TOWN OF PLYMOUTH
COMMUNITY PRESERVATION
COMMITTEE

MEMO

TO: Town Meeting, Board of Selectmen, and the Advisory & Finance Committee
From: The Community Preservation Committee
Date: Friday August 19, 2022
Re: ANNUAL SATM 2018: CPA Article 9B

ARTICLE 9B: To see if the Town will vote to raise Community Preservation receipts, transfer from Community Preservation available funds or borrow $3,600,000.00 to grant to the Greater Plymouth Performing Arts Center, Inc. for the restoration rehabilitation and preservation of the façade of the 1884 Spire Center for the Performing Arts in Court House Square, and to authorize the Board of Selectmen to accept an historic preservation restriction pursuant to G.L. c. 44B Section 12 and G.L. c. 184 Sections 31-33, or take any other action relative thereto.
COMMUNITY PRESERVATION COMMITTEE

CPC RECOMMENDATION: Approval (unanimous)
The Community Preservation Committee voted in favor unanimously of Article 9B at its meeting held Thursday August 18, 2022.

SUMMARY & INTENT: The Community Preservation Committee is recommending 9B to Fall Town Meeting 2022 for the historical restoration of the façade of the 1884 Spire Center for the Preforming Arts located in Plymouth Court House Square.

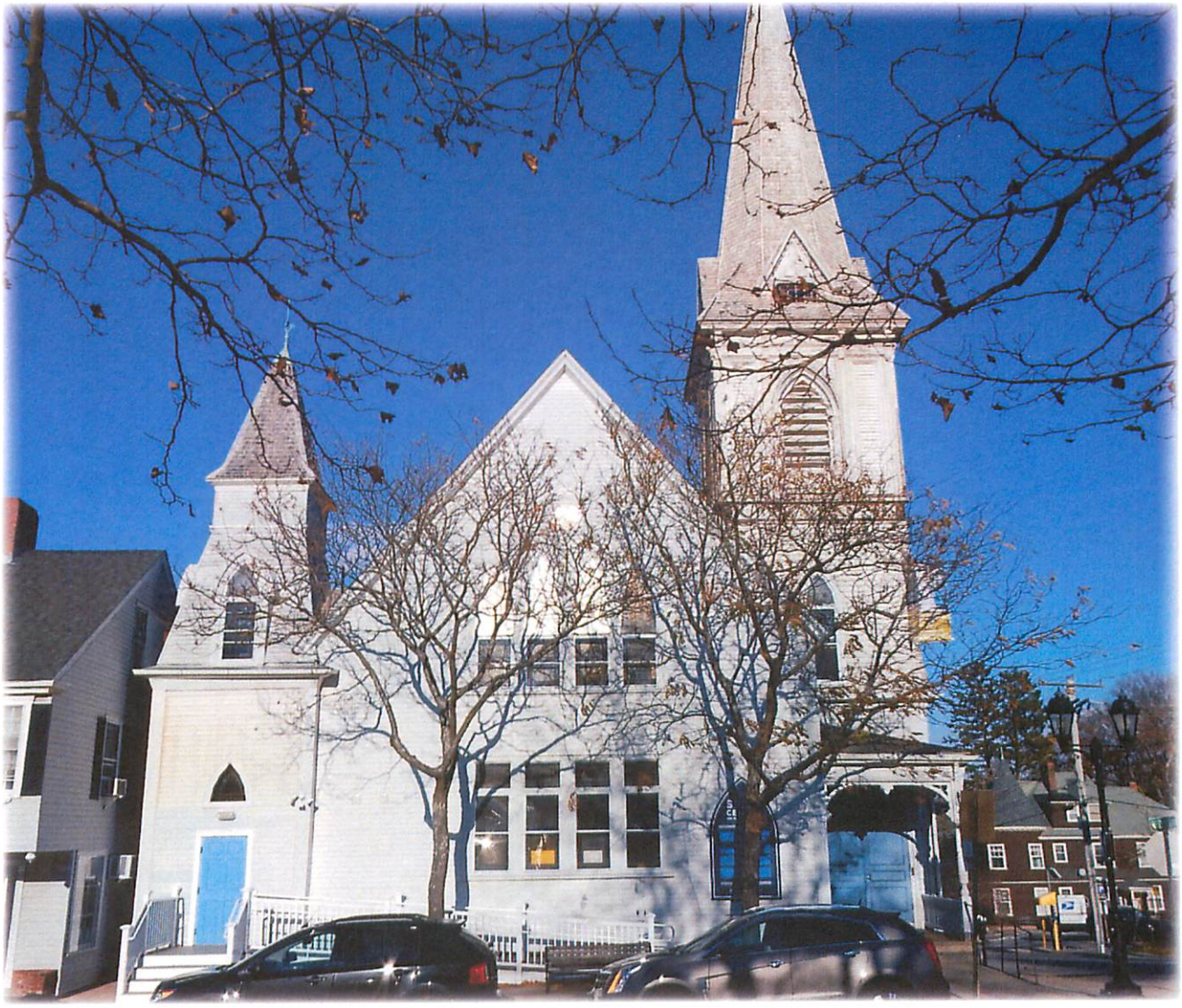
The agreement is as follows.

The building will be available for the Town's use when requested by the Board of Selectmen free of charge and based on availability.

The Greater Plymouth Performing Arts Center Inc. (GPPAC) has agreed to establish an endowment for the future capital improvements (not to be used heat, lights and general maintenance). One percent of the annually revenue generated by 25 ½ Court Street will be dedicated to a capital improvements account to be submitted to the Town of Plymouth Finance Department for confirmation by last Friday in April of each year.

GPPAC will except one designee from the Community Preservation Committee and one designee by the Historical Commission to serve on the Board of GPPAC building committee during the renovations for the Spire Center for the Preforming Arts 25 ½ Court Street and as long as CPA funds Under Article 9B Fall Town Meeting 2022 are available

GPPAC sponsored events will be free to Plymouth Students up to grade 12 based on availability.



APPLICATION FOR CPA FUNDS - FY 2022-23

SPIRE CENTER FOR THE PERFORMING ARTS

PLYMOUTH, MA

JUNE 30, 2022

Spencer Preservation Group
PRESERVATION ARCHITECTS

FISCAL YEAR 2020-2021 APPLICATION

Project Name: SPIRE CENTER PRESERVATION PROJECT

CPA Funding requested: $ 3,100,000 If the amount is unknown, will an appraisal be needed?

☐ Y ☑ N (If yes see page 14 of the appraisal process)

Total project cost: $ 3,600,000

Category—check all that apply: ☐ Open Space/Recreation ☑ Historic ☐ Housing

Lot and Plot: Parcel ID 017-000-145-002

Assessors Map #:

Number of acres in parcel: < 1

Number of proposed housing units: 0

Are there any existing deed restrictions on this property? ☐ No ☐ Don't know ☑ Yes/DESCRIBE

Describe restrictions below:

Historic restriction held by Commonwealth of MA

Project Sponsor/Organization: Greater Plymouth Performing Arts Center, Inc.

Contact Name: ROBERT HOLLIS

Address: 110 FAIRVIEW LN PLYMOUTH, MA 02360

Phone #: 508-577-0023 E-mail: rhollis@hollisagency.com

Robert Hollis 5/24/2022

Applicant Signature Date submitted

APPLICATION REQUIREMENTS:

A complete application consists of this application page (the specific amount of CPA funding is required), along with the following:

- A detailed description of the project explaining how your proposal benefits the Town of Plymouth and how it meets CPA goals and selection criteria outlined at the end of this application packet.
- Are there any special permit, variance or other approvals required? Are there any legal ramifications or impediments to this project?
- A detailed project budget including any additional revenue sources. Will there be any annual costs to the town once the project is operational?
- A project timeline.
- Additional supporting information such as photographs, plot plans, and maps (if applicable).
- Applicant must provide all title information for the property.
- Applicant must initial each page in the space provided.

initial here

PLEASE SEND 11 COPIES (DOUBLE-SIDED) OF YOUR APPLICATION TO:
The Community Preservation Committee, Plymouth Town Hall
26 Court Street, Plymouth, MA 02360

Applications may also be dropped off at the Town Clerk's office.
or in the CPC mailbox at Plymouth Town Hall.

The deadline for submitting an application is last Friday in February for Spring Town Meeting, and last Friday in June for Fall Town Meeting.

MEMORANDUM OF UNDERSTANDING

Project Name: SPIRE CENTER PRESERVATION PROJECT

Applicant Name: ROBERT HOLLIS

Address: 110 FAIRVIEW LN PLYMOUTH, MA 02360

Phone #: 508-20577-0023 E-mail: rhollis@hollisagency.com

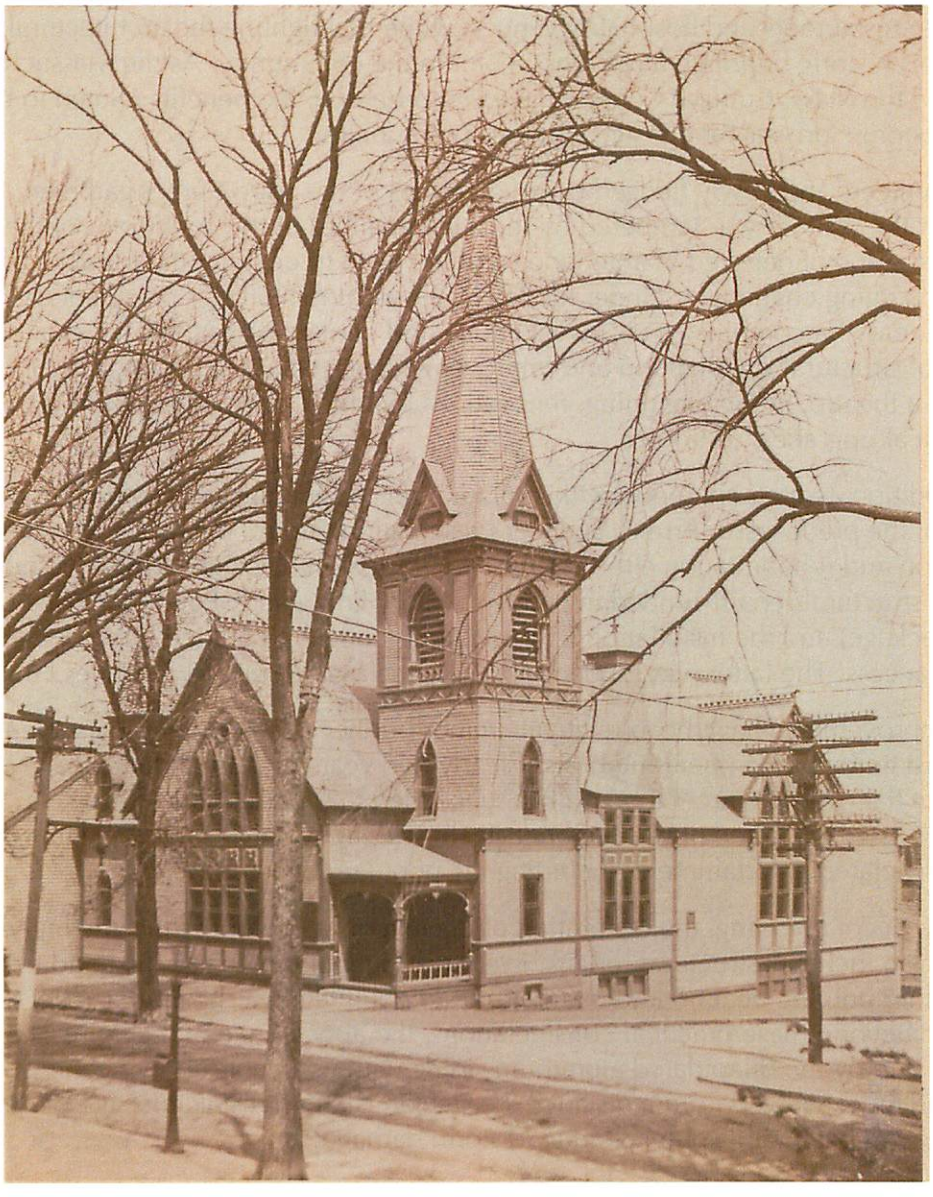
I understand that there are certain conditions and responsibilities involved in receiving CPA funding. My signature below indicates that I have read the following conditions and agree to follow them if my application is recommended to and approved by Town Meeting:

1. I understand that the funding process follows procedures described in the Community Preservation Act, M.G.L. Ch. 44B and that this places certain restrictions on how payments may be made.
2. In order to acknowledge the Community Preservation Act, and thus the contributions of the Plymouth taxpayers, I will:
   - Order, pay for and place a temporary "Community Preservation Works" sign or banner in front of the project. The Community Preservation Committee will provide the approved design. Approximate cost for the banner is generally $250–$300.
   - Acknowledge the contributions of the Community Preservation Act in all press releases, newsletters, and other publicity.
   - Include recognition of the Community Preservation Act if a permanent plaque or sign is placed on the project.
3. If requested I will supply the Community Preservation Committee with quarterly financial up-dates the project.
4. As needed, I will assist in the process of obtaining the required deed restriction to help protect the property in perpetuity.
5. The Applicant agrees to adhere to the intent and the spirit of the presentation made to Town Meeting.

ROBERT HOLLIS
Print Name

Robert Hollis 5/24/2022
Signature Date

H
initial here



Spire Center for the Performing Arts:

Community Preservation Grant Application

June 29, 2022

The Spire Center occupies a prominent position on Plymouth's Court Street, facing the historic courthouse recently rehabilitated as Plymouth's Town Hall. Built in 1884, this former Methodist Church building has undergone several transformations in use and since 2012 has served as the Spire Center for the Performing Arts, a not-for-profit organization. The building is owned by the Town of Plymouth and leased on a long-term basis to the Greater Plymouth Performing Arts Center, Inc. Vigorous and multi-faceted programming brings enthusiastic audiences to Plymouth,

with benefits to restaurants and hospitality venues, while highlighting the architectural historical character of this historic building, a reference point in the community. As the Massachusetts Office of Tourism and the Mass. Cultural Council have demonstrated, the benefits related to the arts are significant economic drivers for the surrounding communities.

When the volunteers and newly fledged board members of the Spire Center gathered, their enthusiasm for the venture was tempered by the harsh realities of the conditions of the building. The downward slope of deferred maintenance and the need to upgrade the former sanctuary as a theater were daunting challenges. Under the leadership of Bob Hollis as president of the board and head 'visionary,' a combination of sweat equity and bootstrap fund raising resulted in a combination of structural stabilization and improvements necessary to secure a certificate of occupancy as a theatre. In the beginning, renovations included a fire suppression (sprinkler) system, electrical upgrades, restrooms.

In 2015 a condition assessment report with structural recommendations was prepared by Spencer & Vogt Group, the predecessor firm to Spencer Preservation Group, the architectural firm guiding the preservation and rehabilitation efforts (see CPA submission package). This was succeeded in 2016-17 with structural repairs funded in part by a MPPF Emergency Fund grant (see CPA submission package) and the installation of an elevator along with related improvements for handicapped access. The latter was funded in part by the Mass. Cultural Facilities Fund.

Continuing improvements have been relatively minor but necessary and the Spire Center has proven self-sustaining on an operating basis. Clearly two years of the pandemic have stalled operations, but the ever-resourceful board has succeeded in securing funding to keep building operational for its tenants, and now alive once again with active programming with concerts, theatre and associated entertainment, including the popular coffee house.

After several years of planning, the restoration of the exterior envelopment is the highest priority and one that also includes structural repairs. Every historic building needs first and foremost to keep the weather out, the heat in, and maintain structural integrity. The Spire Center is no exception and beyond these practical considerations, the appearance of the Spire Center is adversely affected by the dilapidated aluminum siding with its steeple showing the wear and tear of weather and time. Viewed from a distance the steeple is an unmistakable sign of deterioration, now sporting a big patch at its pinnacle due to storm damage.

Closer inspection shows temporary shoring (now 6 years old) at the transepts along with window glazing falling out and peeling paint on the stained-glass windows. A bird's eye view sees deteriorated asphalt shingle roofing with various temporary patches. Inside, structural engineers have assessed and recommended reinforcement to the tall steeple as well as reinforcing those outward leaning north and south walls of the transepts. In short, there is a pressing need to address critical issues for preservation of the building envelope.

The CPA Request: Preservation Project 2022- 2023

The Spire Center has developed preliminary plans and specifications for a comprehensive envelope and structural project, with estimated budget of $3.6 m with $200,000 of roof replacement being performed the summer of 2022, outside of the CPA grant but certainly related to the pressing needs to re-establish a weathertight enclosure. The scope specific to the CPA grant is thus $3.4 m.

The budget was prepared based on outline plans and specifications prepared by Spencer & Vogt, now Spencer Preservation Group (see CPA submission package). The cost estimated was prepared by Cape Associates, which had also assisted in exploratory probes which the Conditions Assessment was prepared in 2015 (see CPA submission package).

The CPA scope and budget includes construction costs of $2,421,963 m. Other associated costs include architectural and engineering services to complete the construction documents (plans and specifications), conduct competitive bidding and construction administration of $242,196; contingency of $484,393; and escalation to 2023 of $290,636. The total project budget is $3,439,188.

The Center requests a Community Preservation grant of $3.1 m. which they are matching with $500,000 as follows: Mass Cultural Facilities Fund, $200,000, committed; Plymouth Community Foundation, $100,000, committed; and capital Campaign, $200,000, in progress.

The Preservation Work

Removal of the aluminum siding in three locations has been useful in understanding how much historic fabric remains and gives hints of what has been lost as a result of the destruction by lopping off anything that extended beyond the plane of the siding. Most of the trim detail have been lost. Working with the surviving historic photos (see Conditions Assessment in the CPA submission package) as the starting basis for restoration of the missing trim elements, Spencer Preservation Group, as preservation architects will also consult millwork catalogues of the late 19th century as well as comparable historic buildings of this type, in the style what might be best called Victorian Carpenter Gothic.

Another useful tool is paint analysis to determine historic colors. Once again, historic photos help but actual sampling is revealing. The Spire Center intends to apply the original colors to sample areas to share the exciting discovery to return this building to its Victorian splendor – no longer white. The body of the clapboards, shingles, and novelty siding was originally tan, with dark green trim and sash, with the doors another shade of dark green. (See paint analysis by Finch & Rose in the CPA submission).

Preservation Standards

Preservation and restoration work are guided by the ***Secretary for the Interior Standards for Historic Preservation.*** Where original fabric survives in durable condition, it will be retained and repaired as necessary. Missing elements will be replicated based on evidence, documentary or comparable examples. Structural repairs will be designed to be as complementary interventions. Proper life safety and lead paint safe practices will ensure worker and public safety. Materials and preservation techniques will be employed to maximize durability and longevity of the work.

The project will be submitted to the Plymouth Historic District Commission for a Certificate of Appropriateness.

Schedule

The overall time schedule is included in the CPA submission package.

Plans and specifications for the roof replacement have been prepared, the project bid and the contract awarded. Work is anticipated to be finished in September.

The schedule then moves on to the Town Meeting in September. With hope for a positive vote, the architectural team will then finalize the plans and specifications for bidding in January – February and preservation work starts in March with completion in September.

In conclusion

The Spire Center is a community cultural resource housed in a repurposed historic church building, demonstrating the adaptive reuse of a structure that would have been otherwise subject to the vagaries of real estate speculation. It is time for this resource to get the attention it deserves to ensure its future preservation. The Center and its consultants stand ready and eager to respond to questions and comments from the Community Preservation Committee and welcome the opportunity to offer guided tours and discussions with the design team.

SPIRE CENTER FOR THE PERFORMING ARTS

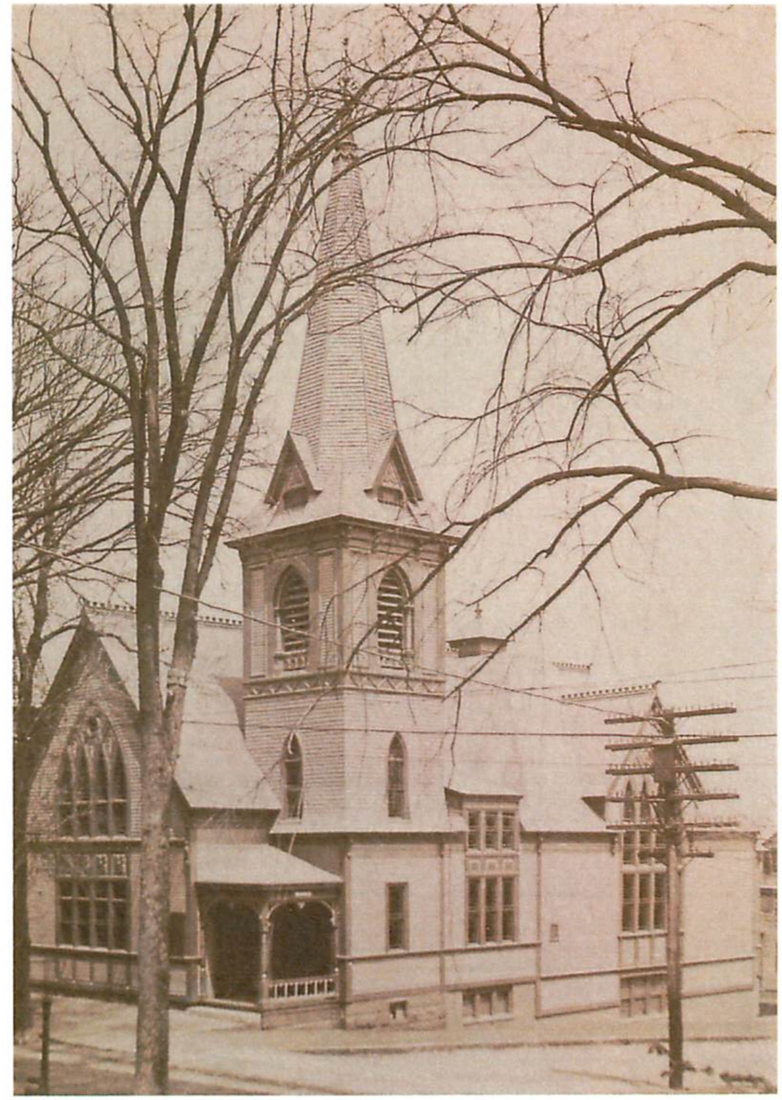
EXTERIOR IMPROVEMENTS

PROJECT TEAM

ARCHITECT
Spencer & Vogt Group
1 Thompson Square
Charlestown, MA 02129
617 227 2654

DRAWING INDEX

ARCHITECTURAL



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SPENCER & VOGT GROUP
architecture preservation
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Seal

Consultant

ISSUE / REVISIONS

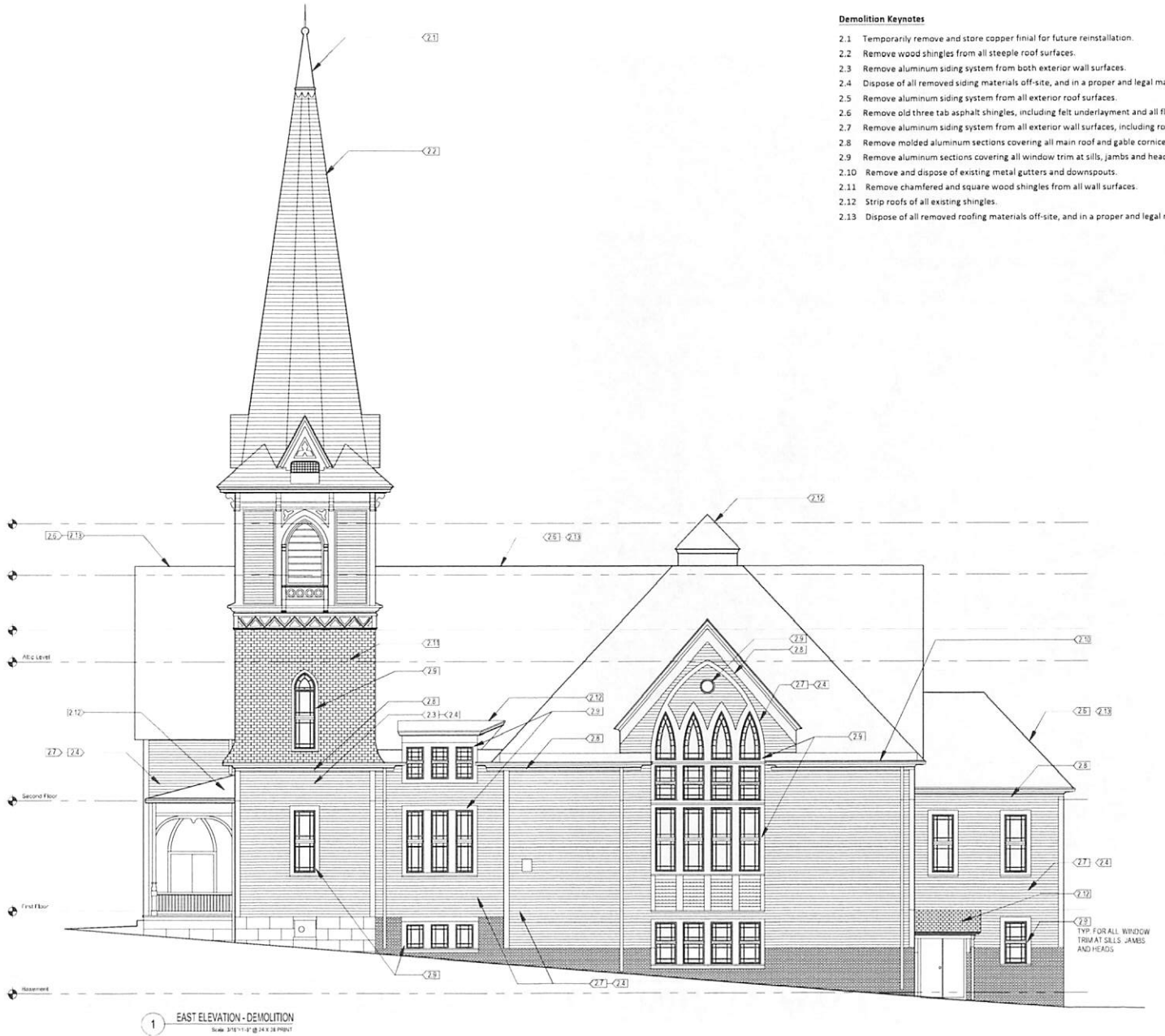
Date 04.20.17
Drawn by
Checked by
Project Number
1625.00

SPIRE CENTER FOR THE PERFORMING ARTS
25½ Court Street, Plymouth, MA 02360

A-000

Demolition Keynotes

2.1 Temporarily remove and store copper finial for future reinstallation.
2.2 Remove wood shingles from all steeple roof surfaces.
2.3 Remove aluminum siding system from both exterior wall surfaces.
2.4 Dispose of all removed siding materials off-site, and in a proper and legal manner.
2.5 Remove aluminum siding system from all exterior roof surfaces.
2.6 Remove old three tab asphalt shingles, including felt underlayment and all flashing.
2.7 Remove aluminum siding system from all exterior wall surfaces, including roof gables.
2.8 Remove molded aluminum sections covering all main roof and gable cornices.
2.9 Remove aluminum sections covering all window trim at sills, jambs and heads.
2.10 Remove and dispose of existing metal gutters and downspouts.
2.11 Remove chamfered and square wood shingles from all wall surfaces.
2.12 Strip roofs of all existing shingles.
2.13 Dispose of all removed roofing materials off-site, and in a proper and legal manner.



1 EAST ELEVATION - DEMOLITION
Scale: 3/16"=1'-0" @ 24 X 36 PRINT

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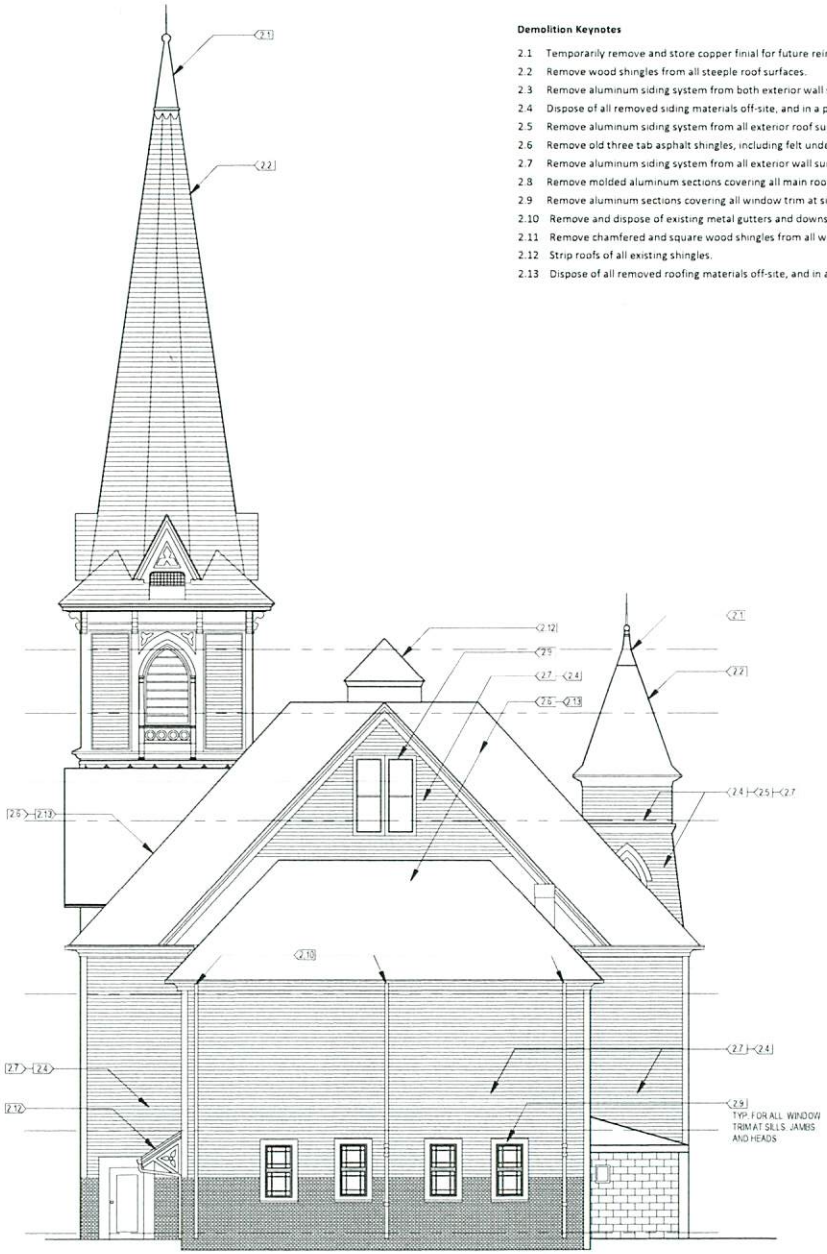
SPIRE CENTER FOR THE PERFORMING ARTS
29½ Court Street , Plymouth, MA 02360

CONSTRUCTION DOCUMENTS
DEMOLITION ELEVATIONS

D-200



1 NORTH ELEVATION - DEMOLITION

Scale: 3/16"=1'-0" @ 24 X 36 PRINT

Demolition Keynotes

2.1 Temporarily remove and store copper finial for future reinstallation.
2.2 Remove wood shingles from all steeple roof surfaces.
2.3 Remove aluminum siding system from both exterior wall surfaces.
2.4 Dispose of all removed siding materials off-site, and in a proper and legal manner.
2.5 Remove aluminum siding system from all exterior roof surfaces.
2.6 Remove old three tab asphalt shingles, including felt underlayment and all flashing.
2.7 Remove aluminum siding system from all exterior wall surfaces, including roof gables.
2.8 Remove molded aluminum sections covering all main roof and gable cornices.
2.9 Remove aluminum sections covering all window trim at sills, jambs and heads.
2.10 Remove and dispose of existing metal gutters and downspouts.
2.11 Remove chamfered and square wood shingles from all wall surfaces.
2.12 Strip roofs of all existing shingles.
2.13 Dispose of all removed roofing materials off-site, and in a proper and legal manner.

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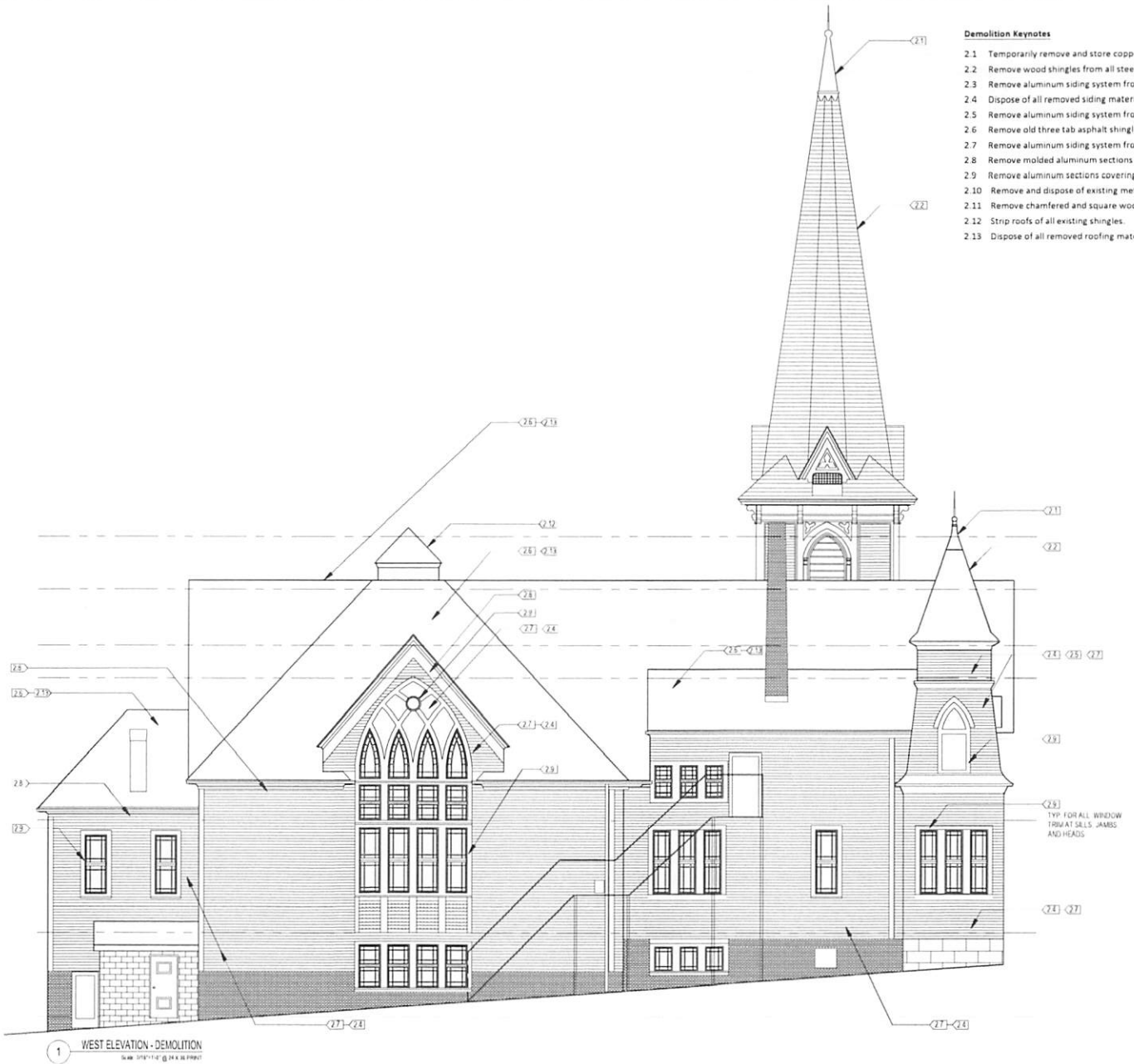
CONSTRUCTION DOCUMENTS
DEMOLITION ELEVATIONS

D-201



1 WEST ELEVATION - DEMOLITION

Scale: 3/16"=1'-0" @ 24 x 36 PRINT

Demolition Keynotes

2.1 Temporarily remove and store copper finial for future reinstallation.
2.2 Remove wood shingles from all steeple roof surfaces.
2.3 Remove aluminum siding system from both exterior wall surfaces.
2.4 Dispose of all removed siding materials off-site, and in a proper and legal manner.
2.5 Remove aluminum siding system from all exterior roof surfaces.
2.6 Remove old three tab asphalt shingles, including felt underlayment and all flashing.
2.7 Remove aluminum siding system from all exterior wall surfaces, including roof gables.
2.8 Remove molded aluminum sections covering all main roof and gable cornices.
2.9 Remove aluminum sections covering all window trim at sills, jambs and heads.
2.10 Remove and dispose of existing metal gutters and downspouts.
2.11 Remove chamfered and square wood shingles from all wall surfaces.
2.12 Strip roofs of all existing shingles.
2.13 Dispose of all removed roofing materials off-site, and in a proper and legal manner.

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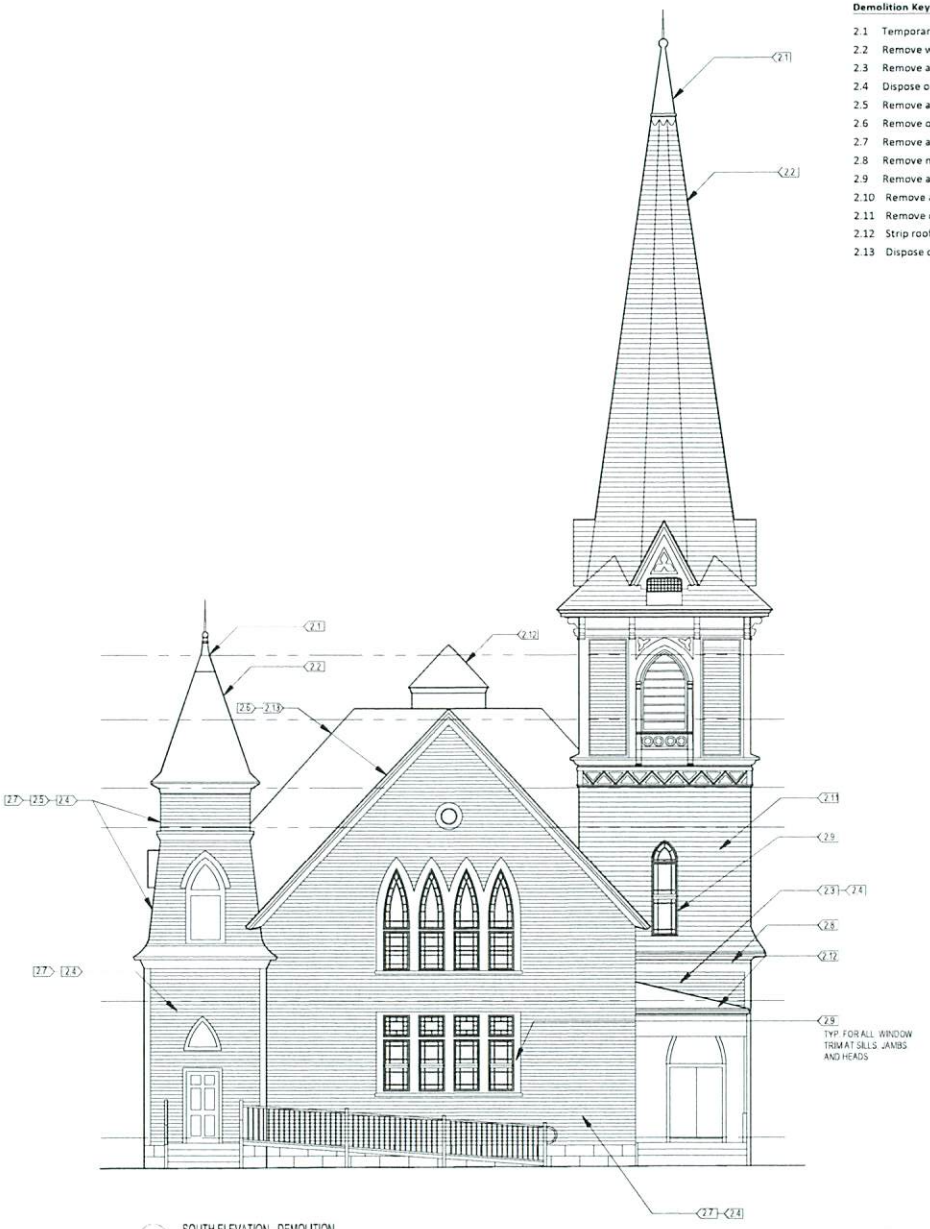
CONSTRUCTION DOCUMENTS
DEMOLITION ELEVATIONS

D-202



1 SOUTH ELEVATION - DEMOLITION

Scale: 3/16"=1'-0" @ 24 X 36 PRINT

Demolition Keynotes

2.1 Temporarily remove and store copper finial for future reinstallation.
2.2 Remove wood shingles from all steeple roof surfaces.
2.3 Remove aluminum siding system from both exterior wall surfaces.
2.4 Dispose of all removed siding materials off-site, and in a proper and legal manner.
2.5 Remove aluminum siding system from all exterior roof surfaces.
2.6 Remove old three tab asphalt shingles, including felt underlayment and all flashing.
2.7 Remove aluminum siding system from all exterior wall surfaces, including roof gables.
2.8 Remove molded aluminum sections covering all main roof and gable cornices.
2.9 Remove aluminum sections covering all window trim at sills, jambs and heads.
2.10 Remove and dispose of existing metal gutters and downspouts.
2.11 Remove chamfered and square wood shingles from all wall surfaces.
2.12 Strip roofs of all existing shingles.
2.13 Dispose of all removed roofing materials off-site, and in a proper and legal manner.

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SPIRE CENTER FOR THE PERFORMING ARTS
295 Court Street, Plymouth, MA 02360

CONSTRUCTION DOCUMENTS
DEMOLITION ELEVATIONS

D-203

New Work Keynotes

4.1 Cut and repoint tower foundation consisting of ashlar granite masonry.
4.2 Cut and repoint brick foundation.
4.3 Cut and repoint upper 50% of chimney and cap with bluestone; evaluate structural integrity of chimney.
4.4 Repoint upper 50% of chimney.

5.1 Remove and replace deteriorated components of existing fire escapes.

6.1 Replace any deteriorated wood roof sheathing with new in-kind wood sheathing.
6.2 Cover all roof sheathing with Huber Engineered Woods "Zip System" roof sheathing.
6.3 Replace any deteriorated decorative wood trim at roof gables with new in-kind materials to match existing.
6.4 Replace deteriorated wood louver elements with new in-kind materials to match existing.
6.5 Replace deteriorated wood cornice elements with new in-kind materials to match existing.
6.6 Replace missing wood decorative elements at top of wall, just below louvered openings.
6.7 Replace missing wood decorative elements at porch balustrade, columns and frieze.
6.8 Replace deteriorated wood cornice elements with new in-kind materials to match existing.
6.9 Replace missing wood decorative elements at window spandrels and transoms.
6.10 Replace missing horizontal and vertical wood trim used to create wall panels.
6.11 Replace missing wood brackets and corbels.
6.12 Replace missing carved decoration in window panels above gothic arches.
6.13 Replace missing wood decorative elements at top of wall, just below projecting cornice.
6.14 Replace any deteriorated wood trim at projecting window dormers with new in-kind materials.

7.1 Provide new wood shingles to match shape and exposure of existing roof shingles.
7.2 Provide felt underlayment over all exposed wood roof sheathing.
7.3 Provide felt underlayment over all new and existing wood wall sheathing.
7.4 Provide copper flashing at all changes in roof surfaces and along perimeter of roof base.
7.5 Provide ventilated underlayment ("Cedar Breather") over new felt underlayment on roof wood shingle surfaces.
7.6 Replace deteriorated wood shingles (assume 50%) with new in-kind materials to match existing.
7.7 Replace deteriorated wood shingles with new in-kind materials to match existing.
7.8 Replace deteriorated wood shingles (assume 20%) with new in-kind materials to match existing.
7.9 Provide copper flashing over projecting ledge at base of wall along all four sides.
7.10 Provide new copper flashing at arched head of all three openings.
7.11 Provide new copper flashing over projecting ledge at base of wall along three sides.
7.12 Provide new copper-covered roof cricket and metal flashing where northwest wall meets main roof.
7.13 Provide 100% new wood shingles to match shape and exposure of original roof shingles.
7.14 Provide metal base flashing along outer edges of porch roof.
7.15 Provide felt underlayment over all exposed wood roof sheathing.
7.16 Provide fully adhered membrane roofing system.
7.17 Provide 40 year "Architectural" asphalt shingles on roof.
7.18 Not used.
7.19 Provide new roofing felt over all roof sheathing.
7.20 Provide adhesive waterproofing membrane along six (6') foot strip at all eaves.
7.21 Provide 40 year "Architectural" asphalt shingles and install per 110 mph wind zone requirements.
7.22 Provide new fully-adhered membrane roofing system at all shed dormers.
7.23 Provide new fully-adhered roofing system at cross gable ventilator flat roof area.
7.24 Provide new fully-adhered membrane roofing system at flat roof area above Chancel roof.
7.25 Not used.
7.26 Provide new metal-covered cricket and metal flashing where southeast wall meets main roof.
7.27 Provide new metal flashing at heads of window and door openings.
7.28 Provide metal weather-stripping at perimeter of entry door(s).
7.29 Provide 5" of blown-in cellulose in all exterior walls (R-value = 17.5).
7.30 Provide new metal flashing at head of all window openings.
7.31 Provide new metal flashing at head of one window opening.
7.32 Provide metal base flashing along edge of entry porch roof.
7.33 Provide metal flashing at all changes in roof surfaces and along perimeter of roof base.
7.34 Provide metal flashing over projecting ledge at base of wall along all four sides.
7.35 Provide new metal flashing at arched head of dormer windows.
7.36 Provide new metal flashing over projecting ledge at base of roof.
7.37 Provide one new drain line from interior membrane roof over floor through exterior wall.

8.1 Restore all window sash with new hardware, sash weight chains, pulleys and sash weights.
8.2 Restore all wood window sash and wood window frames.
8.3 Replace all existing window sash cord with new sash chains.
8.4 Refurbish and oil existing sash weight pulleys and rehang sash weights on new chains.
8.5 Provide new metal weather-stripping at each window frame; cut kerfs in each sash.
8.6 Fix all upper sash in-place with blocks below each end of meeting rail.
8.7 Reinstall all refurbished and repaired window sash locks and sash lifts.
8.8 Provide bird screen on inside surfaces of all four louver openings.

