joists can support an allowable uniform live load of 20 psf, while the framing in the vicinity of the 2x8 joists can support an allowable uniform live load of 89 psf. The first floor framing at the 1920s portion can support an allowable uniform live load of 39 psf.

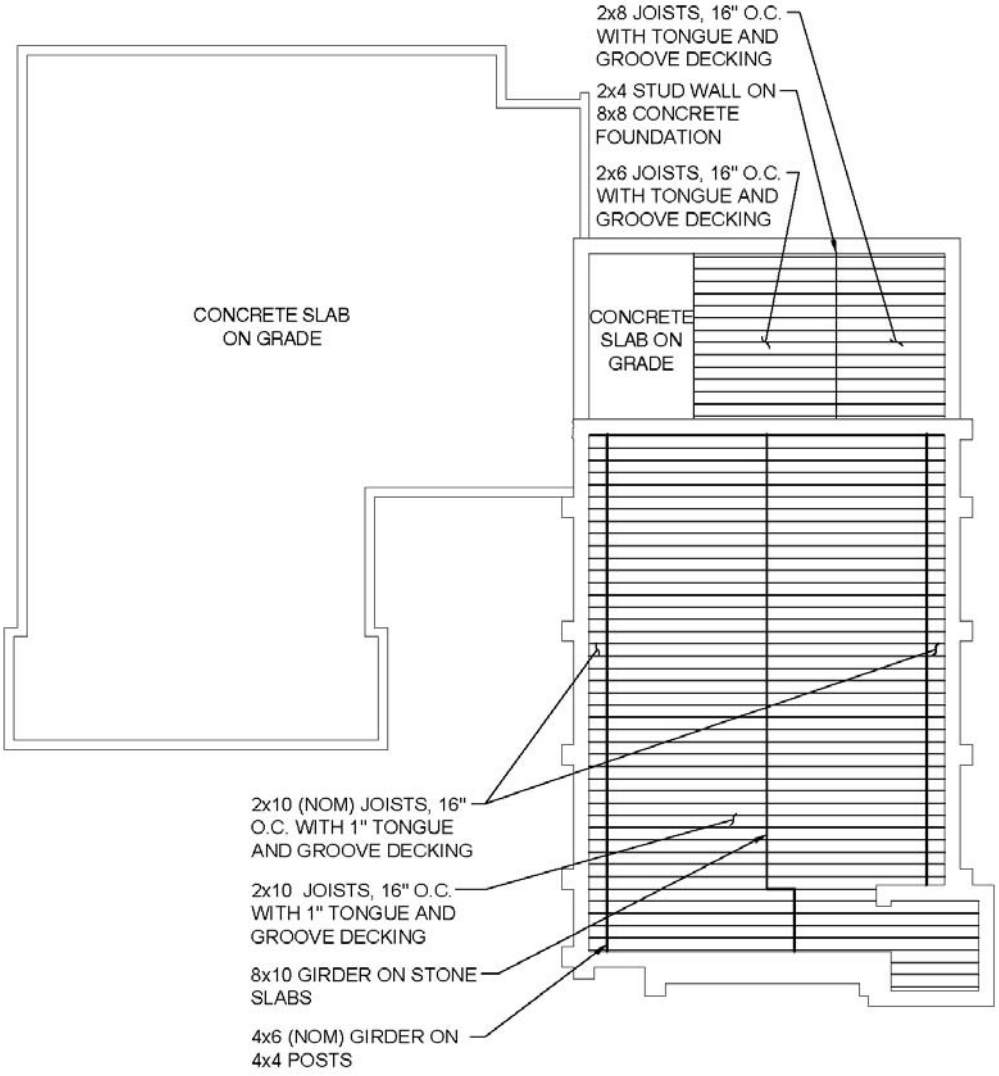
The calculated capacity of the 1889 first floor is greatly reduced due to the unique notched condition at the connection between the 2x13 joists and the 8x12 girder. It was determined that the notched condition significantly compromises the load-carrying capacity of the girder, such that the girder has essentially no reserve live load capacity. It is important to note that conservative assumptions were made about the effect of this condition due to the limited scope of this initial investigation. A more comprehensive investigation should be conducted to verify the impact of this notched condition and the way that the members are actually performing. We did observe longitudinal splits at some locations of this girder, which could be an indication of previous overloading. Strengthening or supplemental support of the girder will likely be required.

If a higher grade lumber, such as select structural grade, can be justified based on visual grading of the wood members, this can result in a higher allowable uniform superimposed load. However, a more comprehensive investigation will be required in general to verify the assumptions made for all of the wood framing areas as well as to determine if any strengthening repairs are necessary.

