

HISTORIC AMERICAN BUILDING SURVEY
NEW TABERNACLE FOURTH BAPTIST CHURCH
HABS #SC-535

Location: 21 Elizabeth Street, Charleston, Charleston County, South Carolina. Located on the center of the property, the building faces north towards Elizabeth street and its south elevation is parallel to Charlotte Street.

Present Owner: Property is currently owned by the New Tabernacle Fourth Baptist Church.

Present Occupation: The members and staff of the New Tabernacle Fourth Baptist Church.

Present Use: A place of worship for the limited number of congregation still attending is on the first floor, and in the more modern attached building on the west side of the structure.

Significance: The New Tabernacle Fourth Baptist Church is significant to both Charleston's limited, early Gothic Revival architecture and the African American history of the city. The church, at its transition from St. Luke's to New Tabernacle Fourth Baptist, holds direct ties to the Reverend D.J. Jenkins; significant to African American history in the city because of his role in the establishment of the Jenkins Orphanage.

Part I. Historical Information

A. Physical History

1. Date constructed: 1859; sanctified in 1862 as St. Luke's Episcopal Church
2. Architect: Francis D. Lee; Created the original design that consisted of brick construction with an outer layer of stucco and a steeple in the Northwest Corner. The steeple was never built and the additional stucco layer was never applied because of the onset of the Civil War, which brought financial difficulties. ¹ However it appears the foundation for the tower was laid out. (See Figure 1)
3. Original and Subsequent Uses: The structure remains a church today. Originally, the structure was St. Luke's Episcopal church and was organized in 1858, which later united with St. Paul's (Radcliffeborough) in 1949. The building was purchased in 1950 and became the New Tabernacle Fourth Baptist church, which remains today. There was a proposal made in as an adaptive reuse project, to turn the church into a theater but was denied due to a lack of community support. ²
4. Builder: Patrick O'Donnell. The contractor moved to Charleston from Galway, Ireland and became a prominent builder in the 1850s. Especially as he began constructing the city's largest Italianate style house, known as the Patrick O'Donnell House, located at 21 King Street.³
5. Original Plans and Construction: Built in the shape of a Greek Cross, 100 feet by 80 feet, the Gothic style building has a single Gothic Window 37 feet high, on each side. According to the original plans, the building was to contain a tower in the northwest corner that was never built and the brickwork was to be stuccoed.⁴ The interior of the church was intended to accommodate about 1,200 worshippers. 102 pews were placed on the ground floor, an about thirty more pews were spread among the three galleries. According to newspaper reports, a centered octagonal dome with a skylight made of stained glass, was originally designed as well as, painted walls to replicate Bath Stone.⁵ The ribs and ceiling were intended to be grained, for the interior to give off a rich brown color.⁶ The church was unfinished by the time of the Civil War, therefore the contractor, Patrick O'Donnell, built the roof over the center hole in order for the church to be functional.⁷
6. Alterations and Additions: The church was struck by union gunfire in 1864, which penetrated the southeast corner of the roof. All of the interior belongings were removed once the occupation troops arrived. The damaged roof was not repaired until 1887, when the St. James Church in Philadelphia donated money. In August of 1885 the church suffered more trauma from a hurricane and again in 1886 during the earthquake. The interior elements of the church were replenished in 1892 when the church was gifted a super-alter, alter cross, and several brass vases. In 1905 a new organ was put in and in 1908 a soundboard was installed over the pulpit. After the New Tabernacle Fourth Baptist Church purchased the church, a new cornerstone was laid in 1952.⁸

Part II. Architectural Information

A. General Statement:

1. Architectural Character: Erected at the corner of Charlotte and Elizabeth the church was built in the Gothic Revival style. It is a rare and splendid example of this architectural movement in Charleston.

According to newspaper accounts by the time construction began the structure a certain sophistication and texturized surface. The arched windows and octagonal buttresses although more subtle than those of the high Gothic examples, do harken back to a certain Gothic sentiment. The church sits at the highest elevation on the entire peninsula.
2. Condition of Fabric: Incorrectly patched mortar work done with Portland Cement visible in countless places on the exterior. Vegetation is growing in several places, especially at higher elevations. Unblocked entryways allow rodents access to the basement/cistern area.