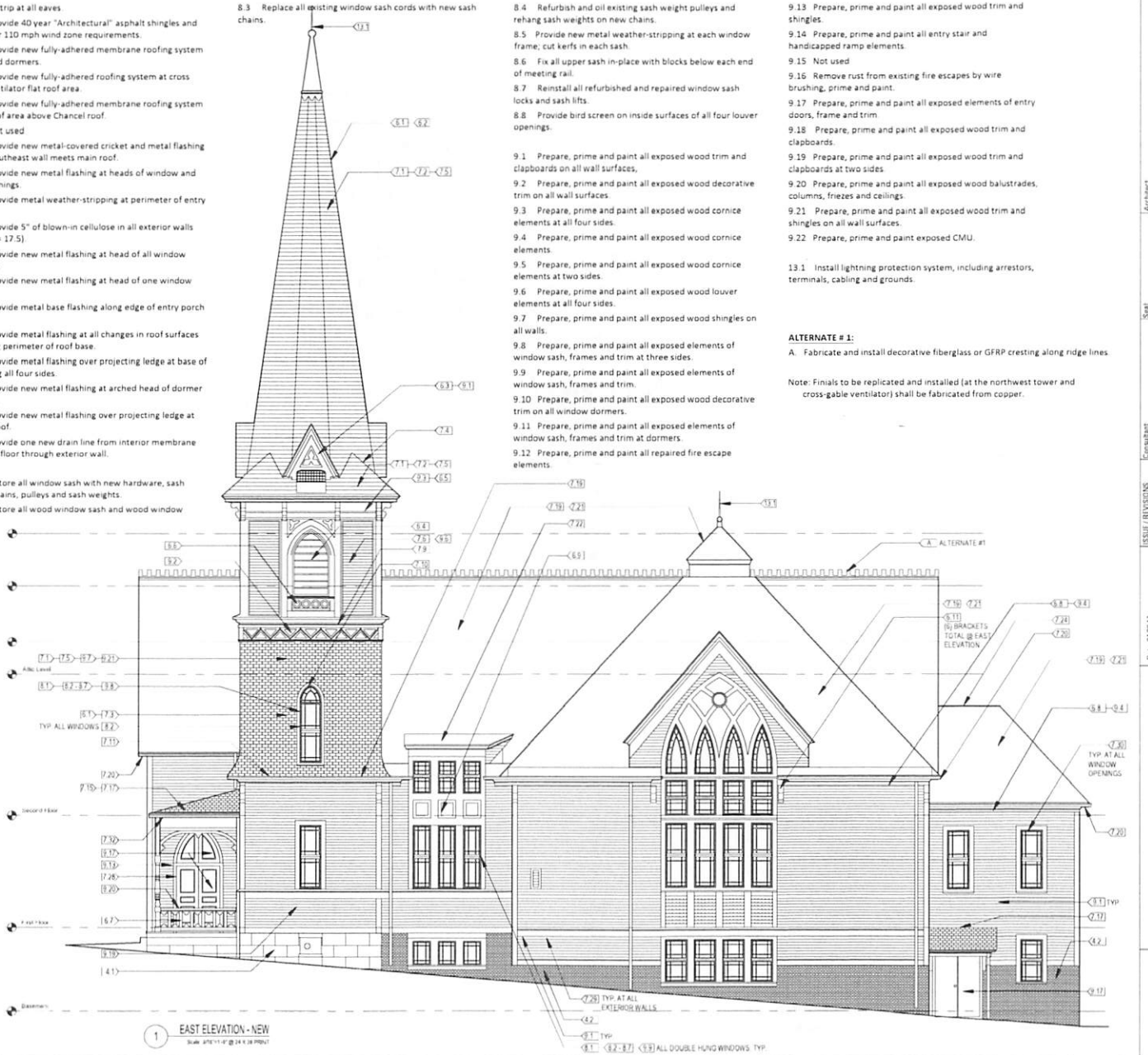
9.1 Prepare, prime and paint all exposed wood trim and clapboards on all wall surfaces,
9.2 Prepare, prime and paint all exposed wood decorative trim on all wall surfaces.
9.3 Prepare, prime and paint all exposed wood cornice elements at all four sides.
9.4 Prepare, prime and paint all exposed wood cornice elements.
9.5 Prepare, prime and paint all exposed wood cornice elements at two sides.
9.6 Prepare, prime and paint all exposed wood louver elements at all four sides.
9.7 Prepare, prime and paint all exposed wood shingles on all walls.
9.8 Prepare, prime and paint all exposed elements of window sash, frames and trim at three sides.
9.9 Prepare, prime and paint all exposed elements of window sash, frames and trim.
9.10 Prepare, prime and paint all exposed wood decorative trim on all window dormers.
9.11 Prepare, prime and paint all exposed elements of window sash, frames and trim at dormers.
9.12 Prepare, prime and paint all repaired fire escape elements.
9.13 Prepare, prime and paint all exposed wood trim and shingles.
9.14 Prepare, prime and paint all entry stair and handicapped ramp elements.
9.15 Not used.
9.16 Remove rust from existing fire escapes by wire brushing, prime and paint.
9.17 Prepare, prime and paint all exposed elements of entry doors, frame and trim.
9.18 Prepare, prime and paint all exposed wood trim and clapboards.
9.19 Prepare, prime and paint all exposed wood trim and clapboards at two sides.
9.20 Prepare, prime and paint all exposed wood balustrades, columns, friezes and ceilings.
9.21 Prepare, prime and paint all exposed wood trim and shingles on all wall surfaces.
9.22 Prepare, prime and paint exposed CMU.

13.1 Install lightning protection system, including arrestors, terminals, cabling and grounds.

ALTERNATE # 1:

A. Fabricate and install decorative fiberglass or GFRP cresting along ridge lines.

Note: Finials to be replicated and installed (at the northwest tower and cross-gable ventilator) shall be fabricated from copper.



1 EAST ELEVATION - NEW
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Architect
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Seal

Consultant

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Date 04.29.17
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Project Number
1626.00

SPIRE CENTER FOR THE PERFORMING ARTS
29½ Court Street, Plymouth, MA 02360

CONSTRUCTION DOCUMENTS
ELEVATIONS - NEW WORK

A-200

New Work Keynotes

4.1 Cut and repoint tower foundation consisting of ashlar granite masonry.
4.2 Cut and repoint brick foundation.
4.3 Cut and repoint upper 50% of chimney and cap with bluestone; evaluate structural integrity of chimney.
4.4 Repoint upper 50% of chimney.

5.1 Remove and replace deteriorated components of existing fire escapes.

6.1 Replace any deteriorated wood roof sheathing with new in-kind wood sheathing.
6.2 Cover all roof sheathing with Huber Engineered Woods "Zip System" roof sheathing.
6.3 Replace any deteriorated decorative wood trim at roof gables with new in-kind materials to match existing.
6.4 Replace deteriorated wood louver elements with new in-kind materials to match existing.
6.5 Replace deteriorated wood cornice elements with new in-kind materials to match existing.
6.6 Replace missing wood decorative elements at top of wall, just below louvered openings.
6.7 Replace missing wood decorative elements at porch balustrade, columns and frieze.
6.8 Replace deteriorated wood cornice elements with new in-kind materials to match existing.
6.9 Replace missing wood decorative elements at window spandrels and transoms.
6.10 Replace missing horizontal and vertical wood trim used to create wall panels.
6.11 Replace missing wood brackets and corbels.
6.12 Replace missing carved decoration in window panels above gothic arches.
6.13 Replace missing wood decorative elements at top of wall, just below projecting cornice.
6.14 Replace any deteriorated wood trim at projecting window dormers with new in-kind materials.

7.1 Provide new wood shingles to match shape and exposure of existing roof shingles.
7.2 Provide felt underlayment over all exposed wood roof sheathing.
7.3 Provide felt underlayment over all new and existing wood wall sheathing.
7.4 Provide copper flashing at all changes in roof surfaces and along perimeter of roof base.
7.5 Provide ventilated underlayment ("Cedar Breather") over new felt underlayment on roof wood shingle surfaces.
7.6 Replace deteriorated wood shingles (assume 50%) with new in-kind materials to match existing.
7.7 Replace deteriorated wood shingles with new in-kind materials to match existing.
7.8 Replace deteriorated wood shingles (assume 20%) with new in-kind materials to match existing.
7.9 Provide copper flashing over projecting ledge at base of wall along all four sides.
7.10 Provide new copper flashing at arched head of all three openings.
7.11 Provide new copper flashing over projecting ledge at base of wall along three sides.
7.12 Provide new copper-covered roof cricket and metal flashing where northwest wall meets main roof.
7.13 Provide 100% new wood shingles to match shape and exposure of original roof shingles.
7.14 Provide metal base flashing along outer edges of porch roof.
7.15 Provide felt underlayment over all exposed wood roof sheathing.
7.16 Provide fully adhered membrane roofing system.
7.17 Provide 40 year "Architectural " asphalt shingles on roof.
7.18 Not used.
7.19 Provide new roofing felt over all roof sheathing.
7.20 Provide adhesive waterproofing membrane along six (6') foot strip at all eaves.
7.21 Provide 40 year "Architectural" asphalt shingles and install per 110 mph wind zone requirements.
7.22 Provide new fully-adhered membrane roofing system at all shed dormers.
7.23 Provide new fully-adhered roofing system at cross gable ventilator flat roof area.
7.24 Provide new fully-adhered membrane roofing system at flat roof area above Chancel roof.
7.25 Not used
7.26 Provide new metal-covered cricket and metal flashing where southeast wall meets main roof.
7.27 Provide new metal flashing at heads of window and door openings.
7.28 Provide metal weather-stripping at perimeter of entry door(s).
7.29 Provide 5" of blown-in cellulose in all exterior walls (R-value = 17.5)
7.30 Provide new metal flashing at head of all window openings.
7.31 Provide new metal flashing at head of one window opening.
7.32 Provide metal base flashing along edge of entry porch roof
7.33 Provide metal flashing at all changes in roof surfaces and along perimeter of roof base.
7.34 Provide metal flashing over projecting ledge at base of wall along all four sides.
7.35 Provide new metal flashing at arched head of dormer windows.
7.36 Provide new metal flashing over projecting ledge at base of roof.
7.37 Provide one new drain line from interior membrane roof over floor through exterior wall.

8.1 Restore all window sash with new hardware, sash weight chains, pulleys and sash weights.
8.2 Restore all wood window sash and wood window frames.
8.3 Replace all existing window sash cords with new sash chains.
8.4 Refurbish and oil existing sash weight pulleys and rehang sash weights on new chains.
8.5 Provide new metal weather-stripping at each window frame; cut kerfs in each sash.
8.6 Fix all upper sash in-place with blocks below each end of meeting rail.
8.7 Reinstall all refurbished and repaired window sash locks and sash lifts.
8.8 Provide bird screen on inside surfaces of all four louver openings.

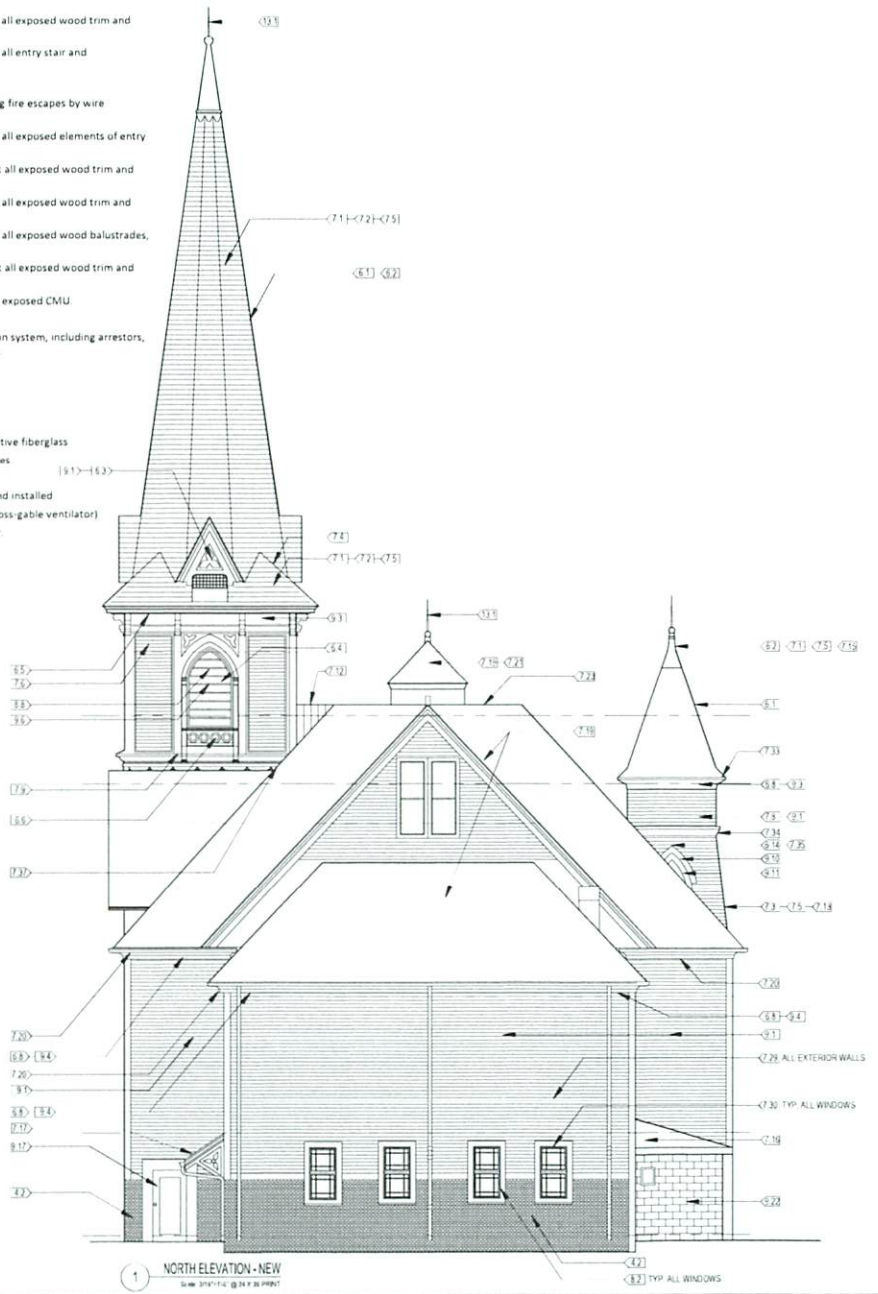
9.1 Prepare, prime and paint all exposed wood trim and clapboards on all wall surfaces.
9.2 Prepare, prime and paint all exposed wood decorative trim on all wall surfaces.
9.3 Prepare, prime and paint all exposed wood cornice elements at all four sides.
9.4 Prepare, prime and paint all exposed wood cornice elements.
9.5 Prepare, prime and paint all exposed wood cornice elements at two sides.
9.6 Prepare, prime and paint all exposed wood louver elements at all four sides.
9.7 Prepare, prime and paint all exposed wood shingles on all walls.
9.8 Prepare, prime and paint all exposed elements of window sash, frames and trim at three sides.
9.9 Prepare, prime and paint all exposed elements of window sash, frames and trim.
9.10 Prepare, prime and paint all exposed wood decorative trim on all window dormers.
9.11 Prepare, prime and paint all exposed elements of window sash, frames and trim at dormers.
9.12 Prepare, prime and paint all repaired fire escape elements.
9.13 Prepare, prime and paint all exposed wood trim and shingles.
9.14 Prepare, prime and paint all entry stair and handicapped ramp elements.
9.15 Not used
9.16 Remove rust from existing fire escapes by wire brushing, prime and paint.
9.17 Prepare, prime and paint all exposed elements of entry doors, frame and trim.
9.18 Prepare, prime and paint all exposed wood trim and clapboards.
9.19 Prepare, prime and paint all exposed wood trim and clapboards at two sides.
9.20 Prepare, prime and paint all exposed wood balustrades, columns, friezes and ceilings.
9.21 Prepare, prime and paint all exposed wood trim and shingles on all wall surfaces.
9.22 Prepare, prime and paint exposed CMU.

13.1 Install lightning protection system, including arrestors, terminals, cabling and grounds.

ALTERNATE # 1:

A Fabricate and install decorative fiberglass or GFRP cresting along ridge lines.

Note: Finials to be replicated and installed (at the northwest tower and cross-gable ventilator) shall be fabricated from copper.



1 NORTH ELEVATION - NEW
Scale: 3/16"=1'-0" @ 24 X 36 PRINT

Architect
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1 Thompson Square, Suite 504
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ISSUE / REVISIONS

Date: 04.20.17
Drawn by:
Checked by:
Project Number:
1635.00

SPIRE CENTER FOR THE PERFORMING ARTS
295 Court Street, Plymouth, MA 02360

CONSTRUCTION DOCUMENTS
ELEVATIONS - NEW WORK

A-201

New Work Keynotes

4.1 Cut and repoint tower foundation consisting of ashlar granite masonry.
4.2 Cut and repoint brick foundation.
4.3 Cut and repoint upper 50% of chimney and cap with bluestone; evaluate structural integrity of chimney.
4.4 Repoint upper 50% of chimney.

5.1 Remove and replace deteriorated components of existing fire escapes.

6.1 Replace any deteriorated wood roof sheathing with new in-kind wood sheathing.
6.2 Cover all roof sheathing with Huber Engineered Woods "Zip System" roof sheathing.
6.3 Replace any deteriorated decorative wood trim at roof gables with new in-kind materials to match existing.
6.4 Replace deteriorated wood louver elements with new in-kind materials to match existing.
6.5 Replace deteriorated wood cornice elements with new in-kind materials to match existing.
6.6 Replace missing wood decorative elements at top of wall, just below louvered openings.
6.7 Replace missing wood decorative elements at porch balustrade, columns and frieze.
6.8 Replace deteriorated wood cornice elements with new in-kind materials to match existing.
6.9 Replace missing wood decorative elements at window spandrels and transoms.
6.10 Replace missing horizontal and vertical wood trim used to create wall panels.
6.11 Replace missing wood brackets and corbels.
6.12 Replace missing carved decoration in window panels above gothic arches.
6.13 Replace missing wood decorative elements at top of wall, just below projecting cornice.
6.14 Replace any deteriorated wood trim at projecting window dormers with new in-kind materials.

7.1 Provide new wood shingles to match shape and exposure of existing roof shingles.
7.2 Provide felt underlayment over all exposed wood roof sheathing.
7.3 Provide felt underlayment over all new and existing wood wall sheathing.
7.4 Provide copper flashing at all changes in roof surfaces and along perimeter of roof base.
7.5 Provide ventilated underlayment ("Cedar Breather") over new felt underlayment on roof wood shingle surfaces.
7.6 Replace deteriorated wood shingles (assume 50%) with new in-kind materials to match existing.
7.7 Replace deteriorated wood shingles with new in-kind materials to match existing.
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7.12 Provide new copper-covered roof cricket and metal flashing where northwest wall meets main roof.
7.13 Provide 100% new wood shingles to match shape and exposure of original roof shingles.
7.14 Provide metal base flashing along outer edges of porch roof.
7.15 Provide felt underlayment over all exposed wood roof sheathing.
7.16 Provide fully adhered membrane roofing system.
7.17 Provide 40 year "Architectural" asphalt shingles on roof.
7.18 Not used.
7.19 Provide new roofing felt over all roof sheathing.
7.20 Provide adhesive waterproofing membrane along six (6") foot strip at all eaves.
7.21 Provide 40 year "Architectural" asphalt shingles and install per 110 mph wind zone requirements.
7.22 Provide new fully-adhered membrane roofing system at all shed dormers.
7.23 Provide new fully-adhered roofing system at cross gable ventilator flat roof area.
7.24 Provide new fully-adhered membrane roofing system at flat roof area above Chancel roof.
7.25 Not used
7.26 Provide new metal-covered cricket and metal flashing where southeast wall meets main roof.
7.27 Provide new metal flashing at heads of window and door openings.
7.28 Provide metal weather-stripping at perimeter of entry door(s)
7.29 Provide 5" of blown-in cellulose in all exterior walls (R-value = 17.5).
7.30 Provide new metal flashing at head of all window openings.
7.31 Provide new metal flashing at head of one window opening.
7.32 Provide metal base flashing along edge of entry porch roof
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7.36 Provide new metal flashing over projecting ledge at base of roof.
7.37 Provide one new drain line from interior membrane roof over floor through exterior wall.

8.1 Restore all window sash with new hardware, sash weight chains, pulleys and sash weights.
8.2 Restore all wood window sash and wood window frames.
8.3 Replace all existing window sash cords with new sash chains.
8.4 Refurbish and oil existing sash weight pulleys and rehang sash weights on new chains.
8.5 Provide new metal weather-stripping at each window frame; cut kerfs in each sash.
8.6 Fix all upper sash in-place with blocks below each end of meeting rail.
8.7 Reinstall all refurbished and repaired window sash locks and sash lifts.
8.8 Provide bird screen on inside surfaces of all four louver openings.

9.1 Prepare, prime and paint all exposed wood trim and clapboards on all wall surfaces.
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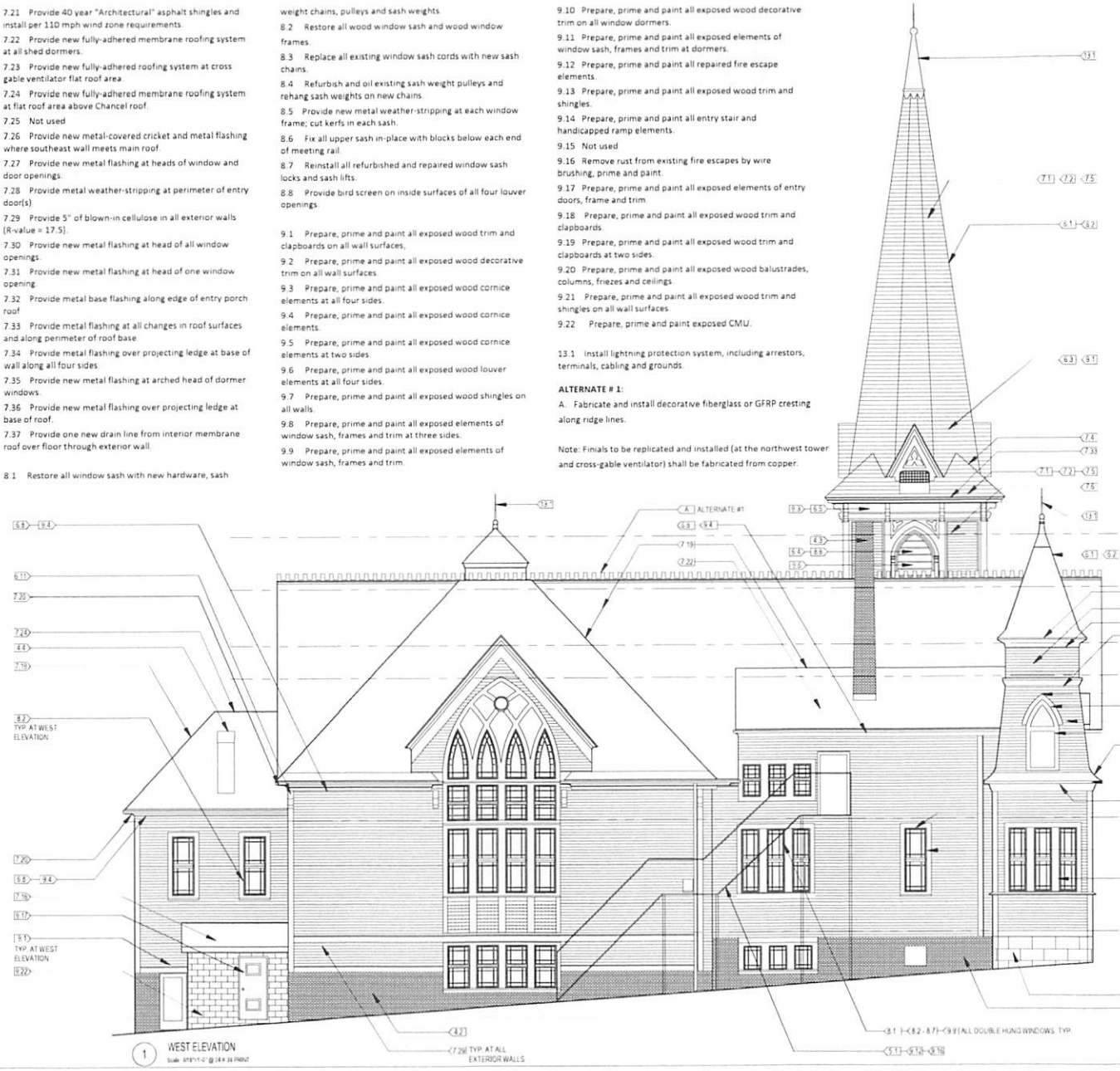
13.1 Install lightning protection system, including arrestors, terminals, cabling and grounds.

ALTERNATE # 1:

A. Fabricate and install decorative fiberglass or GFRP cresting along ridge lines.

Note: Finials to be replicated and installed (at the northwest tower and cross-gable ventilator) shall be fabricated from copper.



1 WEST ELEVATION
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ISSUE / REVISIONS

Date 04.20.17
Drawn by
Checked by
Project Number
1605.00

SPIRE CENTER FOR THE PERFORMING ARTS
295 Court Street, Plymouth, MA 02360

CONSTRUCTION DOCUMENTS
ELEVATIONS - NEW WORK

A-202

New Work Keynotes

4.1 Cut and repoint tower foundation consisting of ashlar granite masonry.
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8.4 Refurbish and oil existing sash weight pulleys and rehang sash weights on new chains.
8.5 Provide new metal weather-stripping at each window frame; cut kerfs in each sash.
8.6 Fix all upper sash in-place with blocks below each end of meeting rail.
8.7 Reinstall all refurbished and repaired window sash locks and sash lifts.
8.8 Provide bird screen on inside surfaces of all four louver openings.

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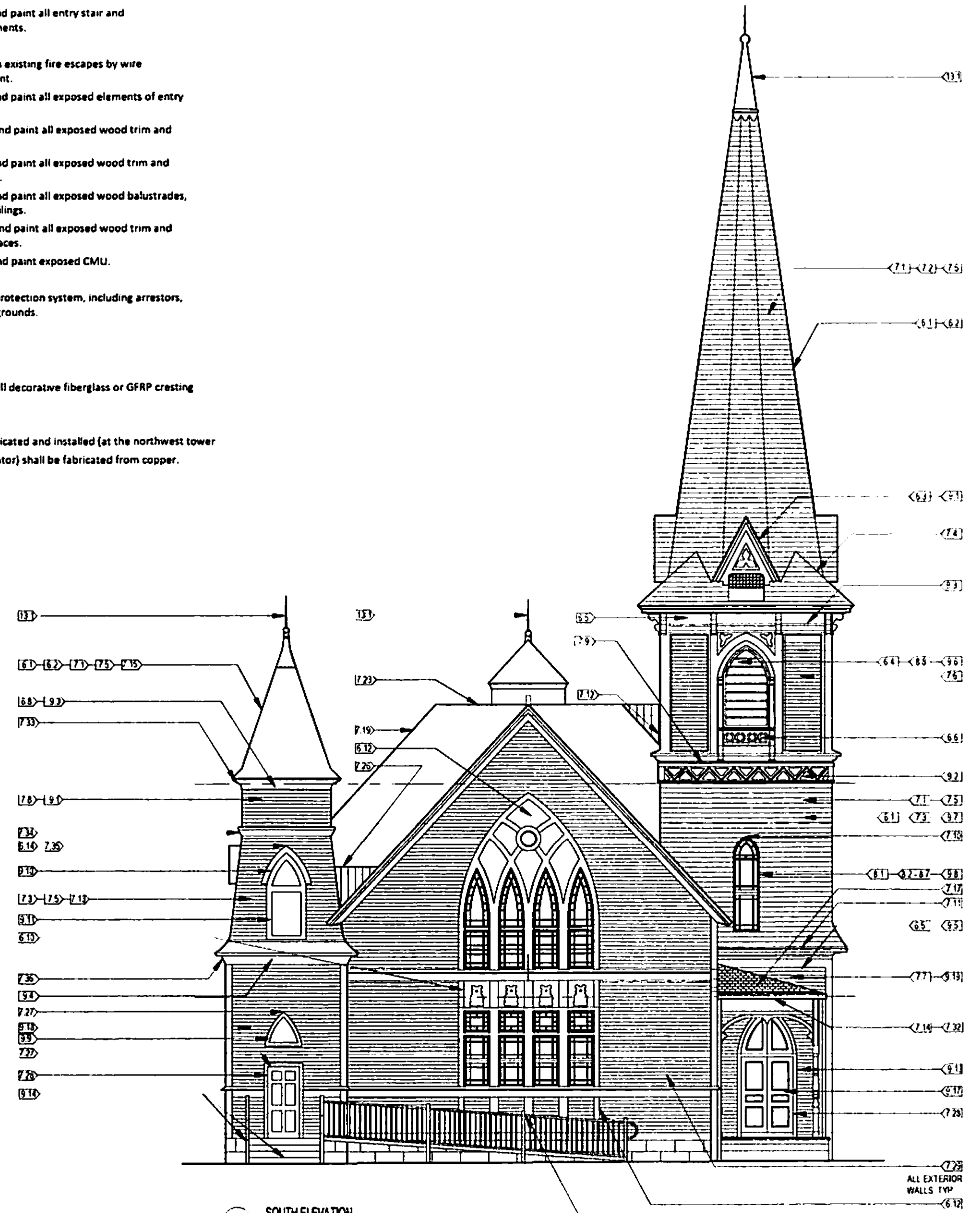
13.1 Install lightning protection system, including arrestors, terminals, cabling and grounds.

ALTERNATE # 1:

A. Fabricate and install decorative fiberglass or GFRP cresting along ridge lines.

Note: Finials to be replicated and installed (at the northwest tower and cross-gable ventilator) shall be fabricated from copper.



1 SOUTH ELEVATION

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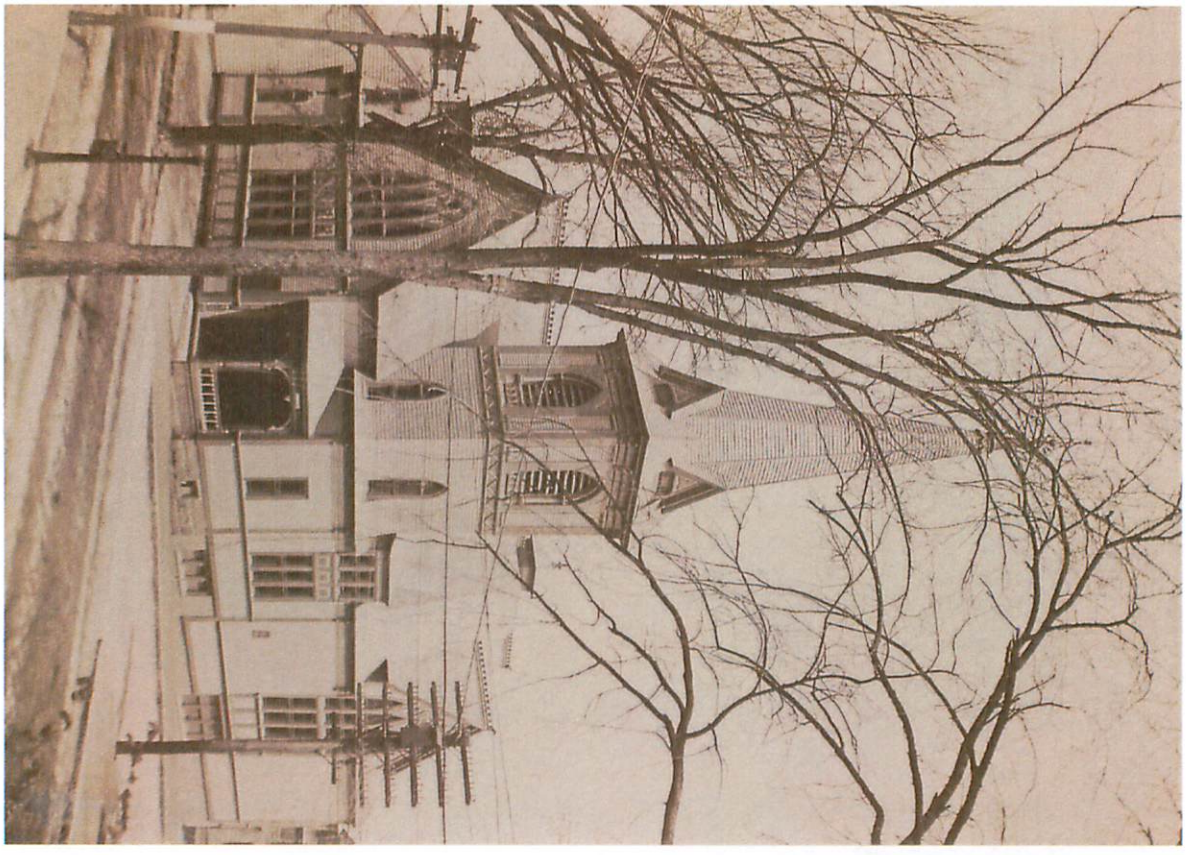
ISSUE / REVISIONS

Date 04.2017
Drawn by
Checked by
Project Number 1635.00

SPIRE CENTER FOR THE PERFORMING ARTS
25½ Court Street, Plymouth, MA 02360

CONSTRUCTION DOCUMENTS
ELEVATIONS - NEW WORK

A-203



1 PHOTO OF THE SPIRE, CIRCA 1900 - SOUTHEAST ELEVATION

A-204

SPIRE CENTER FOR THE PERFORMING ARTS
29½ Court Street., Plymouth, MA 02360

HISTORIC PHOTO

Date: 04.20.17
Drawn by
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Project Number
1635.00

ISSUE / REVISIONS

Consultant

Seal

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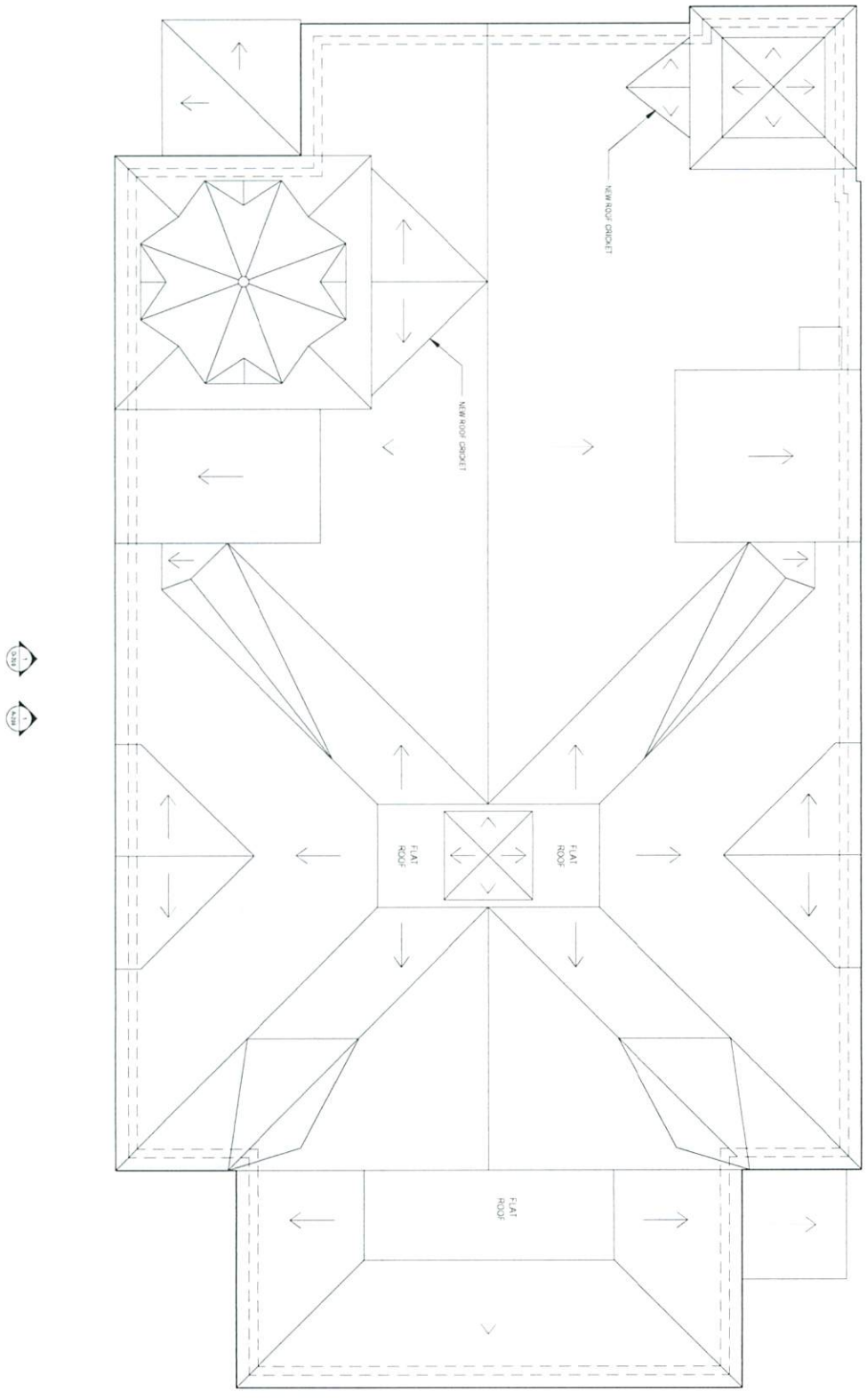
1 EXISTING ROOF PLAN



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A-205

SPIRE CENTER FOR THE PERFORMING ARTS
29½ Court Street , Plymouth, MA 02360

EXISTING ROOF PLAN

Date: 04.20.17
Drawn by
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Project Number
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ISSUE / REVISIONS

Consultant

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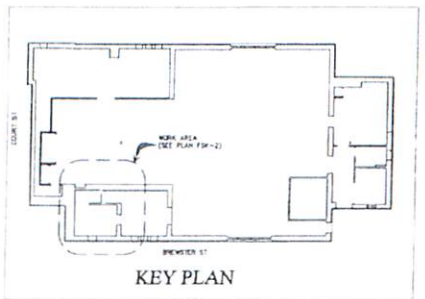


KEY PLAN

PROPOSED STRUCTURAL AUGMENTATION

1. STRIP ALL EXISTING CLADING AND FINISHES TO EXPOSE SUBSTRATE. REPLACE APPROXIMATE 10% EXISTING BOARD SHEATHING ASSUMED TO BE DETERIORATED AND REPLACE IN KIND WITH ROUGH SAWN PINE BOARDS. RE-SHEATH ENTIRE EXTERIOR WALL AND ROOF SURFACES W/ ½" ZIP WALL INSTALLED PER MANUFACTURER'S SPECIFICATIONS. NAIL W/10d NAILS @ 4" AT ALL EDGES + 10d @ 12" IN THE FIELD.

2. REPAIR OR REPLACE IN KIND EXTERIOR CLADING, ROOFING AND DECORATIVE TRIM ELEMENTS PER PROJECT PRESERVATION GUIDELINES.

3. REPAIR DETERIORATED POST(S) BASE AT ALL STEEPLE COLUMN BASE LOCATIONS BY COMBINATION DUTCH MAN SPLICES AND/OR BY APPLICATION OF WOOD PRESERVATION CONSOLIDANT TREATMENT.

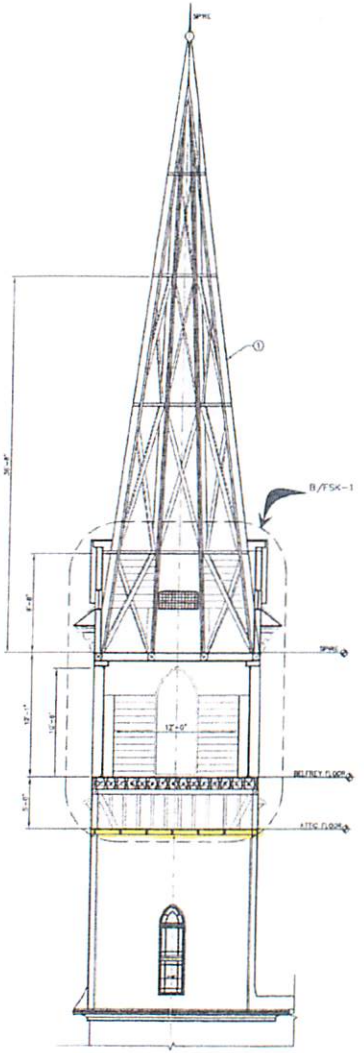
4. REMOVED DAMAGED FLOOR BOARDS. EXAMINE EXISTING SPIRE FLOOR FRAMING. AUGMENT EXISTING TIMBER BEAM CONNECTIONS WITH SIMPSON'S LS-70 BRACKETS BOTH SIDES OF EACH BEAM TO BEAM CONNECTION.

5. INSTALL SIMPSONS TYPE HDU14-SDS 2.5 HOLDOWN ANCHORS W/ 1"ø RONSON ROD AT EACH WITH (9) 3x6 SPIRE POSTS. EXTEND TIE-ROD THRU SPIRE DECK DOWN TO BELFRY TOWER FLOOR BELOW. FURNISH AND INSTALL 1" ø TRANSITION ROD AND COUPLER AS NEEDED TO FACILITATE HOLDOWN OFFSET RAISED OFF SILL BEAM.

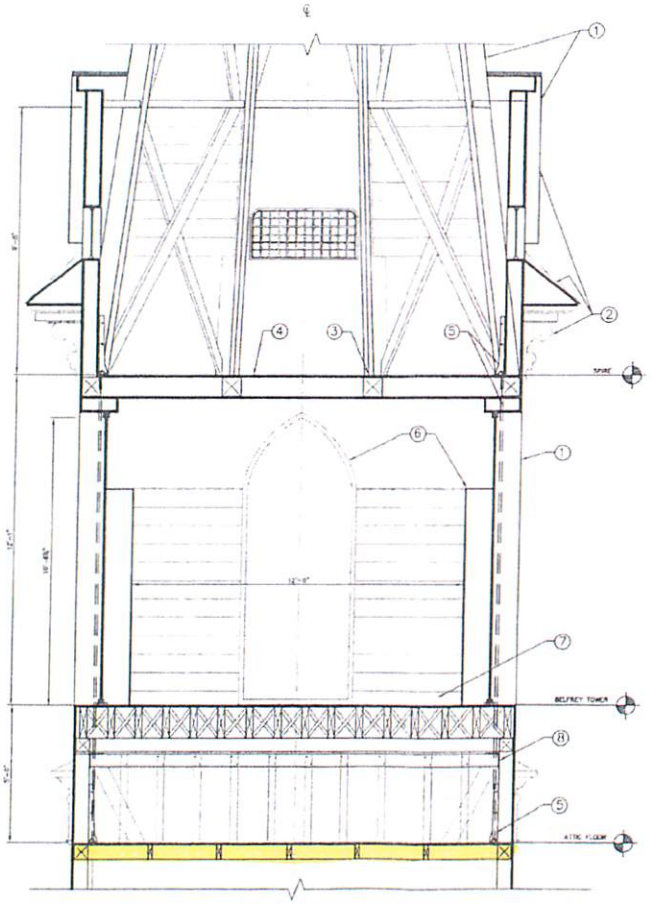
6. REPAIR LOUVERED WINDOWS AND INSTALL NEW WATER TIGHT "WINDOW BOX" FRAME INSIDE BELFRY TOWER.

7. REPAIR EXISTING ROOF/FLASHING AT PERIMETER EDGES. INSTALL NEW SLEEPER SYSTEM + DECKING AT WALKING SURFACE.

8. INSTALL CONTINUOUS 18x5x⅜ PERIMETER LEDGER ANGLE BENEATH EXISTING SPANDREL BEAM. SECURE TO EACH STUD WITH ¾" SDS SCREWS AND CORNER POST.



SECTION A
SCALE: 3/16" = 1'-0"



ENLARGED SECTION B
SCALE: 1/2" = 1'-0"

PROGRESS PLAN
FOR PRELIMINARY
PRICING ONLY

COASTAL engineering co.

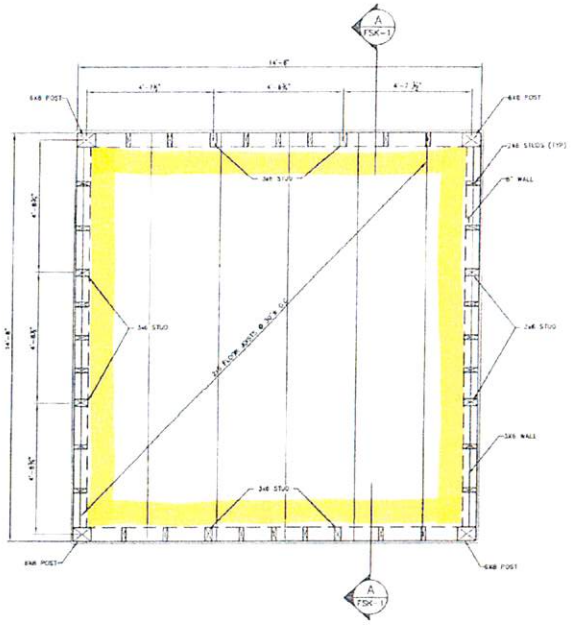
PROJECT: SPIRE CENTER FOR PERFORMING ARTS
PLYMOUTH, MA
SHEET TITLE: SPIRE - EXISTING CONDITIONS

SCALE	AS NOTED
DESIGN BY	JB
DATE	09/30/16
DRAWN BY	AEM
CHECKED BY	JB

FSK-1

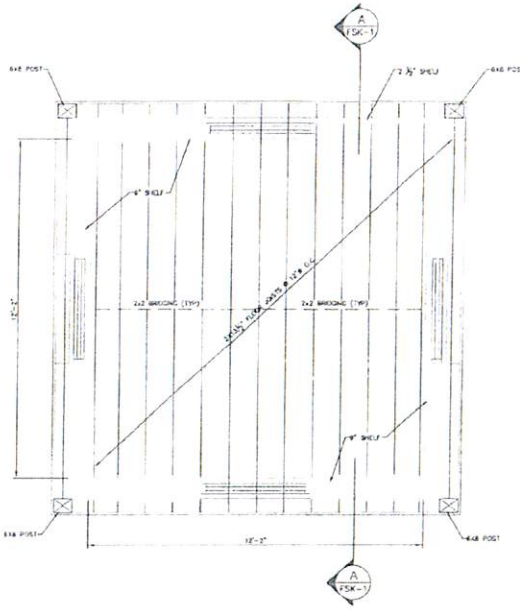
1 OF 1 SHEETS

PROJECT NO. C18223.01



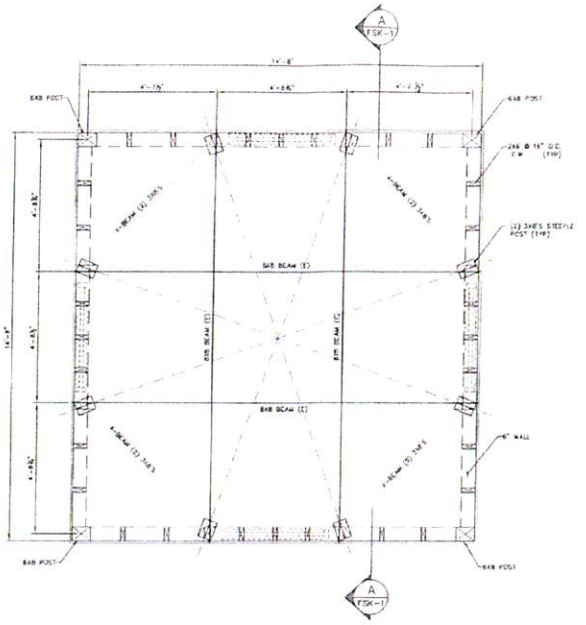
ATTIC / EXISTING FRAMING PLAN

SCALE: 1/2" = 1'-0"



BELFREY FLOOR / EXISTING FRAMING PLAN

SCALE: 1/2" = 1'-0"



SPIRE / EXISTING FRAMING PLAN

SCALE: 1/2" = 1'-0"

PROGRESS PLAN
FOR PRELIMINARY
PRICING ONLY

COASTAL engineering co.