Table 1. Summary of Preliminary Analysis

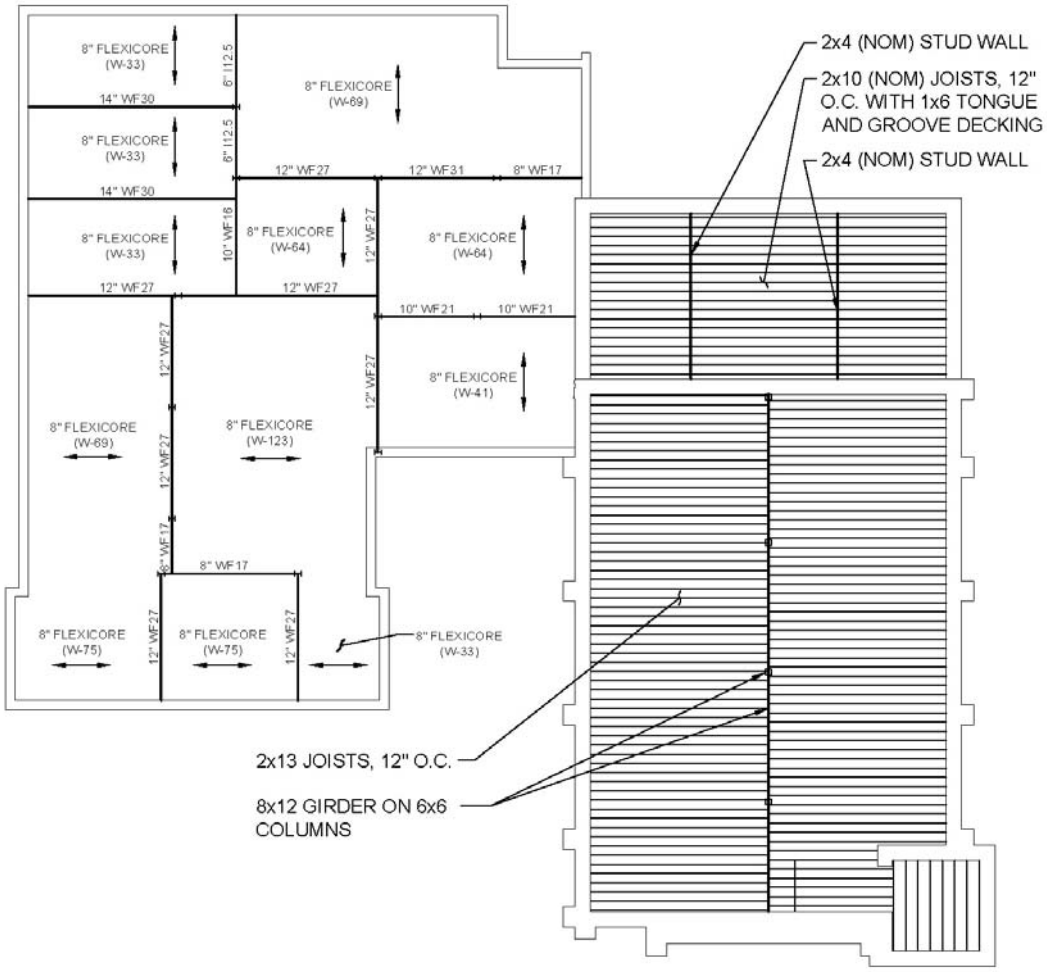
Location		Framing Type	Member Length	Wood Species	Wood Grade	Allowable Uniform Superimposed Live Load
Ground Floor	1889	2x10 @ 16"	17'-4"	Southern Yellow Pine (Longleaf Pine)	No. 1	24 psf
		2x10 @ 16"	20'-4"			
		4x6 (nom) Girder	4'-0"			
		8x10 Girder	15'-4"			
	1930s	2x6 @ 16"	16'-0"	Mixed Southern Pine	No. 1	20 psf
		2x8 @ 16"	11'-10"			89 psf
First Floor	1889	2x13 @ 12" (notched)	19'-3"	Eastern Softwood (Black Spruce)	No. 1	*
		8x12 Girder (notched)	15'-4"	Southern Yellow Pine (Longleaf)		
	1930s	2x10 (nom) @12"	16'-0"	Mixed Southern Pine	No. 1	39 psf

*The notched connection between the floor joists and girder greatly reduces the calculated capacity of this floor system. Reinforcement will be required.