B. Description of Exterior:

1. Overall Dimensions: Greek cross plan 100' by 80' with a central dome rising 55' in height and spanning 50' in diameter.
2. Foundations: Masonry Foundation.
3. Walls-English bond (4-1) coursing, red brick with white mortar.Ten brick and ten mortar are equivalent to thirty inches. Beltcoursing is present at the level of the first floor, at the level of the water table. There are also several details of beltcoursing surrounding the windows and along the upper pilasters which denote the different roof lines across the building. The pilasters themselves start out as rectangular and change to an octagonal construction midway through.
4. Structural Systems Framing: The building is founded on load bearing brick masonry walls.
5. Openings
 - a. Doorways and Doors: There are two main doors on the western side of the church. Both sets of doors form a perfectly pointed arch, mimicking the shape of the windows. These doors are wooden and have an intricate wooden molding surrounding them. They are painted a vibrant red shade. There is another secondary entrance to the church on the northern side consisting of one red wooden door. There is a back entry to the church on the eastern side. This door, while in the pointed arch shaped, is painted a yellow ochre shade. The entry way to the cistern also occurs on the northern wall.
 - b. Windows: The prominent windows of the church occur on the four main sides and are in the typical Greek Revival style. The windows are in the shape of pointed arches and are sixteen feet wide and thirty feet tall. These windows are divided into six vertical sections and include elaborate wooden tracery to envelop the intricate stained glass designs. Now the stained glass is only visible from the inside, as the exterior portions have been covered with Lexan to protect the glass from harm. (See Figure 3, 4)

The secondary windows of the church are smaller and wooden framed, occurring on the northern and southern elevations. These windows are also in a pointed arch formation and have similar wooden tracery to those of the stained glass.

6. Roof: The roof is made of slate. The roof line engages in an intricate relationship with the beltcoursing of the bricks and offers a level of sophistication to the architecture. The gable roofs rise, in the main area of the church at a slope of approximately seven to twelve.
7. Cistern: A cistern lies underneath the northwestern area of the building and may have historically been used as part of the fire fighting system here in the city. (See Figure 2)

C. Description of Interior:

1. Floor plans: The interior full first floor of the church is divided into the typical central nave and two side aisles where the pews are located. This central space is dually rectilinear and octagonal in its division by columns, which are all connected by gothic arches and adjoining in the center of the domed ceiling. (See Figure 5) At the intersections of the fan tracery are circular plaster decorations in an almost floral impression.

There is a secondary level to the church interior which results in a balcony running the perimeter of the northern, western and southern sides of the church. The eastern wall is free of the balcony as it contains the altar and main stained glass

2. Flooring : The flooring in the sanctuary is a grey/beige tiling. Directly underneath where the pews are, the flooring is a darker grey tiling. In the stairways and balconies, the flooring is a dark pine, matching the altar rail and pews.

3. Wall and Ceiling Finish: The walls in the church were intended to look like stone and therefore have a cream or off white tone. The are made of lime plaster. The ceiling is an intricate pattern of arches intersecting with plastered detail, all coming together as one central round decorative object.(See Figure 6)

4. Openings: Doors and windows on the inside of the church appear the same as on the exterior and have wooden sills. However on the interior the pattern of stained glass is visible. The stained glass window on the eastern wall is the main stained glass window as it is situated behind the altar. It is a fine example of stained glass craftsmanship, and is painted glass with customized lead came. (See Figure 7). The stained glass windows on the southern, western and northern sides are not painted glass and have an abstract geometrical pattern. (See Figure 8)

5. Decorative Features and Trim: The interior is richly decorated. The balcony banisters feature an intricate pattern and gold inlays at the central portions. There are also golden floral designs at

each intersection of the balcony and a corresponding column. The organ is not original but is a central feature of the church. Each individual pipe has painted decoration and the wood surrounds are intricately carved. (See Figure 9)

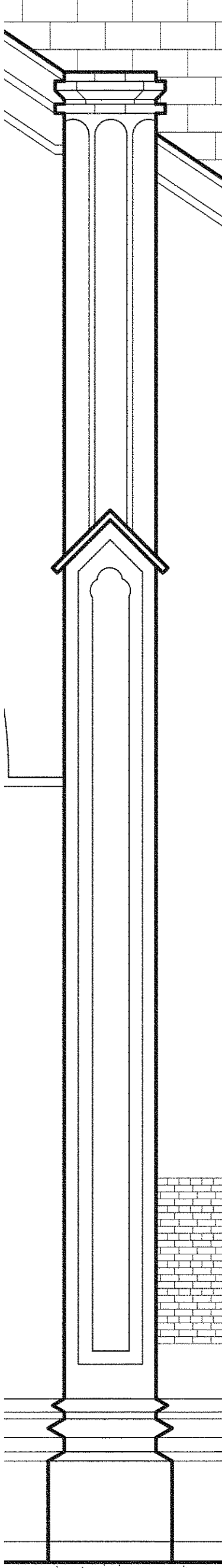
6. Hardware: The lighting fixtures of the building show its certain age, as the insertion of gas and then electrical wiring is clearly discernible.