NO.	DATE	REVISION

PROJECT: SPIRE CENTER FOR PERFORMING ARTS
25 1/2 COURT STREET PLYMOUTH, MA.
SHEET TITLE: EXISTING SPIRE FRAMING PLANS

SCALE	AS NOTED
DESIGN BY	JB
DATE	09/30/16
DRAWN BY	KJEM
CHECKED BY	JH

FSK-2

2 OF 2 SHEETS

PROJECT NO. C18225.01

Table of Contents for Outline Specifications

Southeast Tower and Steeple

Level 5 (Steeple roof)

- Temporarily remove and store copper finial for future reinstallation
- Undertake all recommended structural augmentation improvements (Coastal Engineering)
- Remove wood shingles from all steeple roof surfaces
- Replace any deteriorated wood roof sheathing with new in-kind wood sheathing
- Cover all roof sheathing with Huber Engineered Woods "Zip System" roof sheathing
- Replace any deteriorated wood trim at roof gables with new in-kind materials to match existing
- Prepare, prime and paint all exposed wood trim at roof gables
- Provide felt underlayment over all exposed wood roof sheathing
- Provide copper flashing at all changes in roof surfaces and along perimeter of roof base
- Provide ventilated underlayment ("Cedar Breather") over new felt underlayment on roof surfaces
- Provide new wood shingles to match width and exposure of existing roof shingles
- Install lightning protection system, including arrestors, terminals, cabling and grounds

Level 4 (Louvered bell area)

- Replace deteriorated wood shingles (assume 50%) with new in-kind materials to match existing
- Replace deteriorated wood louver elements with new in-kind materials to match existing
- Replace deteriorated wood cornice elements with new in-kind materials to match existing
- Provide copper flashing over projecting ledge at base of wall along all four sides
- Prepare, prime and paint all exposed wood trim and shingles on all wall surfaces
- Prepare, prime and paint all exposed wood cornice elements at all four sides
- Prepare, prime and paint all exposed wood louver elements at all four sides
- Provide bird screen on inside surfaces of all four louver openings
- Provide one new drain line from interior membrane floor through exterior wall

Level 3 (Second floor)

- Replace missing wood decorative elements at top of wall, just below louvered openings
- Remove chamfered and square wood shingles from all wall surfaces
- Replace any deteriorated wood wall sheathing with new in-kind wood sheathing
- Provide felt underlayment over all new and existing wood wall sheathing
- Provide new copper flashing at arched head of three window openings
- Provide new copper flashing over projecting ledge at base of wall along three sides
- Provide new copper-covered roof cricket and metal flashing where northwest wall meets main roof
- Provide ventilated underlayment ("Cedar Breather") over new felt underlayment on wall surfaces
- Provide new wood shingles to match shape and exposure of existing roof shingles
- Restore all window sash with new hardware, sash weight chains, pulleys and sash weights
- Provide new metal weather-stripping at each window frame; cut kerfs in each sash
- Fix all upper sash in-place with blocks below each end of meeting rail
- Prepare, prime and paint all exposed wood shingles on all walls
- Prepare, prime and paint all exposed wood decorative trim on all wall surfaces
- Prepare, prime and paint all exposed elements of window sash, frames and trim at three sides

Level 2 (First floor)

- Remove aluminum siding system from both exterior wall surfaces
- Dispose of all removed siding materials off-site, and in a proper and legal manner
- Replace deteriorated wood shingles with new in-kind materials to match existing
- Replace deteriorated wood cornice elements with new in-kind materials to match existing

- Provide new metal flashing at head of one window opening
- Provide metal base flashing along edge of entry porch roof
- Provide metal weather-stripping at perimeter of entry door
- Restore all window sash and window frames
- Replace all existing window sash cords with new sash chains
- Refurbish and oil existing sash weight pulleys and re-hang sash weights on new chains
- Provide new metal weather-stripping at each window frame; cut kerfs in each sash
- Fix all upper sash in-place with blocks below each end of meeting rail
- Prepare, prime and paint all exposed elements of window sash, frames and trim
- Reinstall all refurbished and repaired window sash locks and sash lifts
- Prepare, prime and paint all exposed wood trim and clapboards at two sides
- Prepare, prime and paint all exposed wood cornice elements at two sides
- Prepare, prime and paint all exposed elements of entry doors, door frames and trim

Level 1 (Basement and foundation))

- Cut and repoint tower foundation, consisting of ashlar granite masonry

Northwest Tower and Steeple

Level 4 (Steeple roof)

- Temporarily remove and store copper finial for future reinstallation
- Remove wood shingles from all steeple roof surfaces
- Replace any deteriorated wood roof sheathing with new in-kind wood sheathing
- Cover all roof sheathing with Huber Engineered Woods "Zip System" roof sheathing
- Provide felt underlayment over all exposed wood roof sheathing
- Provide metal flashing at all changes in roof surfaces and along perimeter of roof base
- Provide ventilated underlayment ("Cedar Breather") over new felt underlayment on roof surfaces
- Provide new wood shingles to match width and exposure of existing roof shingles
- Install lightning protection system, including arrestors, terminals, cabling and grounds

Level 3 (Wall base below steeple roof)

- Remove aluminum siding system from all exterior wall surfaces
- Dispose of all removed siding materials off-site, and in a proper and legal manner
- Replace deteriorated wood shingles (assume 20%) with new in-kind materials to match existing
- Replace deteriorated wood cornice elements with new in-kind materials to match existing
- Provide metal flashing over projecting ledge at base of wall along all four sides
- Prepare, prime and paint all exposed wood trim and clapboards on all wall surfaces
- Prepare, prime and paint all exposed wood cornice elements at all four sides

Level 2 (Tapered roof area; 2nd floor)

- Remove aluminum siding system from all exterior roof surfaces
- Dispose of all removed siding materials off-site, and in a proper and legal manner
- Remove wood shingles from all roof surfaces
- Replace any deteriorated wood roof sheathing with new in-kind wood sheathing
- Cover all roof sheathing with Huber Engineered Woods "Zip System" roof sheathing
- Replace any deteriorated wood trim at projecting window dormers with new in-kind materials
- Provide felt underlayment over all new and existing wood roof sheathing
- Provide new metal flashing at arched head of dormer windows
- Provide new metal flashing over projecting ledge at base of roof

- Provide new metal-covered roof cricket and metal flashing where southeast wall meets main roof
- Provide ventilated underlayment ("Cedar Breather") over new felt underlayment on roof surfaces
- Provide 100% new wood shingles to match shape and exposure of original roof shingles
- Restore all window sash and window frames
- Replace all existing window sash cords with new sash chains
- Refurbish and oil existing sash weight pulleys and re-hang sash weights on new chains
- Provide new metal weather-stripping at each window frame; cut kerfs into each sash
- Fix all upper sash in-place with blocks below each end of meeting rail
- Prepare, prime and paint all exposed wood decorative trim on all window dormers
- Prepare, prime and paint all exposed elements of window sash, frames and trim at dormers
- Reinstall all refurbished and repaired window sash locks and sash lifts
-

Level 1 (1st floor entry level)

- Remove aluminum siding system from exterior wall surfaces
- Dispose of all removed siding materials off-site, and in a proper and legal manner
- Replace deteriorated wood shingles with new in-kind materials to match existing
- Replace deteriorated wood cornice elements with new in-kind materials to match existing
- Replace missing wood decorative elements at top of wall, just below projecting cornice
- Provide new metal flashing at heads of window and door openings
- Provide metal weather-stripping at perimeter of entry door
- Prepare, prime and paint all exposed wood trim and clapboards
- Prepare, prime and paint all exposed wood cornice elements
- Prepare, prime and paint all exposed elements of window sash, frames and trim
- Prepare, prime and paint all exposed elements of entry door, frame and trim
- Prepare, prime and paint all entry stair and handicapped ramp elements
- Cut and repoint tower foundation, consisting of brick masonry

Exterior Walls, including Roof Cross Gables

1st and 2nd Floors

- Remove aluminum siding system from all exterior wall surfaces, including roof gables
- Dispose of all removed siding materials off-site, and in a proper and legal manner
- Remove molded aluminum sections covering all main roof and gable cornices
- Remove aluminum sections covering all window trim at sills, jambs and heads
- Provide 5" of blown-in cellulose in all exterior walls (R-value = 17.5)
- Replace deteriorated wood shingles with new in-kind materials to match existing
- Replace deteriorated wood cornice elements with new in-kind materials to match existing
- Replace missing wood decorative elements at window spandrels and transoms
- Replace missing horizontal and vertical wood trim used to create wall panels
- Replace missing wood brackets and corbels
- Replace missing carved decoration in window panels below gothic arches
- Remove and replace deteriorated components of existing fire escapes
- Remove rust from existing fire escapes by wire brushing
- Provide new metal flashing at head of all window openings
- Restore all window sash with new hardware, sash weight chains, pulleys and sash weights
- Provide new metal weather-stripping at each window frame; cut kerfs in each sash
- Fix all upper sash in-place with blocks below each end of meeting rail
- Prepare, prime and paint all exposed elements of all window sash, frames and trim
- Prepare, prime and paint all exposed wood trim and shingles on all wall surfaces

- Prepare, prime and paint all exposed wood cornice elements
- Prepare, prime and paint all repaired fire escape elements

Main Entry Porch and Shed Roof at Basement (southeast side)

- Replace missing wood decorative elements at porch balustrade, columns and frieze
- Provide metal base flashing along outer edges of each porch roof
- Strip both roofs of all existing roofing shingles
- Replace any deteriorated wood roof sheathing with new in-kind wood sheathing
- Provide felt underlayment over all exposed wood roof sheathing
- Provide new standing seam metal roof on main entry porch
- Provide 40 year "Architectural" asphalt shingles on shed roof to basement
- Provide 40 year "Architectural" asphalt shingles on shed roof at northwest side as well
- Prepare, prime and paint all exposed wood trim and shingles
- Prepare, prime and paint all exposed wood balustrades, columns, friezes and ceilings
- Prepare, prime and paint all exposed elements of entry doors, frame and trim

Main Roof, including Cross Gables

- Install lightning protection system, including arrestors, terminals, cabling and grounds
- Remove old three tab asphalt shingles, including felt underlayment and all flashing
- Dispose of all removed roofing materials off-site, and in a proper and legal manner
- Cover all roof sheathing with Huber Engineered Woods "Zip System" roof sheathing
- Provide new roofing felt over all roof sheathing
- Provide adhesive waterproofing membrane along six (6') foot strip at all eaves
- Provide 40 year "Architectural" asphalt shingles and install per 110 mph wind zone requirements
- Provide new fully-adhered membrane roofing system at all shed dormers
- Provide new fully-adhered membrane roofing system at cross gable ventilator flat roof area
- Provide new fully-adhered membrane roofing system at flat roof area above Chancel roof
- Remove and replace deteriorated components of existing fire escapes
- Remove rust from existing fire escapes by wire brushing, prime and paint

Alternate #1:

- Fabricate and install decorative fiberglass or GFRP cresting along ridge lines.
- Fabricate and install replica finials in fiberglass or GFRP for northwest tower
- Fabricate and install replica finials in fiberglass or GFRP for cross gable ventilator

Insulation of Main Roof, including Cross Gables

- Provide 2" thick "flash" coating of all roof rafter cavities with closed cell foam insulation
- Provide 8" thick fiberglass batts in remainder of rafter cavities

OR ALTERNATIVELY

- Provide 16" of blown-in cellulose insulation on all attic floor surfaces

OR ALTERNATIVELY

- Provide 6" thick layer of closed cell foam insulation over attic surfaces of ceiling materials below

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:

1. Lump-sum allowances.

C. Related Sections:

1. Division 01 Section "Unit Prices" for procedures for using unit prices.
2. Division 01 Section "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.2 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

1.3 SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

C. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

D. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.4 COORDINATION

A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.5 LUMP-SUM ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

Allowance No. 1: Lump-Sum Allowance: Include the sum of: $_____. Include _____ as specified in Division _____, Section "_____" and as shown on Drawings. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit.

Allowance No. 2: Lump-Sum Allowance: Include the sum of: $_____. Include _____ as specified in Division _____, Section "_____" and as shown on Drawings. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit.

END OF SECTION 012100

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for unit prices.

B. Related Section:

1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.2 DEFINITIONS

A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Price No. 1 - _____:

1. Description: Provide _____ according to Division ___ Section "XXXXXX, "_____."
2. Unit of Measurement: Per square foot of surface area / Per lineal foot.

B. Unit Price No. 2 - _____:

1. Description: Provide _____ according to Division ___ Section "XXXXXX, "_____."
2. Unit of Measurement: Per square foot of surface area / Per lineal foot.

C. Unit Price No. 3 - _____:

1. Description: Provide _____ according to Division ___ Section "XXXXXX, "_____."
2. Unit of Measurement: Per square foot of surface area / Per lineal foot.

D. Unit Price No. 4 - _____:

1. Description: Provide _____ according to Division ___ Section "XXXXXX, "_____."
2. Unit of Measurement: Per square foot of surface area / Per lineal foot.

E.

END OF SECTION 012200

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for Alternates.

1.2 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each Alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each Alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each Alternate. Indicate if Alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to Alternates.

C. Execute accepted Alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each Alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: _____.

1. Base Bid: **<Insert brief description of base bid requirement> [as indicated on Sheet <Insert title of sheet>] [and] [as specified in Division <Insert Division number> Section "<Insert Section Title>"].**
2. Alternate: **<Insert brief description of alternate requirement> [as indicated on Sheet <Insert title of sheet>] [and] [as specified in Division <Insert Division number> Section "<Insert Section Title>"].**

B. Alternate No. 1: _____.

1. Base Bid: **<Insert brief description of base bid requirement> [as indicated on Sheet <Insert title of sheet>] [and] [as specified in Division <Insert Division number> Section "<Insert Section Title>"].**
2. Alternate: **<Insert brief description of alternate requirement> [as indicated on Sheet <Insert title of sheet>] [and] [as specified in Division <Insert Division number> Section "<Insert Section Title>"].**

C. Alternate No. 1: _____.

1. Base Bid: **<Insert brief description of base bid requirement> [as indicated on Sheet <Insert title of sheet>] [and] [as specified in Division <Insert Division number> Section "<Insert Section Title>"].**
2. Alternate: **<Insert brief description of alternate requirement> [as indicated on Sheet <Insert title of sheet>] [and] [as specified in Division <Insert Division number> Section "<Insert Section Title>"].**

D. Alternate No. 1: _____.

1. Base Bid: **<Insert brief description of base bid requirement> [as indicated on Sheet <Insert title of sheet>] [and] [as specified in Division <Insert Division number> Section "<Insert Section Title>"].**
2. Alternate: **<Insert brief description of alternate requirement> [as indicated on Sheet <Insert title of sheet>] [and] [as specified in Division <Insert Division number> Section "<Insert Section Title>"].**

E.

END OF SECTION 012300

SECTION 013591 - HISTORIC TREATMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes general protection and treatment procedures for designated historic spaces, areas, rooms, and interior and exterior surfaces in the entire Project.

1.2 DEFINITIONS

A. Consolidate: To strengthen loose or deteriorated materials in place.

B. Dismantle: To disassemble and detach items by hand from existing construction to the limits indicated, using small hand tools and small one-hand power tools, so as to protect nearby historic surfaces; and legally dispose of dismantled items off-site, unless indicated to be salvaged or reinstalled.

C. Existing to Remain: Existing items that are not to be removed or dismantled.

D. Historic: Spaces, areas, rooms, surfaces, materials, finishes, and whose overall appearance is important to the successful preservation and rehabilitation as determined by the Architect.

E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish, as approved by the Architect.

F. Reconstruct: To remove existing item, replicate damaged or missing components, and reinstall in original position.

G. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.

H. Reinstall: To protect removed or dismantled item, repair and clean it as indicated for reuse, and reinstall it in original position, or where indicated.

I. Remove: Specifically for historic spaces, areas, rooms, and surfaces, the term means to detach an item from existing construction to the limits indicated, using hand tools and hand-operated power equipment, and legally dispose of it off-site, unless indicated to be salvaged or reinstalled.

J. Repair: To correct damage and defects, retaining existing materials, features, and finishes while employing as little new material as possible. Includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.

K. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.

L. Replicate: To reproduce in exact detail, materials, and finish, unless otherwise indicated.

M. Reproduce: To fabricate a new item, accurate in detail to the original, and in either the same or a similar material as the original, unless otherwise indicated.

N. Restore: To consolidate, replicate, reproduce, repair, and refinish as required to achieve the indicated results.

O. Retain: To keep existing items that are not to be removed or dismantled.

P. Reversible: New construction work, treatments, or processes that can be removed or undone in the future without damaging historic materials, unless otherwise indicated.

Q. Salvage: To protect removed or dismantled items and deliver them to Owner ready for reuse.

R. Stabilize: To provide structural reinforcement of unsafe or deteriorated items while maintaining the essential form as it exists at present; also, to reestablish a weather-resistant enclosure.

S. Strip: To remove existing finish down to base material, unless otherwise indicated.

1.3 QUALITY ASSURANCE

A. Historic Treatment Specialist Qualifications: An experienced firm regularly engaged in historic treatments similar in nature, materials, design, and extent to this work as specified in each section, and that has completed a minimum of five recent projects with a record of successful in-service performance that demonstrate the firm's qualifications to perform this work.

1.4 STORAGE AND PROTECTION OF HISTORIC MATERIALS

A. Historic Materials for Salvaging and Reinstallation:

1. Repair and clean historic items as indicated, and to functional condition for reuse.
2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
3. Reinstall items in locations indicated.

1.5 PROJECT CONDITIONS

A. Owner will occupy portions of building immediately adjacent to removal and dismantling area. Conduct removal and dismantling work so Owner's operations will not be disrupted.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 GENERAL HISTORIC TREATMENT

A. Ensure that supervisory personnel are present when historic treatment work begins and during its progress.

1. Retain as much existing material as possible; repair and consolidate rather than replace.
2. Use additional material or structure to reinforce, strengthen, prop, tie, and support existing material or structure.
3. Use reversible processes wherever possible.
4. Use historically accurate repair and replacement materials and techniques unless otherwise indicated.

END OF SECTION 013591

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Salvage of existing items to be reused or recycled.

1.2 DEFINITIONS

A. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.

B. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

3.2 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

3.3 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

B. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition[**and cleaned**] and reinstalled in their original locations after selective demolition operations are complete.

D. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.4 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 040120 – MASONRY RESTORATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes maintenance of unit masonry consisting of brick and stone masonry restoration and as follows:

1. Cutting and repointing of brick and stone masonry joints.

1.2 UNIT PRICES

A. Work of this Section is affected by unit prices specified in Division 01 Section "Unit Prices."

1.3 QUALITY ASSURANCE

A. Restoration Specialist Qualifications: Engage an experienced masonry restoration firm to perform work of this Section. Firm shall have completed work similar in material, design, and extent to that indicated for this Project with a record of successful in-service performance. Experience installing standard unit masonry is not sufficient experience for masonry restoration work.

B. Mockups: Prepare mockups of restoration and cleaning to demonstrate aesthetic effects and set quality standards for materials and execution and for fabrication and installation.

PART 2 - PRODUCTS

2.1 MASONRY MATERIALS

A. Face Brick: Provide face brick, including specially molded, ground, cut, or sawed shapes where required to complete masonry restoration work.

1. Provide units complying with ASTM C 62, Grade SW and with physical properties, colors, color variation within units, surface texture, size, and shape to match existing brickwork.

2.2 MORTAR MATERIALS

A. Portland Cement: ASTM C 150, Type I or Type II, white, gray or both where required for color matching of exposed mortar.

B. Hydrated Lime: ASTM C 207, Type S.

C. Mortar Sand: ASTM C 144 unless otherwise indicated.

1. For pointing mortar, provide sand with rounded edges.

2. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.

D. Mortar Pigments: Natural and synthetic iron oxides, compounded for mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortars.

E. Water: Potable.

2.3 MORTAR MIXES

A. Mortar Proportions: Mix mortar materials in the following proportions:

1. Pointing Mortar for Masonry: 1 part portland cement, 2 parts lime, and 6 parts sand.

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm resulting from masonry restoration work.

3.2 REPOINTING MASONRY

A. Rake out and repoint joints in all areas indicated.

B. Rake out joints as follows, according to procedures demonstrated in approved mockup:

1. Remove mortar from joints to depth of 2 times joint width, but not less than 1/2 inch, or not less than that required to expose sound, un-weathered mortar.

2. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.

3. Do not spall edges of masonry units or widen joints. Replace or patch damaged masonry units as directed by Architect.
   a. Cut out center of mortar bed joints using angle grinders with diamond-impregnated metal blades. Remove remaining mortar by hand with chisel and resilient mallet.

C. Pointing with Mortar:

1. After low areas have been filled to same depth as remaining joints, point all joints by placing mortar in layers not greater than 3/8 inch. Where existing masonry units have worn or rounded edges, slightly recess finished mortar surface below face of masonry to avoid widened joint faces. Take care not to spread mortar beyond joint edges onto exposed masonry surfaces or to featheredge the mortar.

3.3 FINAL CLEANING

A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water, spray applied at low pressure.

END OF SECTION 040120

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes work scope for repair of southeast spire and tower:
   1. Provide in-kind replacement of board roof sheathing at steeple exterior. Assume 10% replacement of all spire sheathing surfaces.
   2. Provide OSB wall sheathing over existing steeple board sheathing.
   3. Repair or replace all post bases at all eight (8) spire posts using Dutchmen splices and/or by application of wood consolidant treatment.
   4. Remove damaged floor sheathing at spire level and replace with in-kind sheathing.
   5. Provide new metal beam connectors at each end, and at both sides, of spire level floor framing.
   6. Provide new hold-down anchors and tie-rods at each of eight (8) spire posts.
   7. Provide framed "window box" around each louvered opening.
   8. Provide new sleeper system and wood decking at walking surface of belfry floor.
   9. Provide continuous steel angle ledger below belfry floor, at full perimeter.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness.
   1. Provide dressed lumber, S4S, unless otherwise indicated.

2.2 DIMENSION LUMBER FRAMING

A. Framing Other Than Non-Load-Bearing Interior Partitions: Construction or No. 2 grade.
   1. Species:
      a. Hem-fir (north); NLGA.
      b. Southern pine; SPIB.
      c. Douglas fir-larch; WCLIB or WWPA.

B. Exposed Framing: Provide material hand-selected for uniformity of appearance and freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot-holes, shake, splits, torn grain, and wane.

2.3 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

B. Bolts: Steel bolts complying with ASTM A 307, Grade A with ASTM A 563 hex nuts and, where indicated, flat washers.

1. Where rough carpentry is exposed to weather, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

2.4 METAL FRAMING ANCHORS

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings, or comparable product by one of the following:

1. Cleveland Steel Specialty Co.
2. KC Metals Products, Inc.
3. Phoenix Metal Products, Inc.
4. Simpson Strong-Tie Co., Inc.
5. USP Structural Connectors..

B. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer that meet or exceed those of basis-of-design products.

C. Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A 653/A 653M; structural steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 coating designation; and not less than 0.036 inch thick.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. .

B. Metal Framing Anchors: Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.

3.2 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment.

END OF SECTION 061000

SECTION 064013 - EXTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. The reconstruction of portions of severely weathered and/or missing architectural woodwork (where indicated on drawings) including fascia and soffit surfaces, ornamental brackets, molded trim profiles, and ornamental details.

2. The repair of exterior architectural woodwork is governed by an intention to preserve as much original material as possible. To achieve this, "repair" as indicated on the drawings, is defined as the application of either wood "Dutchman" splices, or the application of epoxy consolidant and patching materials, as defined in this specification. When replacement is warranted, the new work will duplicate the existing with respect to size, shape, profile and density of the historic wood:

a. Work will be categorized in the following ways:
1) Stabilization-- minor repair of wood that is split, checked or shows signs of rot
2) Epoxy repairs -- Where exterior wood siding and trim show physical deterioration, including partially decayed wood
3) "Dutchmen" -- Where woodwork is so badly deteriorated finished repairs would be greater than 1/2" wide, splice new wood "Dutchmen" into existing members to match existing profiles
4) Replacement -- Where woodwork cannot physically or economically be repaired, replace with new wood to match existing in all details

1.2 SUBMITTALS

A. Product Data:

1. Epoxy consolidants and epoxy fillers

B. Shop Drawings: For wood brackets and molding profiles.

C. Samples:

1. Provide 12" sample of proposed lumber for each molding profile.
2. Provide 1 completed cornice bracket.

1.3 QUALITY ASSURANCE

A. Restoration Specialist: Work must be performed by a firm having not less than five (5) years successful experience in compatible wood restoration work on at least three (3) buildings listed on the National Register of Historic places in the last five (5) years, and employing personnel skilled in the restoration process and operations indicated.

B. All work performed shall meet the "Secretary of the Interior's Standards for the Treatment of Historic Properties."

PART 2 - PRODUCTS

2.1 FABRICATION

A. Woodwork for Opaque Finish:

1. Grade: Custom.
2. Wood Species: African mahogany, Heart pine, or Spanish Cedar.

B. Shop Priming: Shop prime woodwork for paint finish with one coat of wood primer specified in Division 09 Painting sections.

1. Back-priming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork.

2.2 PRODUCTS

A. Wood Consolidant: Ready-to-use product designed to penetrate, consolidate, and strengthen soft fibers of wood materials that have deteriorated due to weathering and decay and designed specifically to enhance the bond of wood-patching compound to existing wood.

B. Wood-Patching Compound: Two-part epoxy-resin wood-patching compound; knife-grade formulation as recommended by manufacturer for type of wood repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be designed for filling voids in damaged wood materials that have deteriorated due to weathering and decay. Compound shall be capable of filling deep holes and spreading to feather edge.

PART 3 - EXECUTION

3.1 INSPECTION

A. Test soundness of wood with an ice pick or an awl. Sound wood will separate in long fibrous splinters. Decayed wood will lift up in short irregular pieces due to the breakdown of fiber strength.

3.2 INSTALLATION OF REPAIR MATERIALS

A. Install woodwork true and straight with no distortions. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.

B. Scribe and cut woodwork to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts

C. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk concealed fasteners and blind nailing. Use fine finishing nails for exposed nailing, countersunk and filled flush with woodwork.

D. Install trim with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Scarf running joints and stagger in adjacent and related members.

END OF SECTION 064013

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Loose-fill cellulose insulation.
   2. Glass-fiber blanket insulation.
   3. Spray applied closed cell foam insulation.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 LOOSE-FILL INSULATION

A. Cellulosic-Fiber Loose-Fill Insulation: ASTM C 739, chemically treated for flame-resistance, processing, and handling characteristics.

2.2 GLASS-FIBER BLANKET INSULATION

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. CertainTeed Corporation.
   2. Johns Manville.
   3. Owens Corning.

B. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.

2.3 SPRAY POLYURETHANE FOAM INSULATION

A. Closed-Cell Polyurethane Foam Insulation: ASTM C 1029, Type II, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.

   1. Manufacturer: Subject to compliance with requirements, provide products by the following:

      a. Gaco Western Inc.

2. Minimum density of 1.5 lb/cu. ft., thermal resistivity of 6.2 deg F x h x sq. ft./Btu x in. at 75 deg F.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Extend insulation to envelop entire area to be insulated.

E. Loose-Fill Insulation: Apply according to ASTM C 1015 and manufacturer's written instructions. Level horizontal applications to uniform thickness as indicated, lightly settle to uniform density, but do not compact excessively.

1. For cellulosic-fiber loose-fill insulation, comply with CIMA's Bulletin #2, "Standard Practice for Installing Cellulose Insulation."

F. Glass-Fiber or Mineral-Wool Blanket Insulation: Install in cavities formed by framing members according to the following requirements:
1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.

G. Spray-Applied Insulation: Apply spray-applied insulation according to manufacturer's written instructions. Do not apply insulation until installation of pipes, ducts, conduits, wiring, and electrical outlets in walls is completed and windows, electrical boxes, and other items not indicated to receive insulation are masked. After insulation is applied, make flush with face of studs by using method recommended by insulation manufacturer.

H. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:
1. Loose-Fill Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft.
2. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.

END OF SECTION 072100

SECTION 073113 - ASPHALT SHINGLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Asphalt shingles.
   2. Underlayment.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.
B. Samples: For each exposed product and for each color and blend specified.
C. Warranties: Sample of special warranties.

1.3 QUALITY ASSURANCE

A. Fire-Resistance Characteristics: Where indicated, provide asphalt shingles and related roofing materials identical to those of assemblies tested for fire resistance per test method below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing agency.
   1. Exterior Fire-Test Exposure: Class A; ASTM E 108 or UL 790, for application and roof slopes indicated.

1.4 WARRANTY

A. Special Warranty: Standard form in which manufacturer agrees to repair or replace asphalt shingles that fail in materials or workmanship within specified warranty period.
   1. Material Warranty Period: 30 years from date of Substantial Completion, prorated, with first 12 years non-prorated.

PART 2 - PRODUCTS

2.1 GLASS-FIBER-REINFORCED ASPHALT SHINGLES

A. Multi-Tab Strip Asphalt Shingles: ASTM D 3462, glass-fiber reinforced, mineral-granule surfaced, and self-sealing.
   1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
      a. CertainTeed Corporation.
      b. GAF Materials Corporation.
      c. Owens Corning.
   2. Tab Arrangement: Four tabs, regularly spaced.
   3. Cutout Shape: Square.
   4. Butt Edge: Straight cut.
   5. Strip Size: Manufacturer's standard.

6. Algae Resistance: Granules treated to resist algae discoloration.
7. Color and Blends: As selected by Architect from manufacturer's full range.

B. Hip and Ridge Shingles: Manufacturer's standard units to match asphalt shingles.

2.2 UNDERLAYMENT MATERIALS

A. Felt: ASTM D 226 or ASTM D 4869, Type I or Type II, asphalt-saturated organic felts, non-perforated.

B. Self-Adhering Sheet Underlayment, Polyethylene Faced: ASTM D 1970, minimum of 40-mil-thick, slip-resisting, polyethylene-film-reinforced top surface laminated to SBS-modified asphalt adhesive, with release paper backing; cold applied.

2.3 RIDGE VENTS

A. Rigid Ridge Vent: Manufacturer's standard, rigid section high-density polypropylene or other UV-stabilized plastic ridge vent with non-woven geo-textile filter strips and external deflector baffles, for use under ridge shingles.

2.4 METAL FLASHING AND TRIM

A. General: Comply with requirements in Division 07 Section "Sheet Metal Flashing and Trim."
1. Sheet Metal: Copper

PART 3 - EXECUTION

3.1 UNDERLAYMENT INSTALLATION

A. General: Comply with underlayment manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.

B. Single-Layer Felt Underlayment: Install on roof deck parallel with and starting at the eaves.

C. Self-Adhering Sheet Underlayment: Install, wrinkle free, on roof deck.

3.2 METAL FLASHING INSTALLATION

A. General: Install metal flashings and other sheet metal to comply with requirements in Division 07 Section "Sheet Metal Flashing and Trim."

3.3 ASPHALT SHINGLE INSTALLATION

A. General: Install asphalt shingles according to manufacturer's written instructions, recommendations in ARMA's "Residential Asphalt Roofing Manual," and asphalt shingle recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."

END OF SECTION 073113

SECTION 073129 - WOOD SHINGLES AND SHAKES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wood roof shingles (fire-resistant treated wood, Class B).
2. Wood wall shingles.
3. Underlayment.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each type of wood shingle indicated.

1.3 QUALITY ASSURANCE

A. Grading Agency Qualifications: An independent testing and inspecting agency recognized by authorities having jurisdiction as qualified to label wood shingles for compliance with referenced grading rules.

1. Exterior Fire-Test Exposure: Class B; UL 790 or ASTM E 108 with ASTM D 2898, for application and roof slopes indicated.

PART 2 - PRODUCTS

2.1 ROOF SHINGLES

A. Wood Roof Shingles: Smooth-sawn, No. 1 Grade, Alaskan yellow cedar shingles.

1. Size: 16 inches long; 0.40 inch thick at butt.

2.2 WALL SHINGLES

A. Wood Wall Shingles: Smooth-sawn, No. 1 grade, Alaskan yellow cedar shingles.

1. Size: 16 inches long; 0.40 inch thick at butt.

2. Cedar Wall-Shingle Finish: Semi-transparent penetrating stain, oil based, field applied.

2.3 WOOD TREATMENTS

A. Fire-Retardant Treatment: Exterior-type pressure treatment complying with AWPA C1.

2.4 UNDERLAYMENT MATERIALS

A. Felt Underlayment: ASTM D 4869, Type II, asphalt-saturated organic felt.

B. Self-Adhering Sheet Underlayment, Polyethylene Faced: ASTM D 1970, a minimum of 40-mil-thick, slip-resisting, polyethylene-film-reinforced top surface laminated to SBS-modified asphalt adhesive, with release paper backing; cold applied.

2.5 ACCESSORIES

A. Drainage Mat: Manufacturer's standard, compression-resisting, three-dimensional, nonwoven, entangled filament, nylon mat designed to permit air movement and drain incidental moisture by gravity.

2.6 METAL FLASHING AND TRIM

A. General: Comply with requirements in Division 07 Section "Sheet Metal Flashing and Trim."

PART 3 - EXECUTION

3.1 UNDERLAYMENT INSTALLATION

1. Install felt underlayment on roof deck not covered by self-adhering sheet underlayment. Lap sides of felt over self-adhering sheet underlayment not less than 3 inches in direction to shed water.

B. Self-Adhering Sheet Underlayment: Install, wrinkle free, on roof deck.

3.2 METAL FLASHING INSTALLATION

A. General: Install metal flashings and other sheet metal to comply with requirements in Division 07 Section "Sheet Metal Flashing and Trim."

3.3 ROOF-SHINGLE INSTALLATION

A. General: Install wood-shingle roofing according to manufacturer's written instructions and to recommendations in CSSB's "New Roof Construction Manual" and NRCA's "The NRCA Roofing and Waterproofing Manual."

B. Install drainage mat perpendicular to roof slope in parallel courses, butting edges and ends to form a continuous layer, and fasten to roof deck.

1. Maintain weather exposure of 5 inches for 16-inch and 5-1/2 inches for 18-inch long shingles.

C. Ridge and Hip Units: Install units over wood shingles trimmed at apex. Maintain same exposure dimension of units as roof-shingle exposure. Lap units at ridges to shed water away from direction of prevailing winds. Alternate overlaps of units and fasten with concealed roofing nails of sufficient length to penetrate sheathing.

3.4 WALL-SHINGLE INSTALLATION, SINGLE COURSED

A. Install wood wall shingles according to manufacturer's written instructions and recommendations in CSSB's "Exterior and Interior Wall Manual."

B. Install drainage mat horizontally, in parallel courses, over surface to receive wood shingles, butting edges and ends to form a continuous layer; fasten to wall sheathing.

1. Maintain weather exposure of 7-1/2 inches for 16-inch and 8-1/2 inches for 18-inch long shingles.

END OF SECTION 073129

SECTION 075323 - EPDM MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Adhered EPDM membrane roofing system.

1.2 PERFORMANCE REQUIREMENTS

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each product included in the roofing system.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

B. Exterior Fire-Test Exposure: ASTM E 108, Class B; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.

1.5 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 EPDM MEMBRANE ROOFING

A. EPDM: ASTM D 4637, Type II, scrim or fabric internally reinforced, uniform, flexible EPDM sheet.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Carlisle SynTec Incorporated.

b. Firestone Building Products.
c. GAF Materials Corporation.
d. Johns Manville.

2. Thickness: 60 mils, nominal.

3. Exposed Face Color: Black.

2.2 AUXILIARY MEMBRANE ROOFING MATERIALS

A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.

2.3 SUBSTRATE BOARDS

A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, Type X, 5/8 inch thick.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate panel to roof deck.

PART 3 - EXECUTION

3.1 SUBSTRATE BOARD

A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.

1. Fasten substrate board to top flanges of steel deck to resist uplift pressure at corners, perimeter, and field of roof according to membrane roofing system manufacturers' written instructions.

3.2 ADHERED MEMBRANE ROOFING INSTALLATION

A. Adhere membrane roofing over area to receive roofing according to membrane roofing system manufacturer's written instructions. Unroll membrane roofing and allow to relax before installing.

B. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

C. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeters.

D. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

E. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.

END OF SECTION 075323

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Formed steep-slope roof sheet metal fabrications including edge, valley, rake ridge and eave flashing.
2. Complete roof gutter and downspout system, including strainers and splash blocks.

1.2 SUBMITTALS

A. Shop Drawings: Show installation layouts of sheet metal flashing and trim, including plans, elevations, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.

B. Samples: For each exposed product and for each finish specified.

1.3 QUALITY ASSURANCE

A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.

B. Copper Sheet Metal Standard: Comply with CDA's "Copper in Architecture Handbook." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

C. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.

PART 2 - PRODUCTS

2.1 SHEET METALS

A. Copper Sheet: ASTM B 370, cold-rolled copper sheet, H00 or H01 temper.

1. Non-Patinated Exposed Finish: Mill.

2.2 UNDERLAYMENT MATERIALS

A. Felt: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, non-perforated.

B. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied.

C. Slip Sheet: Building paper, 3-lb/100 sq. ft. minimum, rosin sized.

2.3 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal

flashing and trim installation and recommended by manufacturer of primary sheet metal, unless otherwise indicated.

2.4 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to greatest extent possible.

2.5 STEEP-SLOPE ROOF SHEET METAL FABRICATIONS

A. Apron, Step, Cricket, and Backer Flashing, as well as Drip Edges: Fabricate from the following materials:

1. Copper: 16 oz./sq. ft.

B. Eave, Rake, Ridge, Valley and Hip Flashing: Fabricate from the following materials:

1. Copper: 20 oz./sq. ft.

PART 3 - EXECUTION

3.1 UNDERLAYMENT INSTALLATION

A. Felt Underlayment: Install felt underlayment with adhesive for temporary anchorage. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches.

B. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free.

3.2 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement so that completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.

3.3 ROOF DRAINAGE SYSTEM INSTALLATION

A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA recommendations and as indicated. Coordinate installation of roof perimeter flashing with installation of roof drainage system.

3.4 ROOF FLASHING INSTALLATION

A. General: Install sheet metal flashing and trim to comply with performance requirements and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

END OF SECTION 076200

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Silicone joint sealants.
2. Urethane joint sealants.

B. Work included: Throughout this Work, caulk and seal all joints where as required to provide a positive barrier against passage of air and passage of moisture.

1.2 SUBMITTALS

A. Manufacturer's Literature: Product data sheets for all sealants and related products.

B. Samples:

1. Color: Color of sealants and caulking compounds shall be as selected by the Architect from the manufacturer's standard colors. Submit samples to the Architect for selection and approval.

PART 2 - PRODUCTS

2.1 SILICONE JOINT SEALANTS

A. Mildew-Resistant Silicone Joint Sealant: ASTM C 920.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Dow Corning Corporation.
   b. Sika Corporation; Construction Products Division.
   c. Tremco Incorporated.
2. Type: Single component (S).
3. Grade: Non-sag (NS).
4. Class: 100/50.
5. Uses Related to Exposure: Non-traffic (NT).

2.2 URETHANE JOINT SEALANTS

A. Urethane Joint Sealant: ASTM C 920.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. BASF Building Systems.
   b. Pecora Corporation.
   c. Sika Corporation; Construction Products Division.

d. Tremco Incorporated.

2. Type: Single component (S).
3. Grade: Non-sag (NS).
4. Class: 100/50.
5. Uses Related to Exposure: Non-traffic (NT).

2.3 JOINT SEALANT BACKING

A. Cylindrical Sealant Backings: ASTM C 1330, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

2.4 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Non-porous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.

C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.

1. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

3.2 INSTALLATION

A. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

B. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

END OF SECTION 079200

SECTION 080152 - HISTORIC TREATMENT OF WINDOWS AND DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Preservation and restoration of historic wood window sashes, window frames and trim.
2. Preservation and restoration of historic wood doors, door frames and trim.
3. Application of perimeter sealant at each door and window opening.
4. New door hardware and re-use of existing door hinges.
5. Refurbishment and replacement of missing window hardware.

1.2 QUALITY ASSURANCE

A. Engage an experienced window and door restoration firm to perform work of this Section. Firm shall have completed work on historic windows and doors of similar age and construction with a record of successful in-service performance. Prior window and door experience must include successful work on historic buildings listed on the National Register of Historic Places or the State Register.

B. Mockups: Build mockups to demonstrate aesthetic effects and set quality standards for materials and execution and for fabrication and installation. Approved mockups will be incorporated into the work.

1. Locate mockups on the building where directed by Architect.
   a. Wood Window Repair: Prepare one window unit to serve as mockup to demonstrate sample repairs of wood window members including frame, sashes and glazing.

PART 2 - PRODUCTS

2.1 GLAZING PUTTY

A. Putty is to be best quality pure linseed or other vegetable oil putty.

2.2 REPLACEMENT WOOD MATERIALS

A. Wood: Clear fine-grained lumber; kiln dried to a moisture content of 6 to 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/8 inch deep by 2 inches wide.

1. Species: Heart Pine, Spanish Cedar or Mahogany

2.3 WOOD REPAIR MATERIALS

A. Wood Consolidant: Ready-to-use product designed to penetrate, consolidate, and strengthen soft fibers of wood materials that have deteriorated due to weathering and decay and designed specifically to enhance the bond of wood-patching compound to existing wood.

B. Wood-Patching Compound: Two-part epoxy-resin wood-patching compound; knife-grade formulation as recommended by manufacturer for type of wood repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be designed for filling voids in damaged wood materials that have deteriorated due to weathering and decay. Compound shall be capable of filling deep holes and spreading to feather edge.

2.4 WINDOW HARDWARE

A. General: All hardware that is intact will be cleaned, lubricated and reinstalled on the window as it was mounted to prior to beginning of work. Broken hardware will be collected by Contractor, placed in sealable, clear plastic bag w/ window number written legible on plastic in black permanent marker and delivered to Architect in a sturdy container.

B. All window hardware shall smoothly operate, tightly close, and securely lock wood windows.

C. Replacement Window Hardware: Replace existing damaged or missing window hardware with new hardware.

2.5 WEATHER STRIPPING

A. Compression-Type Weather Stripping: Bronze compressible weather stripping designed for permanently resilient sealing under bumper or wiper action; completely concealed when window is closed.

PART 3 - EXECUTION

3.1 HISTORIC TREATMENT PROCEDURES, GENERAL

A. General: Have historic treatment of windows and doors directed and performed by a qualified historic treatment specialist. Remove windows and doors from opening, protect opening from weather and repair windows and doors on a horizontal surface and then reinstall. In treating historic items, disturb them as minimally as possible and as follows:

1. Stabilize and repair to reestablish structural integrity and weather resistance while maintaining the existing form of each item.

2. Remove coatings from exterior to expose areas requiring repair and to expose and arrest deterioration including applying borate preservative treatment before repair. Remove all interior coatings on sash to have opaque finished applied. Otherwise, treat removal as for exterior.

3. Replace or reproduce historic items where indicated or scheduled.

END OF SECTION 08 0152

SECTION 09 01 80 – EXTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes historic treatment of exterior painting as follows:

1. Exterior Substrates:
   a. Paint preparation of bare wood or fully adhered existing paint.
   b. Polychromatic painting of historic exterior wall surfaces (assume three colors):
      - Restored wood window sashes, frames and trim
      - Restored wood entry doors, frames and trim
      - Restored wood roof and steeple cornices, brackets and related trim
      - Wood shingle and clapboard wall surfaces and related trim and details

1.2 QUALITY ASSURANCE

A. Mockups: Provide mockups for each type of coating system and substrate indicated and each color and finish required to demonstrate aesthetic effects and set quality standards for materials and execution. Duplicate appearance of approved Sample submittals.

B. Engage an experienced painting firm to perform work of this Section. Firm shall have completed painting work on historic buildings of similar age and construction with a record of successful in-service performance. Prior painting experience must include successful work on historic buildings listed on the National Register of Historic Places or the State Register

PART 2 - PRODUCTS

2.1 EXTERIOR WOOD PRIMERS

A. Exterior Wood Primer for Alkyd Enamels: Factory-formulated, alkyd primer for exterior application.

B. Products:
1. Sherwin Williams Company; A-100 Exterior Oil Stain Blocking Primer
2. Benjamin Moore Company; 024/C094 Fresh Start Alkyd Primer
3. Or Architect-approved equivalent.

2.2 EXTERIOR FINISH COATS

A. Exterior Wood - Semi-Gloss Acrylic Latex: Factory-formulated, Satin, acrylic latex for exterior application.

B. Products:
1. Sherwin Williams Paint Company; Duration Exterior Latex Satin Coating.
2. Benjamin Moore Company; Impervex Satin latex enamel.
3. Or Architect-approved equivalent.

PART 3 - EXECUTION

3.1 PREPARATION

A. General: Use only the gentlest, appropriate method necessary to clean surfaces in preparation for painting. Clean all surfaces, corners, contours, and interstices.

3.2 PAINT REMOVAL

A. General: Remove paint to bare wood or fully adhered paint. Ease edges of well adhered paints to reduce "island" effect. Repair defects including dents and gouges. Remove burrs. Where cleaning methods have been attempted and further removal of the paint is required because of incompatible or unsatisfactory surfaces for repainting, remove paint to extent required by conditions.

3.3 SUBSTRATE REPAIR

A. General: Repair substrate surface defects that are inconsistent with the surface appearance of adjacent materials and finishes.

3.4 PROTECTION OF SURFACES

A. Protect all finish materials from damages, drips, splashes, spatters, cuts or tears.

3.5 EXTERIOR FINISH SCHEDULE:

A. Painted Wood:

1. 1 coat primer
   a. Film Thickness Wet/Dry 3.8mils / 1.2 mils per coat.
2. 2 finish coats (on doors and window sashes and frames)
   a. Film Thickness Wet/Dry 3.8mils / 1.2 mils per coat.