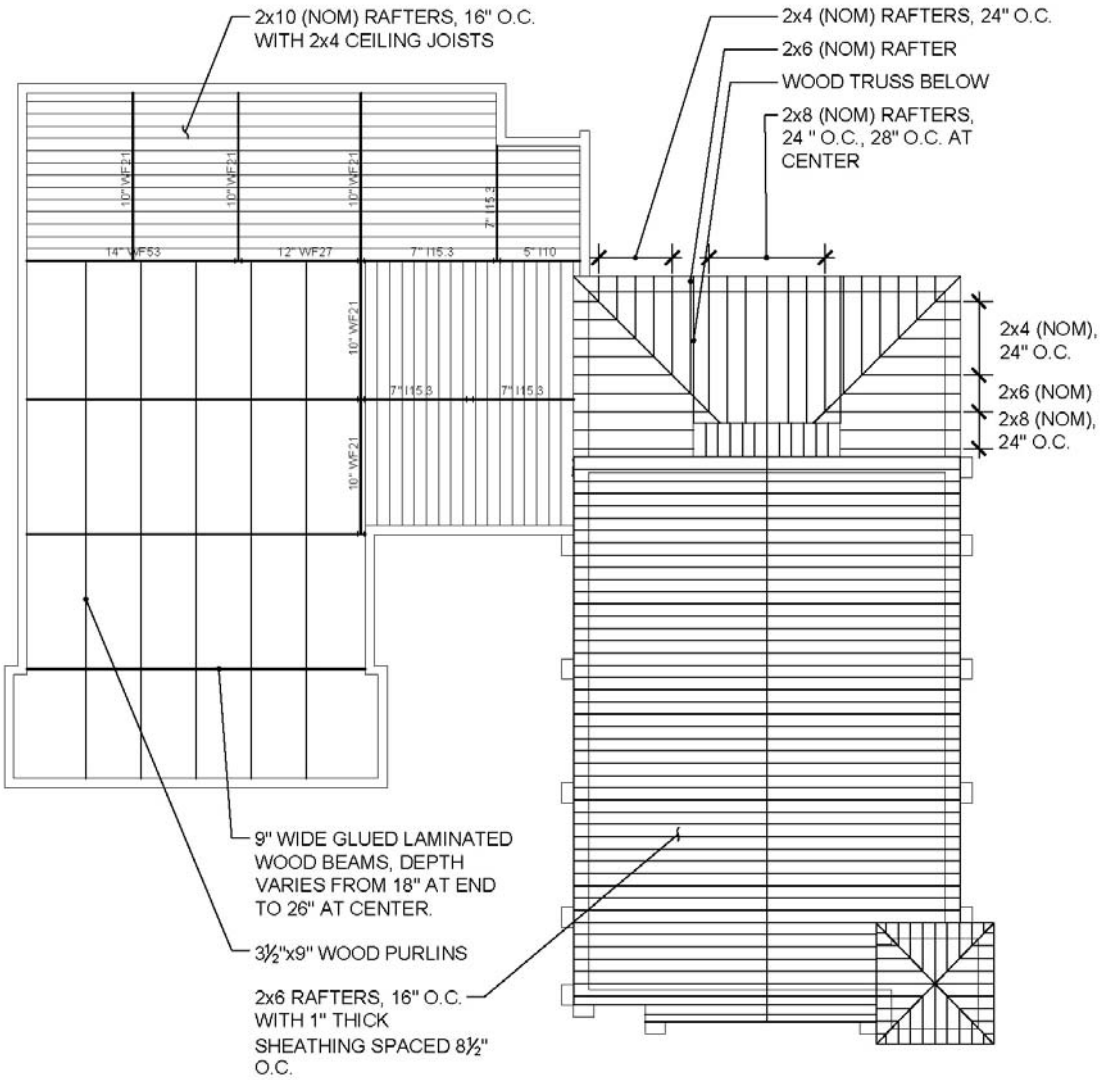
Ground Floor Framing Plan

Scale:1/16" = 1'-0"



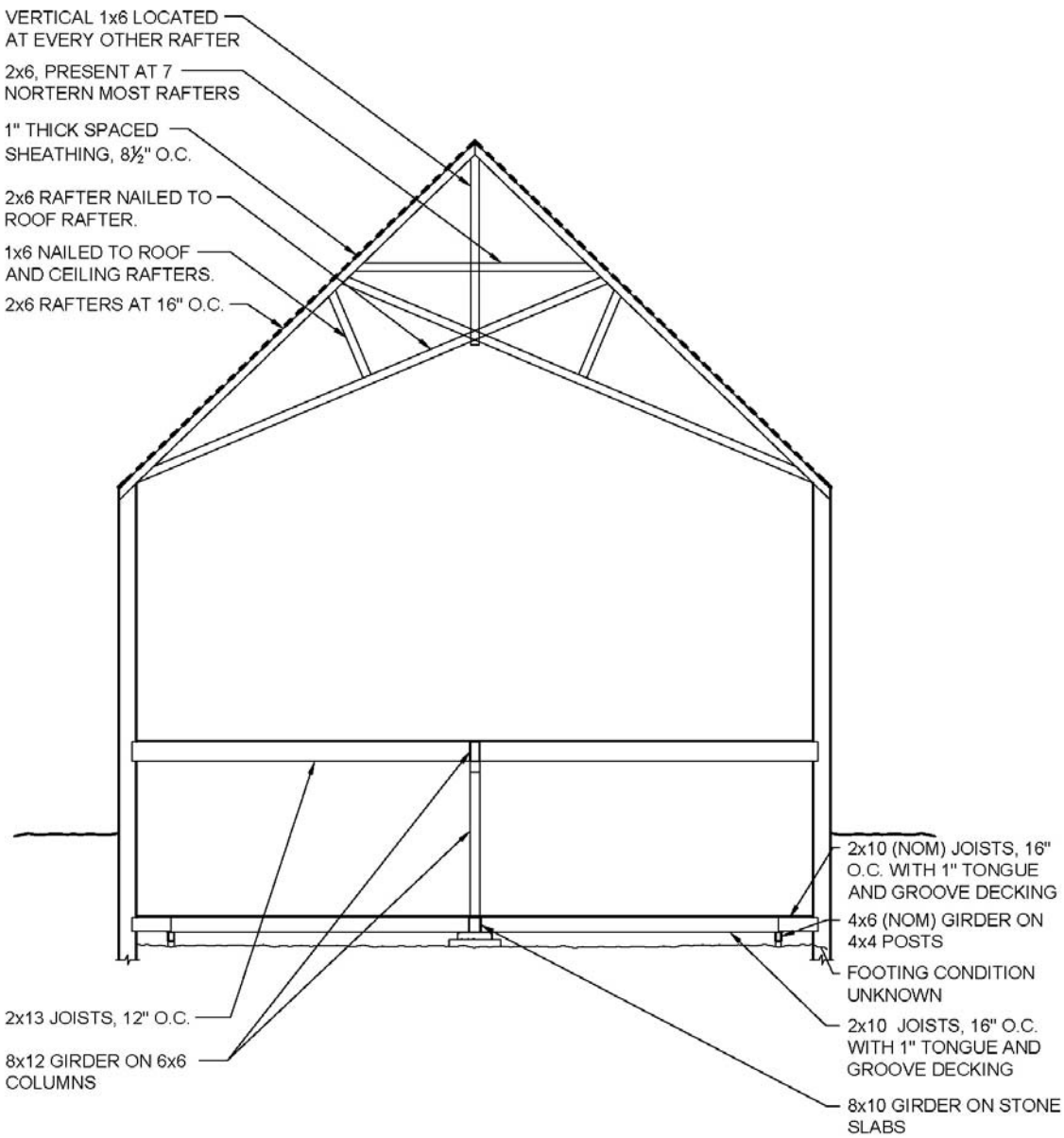
First Floor Framing Plan

Scale:1/16" = 1'-0"



Roof Framing Plan

Scale:1/16" = 1'-0"



East-West Section Through Church

Scale:1/8" = 1'-0"

Mechanical Systems

Heating. The existing system consists of hot water fin tube heating served by two boilers located in the 1959 addition. The original heating plant was replaced with the current gas boilers during the 1959 construction. The building is naturally ventilated via operable windows, with no mechanical cooling.

Electrical. The most recent work on the existing electrical infrastructure was done during the 1959 renovation. Receptacle and lighting was likely retrofitted in the sanctuary before the 1930s addition was built. The current electrical service, at 200 amps, is grossly undersized for the building.