7. Furniture: There are 102 pews in the church providing seating for 1200 congregants.⁹ The pews are a dark wood and match the corresponding pieces in the altar areas. The pulpit is quite unique in its two piece form: one, sits on the floor while the other, an almost cap like object, suspends from above. (See Figure 10)

8. Mechanical Equipment: The ventilation in the church occurs in the ceiling. The HVAC system for the building is located on the exterior northern side and the duct work runs through the basement/cistern. (See Figure 11, 12)

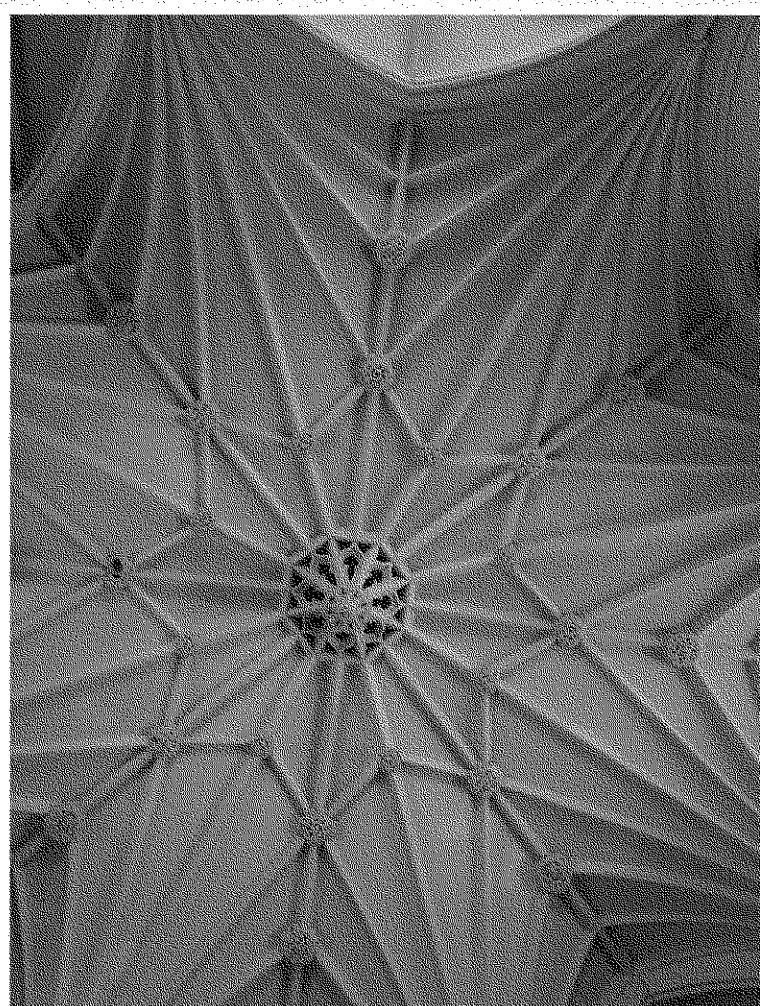
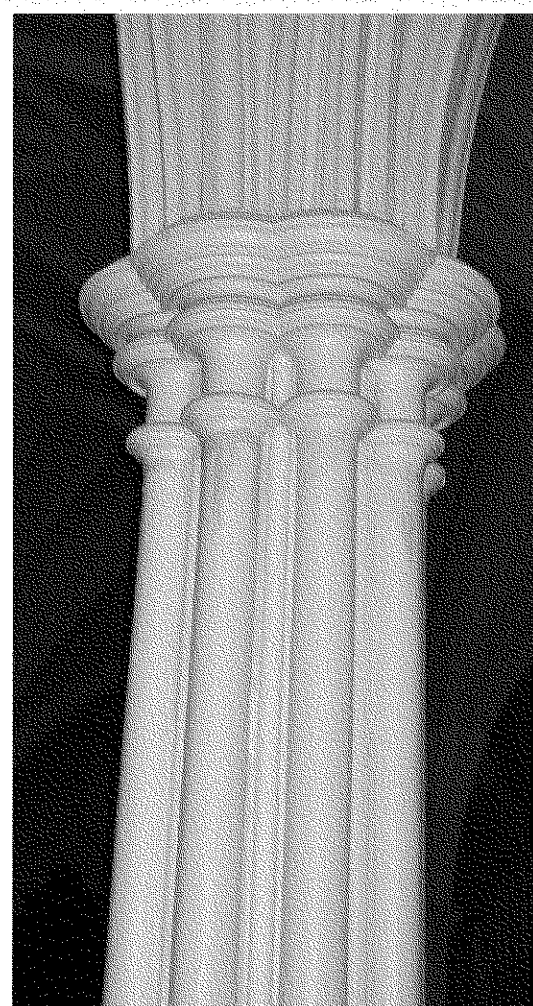
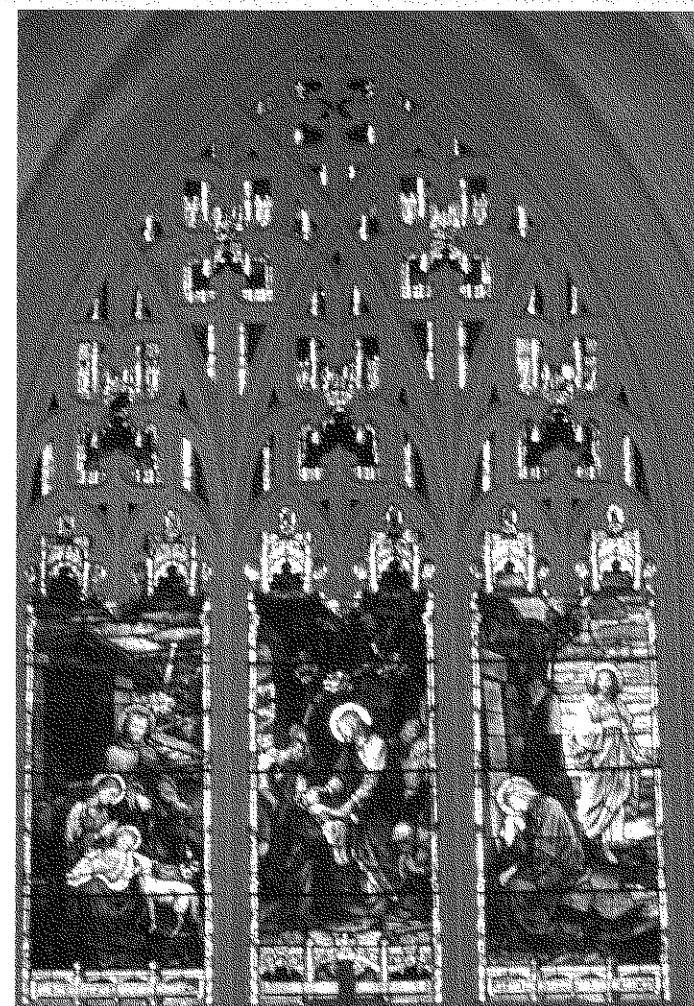
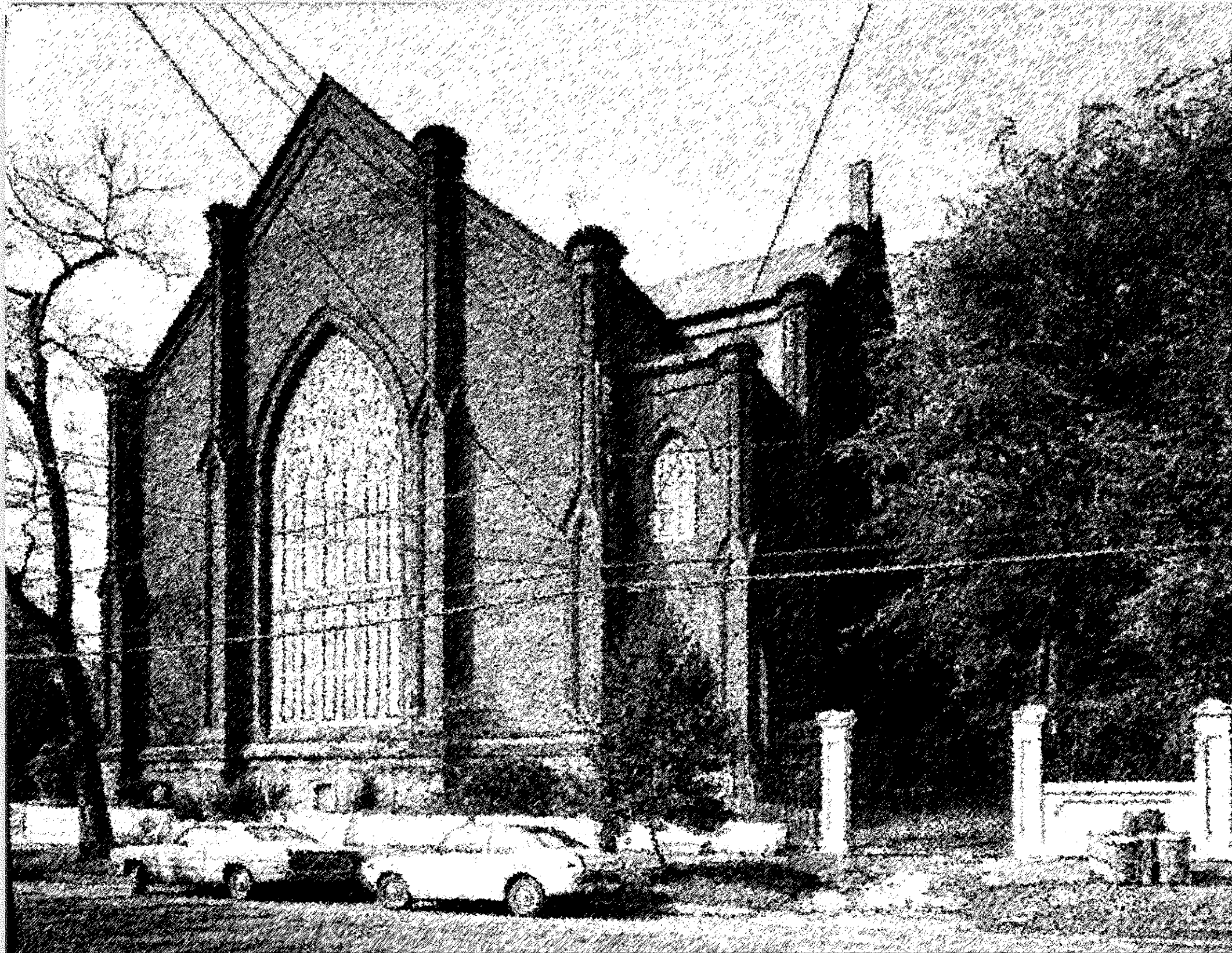
9. Condition of Interior: The staircase in the southeastern corner is entirely deteriorated. The three lower central panels of the stained glass window at the eastern wall of the church have been removed and are now covered with a red velvet cloth. Several floor markers have been removed and replaced with a non-matching material.