3.6 PAINT APPLICATION, GENERAL

A. General:
1. Slightly vary the color of succeeding coats. Do not apply additional coats until each complete coat has been inspected and approved. Only the inspected and approved coats of paint will be considered in determining the number of coats applied.
2. Sand, dust, tack rag and caulk between coats.
3. Apply exterior paint to wood surfaces that have been properly prepared. Avoid painting surfaces while they are exposed directly to the hot sun, and refrain from painting during windy or threatening weather.

3.7 COMPLETION

A. Completed work shall match the approved Samples for color, texture, and coverage. Remove, refinish, or repaint all work not in compliance with the specified requirements.

END OF SECTION 090190

EXTERIOR PAINT ANALYSIS REPORT
THE SPIRE CENTER

Plymouth, Massachusetts
Prepared by Finch&Rose
March 29, 2022

1. INTRODUCTION

The purpose of this report is to document the preliminary findings of our investigation of the exterior painted finishes on the Spire Center (former Methodist Church) in Plymouth, MA. The primary objective of the study was to identify and match the original and subsequent early color treatments on the exterior elements of the building.

The building was built ca. 1886 as a Methodist church in the style now called the Stick Style, and later used as a synagogue. In 2012 the building was renovated for its current use as a performance center. In the mid-20th century when the building was clad with aluminum siding, the window tracery and other projecting decorative elements were removed to m accommodate the siding.

Several ca. 1900 historical photograph of the building in the collection of the Pilgrim Museum were reviewed to better understand the placement of color on the building and the elements removed for the siding. One of the photographs proved to be quite sharp and has helped understand both color placement and the missing details.

Microscope photographs of sample cross sections are included at the end of this report with annotations and detailed captions to illustrate our findings. Note that some colors appear lighter in cross section photographs than they actually are.

2. METHODOLOGY

William Finch of Finch&Rose visited the building on February 24, 2022 to examine the paint in situ using a scalpel and a 10x "Dermlite" with cross-polarized LED illumination, and to take physical paint samples for further processing and examination. The samples were taken from the front entry porch where the paint had been protected from excessive weathering, and from the bottom of the front facade.

Additional samples will be taken in a future site visit to determine the colors used on the window sash and related tracery, the upper level of the entry porch that could not be reached during the February 24 visit, and to further refine the findings presented in this preliminary report.

The samples were initially examined and later the target layers color matched in our office using a Bosch & Lomb zoom binocular microscope. As the fiber optics light source for the microscope is tungsten, a blue 81A filter was used to simulate daylight. Small pieces from the samples were cast in cold molding resin, polished to expose their cross section, and photographed using an Olympus BH2 microscope at 100x magnification in both visible and ultraviolet(UV) light for further

examination and comparison on a computer screen. The UV light causes various pigments and mediums to fluoresce in different ways making it easier to track particular layers across multiple samples.

The photographs of paint samples were not rigorously color corrected (the same layer may have substantially different color casts in different photographs), and should not be used as a basis for color matching. Likewise, the reproduction of paint swatches in this report may not be visually accurate as to the exact colors due to computer screen variations.

The verbal color descriptions of paint layers in this report are approximate and intended only to convey a general sense of the colors as they appeared in the samples. Except where it is obvious, the descriptions do not distinguish between priming layers and finish layers. The paint sequences are usually described as "generations" rather than individual layers. A "generation" defines a full finish treatment including all the individual layers that make it up including any priming layers. Thus some "generations" are composed of only a single layer, and others may include two or three layers comprising both primers and finish layers.

In some samples from the Spire Center some of the finish layers have layers of dirt and soot on them confirming they were finish layers. Note that a given sample (and its photograph) may not include a full sequence of all the layers due to both weathering and past scrapping to prepare for repainting (We observed some evidence heat had been used to remove paint after generation #3.). As the primary goal was to identify the early paint treatments, descriptions of generations after the early ones are very approximate. The early generations are marked on the cross section photographs with colored bars.

More rigorous study, such as pigment identification, and sophisticated vehicle identification analysis of the samples, was beyond the scope of this report and was not performed. The color matches were made visually to commercial paint swatches using the Bosch & Lomb zoom binocular microscope using samples that had been cut back with a scaple to expose the surface of the target layer (i.e., not using cross sections).

3. FINDINGS

In taking samples from the clapboards and trim it quickly became apparent that a scheme of two basic colors was used for the first three paint generations with the clapboards being a deep tan (a more greenish tan in generation 3) while the basic trim elements were a very dark slightly greenish black for generations 1 and 2, and a slightly lighter and more bluish shade in the third. However, the schemes were more complex in that the clapboard color was used to pick out some portions of the porch posts and the porch brackets, and the placement of the two colors on the specific parts of the trim (especially the porch columns) varied in each generation (see photo #2 and microscope photos 4-8). A further complication was that red was used on the narrow rings on the porch post in the first generation (we did not obtain a good sample of the red for matching).

The fourth generation appears to be a medium brown on the clapboards that fluoresces blue in UV light, and a dull greenish brown on the trim that does not fluoresce. The fifth generation has a distinctive pinkish tan primer with a tan finish layer. The sixth generation is a lighter tan. The seventh is a cream that fluoresces bright white in UV light. After that both the clapboards and trim were painted with off-whites. At the entry porch where the sampled elements had not been covered with siding, there was a total of 14-15 layers.

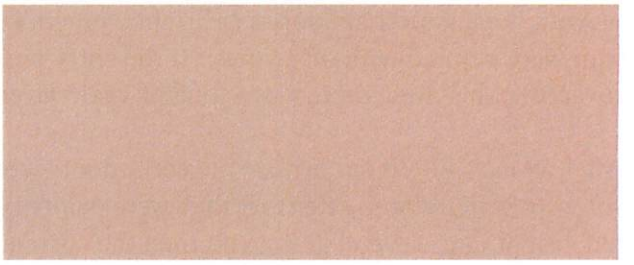
After an initial light tan primer the entry doors were painted a dark green through the first five or six paint generations. After that they were painted brighter greens over light gray primers, then a red, bright blue, several grays, and then the current blue.

The matched colors may seem somewhat dark and somber to our modern taste, but they are right in keeping with the taste of the late 19th century, as can be seen in looking at paint manufactures' color advertisements from that period. Photo #1 shows a typical example dated 1890 from Cary, Ogden, and Parker of Chicago that was titled "*Cottage Colors*".

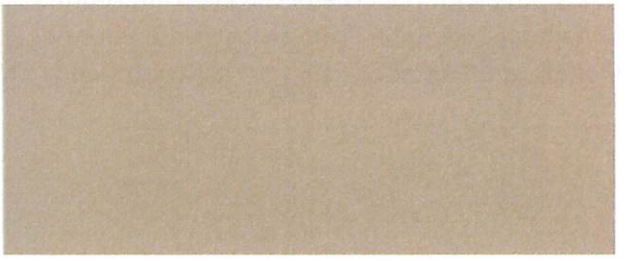
RECOMMENDED COLOR MATCHES

CLAPBOARDS AND LIGHT ELEMENTS OF TRIM:

Generations #1 and #2:
"Sandy Buff"
California Paints "Historic Colors of America"

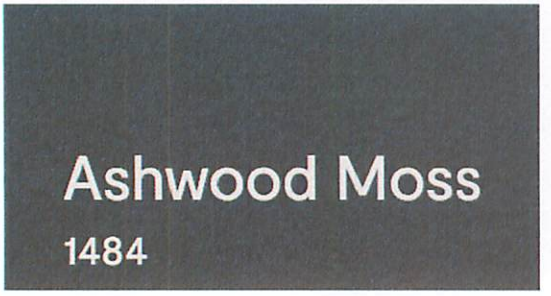


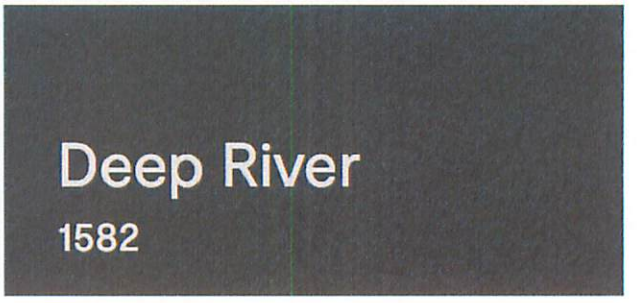
Generation #3:
"Wainscot Green"
California Paints "Historic Colors of America"



DARK ELEMENTS OF TRIM:

Generations #1-2: Benjamin Moore Classic Color Series #1582 or #1484.
Generation #3 was not matched.





DOORS:

Benjamin Moore Essex Green
Historic Color Series

The cheapest, most popular and best paint ever offered.

These paints are combined on a principle different from other paints in the market, exclusively of our own formulating, thus producing a paint receiving the universal endorsement of all who use it.

VOLUME, not weight, is the most important factor in connection with the cost of paint. The Paint embodying the GREATEST COVERING POWER in the SMALLEST BULK and WEIGHT is INVARIABLY and at ALL TIMES THE BEST. A gallon of Linseed Oil weighing 7½ pounds will spread over more surface than a gallon of paint weighing 14 to 16 pounds, and one pound of Lead and Zinc will cover a given surface more perfectly than would 20 pounds of Barytes.

INSIDE AND OUTSIDE WHITE.

When comparison is made between a *dry* sample, as per circular, and *wet* sample, as on opening can, there is a variance of color, which is always to be found. Our Paints when applied and *dry* are intended to conform as nearly as can be with color on circular.

1	2	132	13	4	139	30
11	20	35	131	A	137	68
6	135	113	Floor 366 Paint.	F	10X	22

To ascertain amount required to cover a building, two coats:

Add Front,	*20*	*Feet.*
Rear,	*20*	"
Side,	*30*	"
Other Side,	*30*	"
	100	
Multiply by	*20*	

Divide by 200) 2000 (10 Gallons Paint.

DIRECTIONS.

1. Remove the top off the tin, and thoroughly stir up before using.
2. Stir the paint thoroughly until it is of equal consistency throughout.
3. See that the surface is thoroughly dry.
4. Be sure to cover all kinds pitchy or sappy places with shellac or sizing before applying the paint.
6. Allow ample time for each coat to dry.

Photo #1: Sheet of color swatches from a catalogue dated 1890 from Cary, Ogden, and Parker of Chicago that was titled "*Cottage Colors*".

Photo #2: Detail from a ca. 1900 photograph of the church showing how the various parts of the posts and brackets were picked out in different shades.

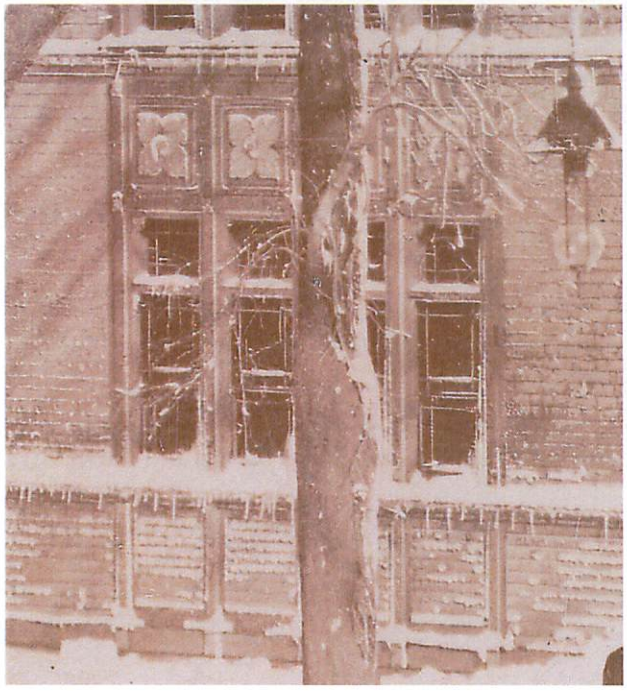
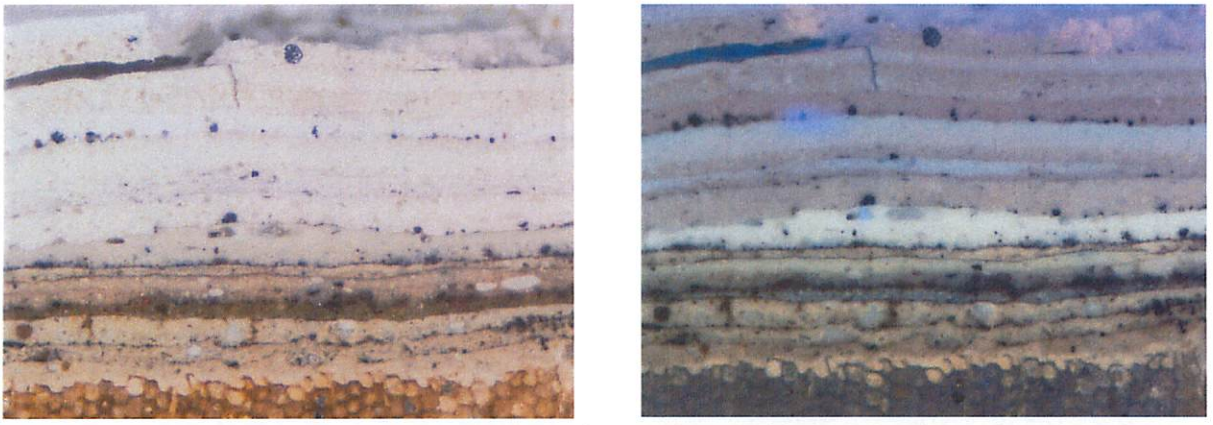
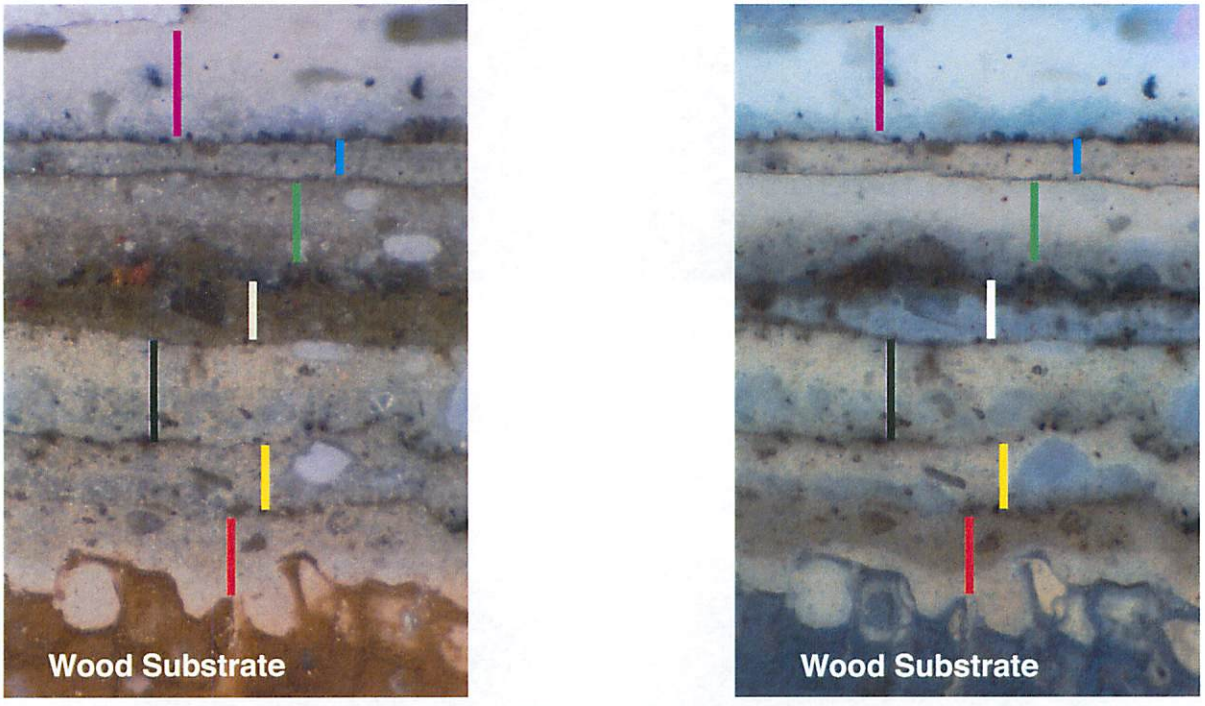


Photo #3: Detail from the ca. 1900 photograph of the church showing how the now missing decorative elements were picked out with lighter shades than the basic trim. As the scalloped clapboards marked "A" appear to match the lighter shade of the clapboards, the photo was likely taken after the application of the 2nd pant generation. They matced the trim in the first generation paint scheme.

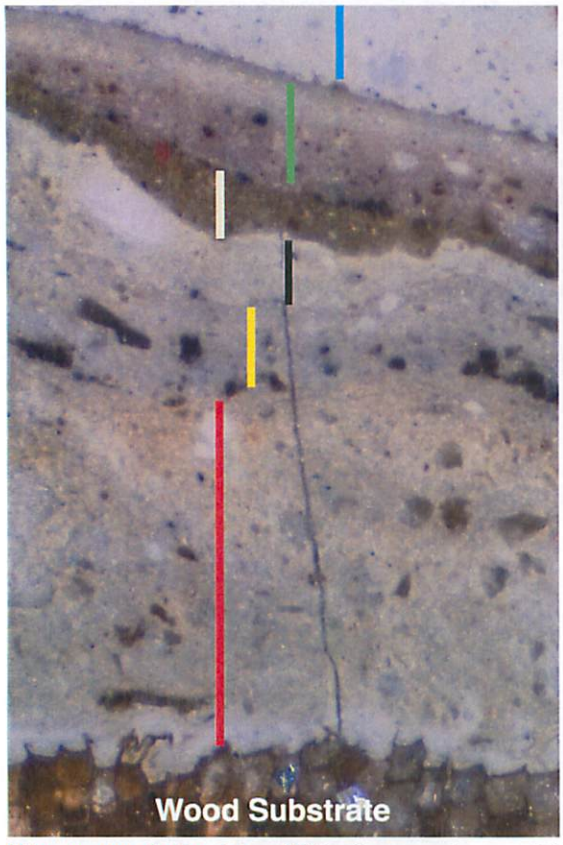


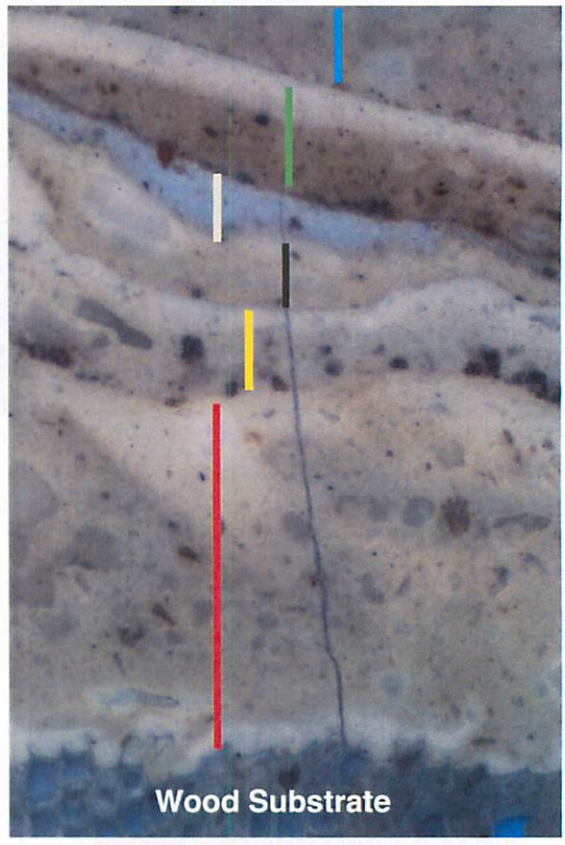
Microscope photos 1A and 1B - Cross sections at 50x of sample from the bracket below the porch roof clearly showing its full sequence paint layers. The layers on the clapboards were similar, but the full sequence is clearer in this sample. The left photo (1A) is in visible light, the right photo (1B) is in ultraviolet (UV) light. The layers of dirt between finish layers are quite visible in this sample.



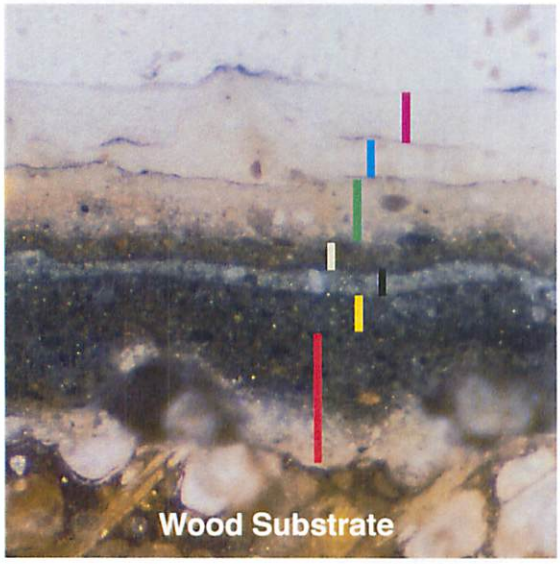
Microscope photos 2A and 2B - Cross sections at 250x of sample from the bracket below the porch roof (1A and 1B) clearly showing the first 7 generations paint layers. The left photo (2A) is in visible light, the right photo (2B) is in UV light. The color bars mark each paint generation as listed below.

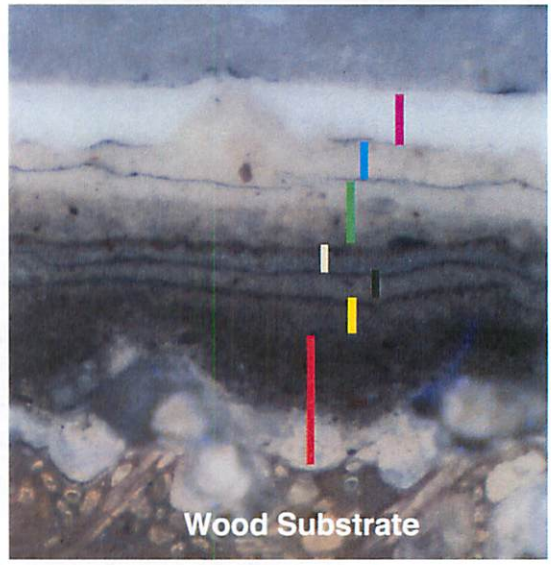
- Generation #1: Tan over a light tan primer - the primer is more obvious in UV.
- Generation #2: Tan over a light tan primer
- Generation #3: Greenish tan
- Generation #4: Medium brown - note blue fluorescence in UV.
- Generation #5: Tan - Prime is more pinkish in some samples, and finish layer has whitish fluorescence in UV.
- Generation #6: Tan
- Generation #7: Cream - bright white fluorescence in UV.



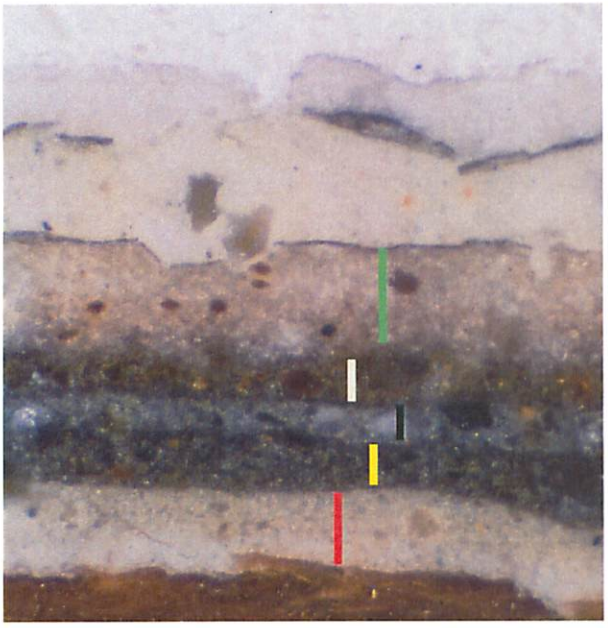


Microscope photos 3A and 3B - Cross sections at 100x of sample from a porch clapboard. The first generation is unusually thick and my include a second tan primer over the initial white primer. Generation 2 has a slightly grayish tint in this sample, and prime layer of #5 is distinctly pinkish.

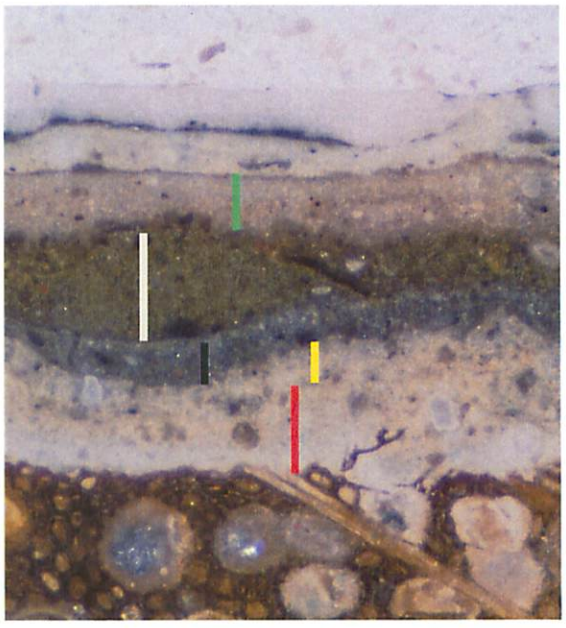




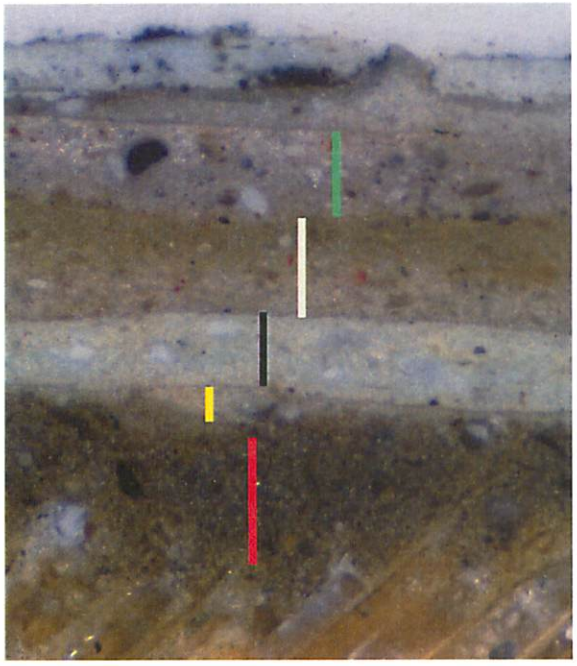
Microscope photos 4A and 4B - Cross sections at 100x of sample from the square base of a porch column. The first generation is very dark blackish green over a tan primer. The second generation is a similar dark blackish green. The third generation is distinctly lighter and somewhat blueish. The fourth generation appears to be more greenish than the brown on the sample of generation #4 from the porch bracket (photos 1 and 2). This may be anomaly, but it also is present on a sample from the round part of the column and the molding around the entry doors.



Microscope photo 5 - Cross section at 100x of sample from the corner chamfer on the square base of a porch column. The first generation finish has been picked out with the tan of the clapboard paint.



Microscope photo 6 - Cross section at 100x of sample from the upper round portion of a porch column. The first and second generations match the clapboard paint, while the third and fourth generations match the darker trim paint.



Microscope photo 7 - Cross section at 100x of sample from scalloped boards below the windows of the front facade. The first generation matches the dark blackish green used on the trim, but from generation #2 on the paint is similar to the clapboard colors.

Microscope photo 8 - Cross section at 100x of sample from beaded boards forming the panels of the entry doors. The off-white at the bottom is a primer. The first five or six generations are all dark greens. Although very dark, they appear to be greener than the dark blackish green on the trim.

Spencer Preservation Group
PRESERVATION ARCHITECTS

Spire Center for the Performing Arts

Plymouth, Mass

Cost Estimate as of 28 September 2021, Updated April 8, 2022

Prepared by Cape Associates, Yarmouthport MA

Based on Outline Plans and Specifications prepared by Spencer & Vogt Group (now Spencer Preservation Group) with Coastal Engineering, structural engineers, dated April 20, 2017.

The scope of work for this estimate includes structural reinforcement of the steeple and transepts; removal of the aluminum siding and restoration of missing woodwork and siding; restoration of the stained-glass windows and installation of protective storm windows; replacement of the shingle cladding on the steeple and restoration of the woodwork and cladding at the belfry; replacement of the wood shingles on the small west tower; preparation and painting of all surfaces, including the steeple and tower based on the historic paint colors determined by paint analysis.

Note: The Spire Center will be proceeding with the replacement of the asphalt shingle roof in 2022 for an estimated cost of $200,000 with funding generated by grants and donations.

Estimated Construction Costs	$ 2,421,963
Escalation/Inflation to 2023, 12%	$ 290,636
Design & Construction Contingency, 20%	$ 484,393
Architectural/engineering Fees, 10%	$ 242,196
TOTAL	$ 3,439,188

Submitted by

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Principal of Architecture
doug@spencerpreservationgroup.com

CAPE ASSOCIATES, INC.
P.O. BOX 1858
NORTH EASTHAM, MA 02651

Job Number **211181**
Spencer Preservation Group
Billing Address: 41 Valley Rd, Suite 211B
Nahant, MA 01908
Location: 25 1/2 Court Street, Plymouth
Phone: (617) 227-2675
Architect: Spencer Preservation Group
Plans-Date:
Description:

Cape Associates, Inc
50 years
CUSTOM BUILDERS
EST. 1971
PROPERTY MANAGEMENT | SERVICES | PAINTING

Estimate Completed by:
Rich

Date: 9/27/2021

Num.	Code:	Item Description	Division breakdown	Comment	Quantity	Unit
1	Division	**Division 01. General Requirements**	**$694,622.00**			
2	01100	**Administration**				
3	01100	Building Permit			1.00	EA.
4	01100	P&P Bond		**NIC**		
5	01100	Builder's Risk Insurance		**By Owner**		
6	01100	**Architectural fees**		**By Owner**		
7	01100	**Structural Engineering fees - 8th edition compliance**		**Not included in this estimate.**		
8	01100	**Engineering Fees, Site/Sanitary, surveying on site.**		**Not included in this estimate.**		
9	01100	**HVAC design**		**Not included in this estimate.**		
10	01100	**Lighting design**		**Not included in this estimate.**		
11	01100	**Landscape design**		**Not included in this estimate.**		
12	01100	**LEED administration**		**Not included in this estimate.**		
13	01100	Staging			1.00	LS
14	01100	Supervision			14.00	MONTH/S
15	01100	Project Management			14.00	MONTH/S
16	01100	Dumpster, rental & tipping fees			10.00	EA.
17	01100	Equipment rentals			14.00	MONTH/S
18	01100	Trucking, progress cleanups & cartage			14.00	MONTH/S
19	01100	Toilet, temporary			14.00	MONTH/S
20	01100	Electric, temporary NSTAR account		**By owner on account**		
21	01100	Final construction cleaning			1.00	LS
22	01100	Interior/Exterior window glass cleaning		**none included**		
23	01010	**Weather Conditions**				
24	01010	Sand/salt mix			3.00	MONTH/S
25	Division	**Division 02. Demo & Site Work**	**$86,496.00**			
26	02000	**Demolition**				
27	02000	Remove existing aluminum siding from exterior walls			6800.00	SF

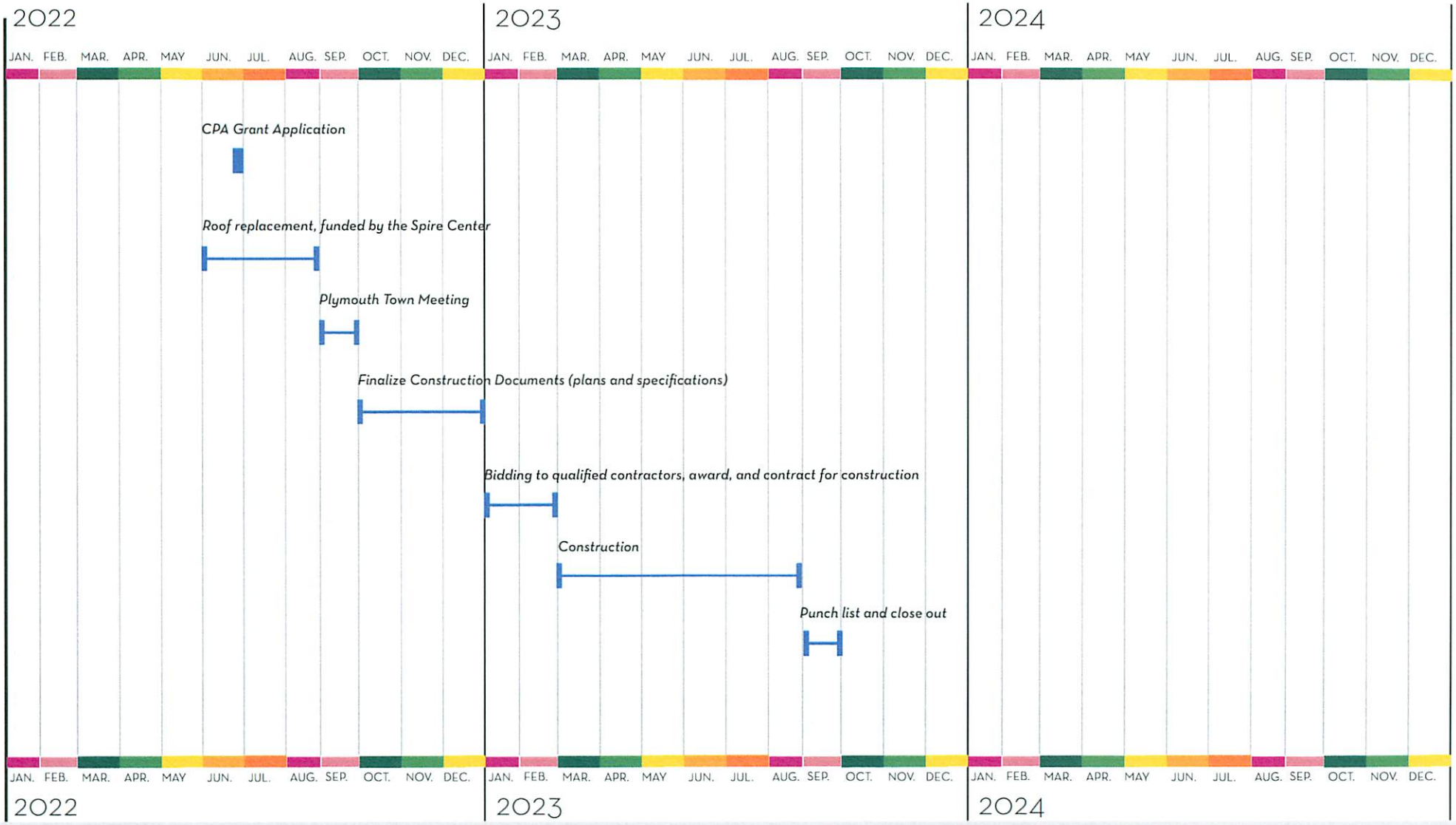
28	02000	Misc demolition		1.00 LS
35	02200	**Site work and Utilities**		
40	02950	**Hardscaping**		
44	02900	**Landscaping - loam and seed; plantings**		
48	Division	**Division 03. Concrete**	**$0.00**	
63	Division	**Division 04. Unit Masonry**	**$24,600.00**	
64	04200	**Masonry**		
65	04200	Repoint granite foundation facing stone joints		90.00 LF
66	04200	Selective repointing of brick foundation - 30%		320.00 SF
67	04200	Repoint chimney		150.00 SF
68	Division	**Division 05. Metals**	**$237,600.00**	
69	05000	**Structural Metals**		
70	05000	Repair steel framing of fire escape; prepare and repaint		1.00 LS
71	05000	Attic structural framing repairs as per Coastal Engineering drawings dated 9/30/16		1.00 LS
72	05000	Corbeled truss structural repairs, with tension rods, as per Coastal Engineering		1.00 LS
73	Division	**Division 06. Carpentry**	**$401,868.00**	
74	06100	**Carpentry**		
75	06100	Provide decorative ridge cresting using Azek trim boards		100.00 LF
76	06100	Provide decorative Azek finials at spire, venting cupola, and west tower		3.00 EA.
77	06100	Repair exterior wood trim windows and doors		260.00 LF
78	06100	Replace missing wood watertable and band molding (strong horizontal bands in photographs)		440.00 LF
79	06100	Replace missing wood vertical sticking at windows and doors and corners.		420.00 LF
80	06100	Replace missing wood carved brackets - 6x18x8 at corner sticking and at cornice		23.00 EA.
81	06100	Replace missing carved decoration in window panels and between gothic arch windows - reinforced fiberglass from clay molding - 4 styles, roughly 2-feet square each		16.00 EA.
82	06100	Repair exterior wood trim at windows and doors		820.00 LF
83	06100	Replace corner boards		80.00 LF
84	06100	Provide new cornerboards and running molding at dormer		20.00 LF
151	06120	**Construction Hardware**		
152	06120	General Hardware as needed: nails, glues, fasteners.		1.00 LS
277	Division	**Division 07. Thermal Protection**	**$190,802.00**	
278	07200	**Thermal Protection - Insulation**		
279	07200	Provide blown-in cellulose insulation in attic, 8" deep		5000.00 SF
284	07300	**Roofing**		
285	07300	Provide new scalloped, primed and painted wood shingles on face of dormer		0.50 SQ
286	07300	Spire roof shingles		14.00 SQ

287	07300	Main hip, main gable, cross gables - remove old three-tab asphalt shingles, install new roof felt, ice-and-water membrane at eaves and architectural asphalt shingles, installed per 110 mph wind zone requirements		58.00 SQ
288	07300	Venting cupola hipped roof - remove old three-tab asphalt shingles, install new roof felt, ice-and-water membrane at eaves and architectural asphalt shingles, installed per 110 mph wind zone requirements		1.00 SQ
289	07300	New 30-year EPDM membrane roof		8.00 SQ
297	07400	**Exterior Siding**		
298	07400	Replace 40% of existing painted, wood shingle siding - 4-1/2" exposure - includes replacement for blown-in insulation holes		27.00 SQ
304	07600	**Flashing & Sheet Metal**		
305	07600	Misc flashings		1.00 LS
316	Division	**Division 08. Windows, Doors & Glazing**	**$459,592.00**	
317	08200	**Exterior Doors & Windows**		
318	08200	Restore wood windows - repair or replace damaged wood, reglaze with black glazing putty, weather-strip perimeter, prepare and paint. Note: seven are gothic arch design, one is circular design.		85.00 EA.
319	08200	Restore and paint Porch Door (Double stile and rail with arched panel above), paint west and northwest door.		4.00 EA.
320	08700	**Finish Hardware**		
323	Division	**Division 09. Finishes**	**$153,600.00**	
324	09200	**Walls & Ceilings - Plaster/Sheetrock**		
334	09300	**Tile Prep**		
341	09350	**Tile Material and Install**		
354	09600	**Flooring:**		
364	09900	**Paint Interior:**		
371	09950	**Paint Exterior:**		
372	09950	Paint kitchen exit door at west elevation		1.00 EA.
373	09950	Paint door at north elevation		1.00 EA.
374	09950	Prepare and paint existing and replacement siding and trim		7000.00 SF
375	Division	**Division 010. Specialties**	**$0.00**	
376	10000	**Custom glass, shower enclosures, mirrors**		
381	10800	**Accessories**		
391	Division	**Division 011. Equipment**	**$0.00**	
392	11400	**Appliances**		
401	Division	**Division 12. Design/Drafting**	**$0.00**	
402	12000	**Design/Drafting**		
418	Division	**Division 13. Solar & Wind Energy Equipment**	**$0.00**	
419	13600	**Solar/Wind Equipment**		
423	Division	**Division 14. Elevator Conveying Equipment**	**$0.00**	
424	14200	**Elevator Conveying Equipment**		
427	Division	**Division 015. Mechanical**	**$0.00**	

428	15300	**Fire Protection**			
432	15400	**Plumbing**			
443	15700	**HVAC**			
449	Division	**Division 016. Electrical**	**$210,000.00**		
450	16000	**Electrical**			
451	16000	Provide new lightning protection system			1.00 EA.
452	16000	Replace attic knob-and-tube wiring with armored cable wiring			1.00 LS
463	16400	**Alarm System**			
466	16400	**Special Systems**			
468	16800	**A\V and Low Voltage**			
470	Division	**Division 20. Construction Contingency**	**$435,938.00**		
471	20000	**Contingency**			
472	20000	Contingency.			1.00 LS
TOTAL				**$2,895,118.00**	

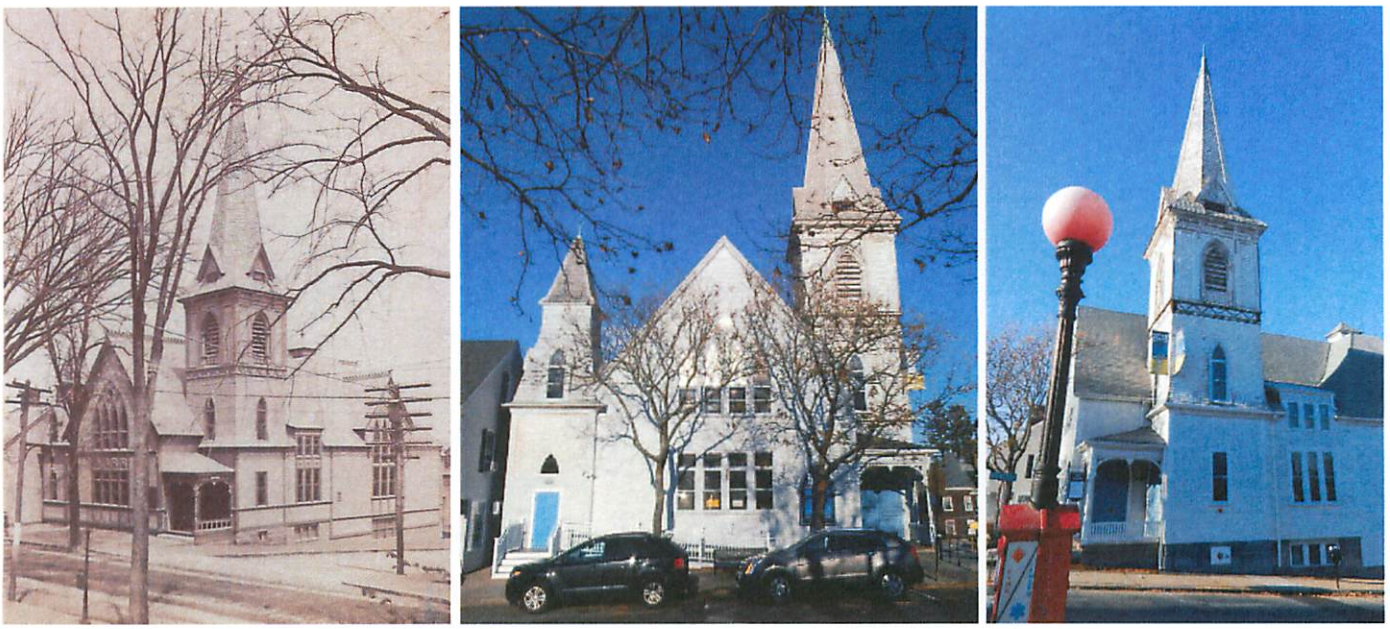
Options:

PROJECT SCHEDULE...



SPIRE CENTER FOR PERFORMING ARTS PROJECT SCHEDULE

Spencer Preservation Group
PRESERVATION ARCHITECTS



Conditions Assessment & conceptual Design

The Spire Center for the Performing Arts

Plymouth, Massachusetts

April 2015

SPENCER & VOGT GROUP
architecture preservation

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TABLE OF CONTENTS

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With special thanks to the following individuals for their invaluable assistance:
Robert Hollis, an inspired leader
Renee Nardo

EXECUTIVE SUMMARY & METHODOLOGY

It has been a privilege to study and provide recommendations for the preservation and rehabilitation of the Spire Center for the Performing Arts, a vibrant community resource and historic cultural asset.

Spencer & Vogt Group was engaged by the Center in 2014 to conduct a comprehensive assessment of physical conditions at the building envelope and to provide recommendations for restoration, preservation, ongoing maintenance, code compliance and the introduction of handicapped access.

Part One of the report, **History & Significance**, begins with a brief history and stylistic description of the building. Next is a list of character defining features, the physical elements that define the building's architectural significance and should be retained in any restoration scheme. The Preservation Guidelines section describes how alterations to the Spire Center should be approached in order to retain and celebrate the building's architectural significance and maintain its eligibility for preservation-related funding.

Part Two, **Existing Conditions & Treatment Recommendations**, includes an examination of conditions at the building, both exterior and interior, from roof shingles to framing to the foundation, and recommendations for repair. A structural assessment and building code analysis are provided for the existing structure.

Part Three, **Conceptual Design, Cost Estimates & Planning**, includes conceptual design for vertical access, a new dressing room, exterior restoration and structural repairs, and cost estimates to complete it. It finishes with a discussion of funding sources for historic properties.

The **Appendix** includes photographic documentation of the building and resources for historic preservation.

Moving Forward

With an understanding of the current physical state of the building fabric, the stewards of the Spire Center for the Performing Arts now have a framework upon which to plan for the next phases of the building's renovation and preservation.

METHODOLOGY

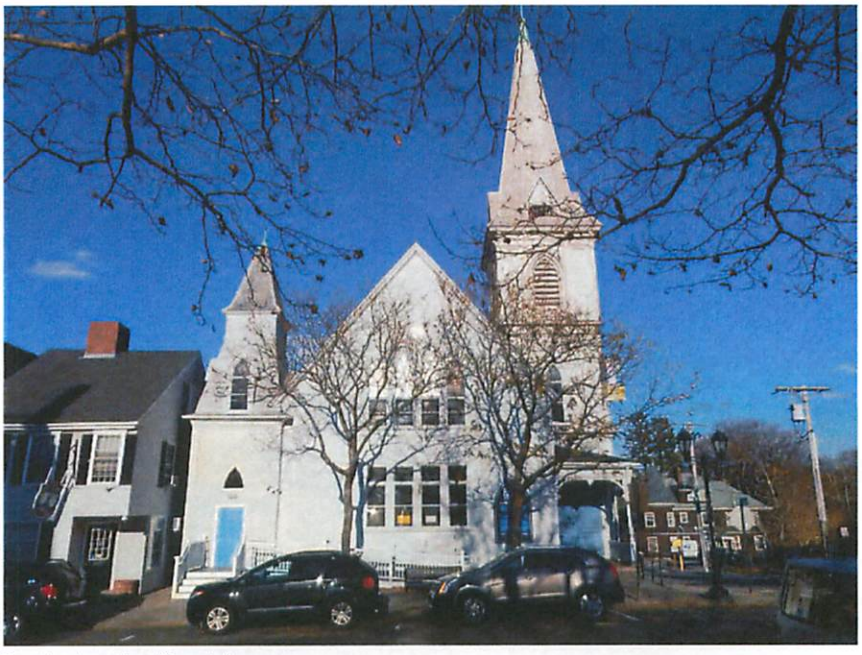
The Conditions Assessment and Conceptual Design report represents a collaborative effort between Spencer & Vogt Group (SVG) and leadership of the Spire Center for the Performing Arts. The Center was represented by Robert Hollis.