Plumbing. Some of the original plumbing is abandoned in place. Some plumbing infrastructure was renovated during the 1959 construction. None of the existing fixtures are compliant with current accessibility standards. The existing storm and sewer appear to be combined. Hot water heating is provided by an existing gas-fired unit located in the 1959 addition.

Fire Protection. The existing building has no sprinkler system.

DISCUSSION AND CONCLUSIONS

Structural Framing

The basement level of the building includes areas of wood framed floor construction over dirt-floor crawl spaces in both the 1889 church and the 1930s addition. These floor systems have limited live load capacity. Additionally, the floor framing in the 1889 church has been previously altered, and moisture infiltration has affected some elements. For this reason, replacement of these wood-framed floor structures is desirable. A new cast-in-place concrete slab on grade could provide an appropriate structural subfloor for these areas. Furthermore, a cast-in-place slab may ultimately be part of the mitigation strategy for radon in the building.

At an isolated inspection opening, significant splits were observed in the main timber girder supporting the 1889 church first floor framing. The full extent of the splits is unknown without further demolition of the finish materials. Based on the observed condition of the girder and the results of the analysis, it is very likely that reinforcement of this girder will be required. Reinforcement may be configured as additional posts or diagonal braces in the basement to reduce spans lengths; steel plates applied to the top and bottom surfaces of the girder; and/or steel plates or LVL lumber applied to the sides of the girder. Once a reuse and associated load requirements for the sanctuary space have been determined, the appropriate reinforcing measures can be determined.

Other areas of structural framing, including wood, steel, and precast concrete systems, are generally intact and may be adequate in their current condition, depending upon the new use proposed for the building.

Masonry

In general, the exterior masonry facades of all three building areas are in servable condition. The distress conditions observed are typical of buildings of their vintage and, based on our experience, are the result of typical weathering and moisture related distress.

Repairs such as repointing mortar joints in zones and isolated locations, replacing individual cracked brick units, repairing individual cracked stone units, and installing joint sealant in the joints between building areas will help improve the weather tightness of the facades and extend their service life. In

addition, repairs to the limestone coping at the 1959 addition including removal of the existing membranes and replacement of all the joint sealant will help prevent water from entering the walls from above. Repairs of isolated foundation cracks such as those observed in the 1930s addition will prevent water from entering the foundation and causing additional distress.

The water infiltration and related distress at the below-grade portions of the 1889 church foundation are more significant. The church foundation was constructed without waterproofing, and moisture migration over time can saturate the wall and deteriorate the masonry materials. To eliminate future moisture infiltration and thereby protect the masonry wall structure and the basement-level interior finishes, it is recommended to install a new below-grade waterproofing system at the foundation wall. Based on our experience, this work would include excavating the perimeter of the church down to the footing; repointing the stone masonry foundation wall on the exterior and interior faces; applying a cementitious parge to prepare the exterior surface to receive waterproofing; installing a fully adhered waterproofing system; and installing a perforated drain tile parallel to the exterior wall around the perimeter of the church. The drain tile would be connected either to a new sump pump or possibly could be designed to discharge to grade at a location downhill from the church.

Many locations of cracked masonry units and mortar joints were observed related to the painted steel lintels at the 1959 and basement of the 1930s additions. Repair of the lintels will likely include selective dismantling of the exterior masonry; cleaning, priming, and painting the steel surface; installing flashing over the lintels to protect the steel from future corrosion; and rebuilding the exterior masonry. In a few cases, the existing corrosion may be so severe that replacement of the steel lintel will be necessary. In this case, the use of hot dipped galvanized steel lintels is desirable for improved future service life.

Erosion was observed at the stone sills of the 1889 church. The units exhibiting the most severe erosion are on the south facade below the large stained glass window. Although the original configuration of the sills at this location is unknown, the stone sills are eroded so that they are almost flush with the windows and wall areas beneath them. The nearly-flush sill profile reduces the ability of the sill to direct water away from the wall area below.

Aesthetic repairs, such as replacing the existing concrete buttress copings with stone to match the facade and removing the metal straps observed at isolated tower sills, will help to restore the original appearance of the 1889 church facades. Prior to making any modifications to the existing stone straps it should be confirmed that they are not required to support the stone.

Windows, Doors, and Openings

The stained glass windows in the 1889 church are not original but are a character defining feature of the church. Although an extensive condition assessment of the stained glass windows was not part of this scope of work, significant distress of the stained glass was not observed. Plastic coverings added to the exterior were originally placed to protect the stained glass windows. These coverings are now discolored and are negatively affecting the appearance of the church's exterior. The plastic coverings likely provide very little protection to the stained glass windows.

Original windows were also observed at the first story level of the 1930s addition. The three-over-one wood double-hung windows are in fair condition with typical weathering-related distress. Restoration of the windows will extend their service life for up to another 50 years.

All other windows observed appear to be replacement windows of unknown vintage. The typical service life of a replacement window is approximately 20 years. Many of the existing replacement windows may be near the end of their useful service life. Any new replacement windows should match the materials and sightlines of the original windows.

In historic photos of the church the arched openings in the tower, which currently contain wood louvers, are openings with wood railings. Removing the existing wood louvers and installing replica railings will restore the historic appearance of the church tower. Netting can be installed to prevent birds and other animals from entering the tower.

The existing modern glass entrance doors at the Wilson Street vestibule of the 1889 church are not original and were installed when the adjacent grade was modified and the rough opening of the church entrance was lowered. Consideration could be given to removing the modern glass doors and installing a new exterior stairway and replica wood doors based on historic photographs to restore the historic appearance of the church tower.

Other exterior doors are hollow metal or aluminum-framed units in generally serviceable condition; minor repairs to improve operation or repainting may be desired.