SHEET	TITLE	AUTHOR
Plans and Elevations		
1	Cover	
2	Plan 1	Watkins, Kunze, Neall
3	Plan 2	Ballantine, Salsbery, Spencer
4	Plan 3	Pigott, Gyure
5	Plan 4	Ward, McDermott, Person
6	Plan 5	Floyd, Hayes, Palomo, Bower
7	Exterior Elevation – North Wall	Ballantine, Salsbery, Spencer
8	Exterior Elevation – East Wall	McDermott, Person, Ward
9	Exterior Elevation – South Wall	Watkins, Kunzee, Beall
10	Interior Elevation – North Wall	Agid, Rivers, Geiger
11	Interior Elevation – South Wall	Pigott, Gyure
12	Interior Elevation – West Wall	Bower, Floyd, Palomo, Hayes
Details		
13	Reflected Ceiling Plan	McDermott
14	Center medallion	Palomo
15	Pulpit	Floyd
16	Organ	Bower
17	Balcony Railing and Spandrel	Agid
18	Railing Elevation	Rivers
19	Altar Stained Glass Window	Watkins and Ward
20	Aisle and Vestibule Stained Glass Window	Geiger
21	Front Door	Spencer
22	Added Window	Salsbery
23	Tablet 1	Gyure
24	Tablet 2	Person
25	Mortar Analysis North Elevation	Hayes
26	Mortar Analysis East Elevation	Kunze
27	Mortar Analysis South Elevation	Beall
28	Cistern	Ballentin
29	Tower Foundation	Orchard
30	Interior Door and Window	Hendricks



Documentary Drawings for New Tabernacle Fourth Baptist Church (Old St. Luke's Episcopal Church)