The project team was assembled and coordinated by Lynne Spencer, partner and preservation principal at Spencer & Vogt Group. Lynne directed onsite investigations with the assistance of project architect Patrick Guthrie. Architectural Designer Nicholas Curtis prepared the plans and elevations. Lynn Smiledge, preservation planner, developed the historic research components of the report and coordinated its final assembly.

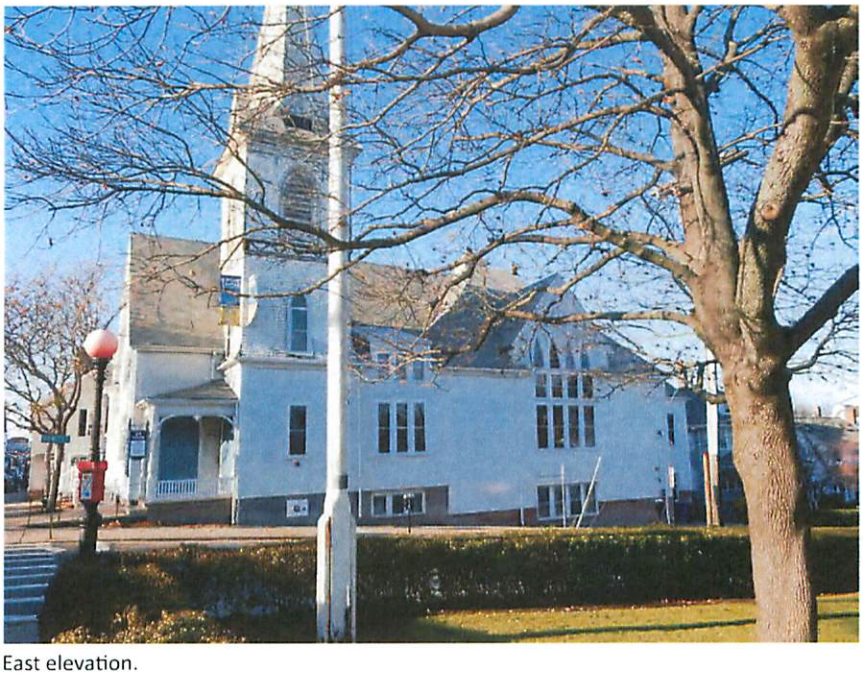
SVG assessed the building envelope and interior conditions and documented them with narrative and photographs. John Bologna of Coastal Engineering conducted the structural engineering assessment of the building in February 2014 and reported on actions needed to bring the structure into compliance with building code requirements. Cape Associates assisted with the building investigation and provided cost estimates.

Patrick Guthrie provided building code analysis and described the work necessary to preserve the building exterior, convert the first floor restrooms into a dressing room and install a LU/LA for vertical access to all three floors.

All photographs were taken by Spencer & Vogt Group and Cape Associates unless otherwise indicated. The final report was issued both as a printed document and in electronic format as a portable document format (pdf). Two hard copies were delivered along with a compact disc.



South elevation (facade).



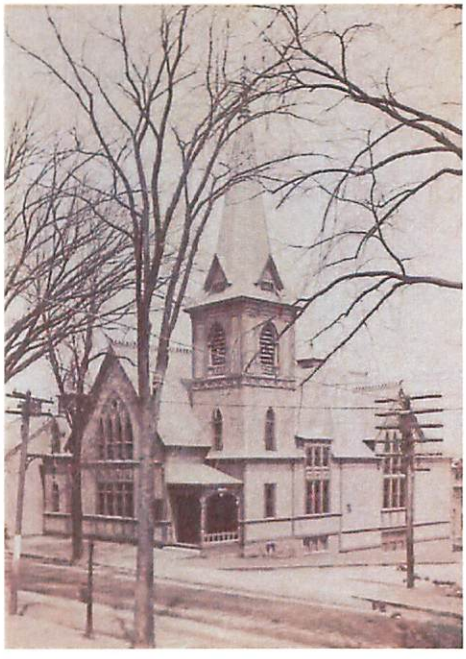
East elevation.

East elevation and north elevations.

BUILDING HISTORY & ARCHITECTURAL SIGNIFICANCE

The building was constructed in 1884 for the Methodist Church, which occupied it until 1972 when it merged with another congregation and built a new house of worship. The church was sold to the Congregation Beth Jacob and adapted for use as a synagogue and later a community center. The Town of Plymouth acquired the dormant building in 2012 with Community Preservation Act funds and entrusted it to the Greater Plymouth Performing Arts Center, Inc., which has rehabilitated it as a performance venue. The Spire Center for the Performing Arts opened its doors to the public in 2014.

The building reflects the Stick Style, often considered a transitional style between the Gothic Revival and later Queen Anne styles. The characteristic Stick elements are best illustrated on historic photographs of the building since many are currently obscured by vinyl siding or deemphasized by the monochromatic paint scheme. They include the steep gable roofs, overhanging eaves, varied shingle shapes and patterns, curved porch braces, brackets forming the upper extension of vertical strips (seen today at the tower), and wood cladding overlaid with raised decorative boards called stickwork. Stick Style color schemes were polychromatic with details picked



Photos at left and above courtesy of Pilgrim Hall Museum.

Photo courtesy of Pilgrim Hall Museum.

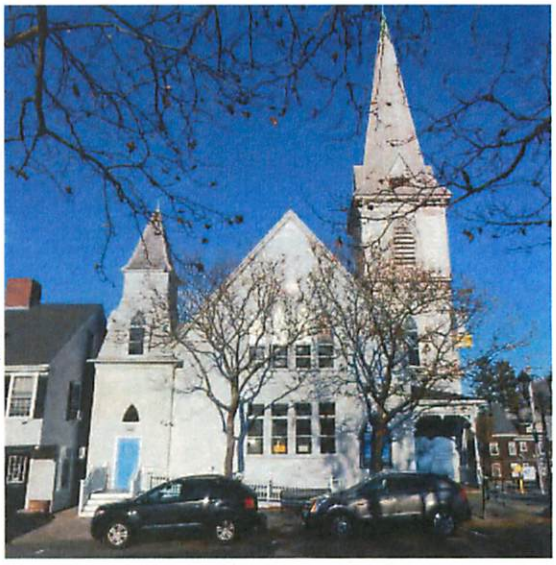
out in a darker color; the original contrasting paint scheme is seen on historic images of the church building.

The building contributes to the Plymouth Historic District, a local historic district established in 1995 and administered by the Plymouth Historic District Commission.

CHARACTER DEFINING FEATURES

Every old building has a distinctive identity and character. Character-defining features are the significant observable and experiential aspects of a building that define its architectural power and personality. These are the features that should be retained in any restoration or rehabilitation scheme in order to protect the building's integrity and to maintain eligibility for preservation grant funding and rehabilitation tax credits.

Character-defining elements include the overall shape of the building and its materials, craftsmanship, decorative details and interior spaces and features, as well as the various aspects of its site and environment. They are critically important considerations whenever building work is contemplated. Inappropriate changes to historic features can undermine the historical and architectural significance of the building, sometimes irreparably.



This survey of the Spire Center for the Performing Arts identifies the elements that contribute to the unique character of the original building and its site. The bulleted items listed in this section should be considered important aspects of the historic nature of the building and changes to them should be made only after careful consideration.

EXTERIOR

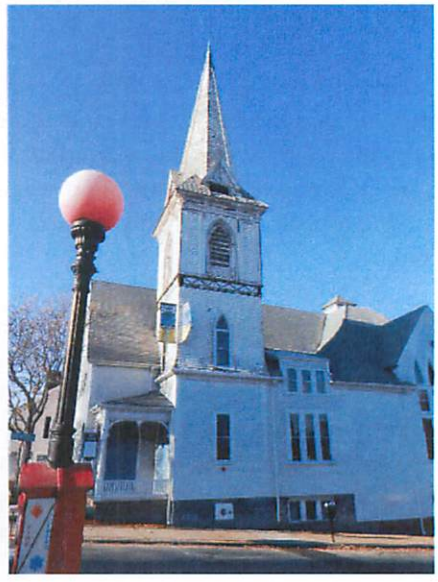
Setting: *The topography, population density and other influences that are noteworthy to the property.*

- The building faces Court Street and the green in front of the Plymouth County administration complex.

Shape: *The form of the building. The massing that gives the initial visual impression of the structure.*

- Two-story rectangular plan. Square tower set back from the southeast corner with an octagonal spire. Smaller square tower at the southwest corner with a four-faced spire. Ventilation tower centered on the ridge at the intersection of the hipped cross gables.

Roof and Roof Features: *Typically the most dominant element of a building. Often the element that most informs the shape of the building.*



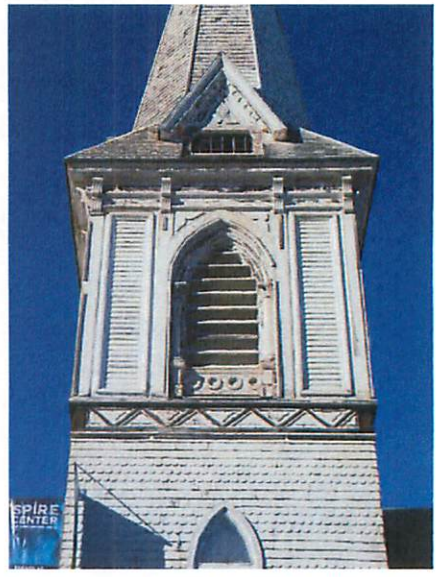
- Steep gabled roof with hipped cross gables at the rear half of the main block and a hipped roof at the northernmost block. Gabled dormers within the hips at the east and west slopes.
- Shed roofed wall dormers on the east and west slopes behind the towers.

Openings: *Windows and doors. These often reflect the hallmark features of specific architectural styles.*

- Asymmetrical window and door placement.
- 1-over-1 light gothic arched and rectangular sash in single and multiple configurations characteristic of Stick Style architecture.
- Louvered arched openings at belfry.
- Oculus windows at facade and hipped gable peaks.
- Arched paneled doors. Main entry has two double-leaf doors.

Trim and Secondary Features: *Casings at windows and doors, moldings, cornices, watertables and other additive features.*

- Stickwork.
- Shaped shingles and shingle patterns.
- Carved porch brackets, posts and balustrades. (NOTE: A utilitarian balustrade has replaced the original ornamental design at the main entry porch.)
- Brackets, molding and carved ornaments at the bell tower faces, cornice and louvered openings. Ornamented gables at the base of the spire roof.
- Wood panel doors with bead molding.
- NOTE: Decorative panels at spandrels between multi-part windows, now covered by vinyl siding, are Stick Style elements and important character-defining features.
- NOTE: Decorative metal cresting at the roof ridges is seen in historic images of the building.



Shaped and patterned shingles at the tower base. Wood moldings, brackets and carved ornaments at the belfry.

Left: Arched double entry with molded trim. Curved and carved roof brackets and carved porch posts and balustrade.
Right: Oculus window at transept gable.

Left: Fishscale shingles revealed under vinyl siding.
Right: Copper finial at southwest tower.

Horizontal and vertical sticks painted in a contrasting color are character defining features seen in this historic photograph. Vertical sticks end in curved brackets at the cornice. Note the decorative metal cresting at the roof ridges.

Materials: *The visible kit of parts that comprise the exterior envelope of the buildings.*

- Wood (shingles, windows, doors and trim).
- Stained and clear glass lights.
- Brick.
- Granite.
- Copper.

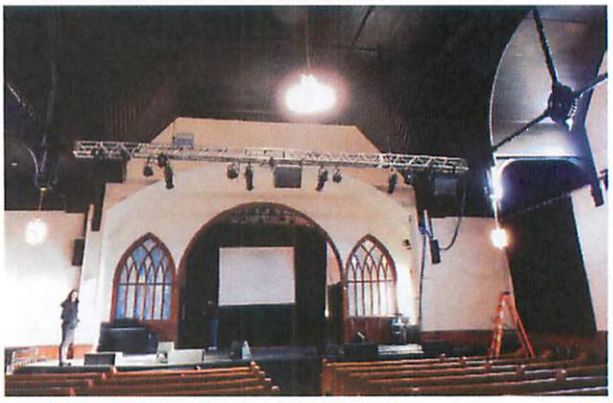
INTERIOR

Individual Spaces: *Individual spaces that are character-defining.*

- The lobby bar (former narthex) and theater (former sanctuary) separated by overhead rolling doors.
- Distinctive hipped ceiling configuration over the performance space and pitched ceilings over transepts.
- Projecting balcony.
- Stairways and landings.

Features & Details

- Beadboard ceiling and corbels.
- Decorative natural finish woodwork including window casings, wainscot, brackets, stair rails, newells, flat sawn balusters and applied ornament at balcony.
- Panel doors and casings, overhead rolling doors under balcony.
- Decorative trusses.
- Hardwood flooring.
- Original folding wood seats.
- NOTE: Original trompe l'oeil painting and stenciling is seen at the stage (former chancel) area in historic photographs.



Theater space (former sanctuary). The grilles of the arched openings flanking the stage, now filled with opaque glass, were originally open to reveal the organ pipes.

Note the overhead rolling doors under the balcony and the original folding wood chairs with pierced and embossed designs.

Left to right: decorative trusses at performance space, paneled arched double entry at performance space, flat sawn balusters at stairwell, stained glass windows at lower level.

PRESERVATION GUIDELINES

The consideration of repairs, renovations, and maintenance of the Spire Center for the Performance Arts should be guided by the significance of the building and site as framed by the National Register of Historic Places and the character defining features identified in this report. *The Secretary of the Interior's Standards for the Treatment of Historic Properties* should be used to inform all work at the building. The Standards provide advice on the preservation and protection of cultural resources and recognize four treatments: Preservation, Rehabilitation, Restoration and Reconstruction. The first three are relevant to this project.

PRESERVATION is defined "as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project."

REHABILITATION is defined "as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural or architectural values."

RESTORATION is defined "as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project."

GENERAL APPLICATION OF THE STANDARDS

Additions

Additions to a historic structure should be respectful and subordinate to the original building. Although the addition should possess similar mass, proportions and materials and can feature complementary stylistic details, it should not replicate the original building and should be readily distinguished as new construction.

Materials

When repairs are required, original building materials should be replaced in kind – brick for brick, wood for wood, slate for slate. When traditional replacement materials are not available or are economically unfeasible, substitute materials that mimic the look, feel, and workability of original materials may be considered. Care should

be taken when deciding to use a synthetic material, however, since modern products may interface poorly with traditional building materials, offer limited longevity versus traditional materials, and experience color shifts and other deteriorative changes.

Siding

Substitute siding materials cannot rival the distinctive, historic appearance of wood clapboards or shingles. Although substitute materials such as vinyl or cement board siding may offer short-term benefits in terms of maintenance and durability of color finish, they have inherent disadvantages. Vinyl siding severely compromises the historic integrity of a building and its application often obscures character defining trim elements or necessitates their removal. Cement board siding lacks the distinctive tapered profile of wood siding, is difficult to install (it requires screws instead of nails), and degrades over time. It performs poorly and takes on water during freeze-thaw cycles and where butt ends have not been properly prepared.

Wood Windows and Doors

Wood windows and doors are character defining features and essential elements in a historic building's distinctive architectural design. Repairing and weatherizing existing wood doors and windows is always the preferred approach for historic buildings and provides energy efficiency comparable to new elements. When windows have exceeded their useful lives and retention is not practical or economically feasible, an approach that combines repairing old windows where possible and introducing new windows where necessary is recommended.

Paint Finishes

Original paint formulations and colors are character-defining elements that are often lost over time because the paint materials themselves are relatively short-lived. When repainting is necessary to preserve the integrity of the envelope, the colors chosen should be appropriate to the style and setting of the building. If the intent is to reproduce the original colors or those from a significant period in the building's history, they should be based on the results of a scientific paint analysis.

Traditional lead-based paints, which offer excellent longevity, durability and color stability, are no longer available in the United States. The highest quality latex-based paints available should be employed instead, after thorough surface preparation and priming. The application of a permanent vinyl or ceramic liquid coating system is damaging to wood, irreversible, and historically inappropriate.

APPLICATION OF THE STANDARDS AT THE SPIRE CENTER FOR THE PERFORMING ARTS

Preservation of the character defining features and architectural integrity of the building should be of paramount concern for the building's stewards.

Preservation of the Setting and Landscape

The building is sited specifically for its historic public function. Its spatial relationship with the street should be retained in any rehabilitation scheme. The handicap access ramp at the facade, installed in 2013, is a practical solution.

Preservation of Exterior Character Defining Features

Roofing

The roofing material is currently asphalt shingles on the main roof slopes and wood shingles on the towers and spires. The type of roofing material used originally has not been determined. Historic photographs suggest that it may have been wood or metal shingle or a combination of the two; these are historically appropriate solutions for the building.

Wood Siding, Windows, Doors and Trim

All wood materials should be retained, repaired and maintained. If the replacement of damaged elements is unavoidable, the original wood profiles should be replicated. Some original trim elements appear to survive under the vinyl siding; others seen in historic images such as the cornice brackets at the stickwork and the balustrade at the entry porch, are no longer extant. These can be replicated if historic images and/or discovered remnants provide sufficient evidence for the recreation of the original forms.

The current white paint scheme is historically inappropriate. We have recommended identification of the original polychromatic color palette through paint analysis. Lacking a scientific determination, an historically appropriate scheme can be devised with the assistance of an historic paint specialist.

Other Exterior Features

The original clear and stained glass windows at the building envelope should be retained. The missing decorative metal cresting at the roof ridges and the finial on the main spire can be recreated if historic images and/or discovered remants provide sufficient guidance for replication.

The design of the handicap ramp at the facade is appropriate but the materials are not. Should the railings and balusters require replacement, the use of traditional or historically sensitive materials such as painted wood or polymer material is recommended.

Preservation of the Interior Plan & Character Defining Features

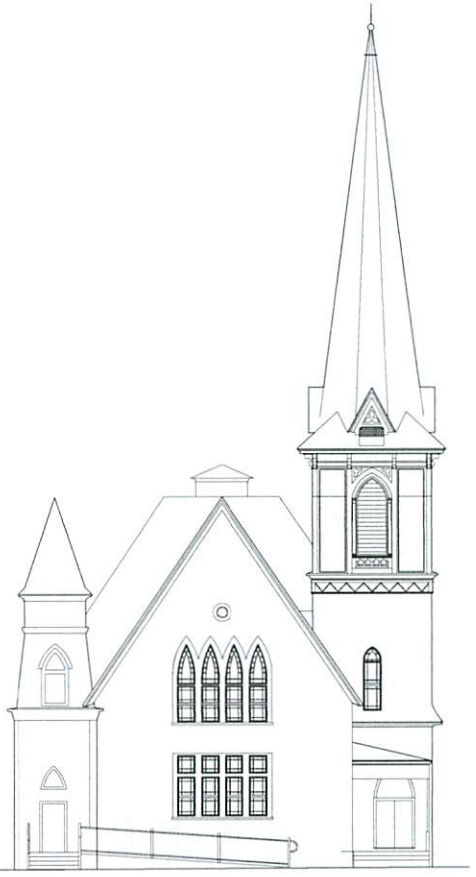
The original first floor plan of sanctuary (theater), foyer, lobby bar and stairwell has been retained in the rehabilitation of the building. The balcony, stage (former chancel), stairways, and upper rooms are character defining and contribute to the historic integrity of the space.

The complex form of the ceiling and its handsome beadboard paneling and carved corbels should be retained along with all the wood trim, including the wainscot and door casings. Other features that are critical to the character of the performance space are listed on page 14 of this report.

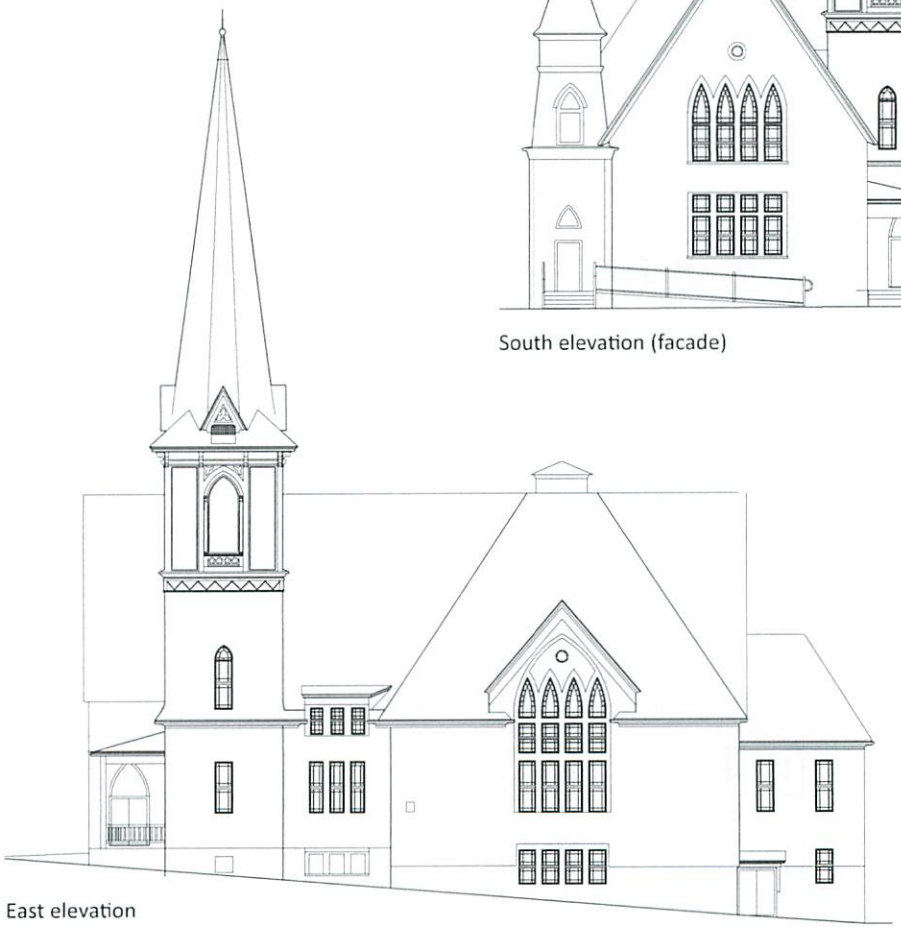
Remnants of the decorative wall painting seen in historic images may exist at the back wall of the stage and the procenium spandrels. Although restoration of this painting is not practical nor desired at this time given the current use of the stage area, if evidence is discovered it should be protected from damage.

Prior to any intervention or renovation, the building interior and its constituent materials should be carefully documented, both photographically and with a written narrative. If interior demolition takes place, character defining elements should be salvaged and reused when possible.

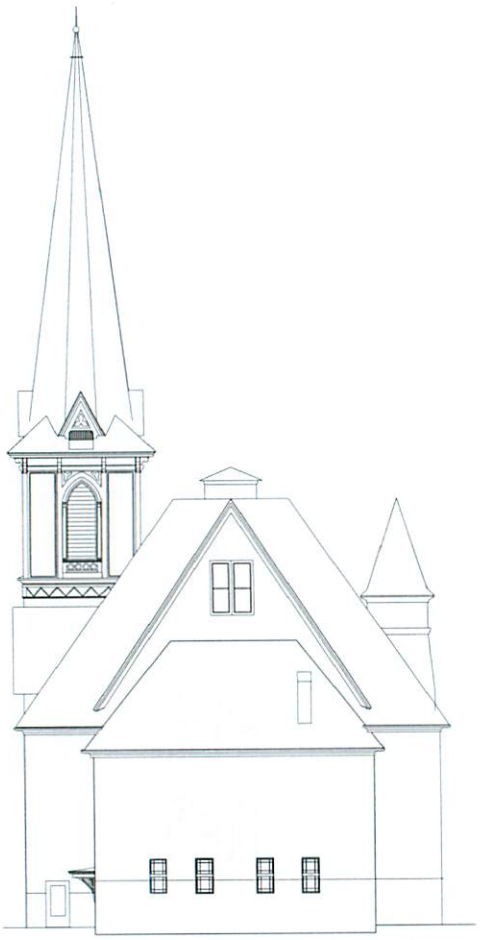
EXISTING CONDITIONS & TREATMENT RECOMMENDATIONS



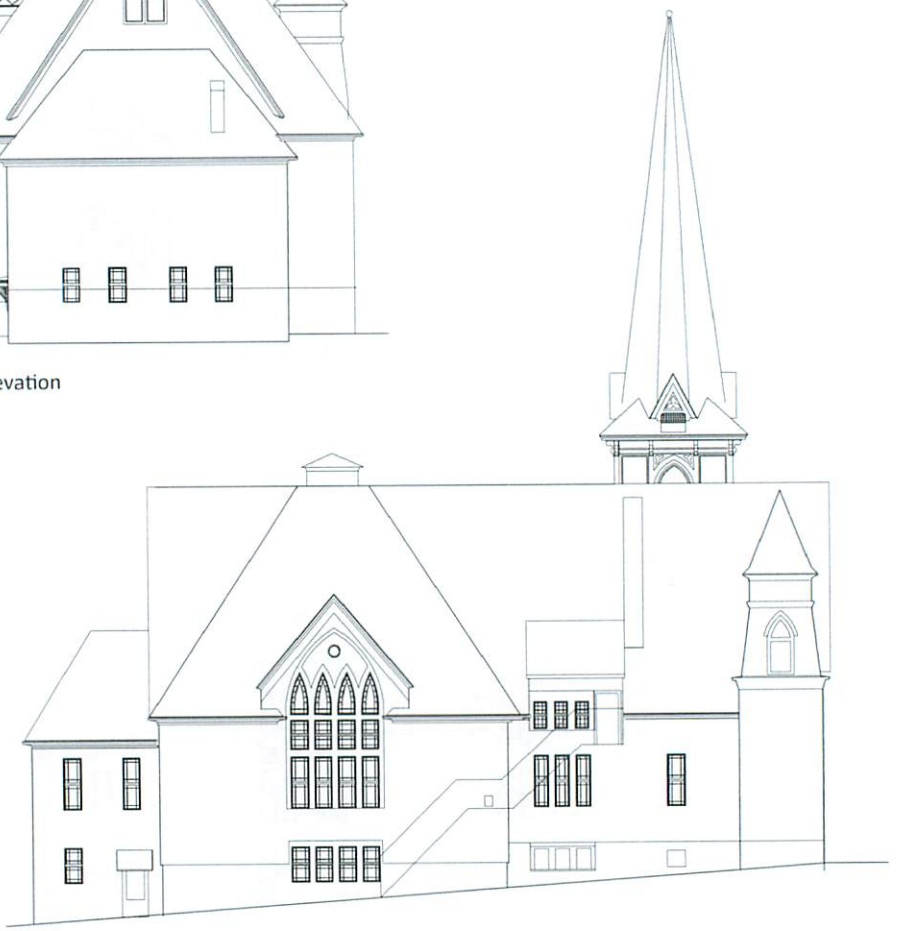
South elevation (facade)



East elevation



North elevation



West elevation

EXTERIOR CONDITIONS

Roof and Water Management System

Conditions

The main roof slopes are covered with 3-tab asphalt shingles. The roofing is in poor condition with worn and missing shingles and has surpassed its life expectancy.

The towers and spires are clad with wood shakes. These are in poor condition and are scheduled for replacement.

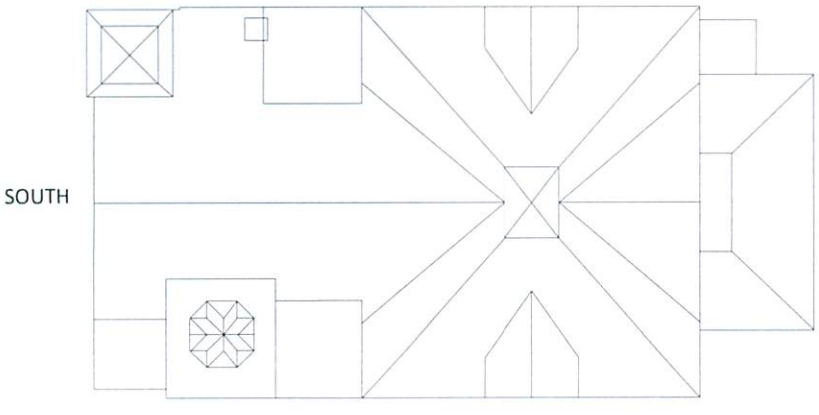
Water is directed off the building with a system of aluminum gutters and downspouts that drain onto paving.

Recommendations

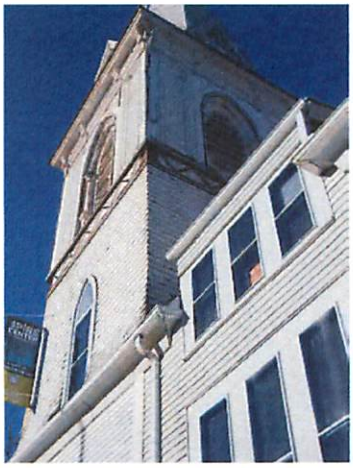
- The original roofing material was likely wood shingles; replacement of the asphalt roof with cedar shingles would be preferred. If wood is cost prohibitive, the roofing could be replaced with 3-tab or architectural asphalt shingles.
- Replace the wood shingles on the towers and spires with Alaskan Yellow Cedar shingles.

Aged asphalt roofing.

Worn and missing wood shingles at the tower and spire.



Roof plan



Aluminum gutter and downspout at the east elevation.

Siding and Trim

Conditions

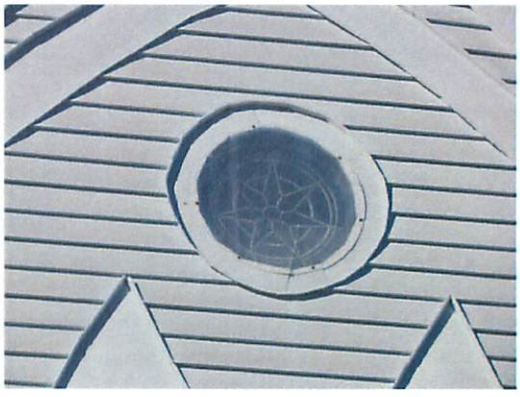
With the exception of the southeast tower, all elevations at the Spire Center are covered with aluminum siding that obscures the original wood cladding and trim elements. Assessment of the conditions of the clapboards, decorative shingles and trim underneath cannot be made until the siding has been removed.

The tower wall surfaces are clad in alternating double rows of square and fishscale wood shingles. The shingles are in poor condition with greatest damage at the tower base.

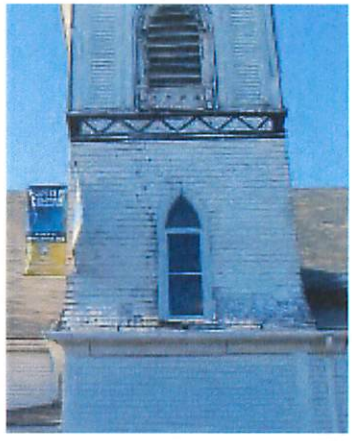
Recommendations

- Remove aluminum siding and sheet aluminum over trim.
- Replace damaged clapboards and decorative shingles and trim with new parts milled to match the historic size.
- Strip, prep and repaint wood elements.
- Replicate missing carved ornaments in panels between the windows at the gable ends. These are seen in historic photographs.
- Replace missing trim, moldings, corbels and brackets.

Wall surfaces and trim elements covered by aluminum siding.



Character defining siding and molded trim features are hidden behind flat aluminum elements.



Wall surfaces and trim elements covered by aluminum siding.

Windows and Doors

Conditions

The building has a variety of original multi-lite windows in single and grouped configurations. All of these rectangular and arched windows have clear glass center portions with stained glass borders. The rectangular windows are protected by aluminum storms. Arched and round windows are are covered by plexiglas.

Ongoing investigative removal of the aluminum siding and storm windows reveals that the original wood windows are in fair condition, with widespread paint failure and areas of rot.

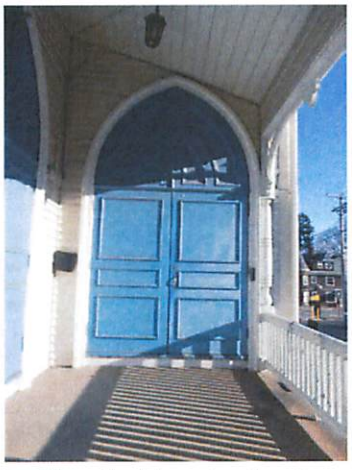
The paneled wood doors, both arched and rectangular, are in fair condition with worn paint finishes.

Recommendations

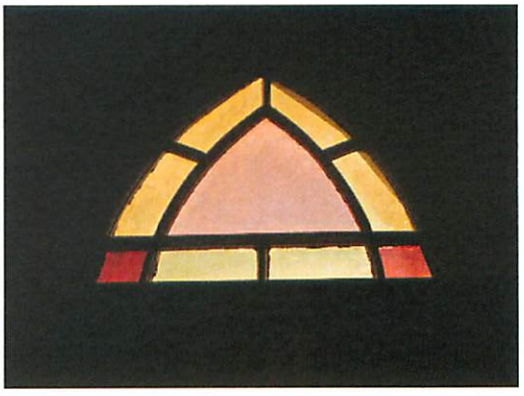
- Fully strip, repair, reglaze, prep and paint window sash.
- Fully strip, repair, prep and paint doors.

Grouped windows at the east transept. Aluminum siding partially removed.

Paint failure at window muntins.



Double arched door at main entry showing weathered paint.



Arched window at east transept seen from the interior.

Foundations

Conditions

The building has a brick foundation. At the facade and southeast tower it is faced with dressed granite. The granite is in good condition. The brick is in fair condition with areas of failed mortar and poorly matched mortar; the brick surface has vestiges of a paint coating.

The front entry is a concrete slab that is spalled, chipped and cracked at the southeast corner. It is approached by a granite step.

Recommendations

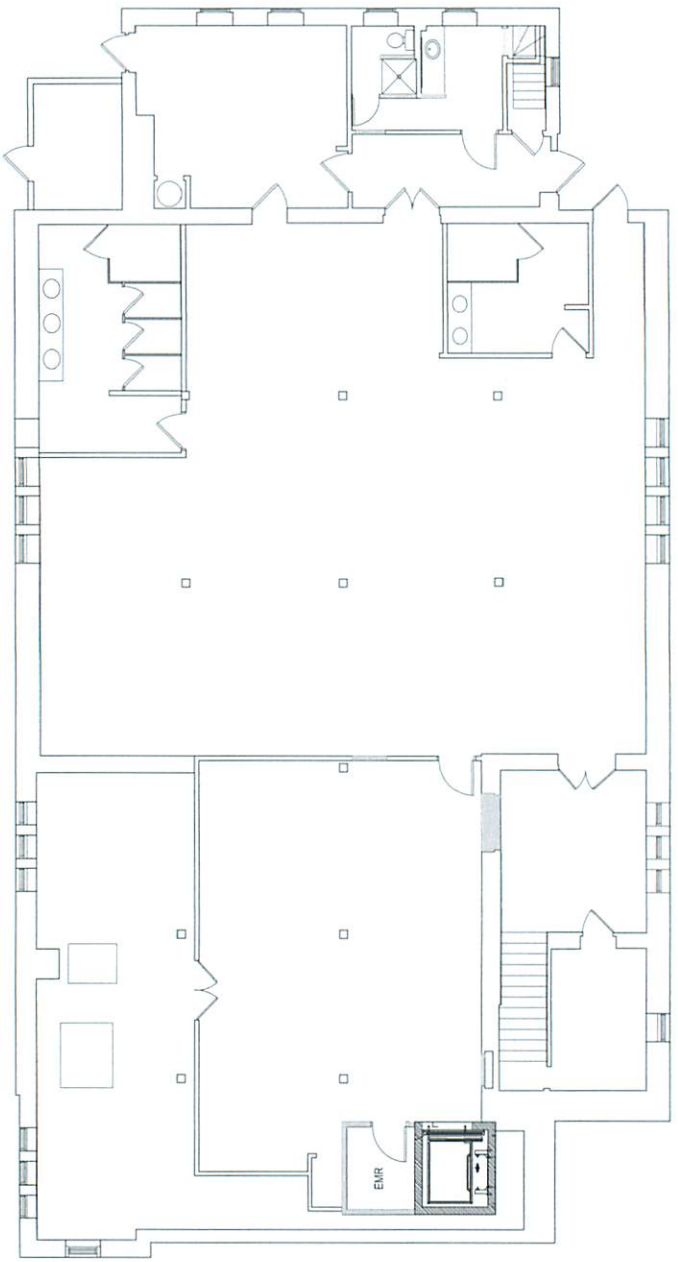
- Repoint the brick selectively with correct mortar.
- Repoint granite facing stones.

Dressed granite-faced brick foundation at southeast tower.

Failed mortar and paint remnants at east elevation.

Concrete slab porch at southeast corner.

NORTH



First Floor

INTERIOR CONDITIONS

First Floor

Conditions

The first floor of the building (at ground level) contains adminstrative offices, space rented as a sound studio, a kitchenette, restrooms, and an open spaced leased as a class room and meeting room.

The spaces were renovated after the acquisition of the buiding by the Spire Center so the infrastructure and finishes are up to date.

Recommendation

- Maintain with regular maintenance.

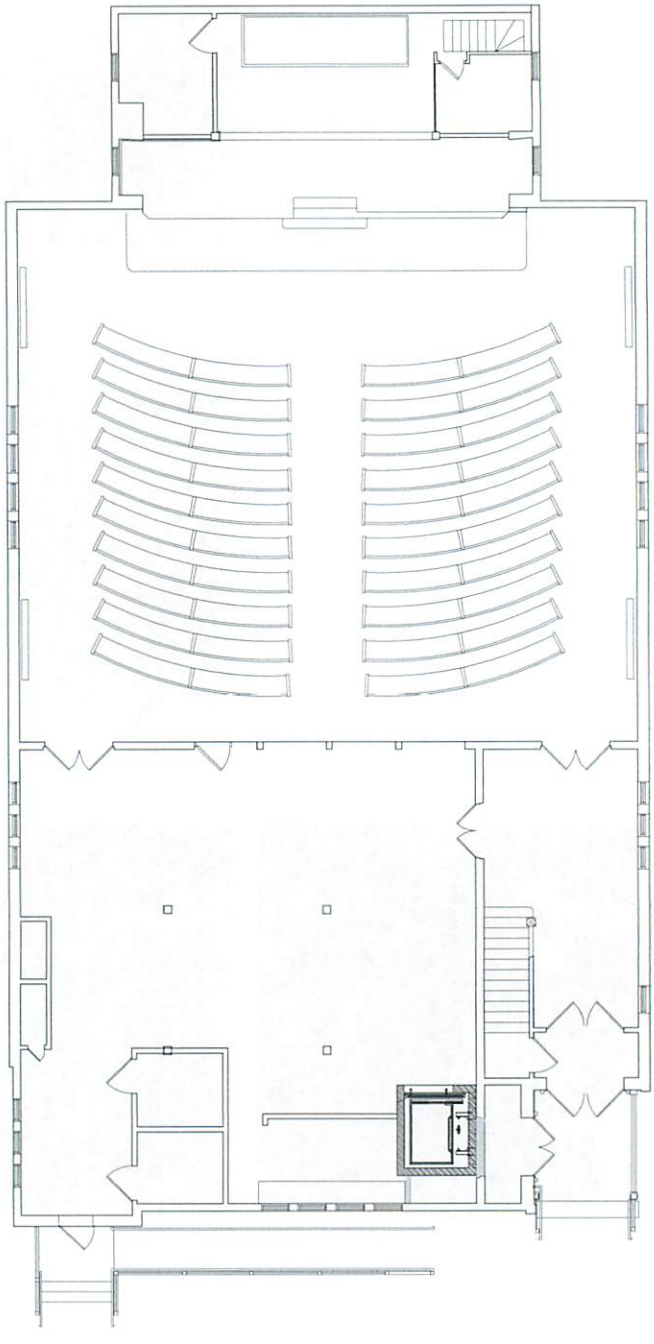
Administrative office.

Rental meeting space.

Recording studio.

New furnace.

NORTH



Second Floor

Second Floor

Conditions

The second floor is occupied by the performance space, stage and lobby. Finishes are largely intact from the original construction and pew renovation. The renovations included two accessible restrooms in the lobby and installation of a new exterior door and access ramp on Court Street. Glass in the wood door between the stairway and lobby is missing.

Recommendation

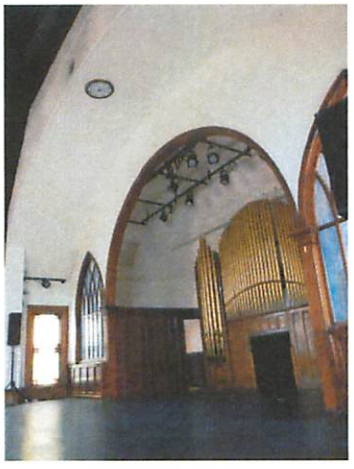
- Salvage glass from the double door into the ticket office for use in doors into the stairway.

Stage, located in former transept and chancel.

Balcony as seen from stage.

Stairway at main entrance foyer at southeast corner of building.

Overhead rolling doors between performance space and lobby.



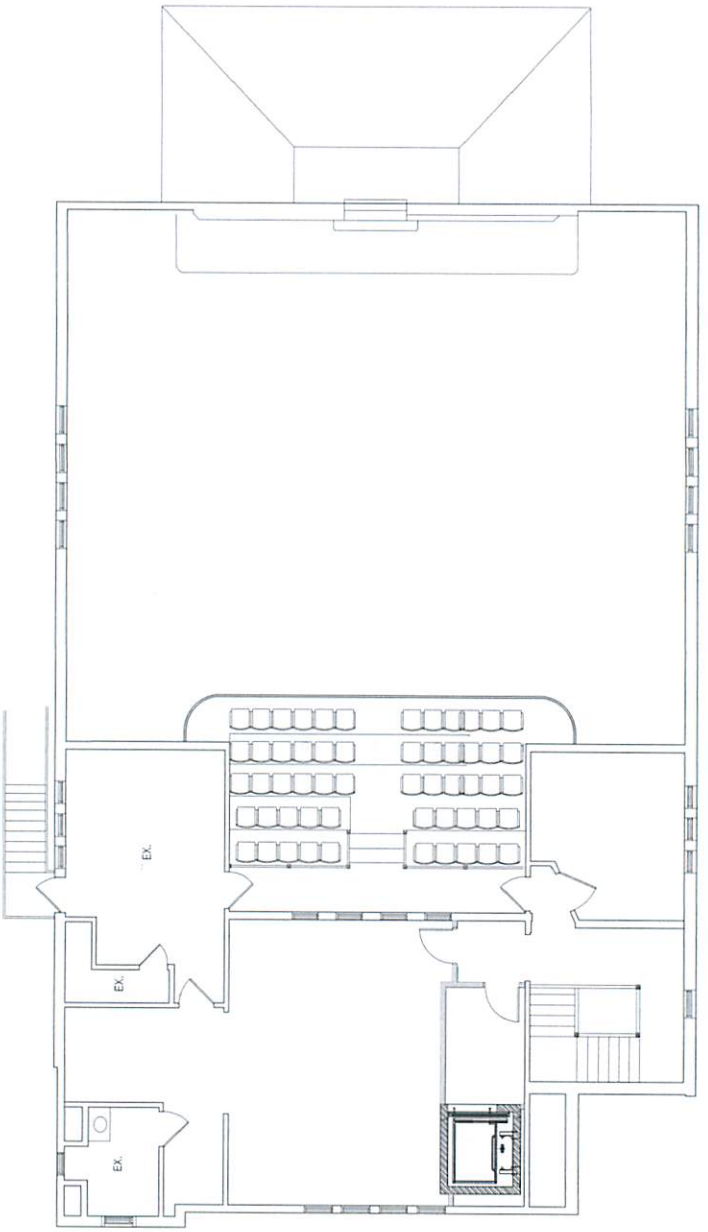
Organ pipes at rear stage wall.

Lobby - west windows.

Theater space. The line of chairs behind the fixed pews is extant original seating. The pews may date to the synagogue conversion but that has not been confirmed.

Lobby - projecting block in center is the build out for the handicap restroom.

NORTH



Third Floor

Third Floor

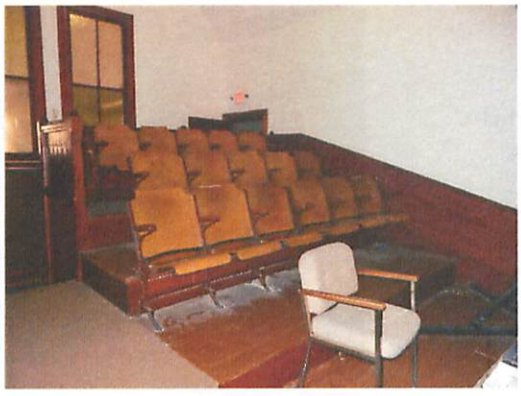
Conditions

The third floor is occupied by the balcony and a rented rehearsal space. Access to the spire is via a ladder attached to the wall at the head of the stairs. The balcony is used in part for the stage sound board and a lighting rig.

Recommendations

- Install LU/LA vertical access.

Window wall at balcony shares light from the rented performance space onto the balcony.



Original seating at the balcony.

Third floor stair landing.

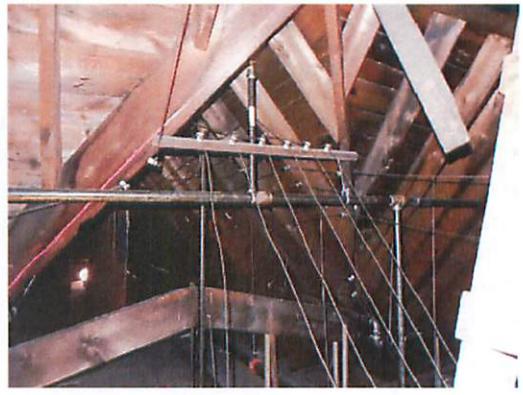
Attic

Conditions

The wood framed attic space has a steep pitched roof with varying floor levels corresponding to the various ceiling heights of the spaces. below. Portions of the attic are not accessible where the ceiling plane abutts the roof framing.

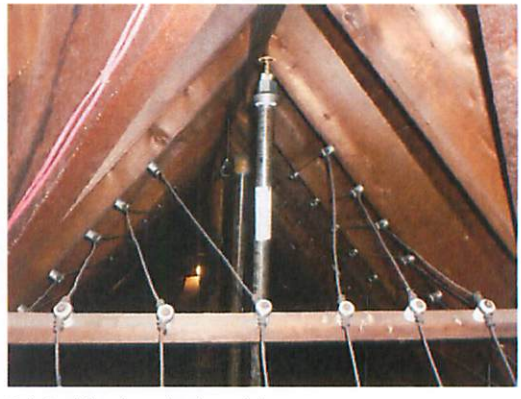
Recommendations

- Removed old knob and tube wiring and re-wire with code compliant wiring.
- Critical framing repairs:
  – Reinforce existing collar beams with new steel beams supported on new tube steel posts that are in turn supported on new transfer beams in the attic floor.
  – Introduce new tension tie elements and connections to join the two halves of the corbel trusses. (See the structural report that follows for detailed recommendations on framing repairs.)