Sealant joints at the perimeters of all window and door openings were observed to be in distressed condition with areas of missing, debonded, or crazed sealant. Replacing the perimeter sealant at these openings will improve the weather resistance of the building envelope.

Roofing

A range of roofing conditions were observed among the 1889 church, the 1930s addition, and the 1959 addition. Of the three areas, the 1930s addition roof appears to have been most recently installed.

The asphalt shingle roofing at the 1889 church and tower is significantly deteriorated and no longer serviceable. It appears that at least two layers of asphalt shingles are present over older cedar shake roofing. Re-roofing at the church will require removal of all existing roofing layers down to the original spaced wood sheathing, inspection and possible repair to the wood roof framing, installation of new 3/8-inch plywood decking and new underlayment, and installation of new shingles. Consideration could be given to fire-retardant treated wood shingles in lieu of asphalt shingles. The decorative finial located at the top of the tower roof is an original feature with historic significance. The finial should be retained and reinstalled after the roof installation is complete. Also, consideration could be given to re-creating the original roof ridge cresting based on historic photographs.

In addition, roofing work should be coordinated with repair/replacement of flashings as well as the gutter and downspout system at the 1889 church. The existing gutter liner includes gaps at the connections of the copper sections. These gaps can be repaired in-place with fully soldered copper strips to restore the gutters to a watertight condition. The existing built-in gutters drain to one downspout on the east and one downspout on the west. The installation of additional downspouts will help to more effectively remove water from the gutters. Due to the building’s exterior design, the roof area at the intersection of the church’s gable roof and the tower is susceptible to water infiltration. This interface should be detailed to direct water away from the tower and toward the gutter on the east side.

If the existing louvers are removed at the bell tower, a new membrane roof system will be required at the fourth level of the tower.

The 1930s roof is in relatively good condition; however, the shingles are reaching the end of their service life and consideration should be given to including replacement of this relatively small roof as part of the roof work at other areas of the building. This will also allow the shingles of the church roof to match the shingles of the 1930s addition roof. Re-roofing at the 1930s will require removal of all existing roofing layers, repairs to the substrate, installation of new underlayment, and installation of new shingles. Consideration could be given to using fire-retardant treated wood shingles in lieu of asphalt shingles. In addition, roofing work should be coordinated with repair/replacement of perimeter flashings as well as the gutter and downspout system. The north and east sides of the roof currently drain to an aluminum gutter which drains to grade through one downspout on the north; at least two additional downspouts should be provided. The west side of the roof drains directly to the roof of the 1950s addition.

The organ pipe enclosure between the roof of the 1930s area and the 1889 church should also be included in repairs at to the 1930s roof. Work will include repainting of the wood cladding, replacement of the roofing, and replacement of flashings.

All roof areas of the 1959 addition are severely deteriorated, resulting in water infiltration to the interior. Complete roof replacement is required. All existing roof layers will be removed down to the wood roof deck, which may require repair or selective replacement at locations of previous water leakage. A new vapor retarder, new rigid insulation to meet current energy code requirements, and new single-ply membrane roofing would then be installed. The roofing work should be coordinated with replacement of the through-wall suppers and downspouts. It is appropriate to remove the existing membrane from the limestone copings, install a new through-wall sheet metal flashing below the limestone copings, and terminate the new roofing at this metal flashing.

Interior

Interior finishes are generally worn and may require replacement to accommodate reuse of the building. Asbestos-containing flooring should be removed or encapsulated in place. As noted above, most interior finishes are not especially distinctive, with the exception of the pressed metal wall and ceiling cladding in the church sanctuary. The cladding is limited to the east, south, and west walls of the space due to the previous remodeling of the north end. Most areas of pressed metal are intact and would require only repainting; localized areas that have been damaged by water infiltration will require replacement with matching material.

The building interior is generally flexible in terms of planning for reuse. All interior partitions at the 1959 addition are non-structural and can be altered or removed as required. The 1930s wing has load-bearing north-south partitions that divide each floor into thirds; other partitions are not load-bearing and can be removed. The 1889 church has no load-bearing interior partitions, except for the walls that define the southeast tower. The raised platform at the 1889 church sanctuary space was added atop the original floor structure, which remains intact and is continuous with the remainder of the space.

Interior fixtures and furnishings are generally not historic or particularly noteworthy. Suspended light fixtures in the church sanctuary are not original but are interesting Art Deco-style fixtures. Other interior lighting is provided by ordinary fluorescent or incandescent fixtures. The varnished wood millwork and folding partitions in the first floor of the 1930s wing are original and distinctive elements that may be

desirable to retain if compatible with reuse of the space. Built-in casework in the 1959 addition is original to the construction of that addition and may be desirable to retain if compatible with reuse of the space.

Universal Accessibility

The church and its additions were built before universal (ADA-compliant) accessibility was a consideration. No elevator is present in the building. Previously, a chair lift was installed to allow for persons with reduced mobility to ascend from the Wilson Street vestibule to the sanctuary of the main church. The building restrooms are on the basement level and are not accessible.

Exterior doors are located on the west wall of the 1959 addition; on the north wall of the 1959 addition; on the north wall of the 1930s addition; and at the southeast corner of the original church. The required number and locations of exits would need to be determined based on the future occupancy and use of the building; however, for this discussion, it is assumed that the 1959 north entrance paired doors would be used as the primary entrance to the building. This entrance faces the adjacent parking lot, and a simple sloped paved walk from the parking area up to the concrete stoop at the building doors would provide appropriate accessibility. These doors are located almost at grade but at a mid-height landing between the basement and first floor levels. To provide accessibility, an elevator would need to be added to the building. The elevator would include doors on two opposite faces and would stop at three positions: basement, mid-height landing, and first floor. The elevator could be located just to the west of the stairwell, in space currently occupied by the women's parlor at the first floor and the men's toilet at the basement. The precast concrete planks that frame the first floor run north-south in this area, and the elevator could be located to require the removal of a minimum number of planks. Alternately, the elevator could be located in a small addition constructed at the corner between the 1959 and 1930s addition. The construction of a small addition could also allow for new exterior entrance doors and a small airlock vestibule between the outside entrance and the stairwell in the 1959 addition (Figure 73).