Charlotte and Elizabeth Street
Charleston, SC

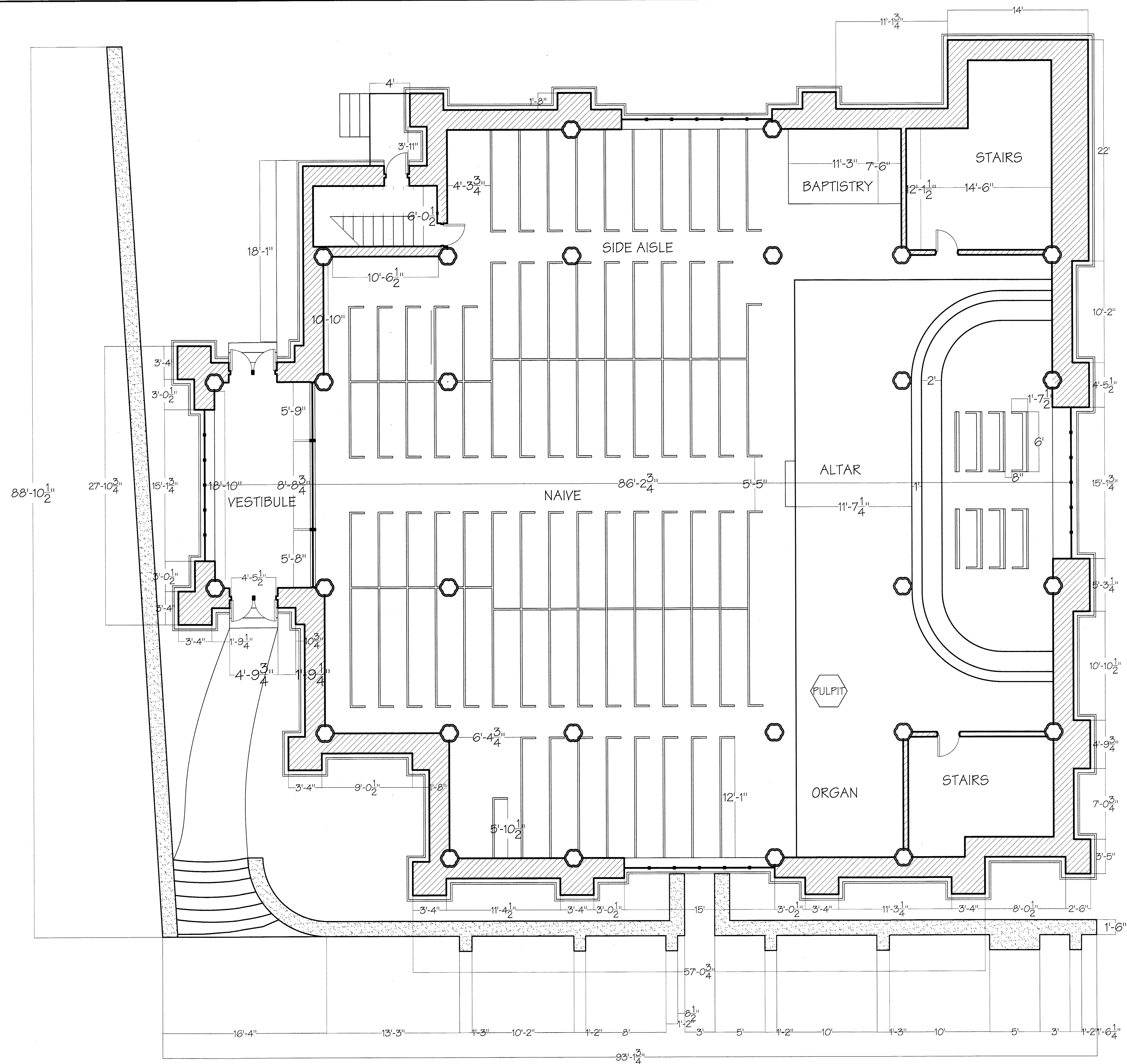


Prepared by the College of Charleston Historic Preservation
and Community Planning Program
HPCP 299 - Spring 2013
James L. Ward, Assistant Professor

MATERIALS
 EXTERIOR BRICK WALL
 CONCRETE WALL

GRAPHIC SCALE
 3/16"=1'0"