Wood framing at gable with wiring and new sprinkler system.

Wood framing at hip roof.



Original knob and tube wiring.

STRUCTURAL ASSESSMENT

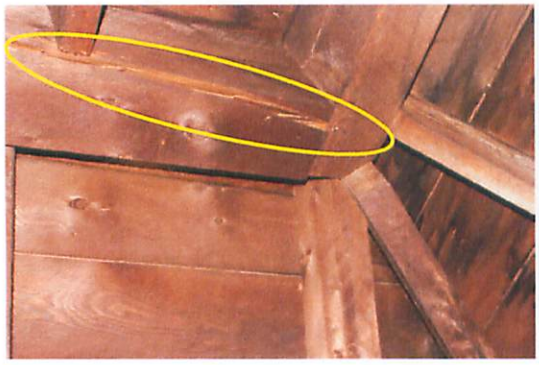
John Bologna of Coastal Engineering conducted an exploratory site investigation of the building in February 2015. The survey findings and recommendations are described below. Three areas of urgent concern were identified where reinforcement and augmentation of existing structure are required. These include 1) the east gable window wall, 2) the cupola roof collar beams and 3) the corbel roof truss adjacent to the balcony and stage proscenium. Coastal Engineering has provided schematic design plans for the structural augmentation and retrofit of these areas. Please see the following page for photographs of the existing conditions.

The investigation revealed that structural framing members were compromised or seriously deficient in the three areas noted above. The recommendation is to augment the structural framing by adding new structural steel framing and reinforcements in each area. This would include the necessary removal of the existing gable windows and the installation of a tube steel structural grid to frame the curtain wall on both the north and south gable walls.

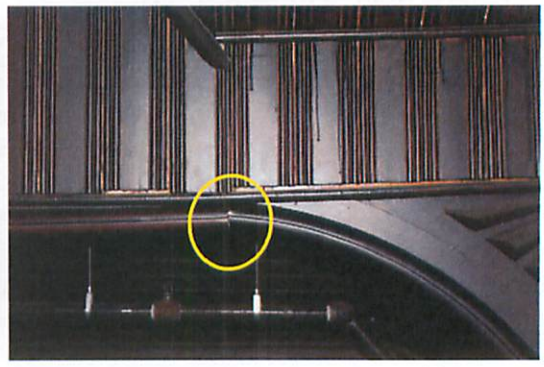
Roof collar beams in the attic were observed to have significant splits and cracks resulting from overstress. These beams act as a compression ring, supporting the roof hip rafter and ridge beams, and have no vertical supports at beam corners to resolve unbalanced loads imposed on opposing sides of the roof framing. The resulting split in several of the members is likely the result of overstress on these compression beam elements. To resolve the unbalanced loads and to reinforce the compromised timbers, the existing collar beams should be reinforced with new steel beams supported on new tube steel posts that are in turn supported on transfer beams in the attic floor.

The transfer beams will themselves need to be supported on the two existing cross "A-Trusses," which will also likely need to be reinforced, or at least further investigated to ensure adequate load carrying capacity. In laying out the plan, it became clear that the the A-Trusses do not span across the entire building width, raising questions on how these trusses were themselves supported. After laying out the roof and attic floor framing on the CAD plans provided, it became apparent that the A-Trusses were supported on the corbel trusses (C-Trusses) that Cape Associates discovered in the concealed attic space adjacent to the balcony.

Superimposing the plans and sections revealed that the corbel trusses rely on the decorative wood tie as a tension element that holds the two bottom sections of the C-Truss together. How they are connected is subjected to further investigation, but it is apparent that a new tension tie element and connection is required to stabilize all four quadrants on either side of both gable window walls. The installation of a new tension rod behind the existing decorative element to tie the two C-Truss halves together is recommended. In doing so, it may be also possible to lift the deflected corbel truss corners by simultaneously jacking the corbel end as the tie rod is tensioned.



Split at roof collar beam at apex of main hip roof.



Trim elements at corbel truss have separated due to uneven load.

Deflection of the truss corners resulting from inadequate connection between the truss sections is seen in the corbel ends, which have dropped 3-4". Note degree out of plumb.

Bowing of window wall at the south transept is exacerbated by the framing deficits at the roof and corbel trusses. The wall is 6"- 9" out of plumb.

REGULATORY ANALYSIS

This building code review makes the following assumptions:

1. The use and occupancy of the Spire Center for the Performing Arts will not change. It will remain a performance hall on the second (main) floor with business rental space on the first (ground) floor and rehearsal, storage space and balcony seating on the third floor.

2. Physical changes to the building, internally or externally, will be limited in scope for the foreseeable future. For example, a non-bearing wall in a guest room or staff space may be moved but the supporting walls of the center hall of the Spire Center for the Performing Arts will not be removed or new stairway openings cut through the floors. Exterior windows and doors may be repaired or replaced but new openings will not be made in the exterior walls. A limited-use/limited access elevator will be installed and operational prior to June 6, 2017.

3. The occupied area of the building is 13,080 s.f. The aggregate area of the building, which includes the unoccupied mechanical rooms on the first floor, is 13,730 s.f.

4. The occupancy classifications are A-1 for the theater use on the second floor and the third floor balcony, and B for the renters on the first floor and third floor.

The applicable building code is the **8th edition of 780 CMR**. The applicable portion is the 2009 International Existing Building Code with Massachusetts Amendments.

In the narrative below the section of the code that applies is in **bold**, text from the code is in *italics*, and specific application to the Spire Center for the Performing Arts is in standard text.

101.4 *Applicability. This code shall apply to the repair, alteration, change of occupancy, addition and relocation of all existing buildings.*

101.4.2 *Buildings previously occupied.* Buildings that are currently occupied may do so without change except for issues of safety and welfare of the users. Unless a change is made to the building it may continue to be occupied with alteration unless there is a matter of concern for life safety. At the Spire Center for the Performing Arts proactive steps were taken to install an automatic sprinkler system when the building was converted from a synagogue to a performance venue.

101.5 *Compliance methods. The repair, alteration, change of occupancy.... of all existing buildings shall comply with one of the methods listed in Sections 101.5.1 through 101.5.3 as selected by the applicant.* When code applicable changes are proposed to an existing

building there are several approaches to evaluating the required compliance. For the Spire Center, the work area method would be the logical method. This basically requires compliance with the requirements for new construction only at the space where the work is being done; surrounding areas unaffected by the work would not require improvement unless the local building official had concerns for life safety. An example of the opinion of the local official taking precedence is the removal of the door from the stair from the second floor main entry vestibule to the first floor office space.

Section 105, Permits, 105.1 Required. Permits are required to *repair, add, alter, remove, convert or replace any electrical, gas, mechanical or plumbing system.* There is a provision to maintain an annual permit. This is an "open" permit which would allow improvements to a building system – electrical wiring, for example – at various times throughout the year without pulling an individual permit each time. Since the schedule of improvements at the Spire Center is incremental, an open permit would not be warranted.

Section 106, Construction Documents, 106.1 General. In general, unless waived by Inspectional Services, a permit application for additions, alterations or removals of systems will need to be accompanied by construction documents with sufficient detail for the code official to evaluate the scope of the work. These documents are prepared by professionals in the discipline of the area of work. For example, the proposed LU/LA work should show how the shaft and openings in the floor are structurally resolved and how exiting configurations are preserved or improved at the areas of construction in a set of drawings stamped by an architect or engineer.

Section 110, Certificate of Occupancy. When a space is altered or existing building occupancy is changed, a Certificate of Occupancy must be issued by the Building Official. Additionally, certain types of spaces require annual inspection regardless of whether work is performed or not. The temporary inspection certificate issued to the Spire Center contains the following conditions for A-1 temporary assembly use: second floor assembly occupancy 225, third floor employees only, first floor for bathroom access only. This temporary certificate has expired and should be renewed or made permanent.

Compliance evaluation for existing buildings

This building code analysis uses the Prescriptive Compliance Method to address alterations and repairs since those are the anticipated categories of work and the range of work is anticipated to be relatively limited. If extensive renovation or modification is contemplated the work would be evaluated under Chapter 4 where the Level of Work would be determined to establish what further code requirements would be triggered.

Chapter 3: Prescriptive Compliance Method

Chapter 3, 301.2 Building Materials, 301.2.1 Existing materials. *Materials already in use in a building in conformance with the requirements or approvals in effect at he time of their erection shall be permitted to remain.* Unless they are considered dangerous to life or safety by the code official, construction materials used at the Spire Center do not need to be changed to conform the current building code unless work is being done that requires compliance with the current code. Like materials may be used for repairs or alterations provided no safety issues are created.

Section 303, Alterations, 303.1 General. *Alteration to any building or structure shall be such that the existing building or structure is no less conforming with the provisions of the code than it was prior to the alteration.* When changes are made at the Spire Center the changes should strive to meet the requirements of the current building code. At bare minimum the changes cannot create a circumstance that is LESS conforming to the code than it was prior to the alteration. For example, a meeting room for more than 49 persons that currently has two exits could not be reconfigured to eliminate one exit.

Sections 303.3 Existing structural elements carrying gravity load, 303.4 Existing structural elements carrying lateral load. Unless the Spire Center is substantially altered or damaged, the building will not be required to retroactively meet the requirements for new construction. Changes to the theater walls, new stairway or elevator penetrations, or the installation of mezzanines in double height spaces would be instances where the work needed to be evaluated relative to impact on the structural capacity of the building to sustain gravity loads and resist lateral movement.

Section 303.7 Seismic Hazards. This section is unique to Massachusetts and would apply if more than 50 percent of the aggregate area of the Spire Center, or over 7,200 s.f., was being altered.

Section 304 Repairs. *Building and structures, and parts thereof, shall be repaired in conformance with Section 301.2. Routine maintenance…ordinary repairs exempt from permit… and abatement of wear due to normal service conditions shall not be subject to the requirements for repairs in this section.*

Section 304.1.1 Dangerous conditions. The code allows for the repair of existing elements with like materials if that work does not pose a hazard to safety. The rest of the section covers repairs required by damage to the building and conditions under which repairs may be done with in kind materials or made to conform to the current building code.

Section 305 Fire Escapes, 305.1.2 Existing fire escapes, Chapter 10: Means of Egress, Section 1001.3.1 Maintenance of Exterior Fire Escapes, Section 1001.3.2 Testing and Certification. The code allows the continued use of the Spire Center fire escape. Certification by a registered design professional is required every five years. The fire escapes should be recertified by 2018.

Section 307 Change of Occupancy. The assembly functions at the Spire Center require some of the most stringent building code safety requirements. Though not envisioned, a change in use for some portion of the Spire Center building would be unlikely to trigger stiffer code safety requirements.

Section 308 Historic Buildings. Buildings that have historic value are given latitude when meeting the requirements of the building code. Proposed work must satisfy the building official that there is not a life safety hazard. The Spire Center is a contributing resource in the Plymouth Historic District and is considered historic. If building code requirements for work would have an impact on the features for which the Spire Center building is considered historically significant, they may be waived if the code official determines life safety issues are not raised.

521 CMR Massachusetts Architectural Access Regulations

Converting the old Methodist Church into a performing arts center required expenditures of greater than 30% of the fair cash value of the structure in infrastructure and physical improvements. Massachusetts Architectural Access regulations state that when this threshold of expenditure is met or exceeded, the entire structure must be brought into conformance or a variance must be sought. With the renovations it is assumed that the Spire Center was brought up to the requirements of the regulations except for specific areas. The Spire Center has been granted a variance from the Massachusetts Architectural Access Board for the main entry on Court Street, allowing continued use of the entry without changing the existing stairs into a ramp. A time variance has been awarded for the installation of a limited use/limited access elevator to provide vertical access to the first, second and third floors. Finally, a variance has been allowed for the use of a portable lift for access to the stage.

The Massachusetts Architectural Access code will apply to all new work done in the public spaces at the Spire Center. For example, new doors to public spaces must be accessible but the LU/LA machine room need not be accessible because it is not a public space.

248 CMR 10.00: Uniform Plumbing Code

For A-1 occupancy the ratio of toilets to occupants varies by gender. One toilet is required for every 30 female occupants and one for every 60 male occupants. The occupancy of the Spire Center for the Performing Arts as written in the certificate of occupancy is 250. This number is divided by two, so the plumbing count would be based on125 five women and 125 men. To determine the count of fixtures divide the number of occupants by the ratio required for each gender and round up the result. For women the result is 4.167 which rounds up to 5 toilets. For men the result is 2.083 which rounds up to 3. Fifty percent of the fixtures for men can be urinals. In addition, for the population allowed by the certificate of occupancy, two sinks must be provided for each gender.

The toilet and sink count at the Spire Center meets these requirements.

Zoning

The Spire Center for the Performing Arts is located in the Downtown/Harbor District (DH). Its street address is 25-1/2 on the town assessors property card. New or remodeled exterior facades and /or signs in the DH are exempt from the mandatory review by the Design Review Board of applications and plans filed with the building inspector are not subject to Zoning Board of Appeals action.

A theater is an allowed use in the DH zoning district.

Historic District Review

The building contributes to the Plymouth Historic District and changes to its exterior are subject to review by the Plymouth Historic District Commission. Design guidelines offering assistance to owners contemplating modifications and additions are included in the appendix to this report.

CONCEPTUAL DESIGN

We were asked to prepare conceptual designs for the exterior restoration of the Spire Center, installation of the Limited Use, Limited Access (LU/LA) elevator, and plans for converting two first floor restrooms into a performer's dressing room. We were also asked to supplement previous investigations of the bowing gable end walls on the east and west elevations with limited destructive testing. During the course of our investigations it became clear that there were repairs required in the roof framing that became a priority.

Exterior Restoration

The Spire Center already had a proposal for restoring the spire. We reviewed the scope prepared by the contractor and discussed wood shingle types that might weather best in the marine air. We concluded that Alaskan Yellow Cedar shingles would weather well. Although the material cost was slightly higher, we suggested that historically the shingles on the spire were likely not painted.

There is woodwork at the dormers which would have been painted which now feature very weathered surfaces. In order to help answer questions about color selection for the work we helped solicit proposals from three firms skilled in paint analysis.

In addition to the restoration of the spire, we were asked to examine the remainder of the exterior. Using photographs, observations made over several site visits, and limited removals of the exterior aluminum siding we evaluated conditions and prepared the following outline scope of work:

- Remove aluminum siding.
- Repoint granite foundation face stones.
- Repoint brick foundation.
- Remove rust, replace worn parts, scrape and paint the fire escape.
- Fabricate and install decorative fiberglas cresting along ridge lines.
- Fabricate and install replica finials in fiberglas for lower tower and venting cupola.
- Replace missing horizontal and vertical wood trim (historic "sticks").
- Replace missing wood brackets and corbels.
- Replace missing carved decoration in window panels below gothic arched windows. Recreate with reinforced molded fiberglass, 4 different styles roughly 2-feet square.
- Replace 20 percent of painted shingle siding, including replacement for blown in insulation.
- Blow in cellulose insulation in walls – 5-inch thickness.
- Remove old three tab asphalt shingles, install new roof felt, install ice and water shield at eaves, install architectural asphalt shingles per 110 mph wind zone requirements. (Note: replacement with wood shingles would be a substantial cost increase.)

- Install new membrane roof at shed dormers, flat roof atop main hip, and flat roof atop rear hip.
- Repair the spire per the proposal from the Burgess Company steeplejacks.
- Restore window sash – repair wood, reglaze with black glazing putty, add weather strip, paint.
- Repaint and weather strip exterior doors.
- Paint siding and trim.
- Install lightning arrestors, terminals, cabling and grounds.

Estimated Cost: $800,000

Cost derived from the Cape Associates estimate on page 55.

Roof Framing Repairs

While investigating framing at the gable end walls where the window wall is bowing out we were alerted by Cape Associates, the contractor helping us make discrete openings in walls to check framing, to two cracked members in the compression ring below the venting cupola at the very top of the main hipped roof. Coastal Engineering evaluated the connections and load paths from these key framing members and concluded that repairs were needed and supplemental measures were required.

Two areas where reinforcement and augmentation of compromised or seriously deficient existing structure are required were identified: 1) the cupola roof collar beams, and 2) the corbel roof truss adjacent to the balcony and stage proscenium. The areas noted are related components of the roofing system, with failure in the collar beams exacerbating conditions at the corbel trusses.

Two roof collar beams under the cupola at the apex of the main hip roof have significant splits and cracks resulting from overstress. These beams, which act as a compression ring supporting the roofing system, have no vertical supports at their corners to resolve the unbalanced loads to which they are subjected.

The corbel trusses, which support the cross trusses (A-trusses), are each comprised of two halves tied together with a wood tension element. The wood ties provide inadequate connection between the truss sections resulting in deflection of the truss corners and sagging of the corbel ends.

Coastal Engineering prepared schematic design plans for the structural augmentation and retrofit of the areas of failure described above. The existing collar beams will be reinforced with new steel beams supported on new tube steel posts that are in turn supported on new transfer beams in the attic floor. The existing

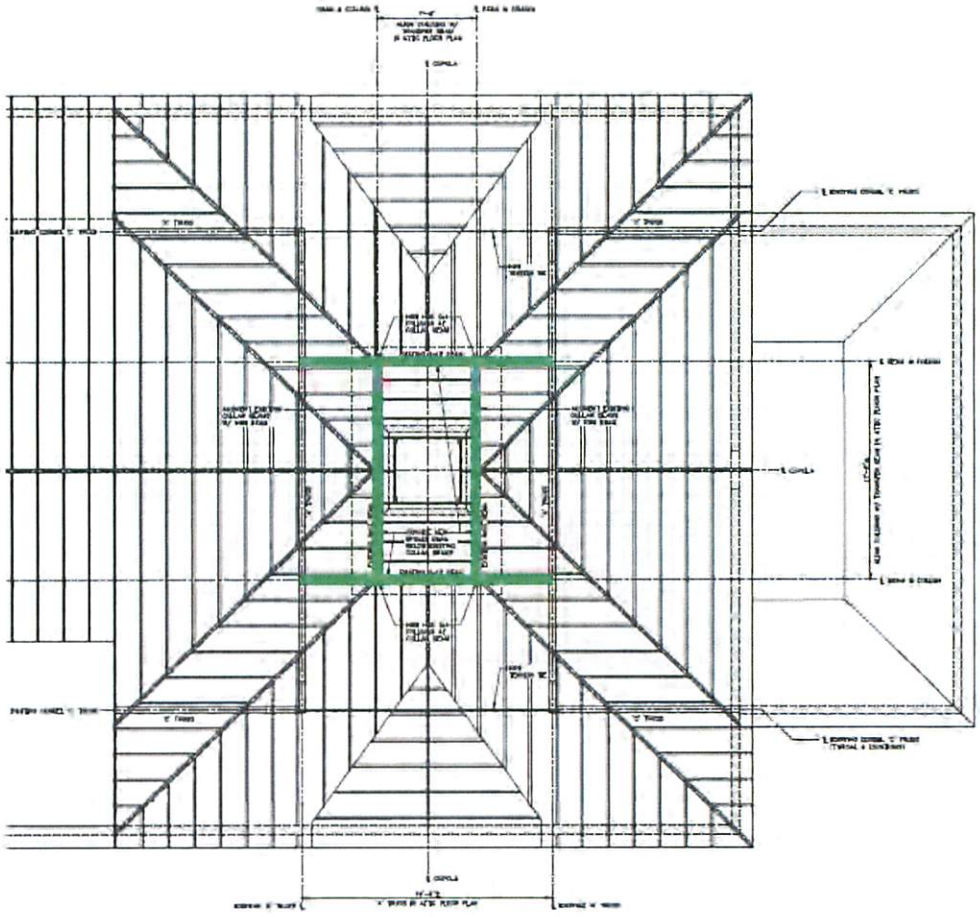
cross trusses (A-trusses) on which the new transfer beams will rest will require further investigation to ensure adequate carrying capacity.

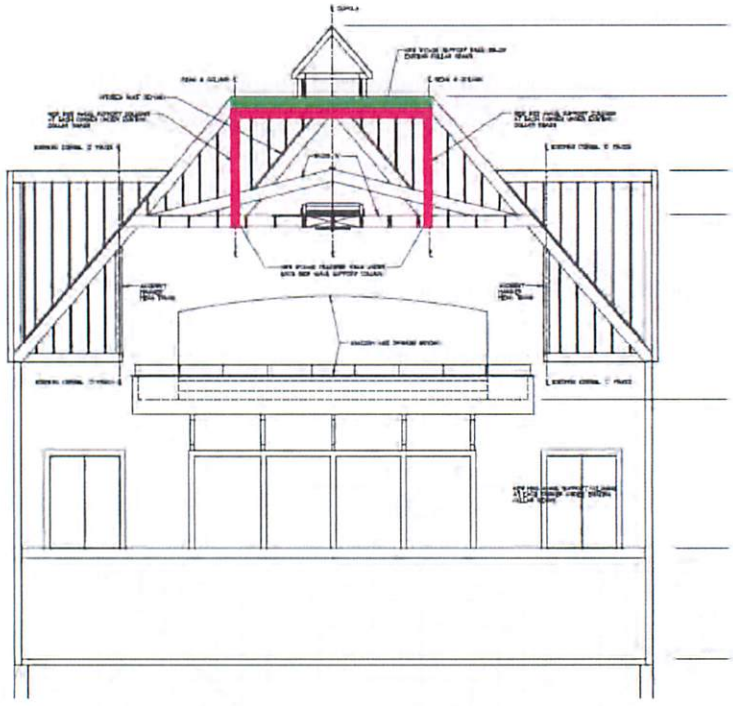
New tension tie elements and connections will be introduced to join the two halves of the corbel trusses. The tension rods will be installed behind the existing carved wood decorative elements.

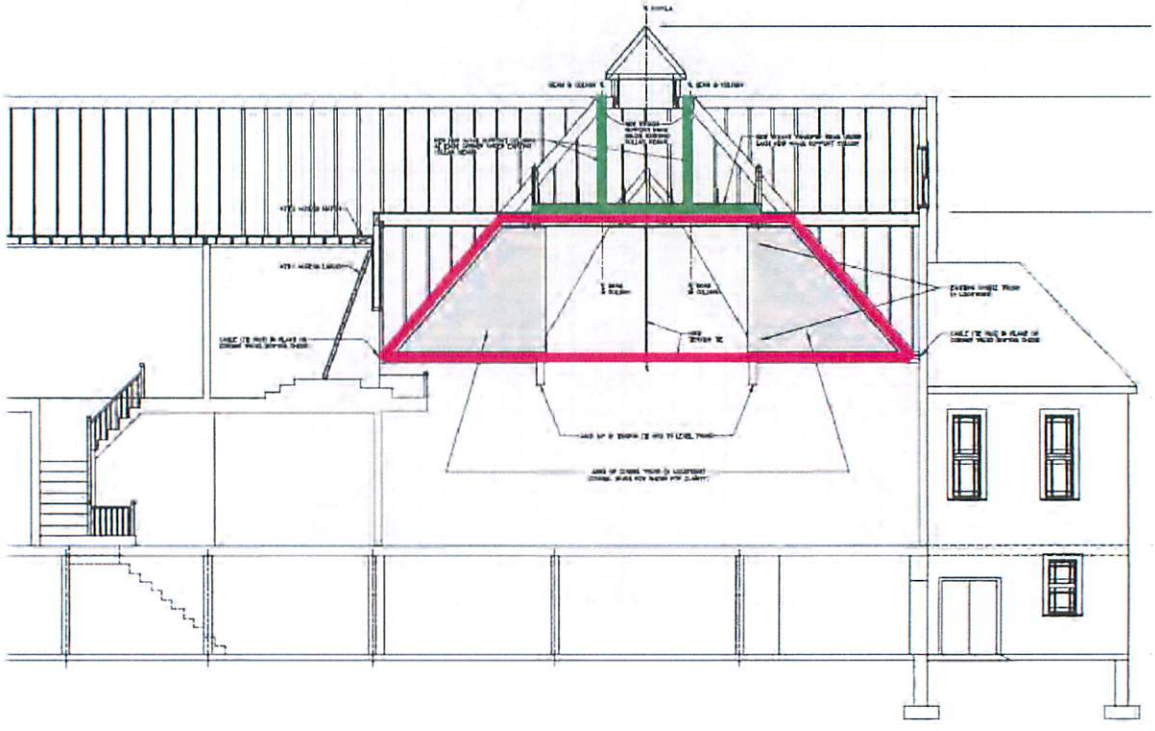
Estimated cost: $75,000

Cost derived from the Cape Associates estimate on page 55.

The drawings that follow illustrate the proposed work.







Limited Use/Limited Access Elevator

We examined three possible locations for the LU/LA, all of which would provide access to each of the three floors.

Option 1 was selected, though the alterations to the balcony were not included for cost savings. This option provided the least alteration of existing spaces and importantly could be built within the existing building envelope without having to pierce the roof. The first floor access will be coordinated with the present sound studio so the entry is always available to building users. The second floor location preserves as much of the existing open space in the lobby as possible, but closes off the historic exterior access to the lobby and requires adjusting the existing granite counter. At the third floor the closet in the rental space is blocked by the lift.

Option 2 was rejected because it required the relocation of major utilities in the basement and relocating an exit access doorway in the theater space. This option would also require alterations to the roof of the shed dormer on the west side to accommodate the elevator over-run.

Option 3 was rejected because it obstructed too much space in the second floor lobby and required relocation of the sound studio sound booth and recording platform.

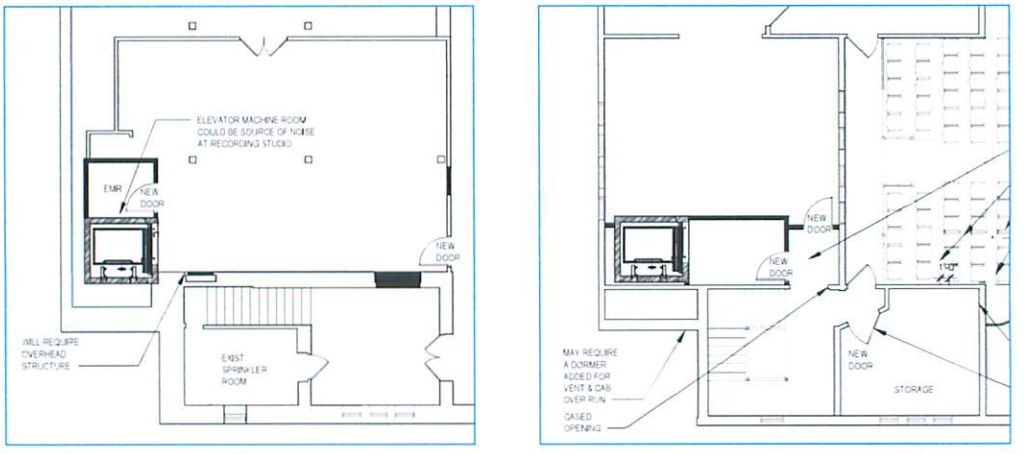
Estimated Cost $120,000

Cost derived from the Cape Associates estimate on page 55.

The drawings on the following pages illustrate the three options.

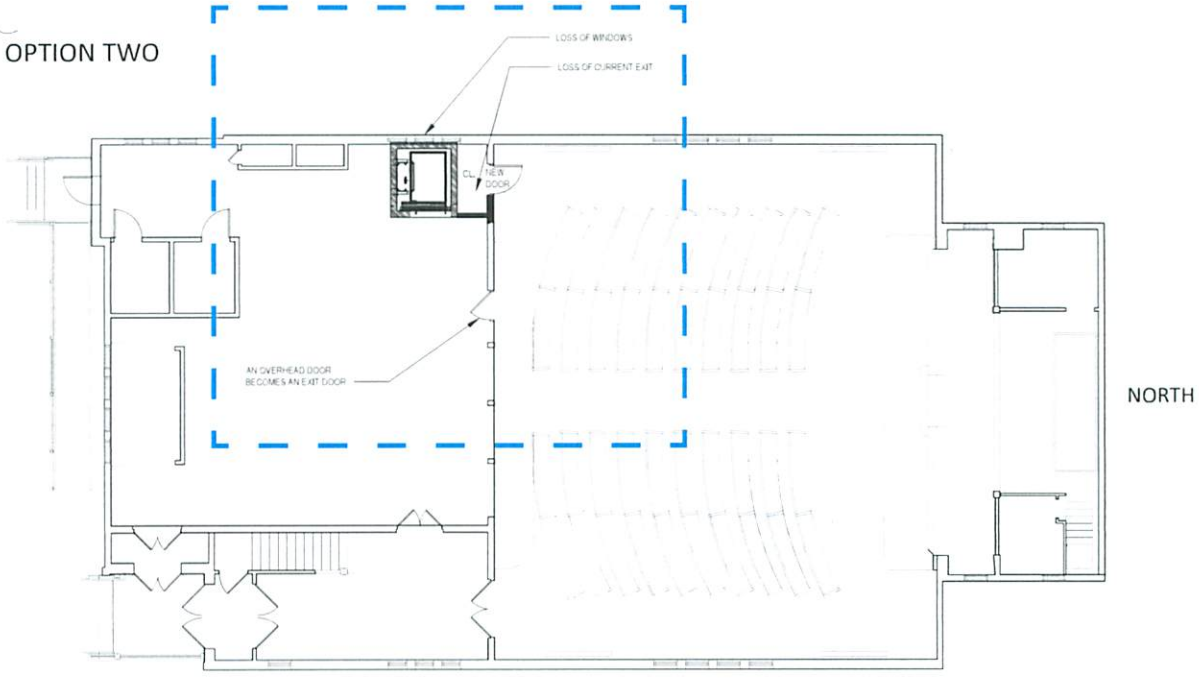
OPTION ONE

Second floor plan

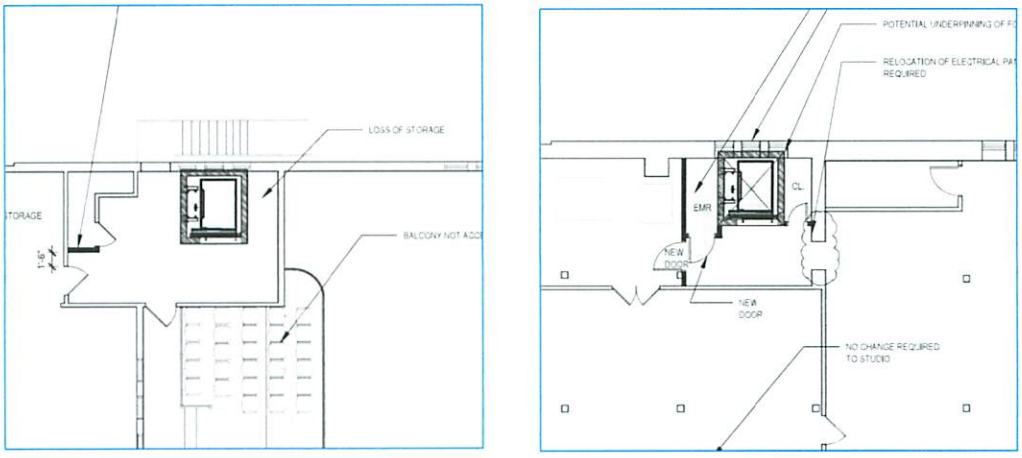


Area shown in dashed blue outline above at first floor (left) and third floor (right).

OPTION TWO

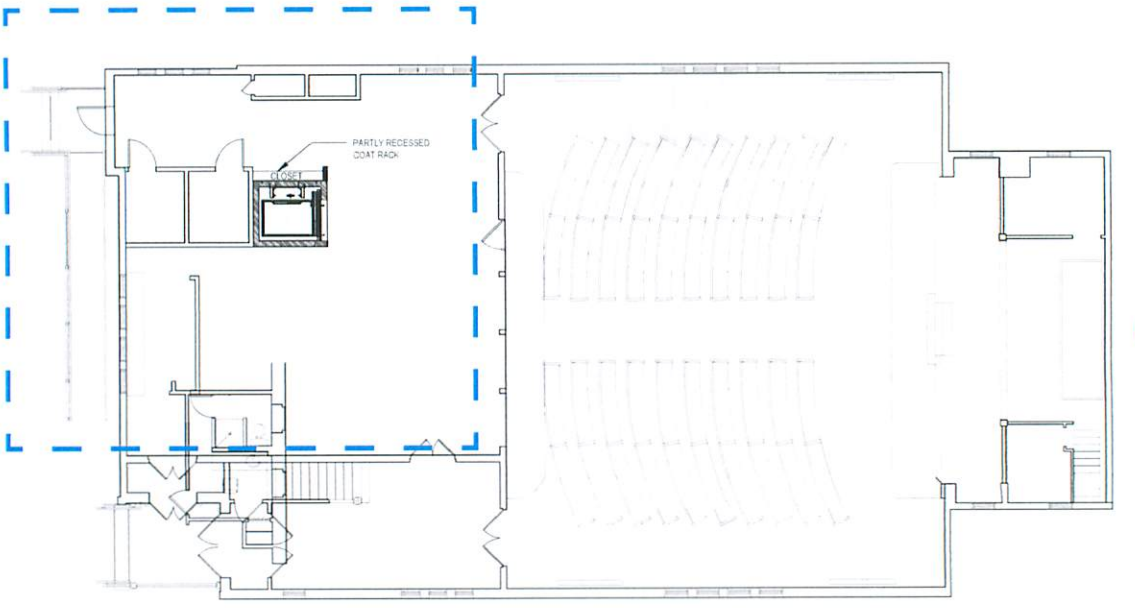


Second floor plan



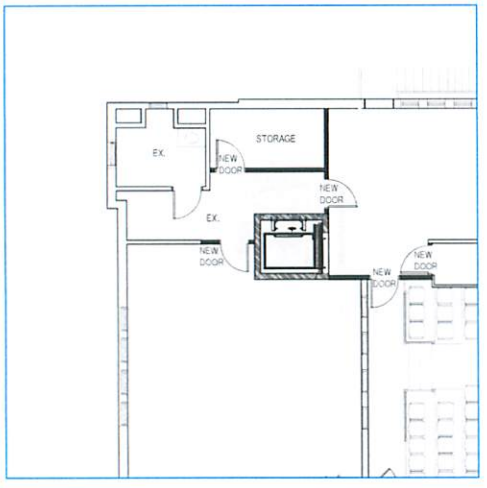
Area shown in dashed blue outline above at first floor (left) and third floor (right).

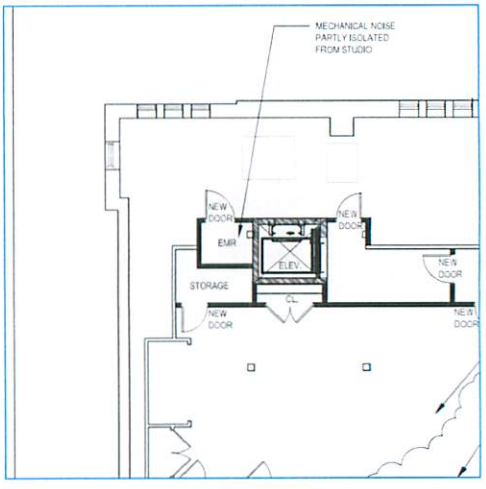
OPTION THREE



NORTH

Second floor plan





Area shown in dashed blue outline above at first floor (left) and third floor (right).

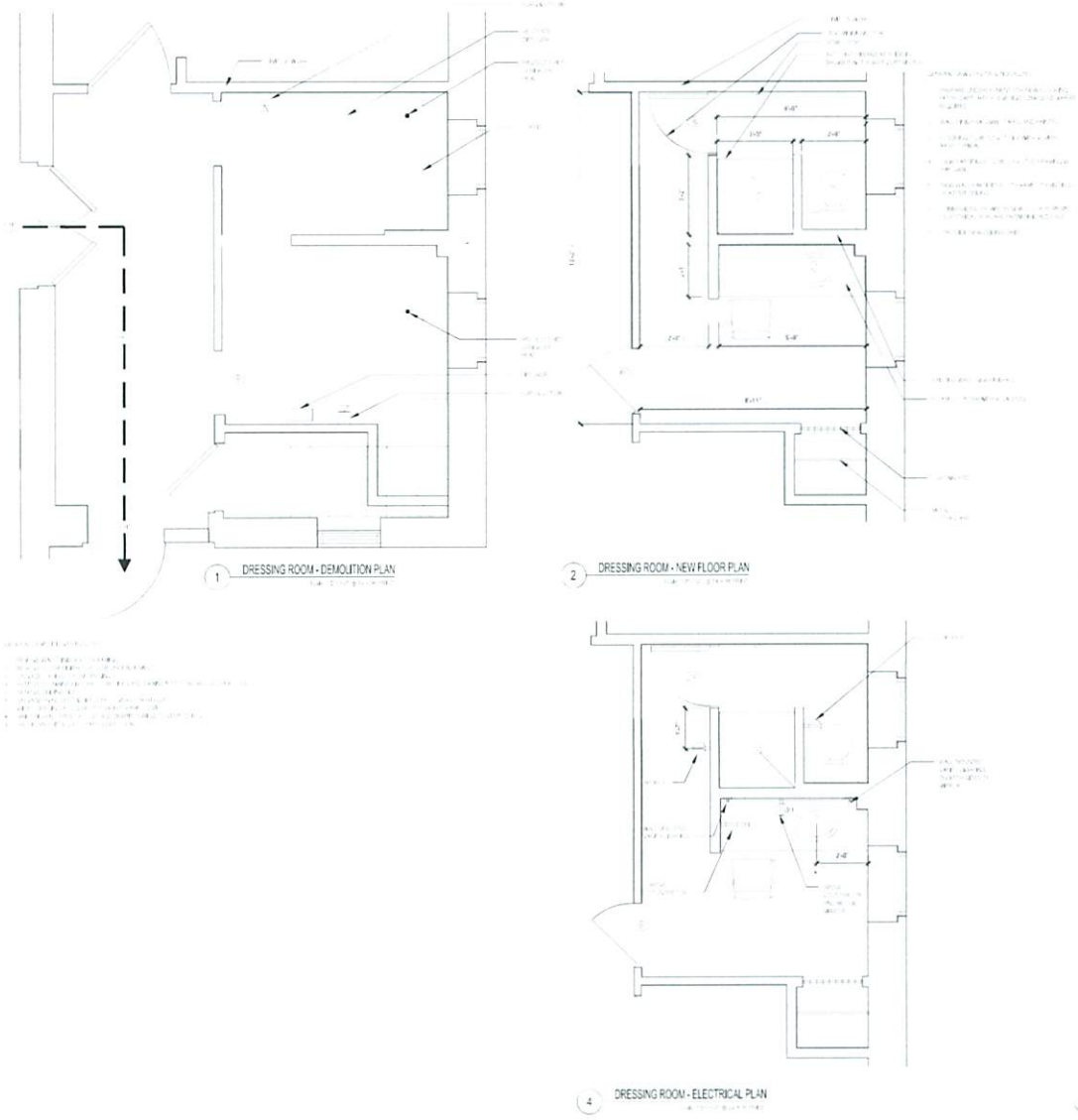
Conversion of Restrooms to Single Dressing Room

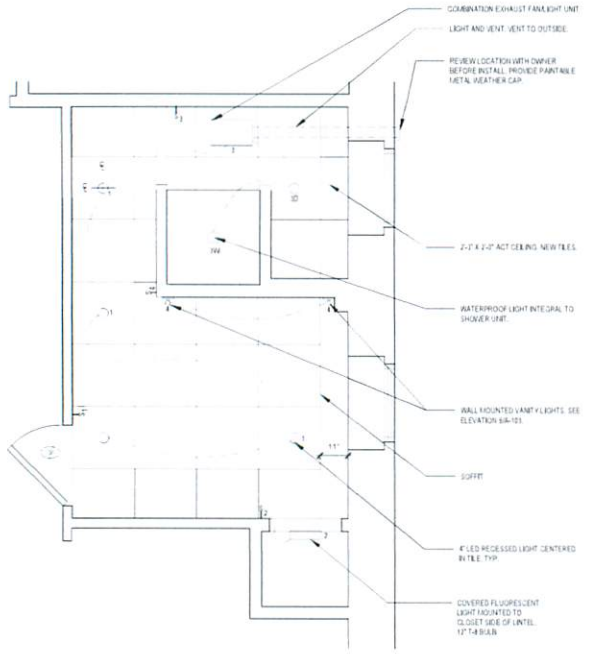
We were asked to prepare drawings for the conversion of two extant first floor restrooms into a performers' dressing room. A make-up vanity, shower, toilet and sink were part of the program. We were asked to fit the dressing room within the existing walls of the restrooms. We strove to maintain the location of the plumbing wall while fitting the program for the space.

Estimated cost $8,500

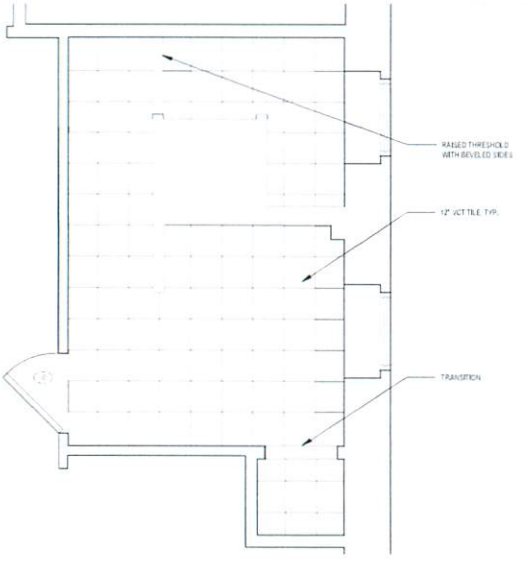
Cost derived from the available budget.

The drawings on the following pages illustrate the conceptual design.

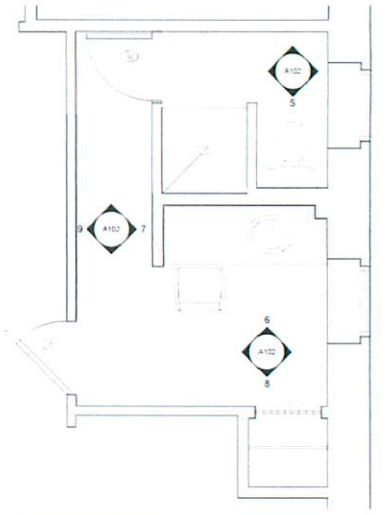




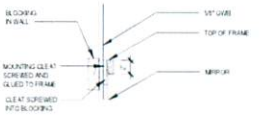
3 DRESSING ROOM - REFLECTED CEILING PLAN



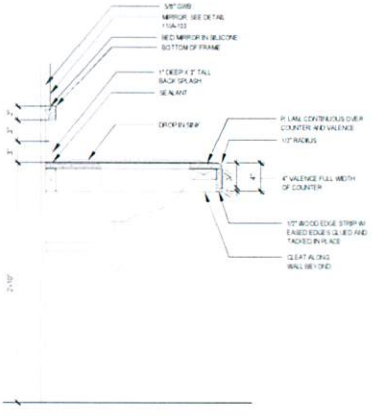
5 DRESSING ROOM - FLOOR TILE PLAN



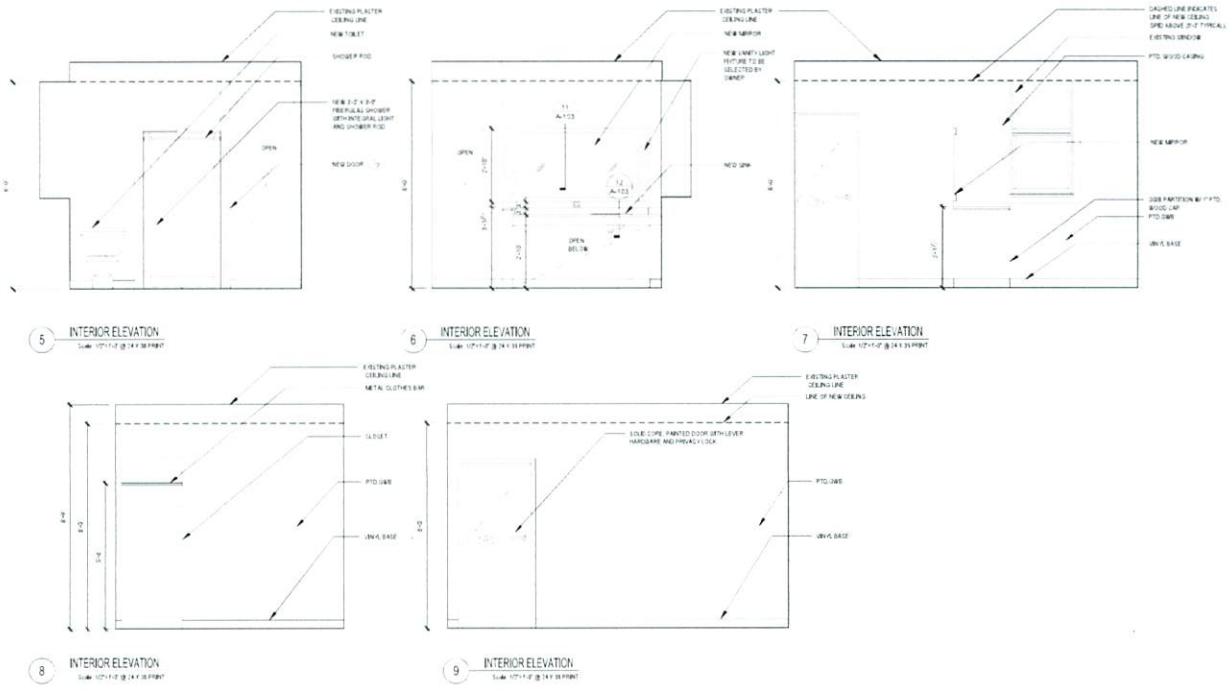
4A DRESSING ROOM -KEY PLAN



11 SECTION THROUGH MIRROR



12 SECTION THROUGH COUNTER TOP



5 INTERIOR ELEVATION

6 INTERIOR ELEVATION

7 INTERIOR ELEVATION

8 INTERIOR ELEVATION

9 INTERIOR ELEVATION

SUMMARY OF PROBABLE COSTS

Cape Associates developed the cost estimates that appear on the following pages.