At the basement level, most of the floor is at one continuous elevation across all three phases of construction. One exception is the room at the northeast corner of the 1930s addition, which is raised six steps (approximately 36 inches) above the rest of the basement floor. This area was raised originally to accommodate plumbing runs from restrooms located in this portion of the basement. The ceiling height in this area is correspondingly lower. The foundation wall in this area extends to the same depth as the remainder of the 1930s addition. Therefore, it is feasible to remove the existing wood-framed floor construction at this room and construct a new floor at the same level as the remainder of the basement of the building, providing for accessibility to this space. The existing exterior door to this room would be eliminated if not required for egress, or a new sunken area well with stairs would be needed at the exterior to connect an enlarged exterior door opening to grade.

At the southeast corner of the building, the Wilson Street vestibule is located between the basement and first floor levels, with stairs connecting to both levels. For purposes of this accessibility discussion, it is assumed that the vestibule and stairs would remain in their existing configuration, with the vestibule used for secondary or emergency egress.

At the first floor level, the building has a variety of different floor levels. The 1959 addition is at approximately 9 feet 9-1/2 inches above the basement floor. The 1930s addition is higher, at approximately 10 feet 11 inches above the basement floor, a difference of about 13-1/2 inches. The original 1889 church has a raised platform at the north end, at approximately 12 feet 5 inches, a further 18 inches above the adjacent 1930s addition. The main floor of the sanctuary is at approximately 10 feet

5 inches, 24 inches below the raised platform and 6 inches below the level of the 1930s addition. The existing north end of the main sanctuary, including the raised platform and wall, floor, and ceiling finishes, dates to 1969 and is not considered a historic or character-defining feature of the sanctuary space. Based on observations of the structural framing, the raised flooring in the northeast basement room is a separate platform added over the original floor structure, which is continuous with the rest of the sanctuary under the platform (Figure 57 and Figure 60). Therefore, it is recommended to simplify interior accessible routes to the sanctuary by removing the raised platform. With the platform removed, a ramp could be used to connect from the 1959 addition (9.79' level) up to the level of the 1889 sanctuary (10.42' level), a difference of 7-1/2 inches; a minimum ramp run of 7-1/2 feet is required. A second ramp would connect up to the level of the 1930s addition (10.92' level), a difference of 6 inches; a minimum ramp run of 6 feet is required. The ramps would be located in the western third of the 1930s addition and would require removal and reconstruction of the wood-framed first floor construction in this area (refer to Figure 73).

The existing restrooms and all fixtures date to 1959 and do not provide universal accessibility. Although specific requirements for restrooms and similar facilities will be dependent upon the ultimate use selected for the building, it is assumed that entirely new restrooms would be constructed in the building, potentially at the location of the existing basement level restrooms and at the corresponding first floor area directly above. It is recommended to include accessible restrooms on both the basement level and the first floor level.

Mechanical Systems

For purposes of this feasibility study, it is assumed that entirely new mechanical systems will be provided to serve the building. Depending upon the new use of the building, it may be possible to reuse selected portions of the existing heating, electrical, and plumbing systems. However, new equipment and utility services as well as substantial replacement and expansion of system networks (e.g., piping, electrical conduit, ductwork) will be required for any new use.