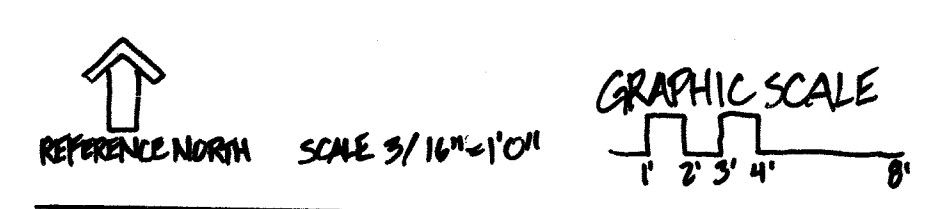
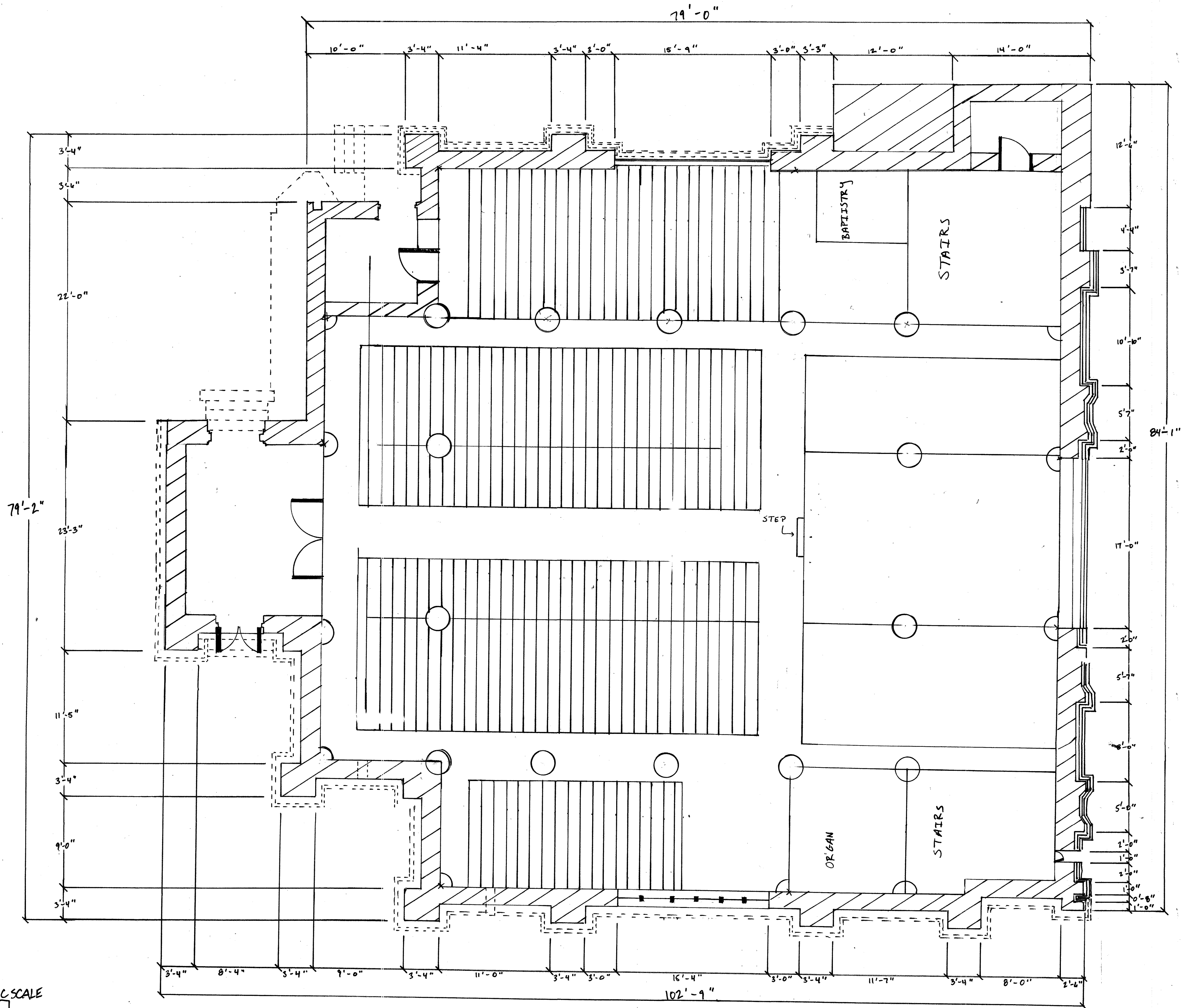
REFERENCE NORTH