Cape Associates, Inc.
BUILDERS Est. 1971
PROPERTY MANAGEMENT || SERVICES || PAINTING

203 Willow Street, Suite B
Yarmouthport, MA 02675

SPIRE CENTER FOR THE PERFORMING ARTS - SCHEMATIC DESIGN ESTIMATE

Job Name: Spire Center for the Performing Arts
Location: 25-1/2 Court Street, Plymouth
Architect: Spencer & Vogt Group
Description: Structural Repair, Exterior Restoration, LU/LA

Pages: 4

Date: 3/25/2015

Scope of Work as outlined by Spencer & Vogt

CSI Section	Location	Item Description	Comments	Category Breakdown	Quantity	Unit
01		Building Permit		**$41,512.00**	1.00	LS
01		Bond, P&P	NIC, estimated $14K cost to Owner			
01		Use of Tools and Equipment, Rental fees			1.00	LS
01		Temporary Job Toilet			6.00	MOS
01		Dumpster rental & dumping fees			10.00	EA
01		Progress Cleanups & Cartage			6.00	MOS
01		Protective coverings			1.00	LS
01		Final contruction cleaning			1.00	LS
01		Professional window cleaning			1.00	LS
01		Supervision			6.00	MOS
02	South Elevation	Remove Artificial Siding		**$16,757.70**	1,420.00	square feet
02	East Elevation	Remove Artificial Siding			1,945.00	square feet
02	North Elevation	Remove Artificial Siding			1,420.00	square feet
02	West Elevation	Remove Artificial Siding			1,945.00	square feet
03	Basement	30-inch deep concrete pit for LU/LA (8'x7') assum 24" wide shoulders at two sides to avoid having to underpin stone foundations		**$2,684.64**	56.00	square feet
04	South Elevation	South Elevations Repoint granite foundation face stone joints		**$5,752.00**	16.00	lf of joint

04	East Elevation	Selective repointing of brick foundation - 15%			50.00	sf of brick
04	North Elevation	Selective repointing of brick foundation - 15%			40.00	sf of brick
04	West Elevation	Repoint granite foundation face stone joints			50.00	lf of joint
04	West Elevation	Selective repointing of brick foundation - 15%			70.00	sf of brick
04	West Elevation	Repoint chimney			150.00	sf of brick
05	Attic	Attic framing repairs per Coastal S101 - steel members assumed		**$47,800.00**	1.00	ls
05	Attic	Corbel truss repairs with tension rods per Coastal S102 - steel members assumed		**$9,960.00**	1.00	ls
05	East & West Elevations	Window wall steel reinforcement -TBD		**$40,650.00**	1.00	ls
05	East Elevation	scrape and paint and metal repair at fire escape		**$3,000.00**	1.00	ls
06	Roofs	Decorative cast fiberglas ridge cresting		**$106,833.84**	100.00	lf
06	Roofs	Decorative cast fiberglas finials at spire, venting cupola, west tower			3.00	ls
06	South Elevation	Repair exterior wood trim windows and doors			260.00	lf
06	South Elevation	Replace missing wood watertable and band molding (strong horizontal bands in photographs)			120.00	lf
06	South Elevation	Replace missing wood vertical sticking at windows and doors and corners.			250.00	lf
06	South Elevation	Replace missing wood carved brackets - 6x18x8 at corner sticking and at cornice			12.00	ea
06	South Elevation	Replace missing carved decoration in window panels and between gothic arch windows - reinforced fiberglass from clay molding - 4 styles roughly 2-feet square			10.00	ea
06	East Elevation	Repair exterior wood trim windows and doors			200.00	lf
06	East Elevation	Replace missing wood watertable and band molding (strong horizontal bands in photographs)			100.00	lf
06	East Elevation	Replace missing wood vertical sticking at windows and doors and corners.			60.00	lf
06	East Elevation	Replace missing wood carved brackets - 6x18x8 at corner sticking and at cornice			2.00	ea
06	North Elevation	Repair exterior wood trim windows and doors			100.00	lf
06	North Elevation	Replace missing wood watertable and band molding (strong horizontal bands in photographs)			20.00	lf
06	North Elevation	Replace corner boards			80.00	lf
06	North Elevation	Replace missing wood carved brackets - 6x18x8 at corner sticking and at cornice			4.00	ea
06	West Elevation	Repair exterior wood trim windows and doors			260.00	lf
06	West Elevation	Replace missing wood watertable and band molding (strong horizontal bands in photographs)			200.00	lf

06	West Elevation	Replace missing wood vertical sticking at windows and doors and corners.			110.00	lf
06	West Elevation	Replace missing wood carved brackets - 6x18x8 at corner sticking and at cornice			5.00	ea
06	West Elevation	Replace missing carved decoration in window panels above gothic arch windows - reinforced fiberglass from clay molding - 4 styles roughly 2-feet square			6.00	ea
06	Basement to second floor	PSL posting for LU/LA mast framing - 32 vertical feet			32.00	LF
06	first floor and second floo	head off opening for LU/LA at floors and ceiling 7' x 8' opening			3.00	ea
06	Roof adjacent to Spire	New shed dormer at top of LU/LA shaft. Rough frame for new shed roof dormer 7'x8' with 4' tall face and cheekwalls with 4' maximum height, sheathing, etc.			1.00	ea
06	Roof adjacent to Spire	Cornerboards and running molding at dormer			20.00	lf
07	South Elevation	Replace 20-percent painted shingle siding - 4-1/2 exposure - includes replacement for blown in insulation holes		**$201,175.00**	3.00	square
07	South Elevation	Blown in cullulose insulation in walls - 5 inches deep			1,420.00	sf
07	West Elevation	Replace 20-percent painted shingle siding - 4-1/2 exposure - includes replacement for blown in insulation holes			4.00	square
07	West Elevation	Blown in cullulose insulation in walls - 5 inches deep			1,945.00	sf
07	North Elevation	Replace 20-percent painted shingle siding - 4-1/2 exposure - includes replacement for blown in insulation holes			3.00	square
07	North Elevation	Blown in cullulose insulation in walls - 5-inches deep			1,200.00	sf
07	West Elevation	Replace 20-percent painted shingle siding - 4-1/2 exposure - includes replacement for blown in insulation holes			4.00	square
07	West Elevation	Blown in cullulose insulation in walls - 5 inches deep			1,945.00	sf
07	Roof adjacent to Spire	scalloped, painted wood shingles on face of dormer			0.50	square
07	Roofs	Main hip, main gable, cross gables - remove old three tab aspahalt shingles, install new roof felt, ice and water at eaves and architectural asphalt shingles, installed per 110 mph wind zone requirements			58.00	square
07	Roofs	Venting cupola hipped roof, remove old three tab aspahalt shingles, install new roof felt, ice and water at eaves and architectural asphalt shingles, installed per 110 mph wind zone requirements			1.00	square
07	Flat roof below venting cupola	New membrane roof			1.00	square
07	Flat roof atop hip at north end of building	New membrane roof			1.00	square
07	Low slope East shed roof next to spire	New membrane roof			2.00	square
07	Low slope West shed roof next at fire escape	New membrane roof			2.00	square

07	Roof adjacent to Spire	Membrane roof over dormer			0.60	square
07	Spire	Repairs to Spire - Allowance $92,000			1.00	ls
07	East Tower	Repairs to east tower - Allowance $32,000			1.00	ls
08	South Elevation	Restore window sash - reglaze with black glazing putty, weather strip, paint, wood repair. Note: seven are gothic arch glass, 1 is circular.		**$112,900.00**	22.00	window
08	South Elevation	Restore and paint Porch Door (Double stile and rail with arched panel above), paint west door.			2.00	door
08	West Elevation	Restore window sash - reglaze with black glazing putty, weather strip, paint, wood repair. Note: seven are gothic arch glass, 1 is circular.			25.00	window
08	West Elevation	Paint kitchen exit door			1.00	door
08	North Elevation	Restore window sash - reglaze with black glazing putty, weather strip, paint, wood repair.			6.00	window
08	North Elevation	Paint door			1.00	door
08	West Elevation	Restore window sash - reglaze with black glazing putty, weather strip, paint, wood repair. Note: seven are gothic arch glass, 1 is circular.			32.00	window
08	West Elevation	Restore and paint Porch Door (Double stile and rail with arched panel above), paint northwest door.			2.00	door
09	East Elevation	Paint siding and trim		**$37,550.00**	1,945.00	sf
09	South Elevation	Paint siding and trim			1,420.00	sf
09	West Elevation	Paitn siding and trim			1,945.00	sf
09	North Elevation	Paint siding and trim			1,200.00	sf
09	LU/LA	32' tall shaftwall construction - 2 hrs 8'x7'			1,000.00	sf
10	LU/LA	LU/LA allow $75,00		**$75,000.00**	1.00	ls
16	roofs to ground	Lightning protection allow $20,000		**$23,500.00**	1.00	ls
16	Attic	Replace knob and tube wiring with armored cable wiring - allow $3500			1.00	ls
		TOTAL	Total Cost	$725,075.18		
			Overhed & Profit	130,513.53		
			Total	**$855,588.71**		

FUNDRAISING DISCUSSION

Community Preservation Act Funding
The Spire Center got its start with Community Preservation Act funds, which made possible the acquisition of the property and the first phase of restoration and renovation. The Center is encouraged to seek CPA money for future phases of restoration/renovation under the historic preservation funding category as long as the proposed work complies with *The Secretary of the Interior's Standards for the Treatment of Historic Properties.*

Applications are accepted by the Community Preservation Committee throughout the year. For consideration at Town Meeting, applications must be received by February 1 for the Spring Town Meeting and May 15 for the Fall Town Meeting. The deadlines provide the Committee and Town departments with sufficient time to review the applications and supporting documentation and to vote on recommendations for Town Meeting prior to the deadlines required under the Town's warrant process. The fiscal year 2014 application can be found online at http://www.plymouth-ma.gov/sites/plymouthma/files/uploads/2014_cpa.pdf.

Massachusetts Historic Rehabilitation Tax Credits
Under this program, a certified rehabilitation project on an income-producing property is eligible to receive up to 20% of the cost of certified rehabilitation expenditures in state tax credits. There is an annual cap, so there are selection criteria that ensure the funds are distributed to the projects that provide the most public benefit. The Massachusetts Historical Commission certifies the projects and allocates available credits. A similar tax credit program is administered at the federal level.

The stewards of the Spire Center have explored the possibility of pursuing both state and federal tax credits for current and future projects. The costs associated with the application process, receipt and adminstration of the tax credits are significant and it is recommended that construction projects meet or exceed a $2 million dollar threshold in order to make obtaining historic rehabilitation tax credits worthwhile.

Massachusetts Preservation Projects Fund
The Massachusetts Preservation Projects Fund (MPPF) is a state-funded 50% reimbursable matching grant program established in 1984 to support the preservation of properties, landscapes, and sites (cultural resources) listed in the State Register of Historic Places. Applicants must be a municipality or nonprofit organization. The grants are generally awarded annually for pre-development (studies) and development (construction) projects with an application deadline in early Spring.

Emergency funds are available at the Secretary's discretion for the stabilization of resources considered in imminent danger. There are no deadlines for the submission of emergency fund requests. The Spire Center applied for an emergency grant in April, 2015 for critical repairs to the roof framing.

Information on the MPPF grant program can be found at http://www.sec.state.ma.us/mhc/mhcmppf/mppfidx.htm.

Massachusetts Cultural Facilities Fund

The fund provides capital grants to promote the acquisition, design, repair, rehabilitation, renovation, expansion, or construction of nonprofit cultural facilities in Massachusetts. Applicants must be nonprofit cultural institutions, municipalities that own cultural facilities, or institutions of higher learning. All grants from the fund must be matched with cash contributions from the private or public sector. The fund is administered through a collaborative arrangement between MassDevelopment and the Massachusetts Cultural Council.

Grants are generally awarded annually with a late Spring application deadline. Information on the Massachusetts Cultural Facilities Fund program can be found at http://www.massculturalcouncil.org/facilities/facilities.htm.

APPENDIX

A) Photographic Documentation

B) Historic Preservation Resources

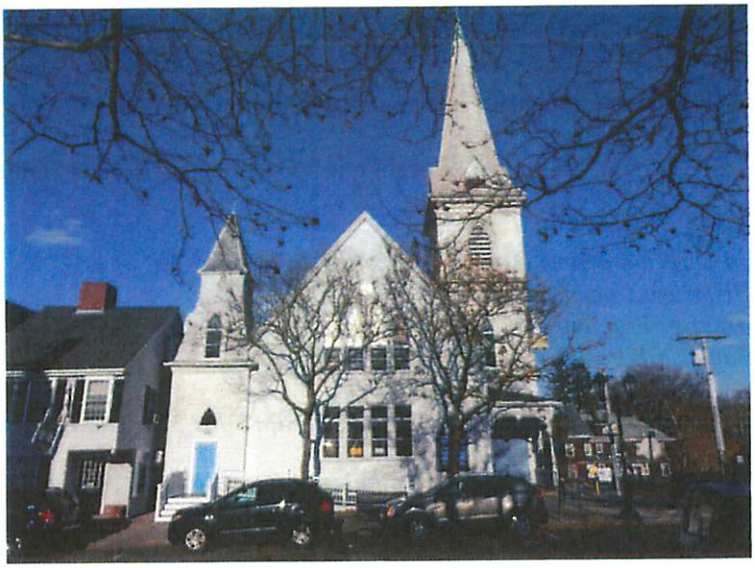
- Plymouth Historic District Commission Handbook (2008)
- *The Secretary of the Interior's Standards for the Treatment of Historic Properties*
- Massachusetts Historical Commission Inventory Form B

C) MPPF Emergency Grant Application (April 2015)

MASSACHUSETTS PRESERVATION PROJECTS FUND

Project Completion Report

Spire Center for the Performing Arts
MPPF Emergency Grant
April 2017



MASSACHUSETTS HISTORICAL COMMISSION
William Francis Galvin, Secretary of the Commonwealth
220 Morrissey Boulevard, Boston, Massachusetts 02125

PROJECT COMPLETION REPORT

Project Number (MHC use only): MPPF #4064 & MPPF #4098

Project Name: **Structural Repairs**

Property Name (as listed in State Register of Historic Places): **Memorial Methodist Episcopal Church**

Address: **25 ½ Court Street, Plymouth, MA 02360**

Grant Recipient: **Greater Plymouth Performing Arts Center, Inc.**

Title of Authorized Signer: **Robert Hollis, President**

Address: **25 ½ Court Street, Plymouth, MA 02360**

Owner: **Greater Plymouth Performing Arts Center, Inc.**

Address: **25 ½ Court Street, Plymouth, MA 02360**

Completion Date: **December 2016**

Project Type: ___ Pre-Development
X Development
___ Acquisition

Total Project Cost: $130,913 (Part of larger project costing $294,979)

State Share: $80,000

Recipient Share: $50,913 (Remainder of match made up in larger project)

Endowment: N/A

Local Project Coordinator: **Robert Hollis**

State Supervisors:

Paul A. Holtz, Co-Director Grants Division/Historical Architect, MHC
Massachusetts Historical Commission
Massachusetts Archives Building
220 Morrissey Boulevard, Boston, MA 02125

Preservation Supervisor: **Spencer & Vogt Group, 1 Thompson Sq., Suite 504, Charlestown, MA**

Contractor(s): **Murray Bros. Construction, Inc., 19 Union Street, Leominster, MA**

Report Prepared by: **Lynn Smiledge (SVG)**

Edited by: **Ross W. Dekle**

Project Completion Report Approval:

I hereby certify that project work has been completed in conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

_____ _____

Brona Simon
Executive Director and State Historic Preservation Officer
Massachusetts Historical Commission

Date

TABLE OF CONTENTS

INTRODUCTION

The building was constructed in 1884 for the Methodist Church, which occupied it until 1972 when it merged with another congregation and built a new house of worship. The church was sold to the Congregation Beth Jacob and adapted for use as a synagogue and later a community center. The Town of Plymouth acquired the dormant building in 2012 with Community Preservation Act funds and entrusted it to the Greater Plymouth Performing Arts Center, Inc., which has rehabilitated it as a performance venue. The Spire Center for the Performing Arts opened its doors to the public in 2014.

The building reflects the Stick style, often considered a transitional style between the Gothic Revival and later Queen Anne styles. The characteristic Stick elements are best illustrated on historic photographs of the building since many are currently obscured by vinyl siding or deemphasized by the monochromatic paint scheme. They include the steep gable roofs, overhanging eaves, varied shingle shapes and patterns, curved porch braces, brackets forming the upper extension of vertical strips (seen today at the tower), and wood cladding overlaid with raised decorative boards called stickwork. Stick style color schemes were polychromatic with details picked out in a darker color; the original contrasting paint scheme is seen on historic images of the church building.

The building contributes to the Plymouth Historic District, a local historic district established in 1995 and administered by the Plymouth Historic District Commission.

A 2015 conditions assessment by Spencer & Vogt Group with Coastal Engineering identified serious structural issues in the roof framing in relation to the center cupola, which originally served as a ventilation shaft, and the transept wall framing. Other pressing concerns included the aging roofing, preservation of the historic wood windows, aluminum siding which effectively obscured historical architectural features, and the main tower and steeple which had its aluminum siding removed in anticipation of restoration. Here the worn and missing shingles and architectural trim is a visible reminder to all visitors to downtown Plymouth of the need to preserve this feature. Less visible but of equal necessity is the need to reinforce structural elements. Lastly the Spire Center is now in the process of completing the installation of an elevator providing access to all three floors. This is the final step in the process of making the building fully accessible.

PURPOSE OF PROJECT

The MPPF grant helped fund a $144,863 construction project that included:

- Permanent structural repairs to the roof framing of the center cupola of the main block of the building.
- Temporary reinforcement of the east and west outer walls of the transept.
- Protection of the art glass windows at the east and west outer walls of the transept.

USE OF PROPERTY

The building was constructed as a Methodist church and later adapted for use as a synagogue and then a community center. The Town of Plymouth acquired the building in 2012; it was rehabilitated as a performance venue and opened its doors to the public in 2014 as the Spire Center for the Performing Arts.

SECTION I

- Comparative Budget
- Financial Documentation

SECTION I

1. COMPARATIVE BUDGET

Work Categories per Contract	*Estimated Cost per Cape Associates Feasibility Study*	*Actual Bid*	*Change Orders*	*Final Cost*
01 General Conditions & Requirements	$18,575	$44,910		$44,910
Structural Reinforcement	$100,902	$74,567	$11,436	$86,003
Total Project Cost	$119,477	$119,477		$130,913

2. SUMMARY OF FUNDING SOURCES

	Estimated per Contract	*Actual*
State Share:	$50,000	$80,000
Non-State Share:	$69,477	$50,913

Non-State Share Breakdown:

Donor: Greater Plymouth Performing Arts Center, Inc.
Source: Cash
Amount: $50,913

NOTE: In addition to the $130,913 spent on structural stabilization, $164,066 has been invested in an elevator as the final stage in renovations to provide full handicapped accessibility to the Spire Center for the Performing Arts. This more than covers the match required for the combined Emergency MPPF Grants for the stabilization.

Endowment Fund: NA

SECTION III

NARRATIVE REPORT

The Spire Center for the Performing Arts was awarded a $80,000 grant from the Massachusetts Preservation Projects Emergency Fund for structural repairs to the roofing system. The work was part of a larger rehabilitation project that totaled $289,430 in construction and $48,000 in architectural and engineering fees.

The work comprised:

- Structural repairs to the attic truss framing in relation to the center cupola
- Strengthening of corbel trusses visible in the nave/performance space
- Temporary stabilization of outward bowing window walls and protection of art glass windows at the narthex and south transept
- Installation of a limited use/limited access elevator as a separate budget by the same contractor

Procurement and Contract Award
The project was approved by the Massachusetts Historical Commission and bidding commenced in November 2015. The procurement consisted of an advertisement in the *Plymouth Bay State Banner* and distribution of the bidding documents to six selected local contractors. As the single bid received in December 2015 was well in excess of the available budget, the scope was revised to provide temporary stabilization of the north and south transepts. The second round of bidding, due April 18, 2016, resulted in a single bid. A contract was awarded to Murray Brothers in the amount of $229,792. This total included structural work for $119,477 and the elevator shaft for $12,315 (note that the elevator itself was added back in by a change order). Work commenced in May 2016 with anticipated completion January 2017. A change order increased the cost of the project by $11,436 for the structural work.

Description of Work
The building had a weakened structural roofing system discovered and described after an inspection by Coastal Engineering Company, Inc. of Orleans, MA performed in February 2015. Two areas where reinforcement and augmentation of compromised or seriously deficient existing structure were identified: **1)** the cupola roof collar beams (Figures 5a, 5b, 5e, 5f) and **2)** the corbel roof truss adjacent to the balcony and stage proscenium (Figures 1a, 1c). The areas noted were related components of the roofing system, with failure in the collar beams exacerbating conditions at the corbel trusses.

Two roof collar beams under the cupola at the apex of the main hip roof had significant splits and cracks resulting from overstress (Figures 5c, 5d). These beams, which act as a compression ring supporting the roofing system, had no vertical supports at their corners to resolve the unbalanced loads to which they are subjected. Originally the reinforcement system was designed with steel. However, Murray Brothers advocated the use of heavy timber. This approach used timber to create a secondary collar beam with posts coming down to adequately support interior beams.

The corbel trusses, which supported the cross trusses (A-trusses), were each comprised of two halves tied together with a wood tension element. The wood ties provided inadequate connection between the truss sections resulting in deflection of the truss corners and sagging of the corbel ends (Figure 1).

Coastal Engineering had prepared schematic design plans for the structural augmentation and retrofit of the areas of failure described above. The existing collar beams were reinforced with new wood beams supported on new wood posts that are in turn supported on new transfer beams in the attic floor (Figures 5, 5g, 5h).

New tension tie elements and connections were introduced to join the two halves of the corbel trusses. The tension rods were installed adjacent to the existing carved wood decorative elements, running east-west. While this succeeded in stabilizing the trusses it was decided to further reinforce the structure by adding steel tension rods running across the auditorium (north-south) to help stabilize the outward leaning walls of the north and south transepts. (Figures 2,3,4, 4a, 4b, 4c) This effectively reduced the lean by about 2".

Additional work included adding temporary beams inside and outside the outer walls of the east and west transepts, bolted together at 18" intervals. Remedial work at the transept initially was designed to address the backway leaning seen in the gable walls above the roof edge (Figures 7a, 7b). Exploratory work involving removal of siding revealed that the entire wall was inadequately framed (Figure 7c). A permanent retrofit was designed but proved to be too expensive for the funding available. Instead, temporary reinforcing beams were installed to stabilize the walls until funding is identified for the permanent reinforcement of the east and west transepts (Figures 7d, 7e).

Future Work

The plan for comprehensive restoration of the Spire Center includes replacement of the roof, completion of structural repairs in a permanent fashion, preservation of the historic wood windows, and removal of the balance of aluminum siding covering the original wood siding. The wood shingles and trim details will be restored, allowing the building to regain its distinctive Stick style appearance. With the installation of the elevator providing access to all three floors, the building is now fully accessible.

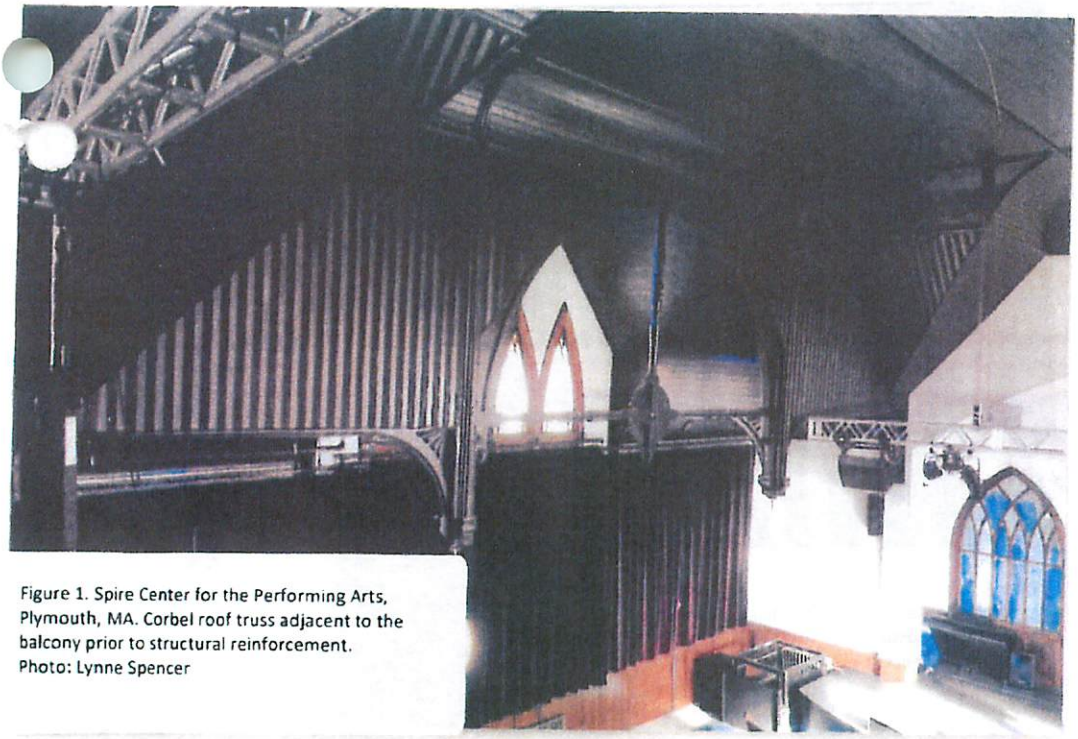


Figure 1. Spire Center for the Performing Arts, Plymouth, MA. Corbel roof truss adjacent to the balcony prior to structural reinforcement.
Photo: Lynne Spencer

Spire Center for the Performing Arts,
.h, MA. Plate attachment of tension bar to beam.
Photo: Lynne Spencer

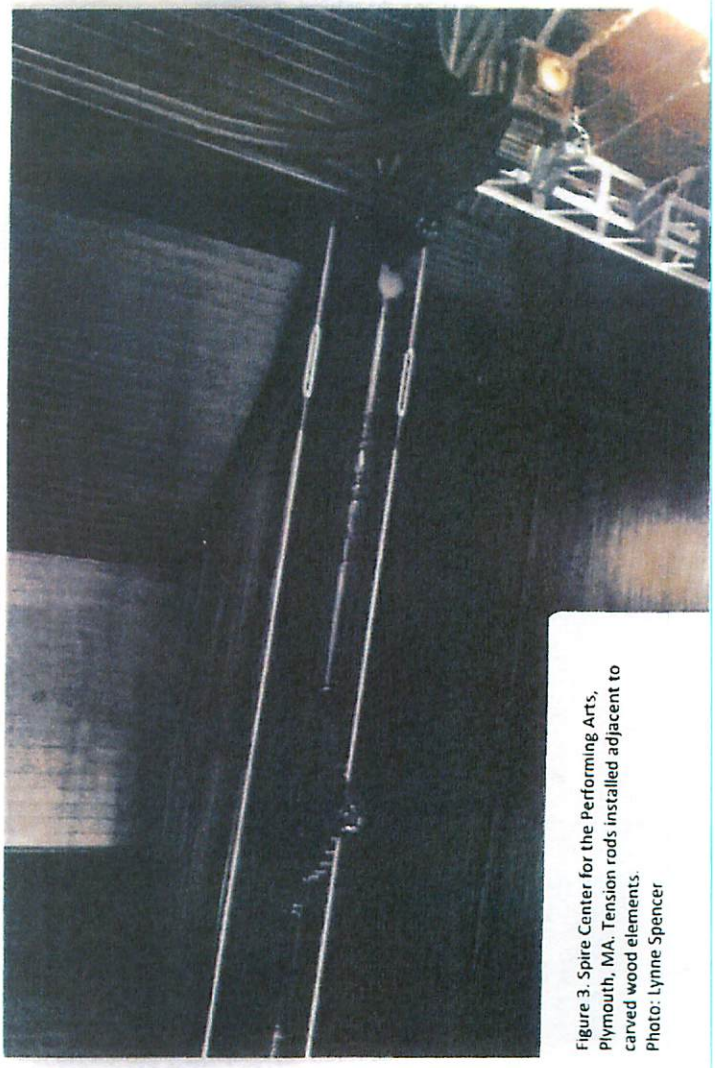


Figure 3. Spire Center for the Performing Arts, Plymouth, MA. Tension rods installed adjacent to carved wood elements.
Photo: Lynne Spencer

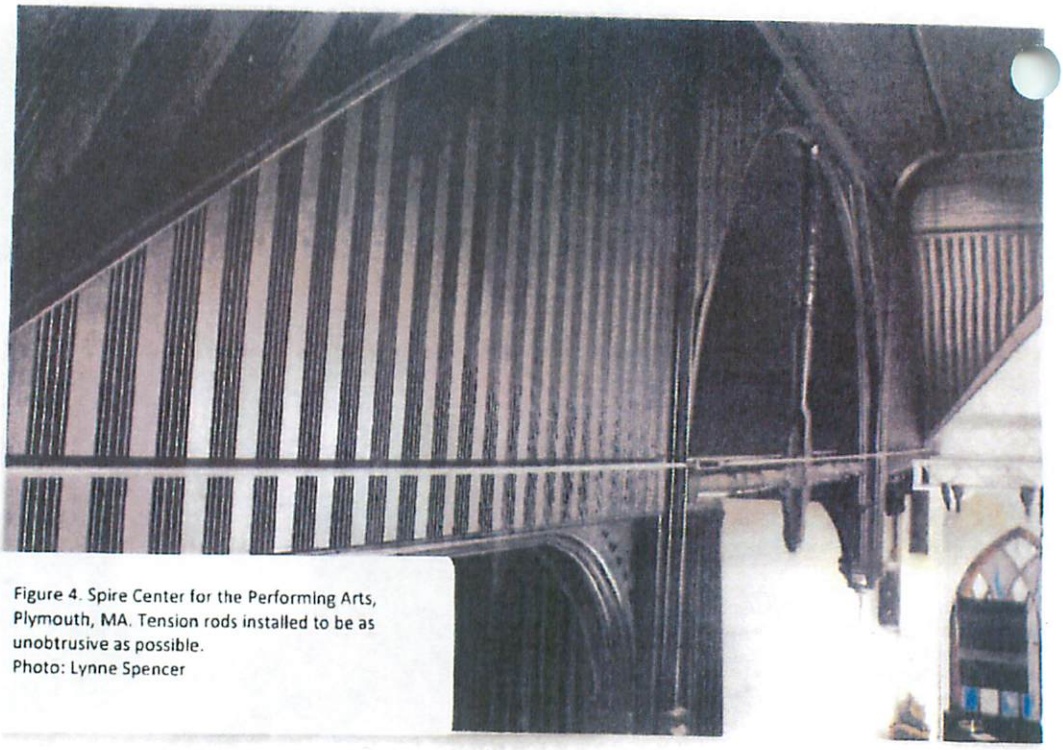


Figure 4. Spire Center for the Performing Arts, Plymouth, MA. Tension rods installed to be as unobtrusive as possible.
Photo: Lynne Spencer

Figure 5. Spire Center for the Performing Arts, Plymouth, MA. Collar beams were reinforced with new wood beams supported on new wood posts supported in turn on new transfer beams in attic floor.
Photo: Lynne Spencer

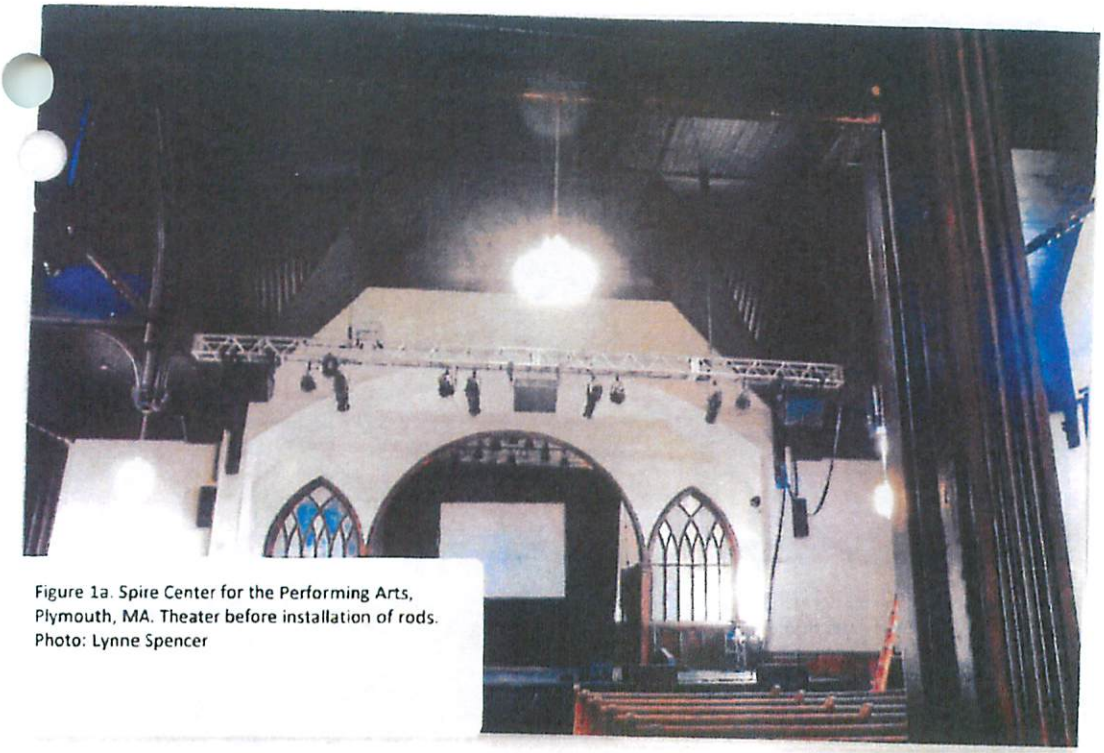


Figure 1a. Spire Center for the Performing Arts, Plymouth, MA. Theater before installation of rods. Photo: Lynne Spencer

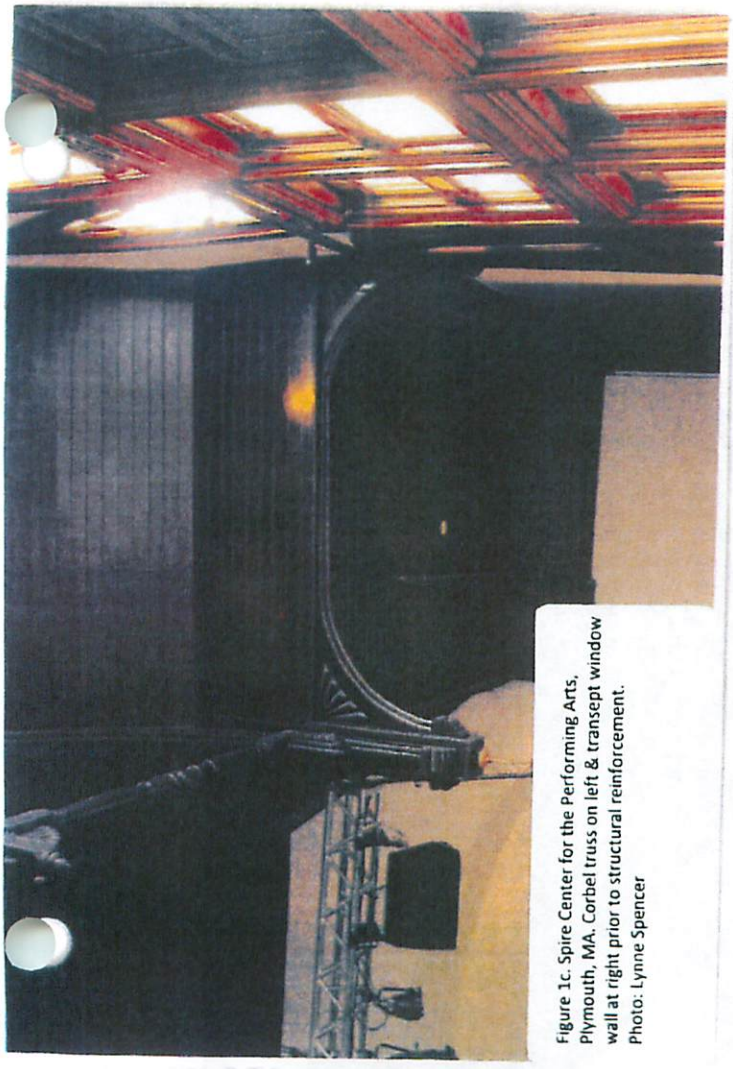


Figure 1c. Spire Center for the Performing Arts, Plymouth, MA. Corbel truss on left & transept window wall at right prior to structural reinforcement. Photo: Lynne Spencer

Figure 4a. Spire Center for the Performing Arts, Plymouth, MA. Tension rods located perpendicular to lighting support. Photo: Lynne Spencer

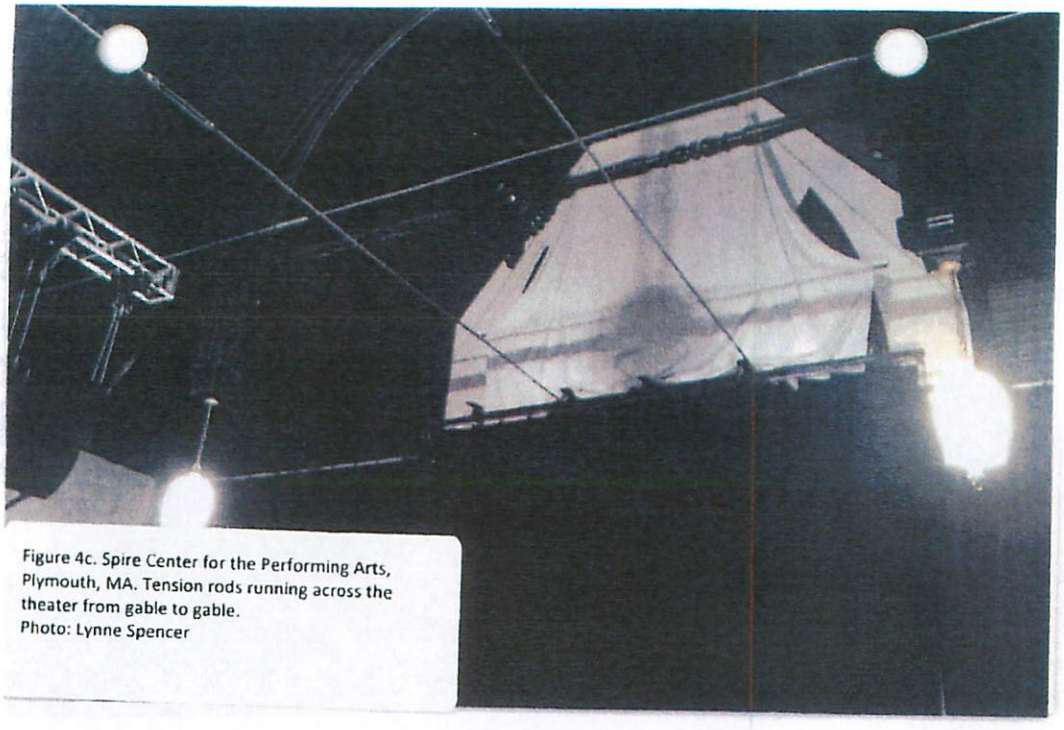


Figure 4c. Spire Center for the Performing Arts, Plymouth, MA. Tension rods running across the theater from gable to gable.
Photo: Lynne Spencer

Figure 4b. Spire Center for the Performing Arts, Plymouth, MA. View towards theater balcony with tension rod plates mounted to wall.
Photo: Lynne Spencer

Figure 5a. Spire Center for the Performing Arts, Plymouth, MA. View north of portion of cupola truss and its tie rod supporting the cupola prior to reinforcement.
Photo: Lynne Spencer

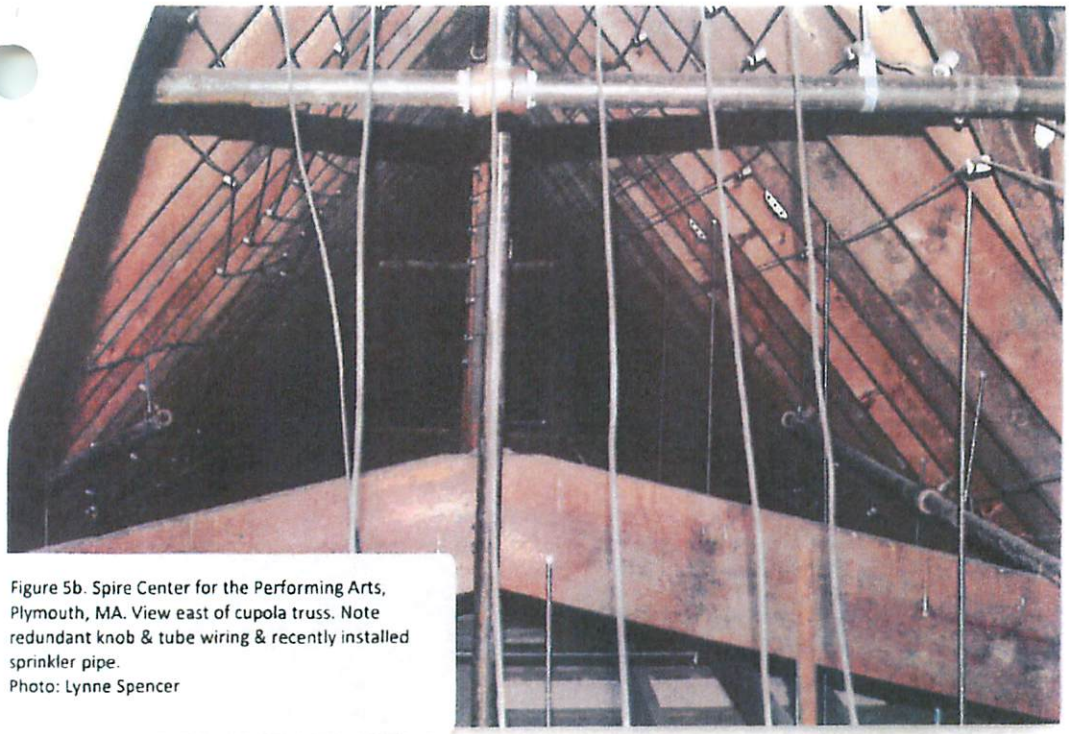


Figure 5b. Spire Center for the Performing Arts, Plymouth, MA. View east of cupola truss. Note redundant knob & tube wiring & recently installed sprinkler pipe.
Photo: Lynne Spencer

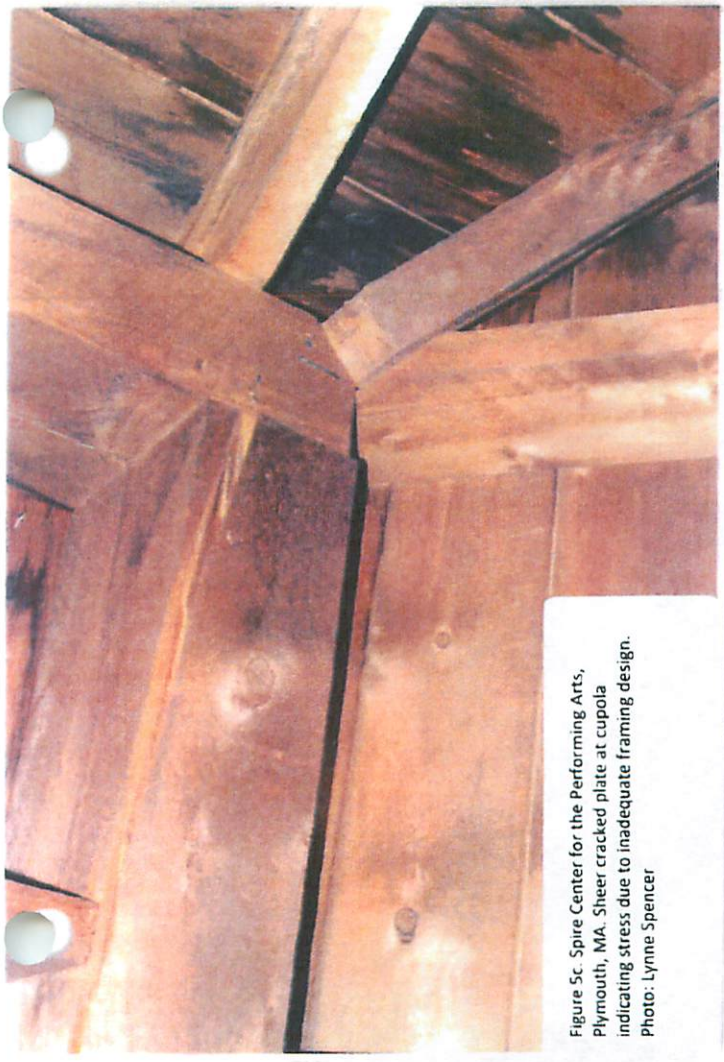


Figure 5c. Spire Center for the Performing Arts, Plymouth, MA. Sheer cracked plate at cupola indicating stress due to inadequate framing design.
Photo: Lynne Spencer

Figure 5d. Spire Center for the Performing Arts, Plymouth, MA. Corresponding stress crack seen at lower right.
Photo: Lynne Spencer

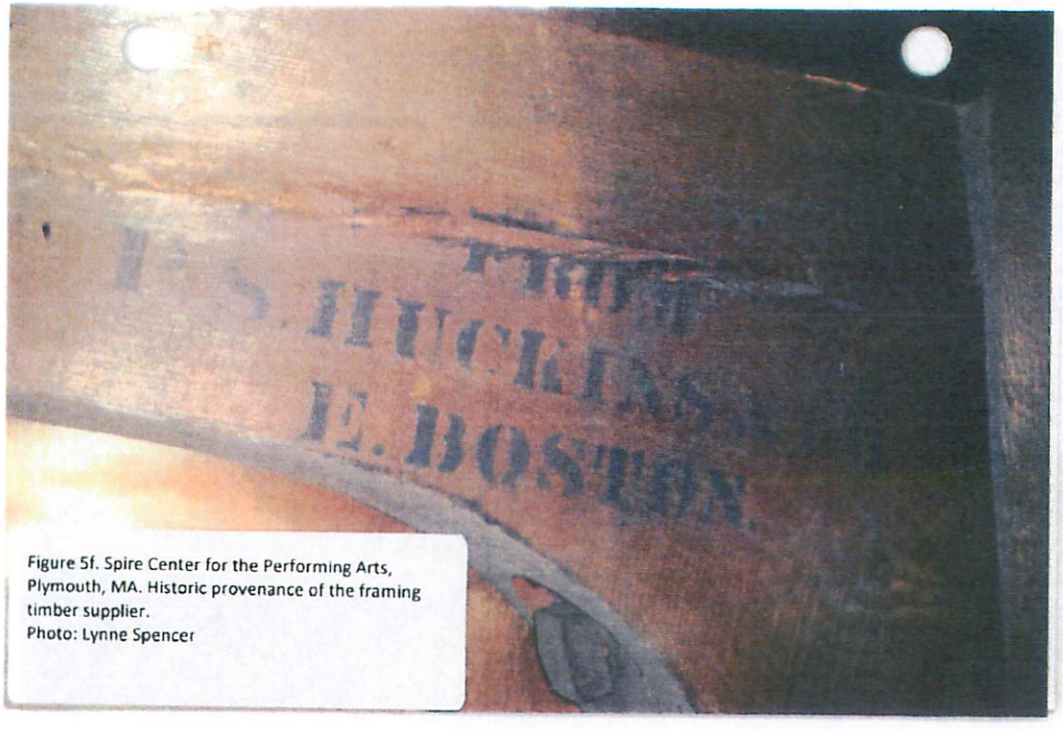


Figure 5f. Spire Center for the Performing Arts, Plymouth, MA. Historic provenance of the framing timber supplier.
Photo: Lynne Spencer