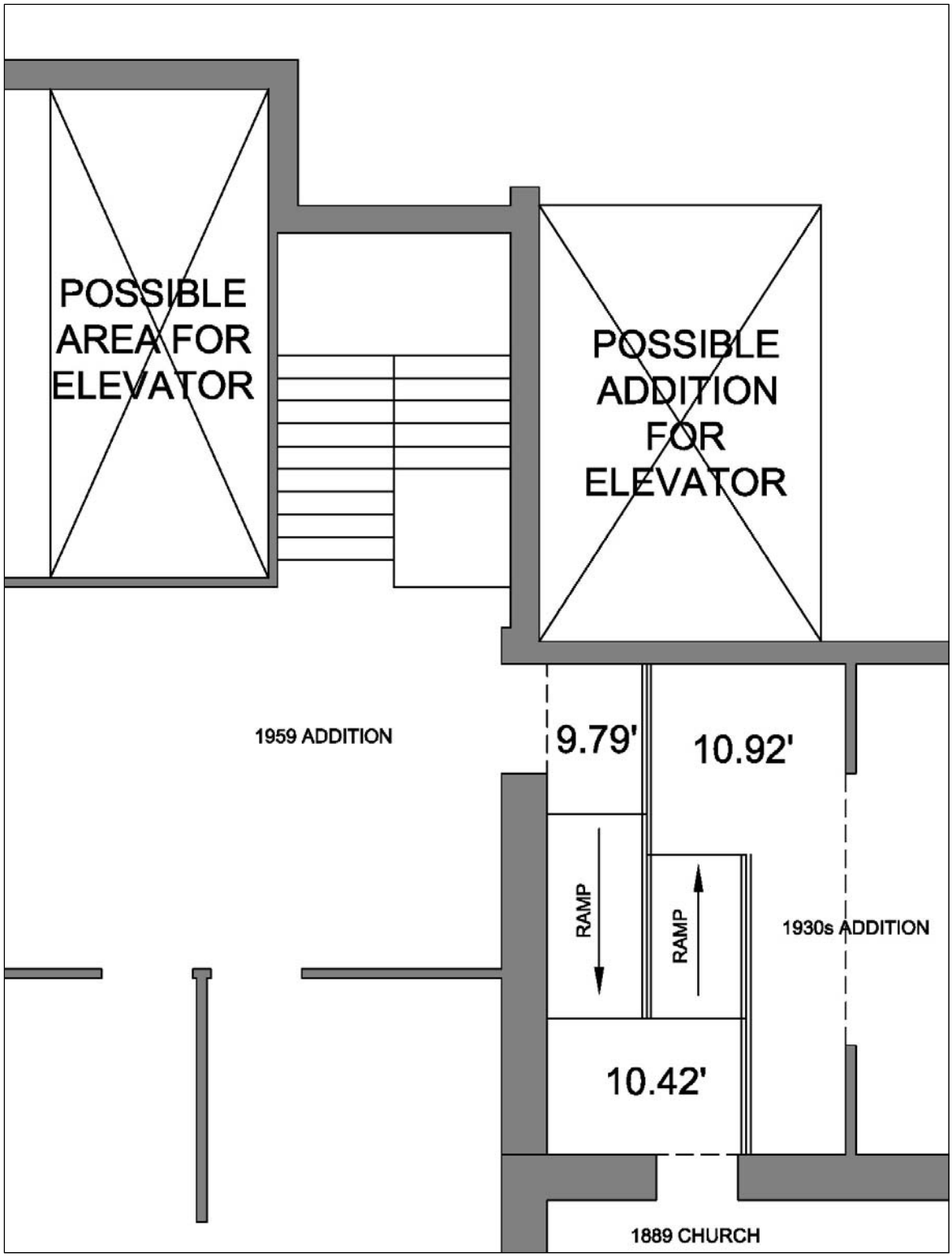


Figure 73. Plan detail at first floor level showing possible elevator locations and ramps for universal accessibility located in western third of 1930s addition.

RECOMMENDATIONS

Based on our visual observations, WJE recommends the following repairs for each of the three structures comprising the First Baptist Church. The repairs are arranged per building area. A higher priority should be given to repairs required to maintain a safe and watertight exterior envelope, and a lower priority given to repairs to restore the historic appearance of the church.

Exterior

1889 Church

1. Excavate the perimeter of the 1889 church, repair any observed distress at the stone masonry foundation wall, parge the stone masonry foundation wall to achieve a smooth surface, and install a waterproofing system and perforated drain at the perimeter of the foundation.
2. Repair existing copper sheet metal gutter liner. At each lapped and pop-riveted connection, install a new copper strip, fully soldered to the gutter liner.
3. Remove existing sheet metal cladding at the cornice. Repair and repaint the underlying original wood cornice.
4. Install at least four new downspouts and replace the two existing downspouts. All new downspouts to be copper.
5. Remove the existing asphalt shingle roofing at the church and tower, perform isolated repairs of the underlying strip sheathing, install new plywood decking, underlayment, and new roofing (asphalt shingle or fire-retardant treated wood shingles). Install a cricket between the tower and the gable roof. Remove and reinstall existing tower finial.
6. Repoint select zones and isolated locations of exterior mortar joints.
7. Repair isolated cracked stone masonry and replace isolated cracked brick masonry.
8. Remove existing deteriorated joint sealant and reseal all window and door perimeters.
9. Remove the existing wood louvers at the bell tower, install new replica railings with bird netting and install new insulation and a new membrane roof within the bell tower.
10. Install dutchman repairs at the eroded stone sills at south facade.
11. Replace the non-original entrance doors at south elevation with replicas of the historic doors.
12. Remove and discard the existing stained glass window covers. Clean, prime, and paint the window frames.
13. Replace the non-original replacement windows at the basement level with new wood windows replicating the design and sightlines of the original windows.
14. Replace the concrete buttress copings with stone to match the existing stone masonry facade.

1930s Addition

1. Remove approximately three courses of brick, clean, prime, and paint the existing steel lintel, install a self-adhered flashing membrane over the lintel, and rebuild the brick veneer.
2. Repair the existing concrete foundation cracks with epoxy.

3. Remove the existing asphalt shingle roofing at the 1930s addition and wood frame extension, perform isolated repairs of the decking, install new underlayment, and new roofing (imitation wood shingles, or cedar shakes). Install new roof flashing at the top and bottom intersections of the wood frame extension and at the intersection of the 1930s addition roof and the 1889 church gable.
4. Remove and replace the existing gutter. Replace the existing downspout and install new downspouts.
5. Repoint select zones and isolated locations of exterior mortar joints.
6. Replace isolated cracked brick masonry.
7. Remove the existing first level wood double-hung windows and perform shop repairs including coating removal, re-glazing and recoating, reinstall windows in the original openings with new operating hardware and weather stripping. Clean, prime and paint wood frames and sills in-situ.
8. Replace the non-original replacement windows at the basement level with new wood windows replicating the design and site lines of the original windows.
9. Remove existing deteriorated joint sealant and reseal all window and door perimeters as well as the vertical joint between the 1889 church and 1930s addition.
10. Clean, prime, and paint the exterior wood cladding at the pipe enclosure addition.

1959 Addition

1. Remove the existing roofing and membrane over the coping, perform isolated repairs of the decking, install new insulation, and new single-ply membrane roofing. Install new roof flashing and counter flashing at the perimeter of the roof.
2. Replace the existing downspouts and through-wall scuppers. Retain and reinstall the heat trace at the downspouts.
3. Remove approximately three courses of brick, clean, prime, and paint the existing steel lintel, install a self-adhered flashing membrane over the lintel, and rebuild the brick veneer above all windows. Repoint open and cracked mortar joints between concrete masonry units at the interior.
4. Repoint select zones and isolated locations of exterior mortar joints.
5. Replace isolated cracked brick masonry.
6. Replace the non-original replacement windows with new windows replicating the design and sightlines of the original windows.
7. Remove existing deteriorated joint sealant and reseal all window and door perimeters, the vertical joint between the 1930s addition and 1959 addition, all upward facing coping joints, and the perimeter of the stone cladding at the south facade.

Interior

1889 Church

1. Remove basement wood floor construction and install new cast-in-place concrete subfloor, including insulation and vapor retarder.
2. Reinforce the main north-south girder at the first floor framing, based on the loading requirements for the new use.

3. At the location where leakage has occurred at the first floor west wall, selectively remove pressed metal cladding and plaster finishes. Replace the wood lintel with a new hot dipped galvanized lintel. Ensure that roof and gutter repairs have created a watertight building envelope. Install salvaged original and new matching pressed metal cladding, and repaint to match adjacent surfaces.
4. Abate or encapsulate asbestos-containing flooring materials.
5. Remove interior finishes and non-structural partitions at basement level as needed to implement other repairs and as required for new use. *Not included in preliminary budget estimate.*
6. Remove 1969 finishes at the north end of the sanctuary, including the raised platform, baptismal pool, and associated supplemental structure, and provide new finishes and elements compatible for new use of the space. *Not included in preliminary budget estimate.*
7. Clean and repaint existing pressed metal cladding in the sanctuary space. Provide new flooring compatible with the new use of the space. *Not included in preliminary budget estimate.*

1930s Addition

1. Remove basement wood floor construction and install new cast-in-place concrete subfloor, including insulation and vapor retarder. The new subfloor would be at one continuous level; the raised floor area at the eastern part of the basement level would be removed.
2. If required for new use, reinforce wood-framed floor construction at the first floor level.
3. Abate or encapsulate asbestos-containing flooring materials.
4. Construct new accessible ramps connecting the first floor levels of each portion of the building.
5. Remove interior finishes and non-structural partitions at basement level as needed to implement other repairs and as required for new use. *Not included in preliminary budget estimate.*
6. Provide new interior finishes at the first floor level, retaining original varnished millwork and folding partitions if possible. *Not included in preliminary budget estimate.*

1959 Addition

1. Repair interior finishes damaged by previous water infiltration through the roof.
2. In coordination with exterior lintel repairs, selectively rebuild cracked portions of concrete masonry.
3. Abate or encapsulate asbestos-containing flooring materials.
4. Remove interior finishes and non-structural partitions at both levels as needed to implement other repairs and as required for new use. *Not included in preliminary budget estimate.*
5. Construct a new elevator connecting the basement level, grade, and the first floor.
6. Construct new accessible restrooms on both floors.

Mechanical Systems

1. ***Heating, Ventilating, and Air Conditioning***. For budgeting purposes, the following new system has been assumed. Heating, cooling, and ventilation will be provided by two new 25-ton variable valve timing (VVT) air handling units (AHU) with remote, air-cooled condensers. The units will be located in indoor mechanical space, with the condensers mounted on the roof of the 1959 or 1930s addition. Each unit will have hot water coils for heating with a variable-frequency drive (VFD) supply and return fan. The units will serve VVT dampers distributed throughout the building to provide zone

control. Ductwork in the Sanctuary will be run in the attic space to preserve the historic character of this space. Hot water perimeter heating and the AHU hot water coils will be served by two new 320 MBH condensing boilers located in the existing 1959 mechanical room.

The existing gas service is located on the north side of the building. The gas connection was extended to the current mechanical room during the 1959 construction. Given the additional ventilation heating load with the proposed new system, the current gas service may be inadequate. The current service should be replaced with a 640 MBH service.

2. ***Electrical***. For budget purposes, a completely new 800 amp electrical service at 120/208V, 3 phase, 4 wire is assumed. Completely new electrical infrastructure typical for an office building including a new lighting and distribution system is assumed. Telephone and data service and associated rough-ins for a typical office building are assumed. Consideration can be given to salvaging and reusing the existing decorative chandeliers in the sanctuary. The installation of a new fire alarm system is also assumed.

3. ***Plumbing***. For budgeting purposes, the following is assumed for the plumbing system. The system will provide approximately 18 fixtures, with a sink and mop receptor. A new central, 30-gallon gas-fired condensing water heater with 25 MBH input will provide domestic water heating. The combined sewer will be replaced with a separate 4-inch sanitary sewer and an 8-inch storm sewer connection. Some allowance is made for overflow drains.

4. ***Fire Protection***. For budgeting purposes, it is assumed that a new fire pump will be required and that the entire building will be sprinkled.

BUDGET ESTIMATE

The following preliminary budget estimate has been developed for the recommended scope of repair and restoration work outlined above. Certain items as indicated in the list above have been excluded from this draft estimate, pending further discussion.

Exterior	
1889 Church	$281,700
1930s Addition	$53,100
1959 Addition	$483,600
Interior and Structure	
1889 Church	$164,100
1930s Addition	$23,000
1959 Addition	$185,500
Mechanical Systems	
HVAC	$450,000
Electrical and Telecommunications	$375,000
Plumbing	$120,000
Fire Protection	$75,000
Subtotal	**$2,211,000**
General Conditions (10%)	$221,100
Construction Contingency (10%)	$221,100
Subtotal, Construction Cost	**$2,653,200**
Design Contingency (10%)	$265,320
Professional Fees (6%)	$159,192
Other Owner Costs (3%)	$79,596
Estimated Project Budget	**$3,157,308**

Therefore, for preliminary planning purposes, we recommend a budget range of $3,150,000 to $3,500,000. An additional budget would be required for new interior finishes and partitions related to a new use. For preliminary planning purposes, a budget of $50 per square foot can be assumed for typical interior office construction.

Much of the recommended repair work is dependent upon the future adaptive reuse of the building and the intended function. However, several repair items are critical to the structural stability and/or the watertightness of the exterior building envelope. These repair items are required now to prevent additional damage to building materials or features. This work includes a new roof, gutter repairs, and new downspouts at the 1889 church; a new roof, scuppers, and downspouts at the 1959 addition; masonry lintel repairs at the 1930s addition; and lintel repairs at 1959 addition. We recommend a preliminary project budget for this repair work of $775,000.