Figure 5g. Spire Center for the Performing Arts, Plymouth, MA. Work in progress on supplementary reinforcement for cupola truss.
Photo: Lynne Spencer

Figure 5e. Spire Center for the Performing Arts, Plymouth, MA. Exploratory in progress at cupola framing.
Photo: Lynne Spencer

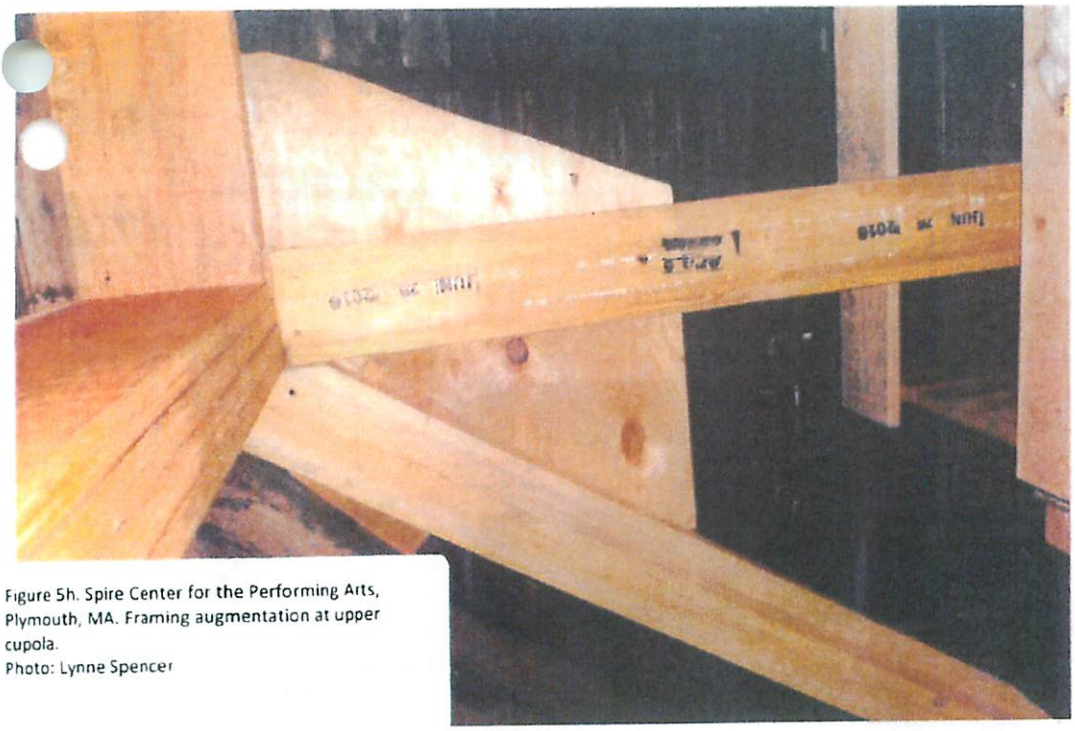
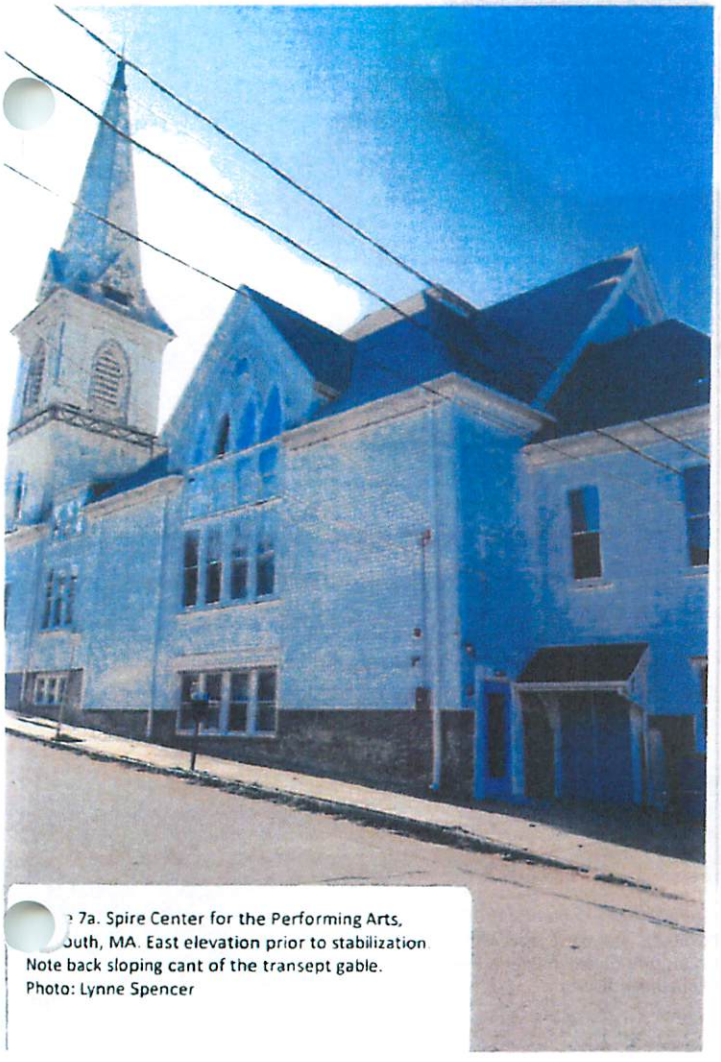


Figure 5h. Spire Center for the Performing Arts, Plymouth, MA. Framing augmentation at upper cupola.
Photo: Lynne Spencer



7a. Spire Center for the Performing Arts, outh, MA. East elevation prior to stabilization. Note back sloping cant of the transept gable.
Photo: Lynne Spencer

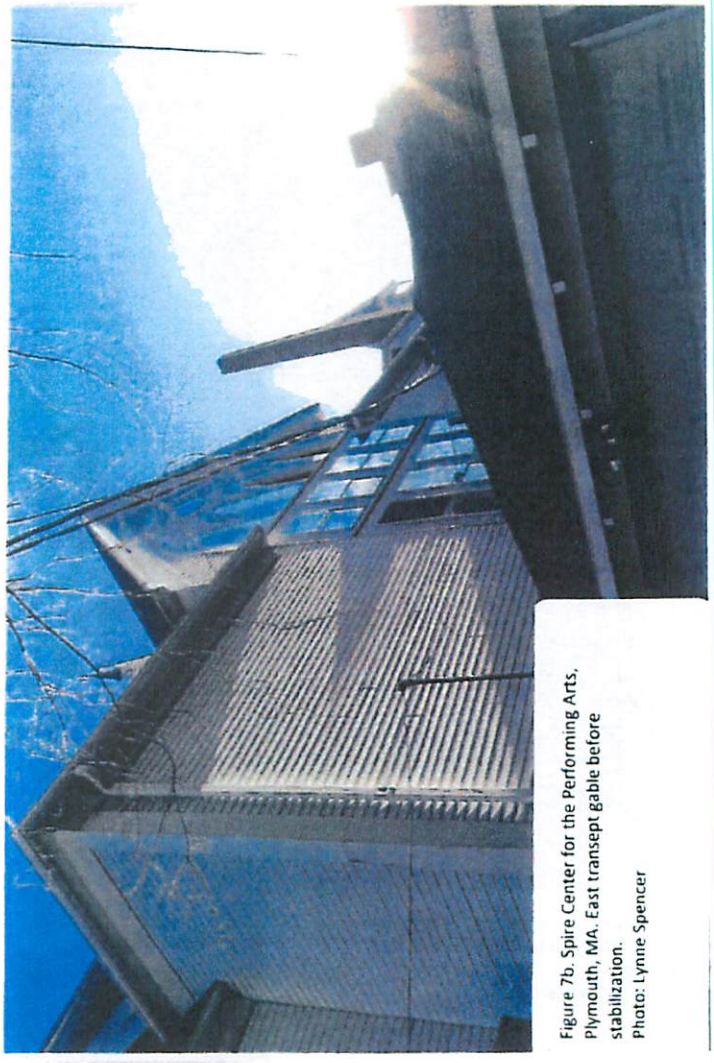


Figure 7b. Spire Center for the Performing Arts, Plymouth, MA. East transept gable before stabilization.
Photo: Lynne Spencer

Figure 7c. Spire Center for the Performing Arts, Plymouth, MA. West transept gable - exploratory investigation of structural conditions.
Photo: Lynne Spencer

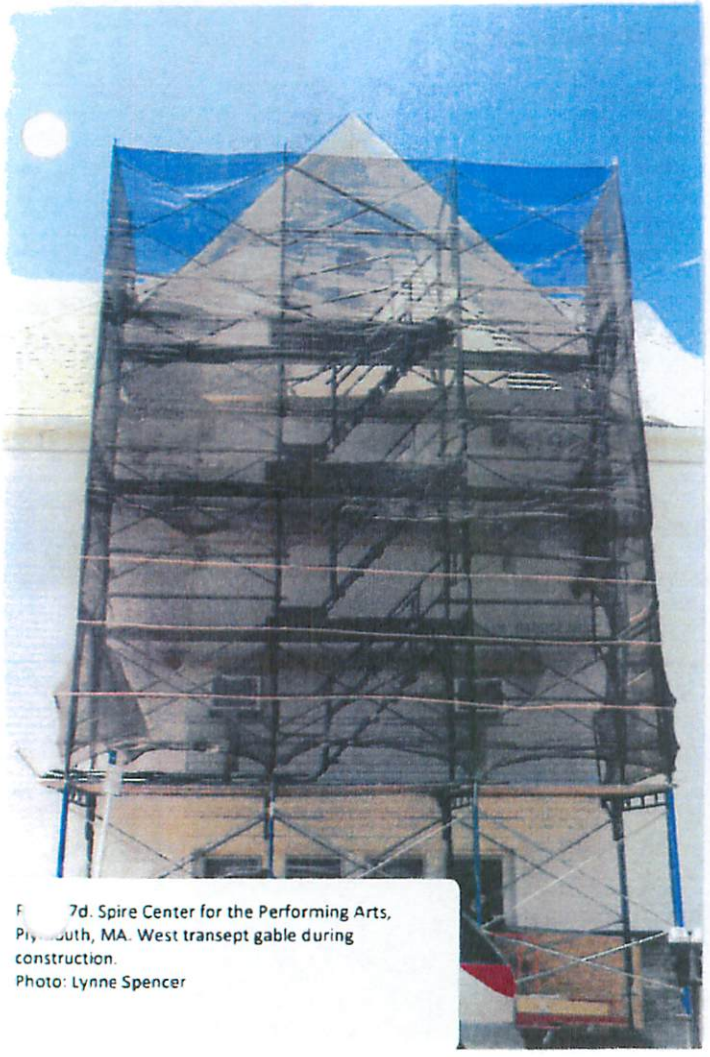


Figure 7d. Spire Center for the Performing Arts, Plymouth, MA. West transept gable during construction.
Photo: Lynne Spencer

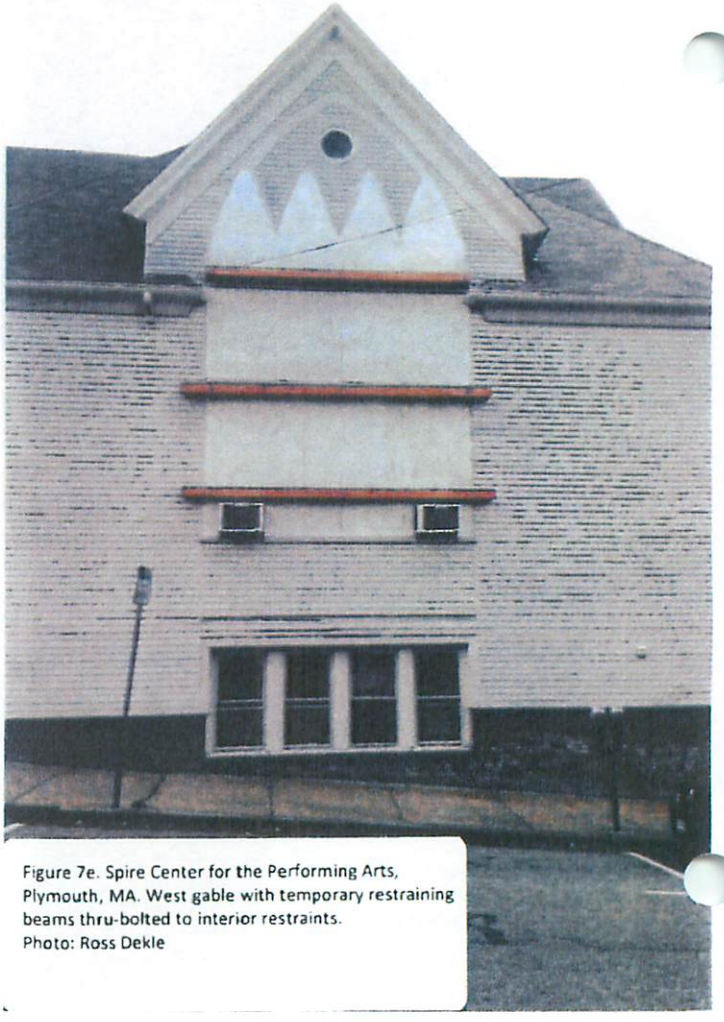


Figure 7e. Spire Center for the Performing Arts, Plymouth, MA. West gable with temporary restraining beams thru-bolted to interior restraints.
Photo: Ross Dekle

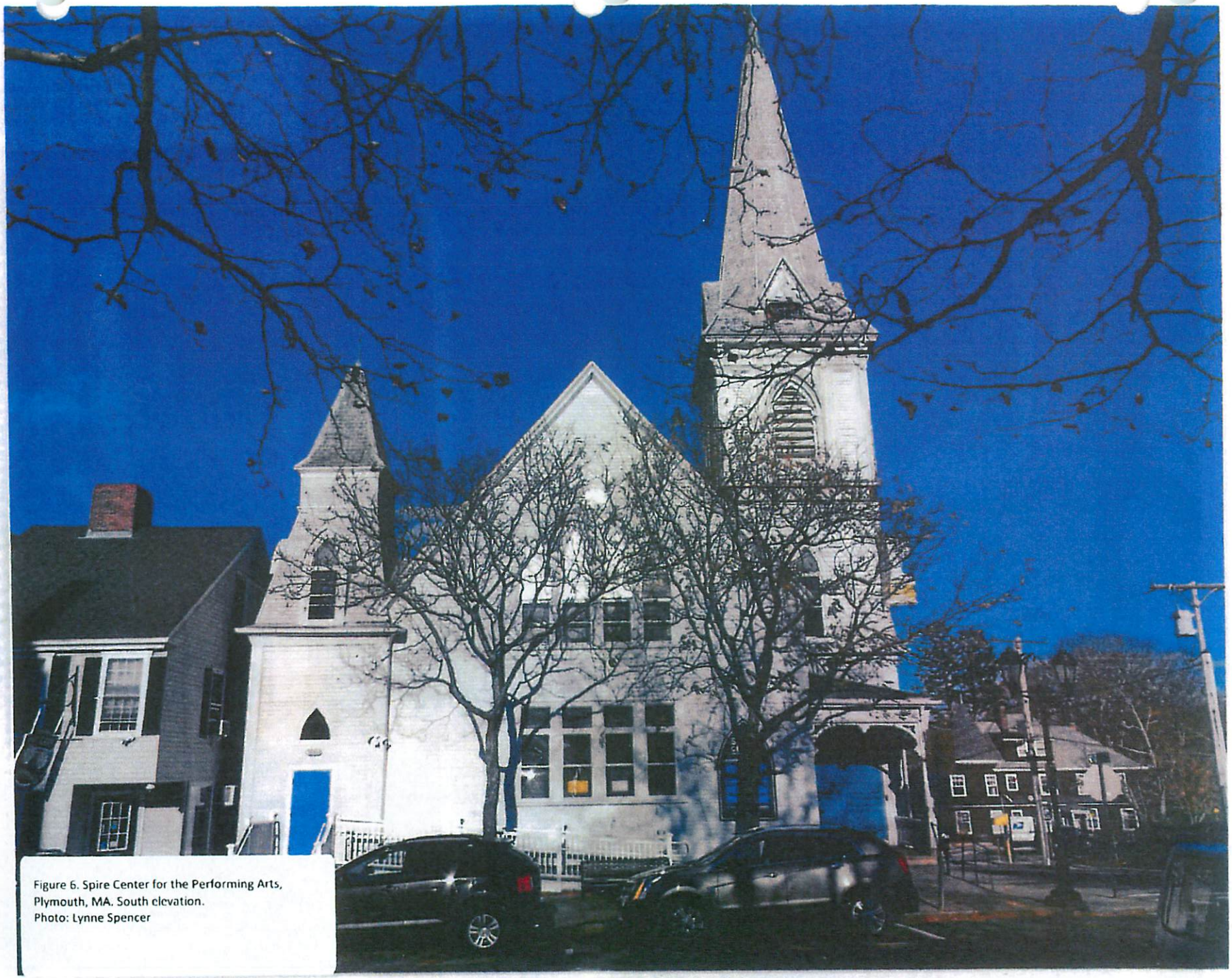


Figure 6. Spire Center for the Performing Arts, Plymouth, MA. South elevation.
Photo: Lynne Spencer

Figure 7. Spire Center for the Performing Arts, Plymouth, MA. East elevation.
Photo: Lynne Spencer

2017 00017226
Bk: 48159 Pg: 251 Page: 1 of 16
Recorded: 03/01/2017 10:39 AM
ATTEST: John R. Buckley, Jr. Register
Plymouth County Registry of Deeds

PRESERVATION RESTRICTION AGREEMENT between the COMMONWEALTH OF MASSACHUSETTS by and through the MASSACHUSETTS HISTORICAL COMMISSION and the TOWN OF PLYMOUTH and GREATER PLYMOUTH PERFORMING ARTS CENTER, INC.

The parties to this Agreement are the Commonwealth of Massachusetts, by and through the Massachusetts Historical Commission located at the Massachusetts Archives Building, 220 Morrissey Boulevard, Boston, Massachusetts 02125, hereinafter referred to as the Commission, and the Town of Plymouth, located at 11 Lincoln Street, Plymouth, Massachusetts 02360 and Greater Plymouth Performing Arts Center, Inc., located at 110 Fairview Lane, Plymouth, MA 02360, are sometimes collectively referred to herein as the "Grantors."

WHEREAS, the Town of Plymouth is the owner in fee simple of certain real property with improvements thereon known as the Memorial Methodist Episcopal Church (the Spire Center for the Performing Arts) as described in a deed dated 12/04/2012, from Beis Jacob Society of Plymouth to the Town of Plymouth, recorded with the Plymouth Registry of Deeds, Book 42340, Page 63, and which is located at 25 ½ Court Street, Plymouth, Massachusetts 02360, hereinafter referred to as the "Premises." The Premises is also described in Exhibit A, a full legal boundary description from deed cited above, and shown in Exhibit B, a legal plot plan, also referenced in the deed cited above, attached hereto and incorporated herein by reference; and

WHERAS, Greater Plymouth Performing Arts Center, Inc. has entered into a lease with the Town of Plymouth dated March 5, 2013 (the "Lease") for the Premises listed above. Said Lease is attached hereto as Exhibit C and incorporated herein by reference, and;

WHEREAS, the Premises includes, but is not limited to, the following: a wood frame building, built in the Gothic Revival Style. There is a square, three storied tower, crowned with a broach spire, at the corner of Court and Brewster Streets. The main entrance is through a Queen Anne styled porch fronting the tower. While the plan of the sanctuary is that of an open auditorium, unencumbered by columns, the impression of a cross-shaped church is given by the roof framing. The complex roof framing forms a flat-topped hip roof, intersected by a gable roof running front to back and the window dormers on the sides. A ventilator cupola sits on top of the flat portion. A rear wing, as wide as the gabled roof, has its own hipped roofs rising to a flat roof at the base of the rear gable; and is also shown as Parcel 017-000-145-002 on the Assessor's Map attached as Exhibit D hereto and incorporated herein by reference; and

Return to: Tiffany Park
Town of Plymouth
11 Lincoln St.
Plymouth, MA 02360

WHEREAS, the Grantors wish to impose certain restrictions, obligations and duties upon themselves as the owner and lessee of the Premises and on the successors to its right, title and interest therein, with respect to maintenance, protection, and preservation of the Premises in order to protect the architectural, archaeological and historical integrity thereof, as set forth in Article 16A that was passed in the 2012 Fall Annual Town Meeting, attached hereto and incorporated herein by reference as Exhibit E; and

WHEREAS, the Premises is significant for its architecture, archaeology and/or associations, and was listed in the State Register of Historic Places on 07/31/1995 as a contributing resource to the Plymouth Historic District, a Local Historic District, and therefore qualifies for a preservation restriction under M.G.L., Chapter 184, section 32; and

WHEREAS, the preservation of the Premises is important to the public for the enjoyment and appreciation of its architectural, archaeological and historical heritage and will serve the public interest in a manner consistent with the purposes of M.G.L. Chapter 184, sections 31, 32, and 33 hereinafter referred to as the Act; and

WHEREAS, the Commission is a government body organized under the laws of the Commonwealth of Massachusetts and is authorized to accept these preservation restrictions under the Act;

NOW, THEREFORE, for good and valuable consideration, the Grantors convey to the Commission the following preservation restrictions, which shall apply in Perpetuity to the Premises.

PURPOSE

It is the Purpose of these preservation restrictions to ensure the preservation of those characteristics which contribute to the architectural, archaeological and historical integrity of the Premises which have been listed in the National and/or State Registers of Historic Places, under applicable state and federal legislation. Characteristics which contribute to the architectural, archaeological and historical integrity of the Premises include, but are not limited to, the artifacts, features, materials, appearance, and workmanship of the Premises, including those characteristics which originally qualified the Premises for listing in the National and/or State Registers of Historic Places.

TERMS

The terms of the Agreement are as follows:

1. Maintenance of Premises: The Grantors agree to assume the total cost of continued maintenance, repair and administration of the Premises so as to preserve the characteristics which contribute to the architectural, archaeological and historical integrity of the Premises in a manner satisfactory to the Commission according to the Secretary of the Interior's "Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings" (36

CFR 67 and 68), as these may be amended from time to time. The Grantors may seek financial assistance from any source available to it. The Commission does not assume any obligation for maintaining, repairing or administering the Premises.

2. Inspection: The Grantors agree that the Commission may inspect the Premises from time to time upon reasonable notice to determine whether the Grantors are in compliance with the terms of this Agreement.

3. Alterations: The Grantors agree that no alterations shall be made to the Premises, including the alteration of any interior, unless (a) clearly of minor nature and not affecting the characteristics which contribute to the architectural, archaeological or historical integrity of the Premises, or (b) the Commission has previously determined that it will not impair such characteristics after reviewing plans and specifications submitted by the Grantors, or (c) required by casualty or other emergency promptly reported to the Commission. Ordinary maintenance and repair of the Premises may be made without the written permission of the Commission. For purposes of this section, interpretation of what constitutes alterations of a minor nature and ordinary maintenance and repair is governed by the Restriction Guidelines which are attached to this Agreement and hereby incorporated by reference.

4. Notice and Approval: Whenever approval by the Commission is required under this restriction, Grantors shall request specific approval by the Commission not less than (30) days prior to the date Grantor intends to undertake the activity in question. A request for such approval by the grantors shall be reasonably sufficient as a basis for the Commission to approve or disapprove the request. The notice shall describe the nature, scope, design, location, timetable and any other material aspect of the proposed activity in sufficient detail to permit the Commission to make an informed judgment as to its consistency with the purposes of this Preservation Restriction. Within (30) days of receipt of Grantors' reasonably sufficient request for said approval, the Commission shall, in writing, grant or withhold its approval, or request additional information relevant to the request and necessary to provide a basis for its decision. However, should the Commission determine that additional time is necessary in order to make its decision the Commission shall notify the Grantors. The Commission's approval shall not be unreasonably withheld, and shall be granted upon a reasonable showing that the proposed activity shall not materially impair the Purpose of this Agreement. Failure of the Commission to make a decision within sixty (60) days from the date on which the request is accepted by the Commission or notice of a time extension is received by the Grantors shall be deemed to constitute approval of the request as submitted, so long as the request sets forth the provisions of this section relating to deemed approval after the passage of time.

5. Assignment: The Commission may assign this Agreement to another governmental body or to any charitable corporation or trust among the purposes of which is the maintenance and preservation of historic properties only in the event that the Commission should cease to function in its present capacity.

6. Validity and Severability: The invalidity of M.G.L. c. 184 or any part thereof shall not affect the validity and enforceability of this Agreement according to its terms. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement.

7. Recording: The Grantor agrees to record this Agreement with the appropriate Registry of Deeds and file a copy of such recorded instrument with the Commission.

8. Archaeological Activities: The conduct of archaeological activities on the Premises, including without limitation, survey, excavation and artifact retrieval, may occur only following the submission of an archaeological field investigation plan prepared by the Grantor and approved in writing by the State Archaeologist of the Massachusetts Historical Commission (M.G.L. Ch.9, Section 27C, 950 CMR 70.00).

9. Enforcement: This Restriction shall be a binding servitude, and shall run with the land and be binding upon the Town of Plymouth, its heirs, successors, transferees, agents and assigns, and shall be binding upon Greater Plymouth Performing Arts Center, Inc., its heirs, successors, transferees, sub lessees, agents and assigns for the term of the Lease or any subsequent lease or other arrangement under which it holds property rights to the Premises. The restrictions, stipulations, and covenants contained herein shall be inserted by the Town of Plymouth and Greater Plymouth Performing Arts Center, Inc., their heirs, successors, transferees, and assigns, verbatim or by express reference, in any deed or other legal instrument by which it divests itself of either the fee simple title or any lesser estate in the Premises, or any part thereof. The Commission shall have the right to prevent and correct violations of the terms of this preservation restriction. If the Commission, upon inspection of the Premises, finds what appears to be a violation, it may exercise its discretion to seek injunctive relief in a court having jurisdiction. Except where the Commission determines that an ongoing or imminent violation will irreversibly diminish or impair the cultural, historical and/ or architectural importance of the Premises, the Commission shall give the Grantors written notice of the violation and allow thirty (30) calendar days to correct the violation before taking any formal action, including, but not limited to, legal action. If a court, having jurisdiction, determines that a violation exists or has occurred, the Commission may seek to obtain an injunction to stop the violation, temporarily or permanently. A court may also issue a mandatory injunction requiring the Grantors to restore the Premises to a condition that would be consistent with the preservation purposes of the grant from the Massachusetts Preservation Projects Fund and the Massachusetts Historical Commission. In any case where a court finds that a violation has occurred, the court may require the Grantors to reimburse the Commission and the Commonwealth's Attorney General for all the Commonwealth's expenses incurred in stopping, preventing, and/ or correcting the violation, including, but not limited to, reasonable attorney's fees. The failure of the

Commission to discover a violation or to take immediate action to correct a violation shall not bar it from doing so at a later time.

10. Other Provisions: None applicable.

The burden of these restrictions enumerated in paragraphs 1 through 10, inclusive, shall run with the land and is binding upon future owners of an interest therein.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 24th day of January, 2017

Town of Plymouth

By: _____
Name: Kenneth A. Tavares
Title: Chairman, Board of Selectmen

COMMONWEALTH OF MASSACHUSETTS

Plymouth, ss.

On this 24th day of January, 2017, before me, the undersigned notary public, personally appeared Kenneth Tavares, proved to me through satisfactory evidence of identification, which was (a current driver's license) (a current U.S. passport) (my personal knowledge of the identity of the principal), to be the person whose name is signed on the preceding or attached document, and acknowledged to me that s/he signed it voluntarily for its stated purposes.

_____
Notary Public Christopher Badot
My Commission Expires 4/10/23

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 23rd day of December, 2016.

Greater Plymouth Performing Arts Center, Inc.

By: _____
Name: Robert L. Hollis Jr.
Title: President

COMMONWEALTH OF MASSACHUSETTS

Plymouth,ss.

On this 23rd day of December, 2016, before me, the undersigned notary public, personally appeared Robert L. Hollis Jr., proved to me through satisfactory evidence of identification, which was my personal knowledge of the identity of the principal, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purposes.

_____
Liana E. Patton
Notary Public
My Commission Expires: 09/24/2021

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 27 day of December, 2016.

Greater Plymouth Performing Arts Center, Inc.

By: _____
Name: Patricia Gorman
Title: Treasurer

COMMONWEALTH OF MASSACHUSETTS

Plymouth, ss.

On this 27 day of December, 2016, before me, the undersigned notary public, personally appeared Patricia Gorman, proved to me through satisfactory evidence of identification, which was (a current driver's license) (a current U.S. passport) (my personal knowledge of the identity of the principal), to be the person whose name is signed on the preceding or attached document, and acknowledged to me that s/he signed it voluntarily for its stated purposes.

_____
Notary Public Amy K. Kelly
My Commission Expires 3.9.2018

APPROVAL BY THE MASSACHUSETTS HISTORICAL COMMISSION

The undersigned hereby certifies that the foregoing preservation restrictions have been approved pursuant to Massachusetts General Laws, Chapter 184, section 32.

MASSACHUSETTS HISTORICAL COMMISSION

By Brona Simon
Brona Simon
Executive Director and Clerk
Massachusetts Historical Commission

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss.

On this 31st day of January, 2017 before me, the undersigned notary public, personally appeared Brona Simon, proved to me through satisfactory evidence of identification, which was ~~(a current driver's license)~~ ~~(a current U.S. passport)~~ (my personal knowledge of the identity of the principal), to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purposes.

Notary Public
Nancy Maida
Nancy maida
My Commission Expires January 25, 2019

RESTRICTION GUIDELINES

The purpose of the Restriction Guidelines is to clarify Paragraph Three of the Terms of the Preservation Restriction Agreement, which deals with alterations to the Premises. Under this Paragraph, prior permission from the Massachusetts Historical Commission is required for any major alteration. Alterations of a minor nature, which are part of ordinary maintenance and repair, do not require the Commission's prior review.

In an effort to explain what constitutes a minor alteration and what constitutes a major change, which must be reviewed by the Commission, the following list has been developed. By no means is this list comprehensive: it is only a sampling of some of the more common alterations, which may be contemplated by building owners.

PAINT

Minor - Exterior or interior hand scraping and repainting of non-decorative and non-significant surfaces as part of periodic maintenance.

Major - Painting or fully stripping decorative surfaces or distinctive stylistic features including murals, stenciling, wallpaper, ornamental woodwork, stone, decorative or significant original plaster.

WINDOWS AND DOORS

Minor - Regular maintenance including caulking, painting and necessary reglazing. Repair or in-kind replacement of existing individual decayed window parts.

Major - Wholesale replacement of units; change in fenestration or materials; alteration of profile or setback of windows as well as any level of stained glass window conservation/restoration. The addition of storm windows is also considered a major change; however, with notification it is commonly acceptable.

EXTERIOR

Minor - Spot repair of existing cladding and roofing including in-kind replacement of clapboards, shingles, slates, etc.

Major - Large-scale repair or replacement of cladding or roofing. Change involving inappropriate removal or addition of materials or building elements (i.e., removal of chimneys or cornice detailing; installation of architectural detail which does not have a historical basis); altering or demolishing building additions; spot repointing of masonry. Structural stabilization of the Premises is also considered a major alteration.

LANDSCAPE/OUTBUILDINGS

Minor - Routine maintenance of outbuildings and landscape including lawn mowing, pruning, planting, painting, and repair.

Major - Moving or subdividing buildings or Premises; altering of Premises; altering or removing significant landscape features such as gardens, vistas, walks, plantings; ground disturbance affecting archaeological resources.

WALLS/PARTITIONS

Minor - Making fully reversible changes (i.e., sealing off doors in situ, leaving doors and door openings fully exposed) to the spatial arrangement of a non-significant portion of the building.
Major - Creating new openings in walls or permanently sealing off existing openings; adding permanent partitions which obscure significant original room arrangement; demolishing existing walls; removing or altering stylistic features; altering primary staircases.

HEATING/AIR CONDITIONING/ELECTRICAL/PLUMBING SYSTEMS

Minor - Repair of existing systems.

Major - Installing or upgrading systems which will result in major appearance changes (i.e., dropped ceilings, disfigured walls or floors, exposed wiring, ducts, and piping); the removal of substantial quantities of original plaster or other materials in the course of construction.

Changes classified as major alterations are not necessarily unacceptable. Under the Preservation Restriction, such changes must be reviewed by the Commission and their impact on the historic integrity of the Premises assessed.

It is the responsibility of the owner of the Premises (Grantor) to notify the Commission in writing when any major alterations are contemplated. Substantial alterations may necessitate review of plans and specifications.

The intent of the Preservation Restriction is to enable the Commission to review proposed alterations and assess their impact on the integrity of the Premises, not to preclude future change. Commission staff will attempt to work with Grantors to develop mutually satisfactory solutions, which are in the best interests of the Premises.

Legal Boundary Description

A certain parcel of land with the buildings thereon situated on the Northeasterly side of Court Street, at its intersection with the Northwesterly side of Brewster Street in said Plymouth, more particularly bounded and described as follows:

NORTHWESTERLY:	by Lot 145 and a portion of Lot 145-1 as designated on the hereinafter referenced plan, 121.59 feet;
NORTHEASTERLY:	by Lot 145-1, 59.61 feet;
SOUTHEASTERLY:	by land of the Town of Plymouth, designated on said plan as "concrete sidewalk", 119.00 feet; and
SOUTHWESTERLY:	by land of the Town of Plymouth, 59.17 feet.

Said parcel contains 7144 square feet, more or less, and is designated as Lot 145-2 on a Certain plan entitled: "Plan of Land in Plymouth, Mass. Prepared for memorial Methodist Episcopal Church Society, Scale 1"=10', August 15, 1978, Delano & Keith, Associates Inc., 5 Sever Street, Plymouth, Mass.", which plan is duly recorded in Plymouth County Registry of Deeds, in Plan Book 20, Page 370. (See Exhibit B of this Agreement)

EXHIBIT A
Legal Boundary description taken from deed recorded 12/04/2012 in Plymouth County Registry of Deeds, Book 42340 Page 63

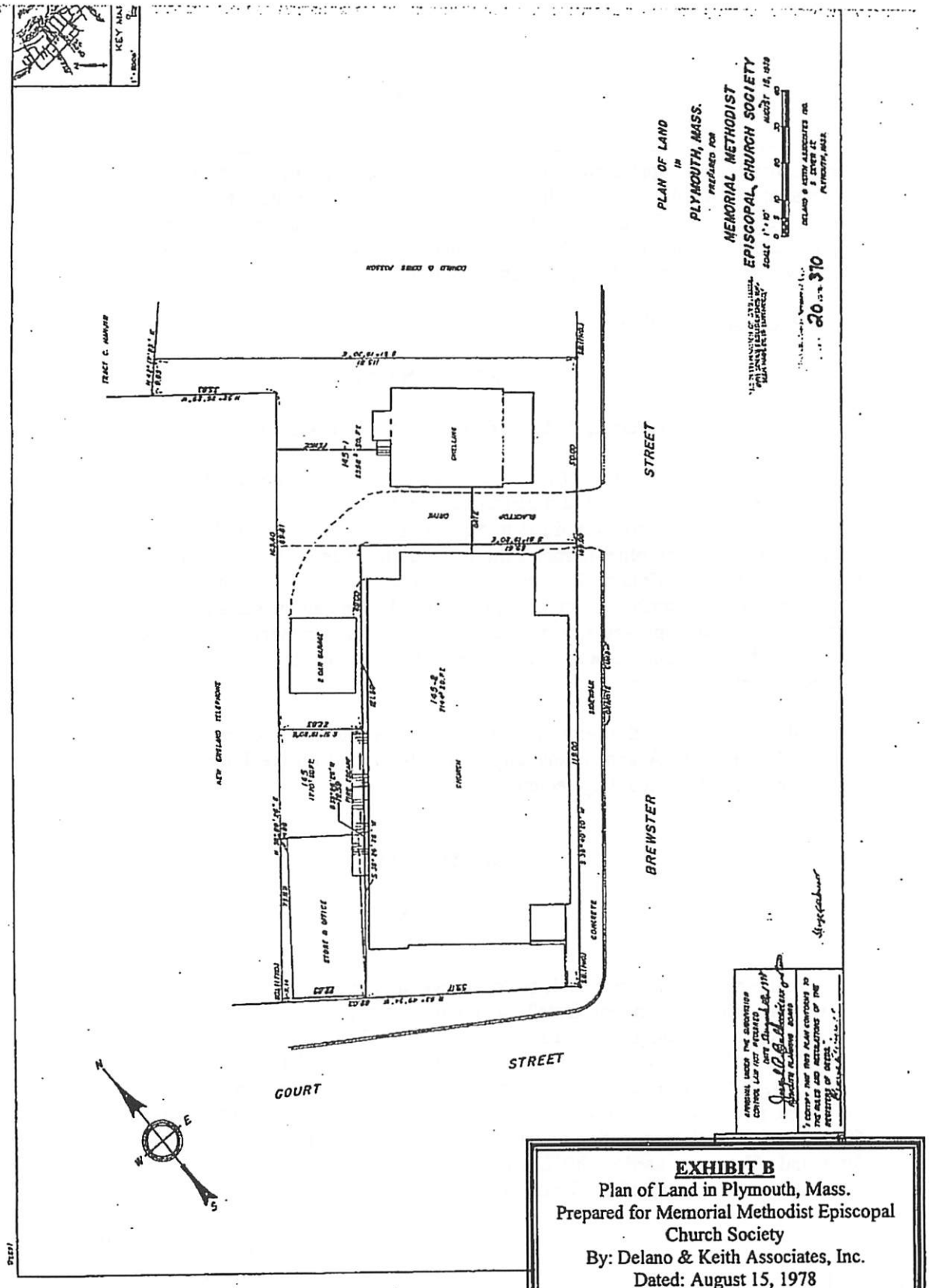


EXHIBIT B
Plan of Land in Plymouth, Mass.
Prepared for Memorial Methodist Episcopal Church Society
By: Delano & Keith Associates, Inc.
Dated: August 15, 1978
Recorded in Plymouth Registry of Deeds
Plan Book 20, Page 370.

GROUND LEASE

This Lease is made and executed on March 5, 2013, by and between the Town of Plymouth, a Massachusetts municipal corporation, acting by and through its Board of Selectmen, having an address of Plymouth Town Hall, 11 Lincoln Street, Plymouth, Massachusetts 02360 (the "Town") and Greater Plymouth Performing Arts Center, Inc., a non-profit corporation organized and existing under the laws of the Commonwealth of Massachusetts, having an address of 110 Fairview Lane, Plymouth, Massachusetts 02360 (the "Lessee").

The parties agree as follows:

SECTION ONE

DEMISE, DESCRIPTION, AND USE OF PREMISES

Town for and in consideration of the covenants and agreements hereinafter contained on the part of the Lessee, to be paid, kept and performed, hereby leases to Lessee and Lessee hereby leases from Town, for the term as defined in Section Two below and for the purposes set forth in Section Six and for no other purpose, those certain premises with the appurtenances, situated in Plymouth, Plymouth County, Massachusetts located at 25 ½ Court Street (the "Premises") and more particularly described in the schedule attached hereto and made a part hereof this Lease as Exhibit A and all improvements on the Premises and appurtenances to it, and the equipment, fixtures and furnishings located on or in the Premises on the first day of this Lease unless expressly excluded herein.

As used in this Lease, the term "Premises" refers to the real property and personal property described in Exhibit A and to any improvements located on the Premises from time to time during the term of this lease agreement.

SECTION TWO

TERM

The initial term of this Lease shall be for ninety- nine (99) years, commencing on February 15, 2013, (the "Commencement Date") and unless earlier terminated in accordance with the provisions hereof, ending on February 14, 2112 (the "Termination Date"). Lessee agrees that if renovation of the improvements has not commenced as defined in Section 14 below by August 15, 2013, the Town may elect to terminate this Lease upon sixty (60) days written notice to Lessee, provided however if the renovation of the improvements are commenced within such 60-day period, such termination notice shall be null and void and this Lease shall continue in full force and effect. As used in this Lease, the expression "term of this Lease" refers to the initial term and to any renewal of this Lease as provided below.

EXHIBIT C

Lease between the Town of Plymouth and Greater Plymouth Performing Arts Center, Inc.
Dated: March 5, 2013

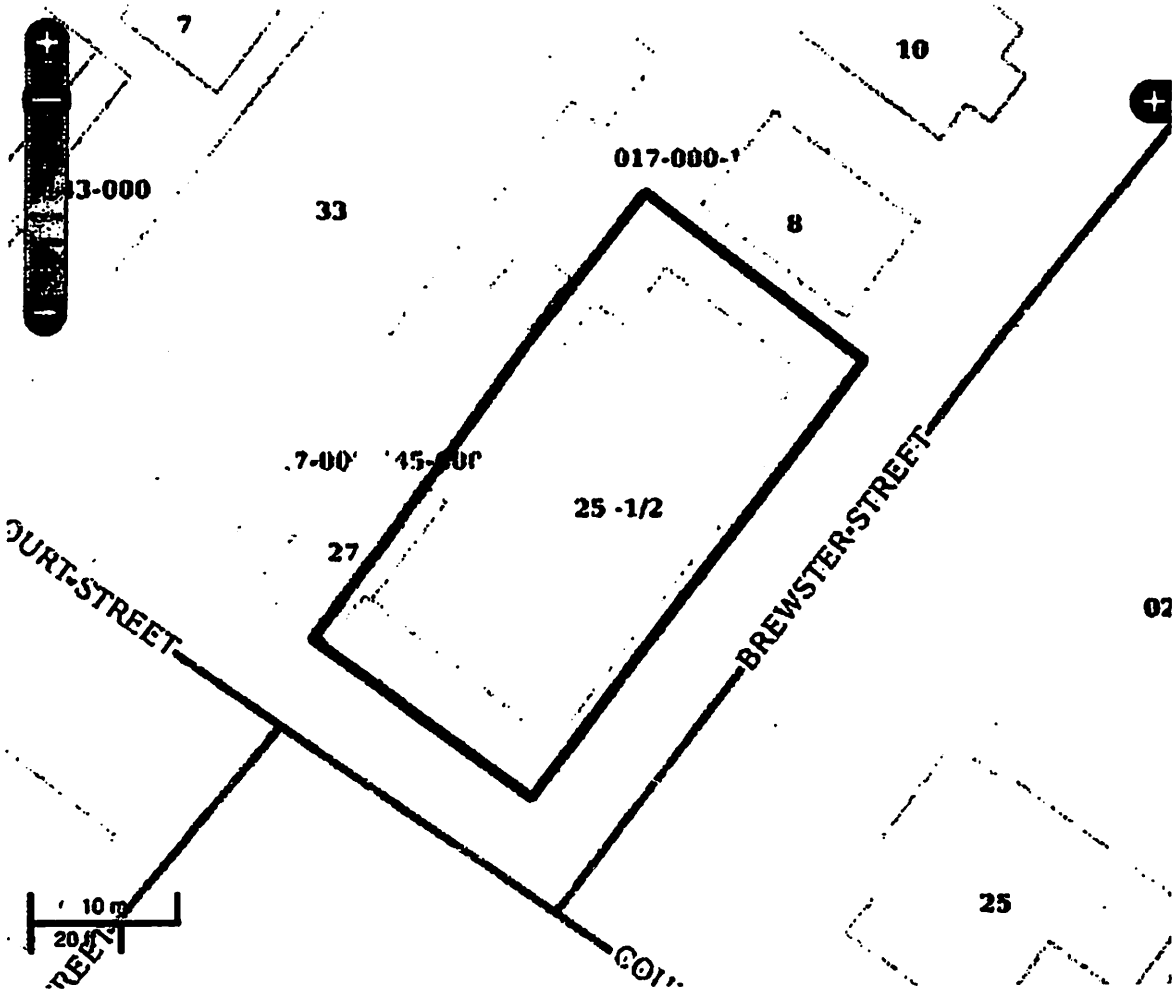


EXHIBIT D

Town of Plymouth

Tax Assessors Map

Parcel ID: 017-000-145-002

October 20, 2012 Town Warrant Article & Confirmation of Vote

ARTICLE 16A: Mr. Nassau moves that the town vote to authorize the Board of Selectmen to appropriate $365,000 to acquire by purchase for historic preservation purposes pursuant to G. L.c. 44B and also for the purposes of leasing and, to comply with G.L. c.44B, §12, conveyance of a historical restriction, on such terms and conditions as the Board of Selectmen deem appropriate, and to accept a deed to the Town of Plymouth of a fee simple interest to a parcel of land and the buildings thereon, commonly known as Congregation Beth Jacob Community Center which is also formally known as Plymouth's Methodist Episcopal Church located at 25 ½ Court Street, Plymouth shown on Assessor's Map 17 as Parcel 145-2, and further that the land shall be in the care, custody, management and control of the Board of Selectmen, and further to appropriate $285,000 for the installation of two ADA compliant bathrooms, fire emergency exit and fire sprinkler system on said premises; and that to meet this appropriation to transfer from the Community Preservation Historical Reserves the sum of $424,328 and from the Community Preservation Undesignated Fund Balance the sum of $225,672, for a total appropriation of $650,000, and further to authorize the Board of Selectmen to enter into a lease agreement for a term up to or in excess of 30 years with the Greater Plymouth Performing Arts Center, Inc. ("GPPAC") for the use of the building located on the premises, for such consideration, which may be nominal, and under such terms and conditions as the Board of Selectmen deems appropriate, which conditions shall include, but not limited to, the following: (1) a provision authorizing the Board of Selectmen to appoint a member to the GPPAC board of directors, for two-year terms, for the length of the lease; (2) a provision providing that the Town and its committees may use the building, based on availability, for meeting space; (3) a provision providing that Plymouth students shall be permitted to attend select GPPAC-sponsored play productions free of charge based upon availability; (4) and a provision negotiated by GPPAC and Congregation Beth Jacob allowing said congregation to use the premises for Rosh Hashanah and Yom Kippur holidays; and further to authorize the Board of Selectmen to grant to a governmental entity, a non-profit or charitable organization, a historical preservation restriction on said property meeting the requirements of G.L. c. 184

The Moderator call a recess at 9:50 AM
The Moderator returned the meeting to order at 10:14 AM

Mr. Howe moved the previous question. The motion PASSED.
On the main motion, on a roll call, the motion PASSED with 85 in favor and 32 in opposition.

EXHIBIT E
Confirmation of vote to purchase, renovate, lease and place a preservation restriction on the property formerly known as the Congregation Beth Jacob Community Center.