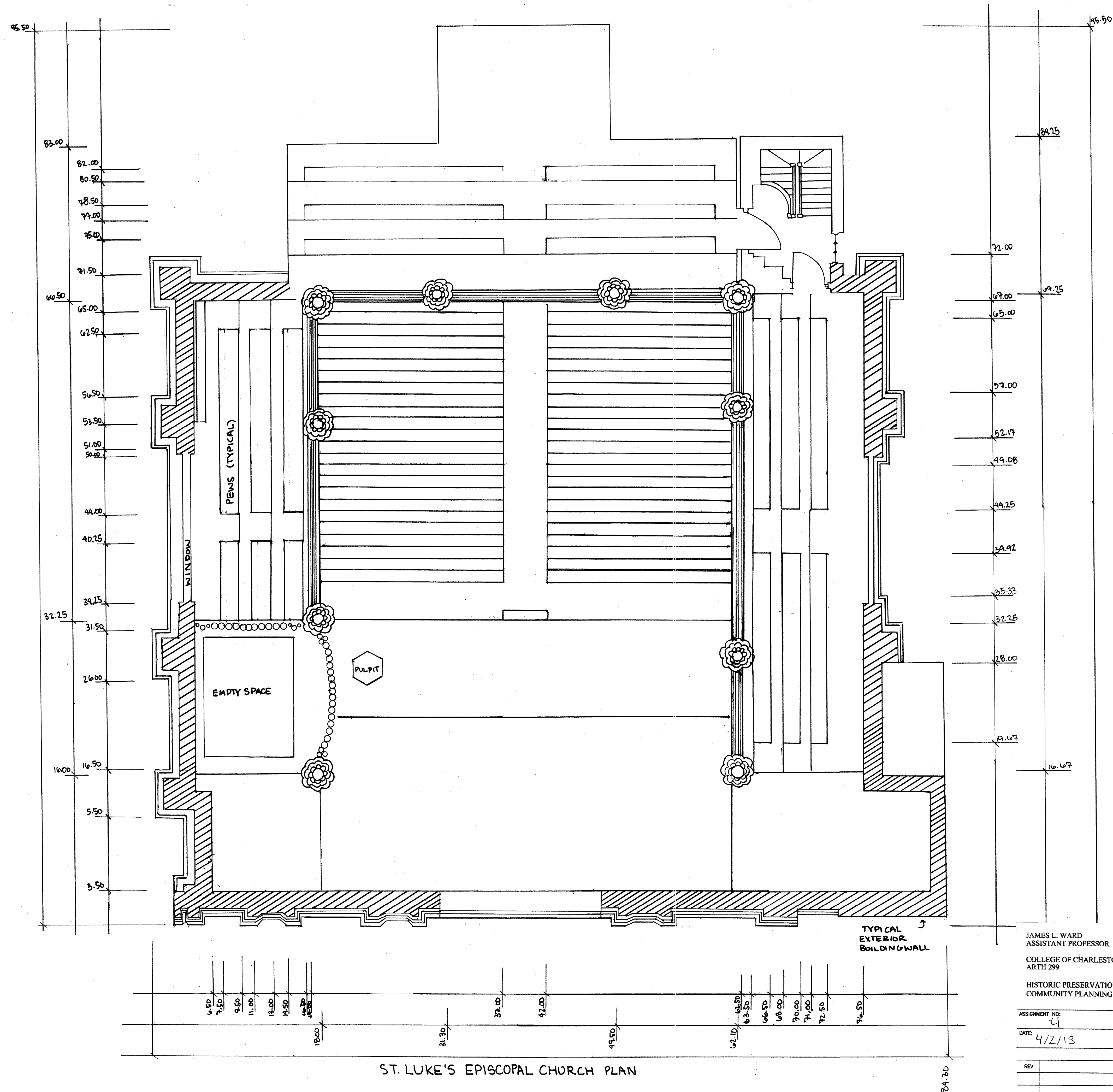
FIRST FLOOR PLAN

JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 399		PROJECT: NEW TABERNACLE FOURTH BAPTIST CHURCH	
HISTORIC PRESERVATION & COMMUNITY PLANNING		DRAWING TITLE: FIRST FLOOR PLAN	
ASSIGNMENT NO: 3		DRAWING PREPARED BY (TEAM/INDIVIDUAL): ALAINA WATKINS, EMMALEE KUNZE, GRACE BEALL	
DATE: APRIL 19, 2013		SCALE: 3/16"=1'0"	SHEET: 1
REV		REVISIONS	
REV	DESCRIPTION	DATE	APPROVED
1	AS PER COMMENTS/GRADE		

JAMES L. WARD ASSISTANT PROFESSOR		PROJECT: Fourth Baptist Church	
COLLEGE OF CHARLESTON ARTH 299		1 st Floor Plan	
HISTORIC PRESERVATION & COMMUNITY PLANNING		1 st Floor Plan	
ASSIGNMENT NO:		DRAWING PREPARED BY (TEAM/INDIVIDUAL):	
DATE:		Brooks, Sophia, & Josh	
SCALE		SHEET	
REVISIONS		DATE	
REV	DESCRIPTION	DATE	APPROVED



FIRST FLOOR PLAN



NOTES:
 WINDOW DIMENSIONS
 APPROXIMATED BASED
 ON INTERIOR AND EXTERIOR
 MEASUREMENTS
 WESTERN EXTERIOR PLAN
 NOT INCLUDED

ST. LUKE'S EPISCOPAL CHURCH PLAN

JAMES L. WARD
 ASSISTANT PROFESSOR
 COLLEGE OF CHARLESTON
 ARTH 299
 HISTORIC PRESERVATION &
 COMMUNITY PLANNING

PROJECT: ST. LUKE'S EPISCOPAL /
 NEW TABERNACLE

DRAWING TITLE:
 INTERIOR FLOOR PLAN

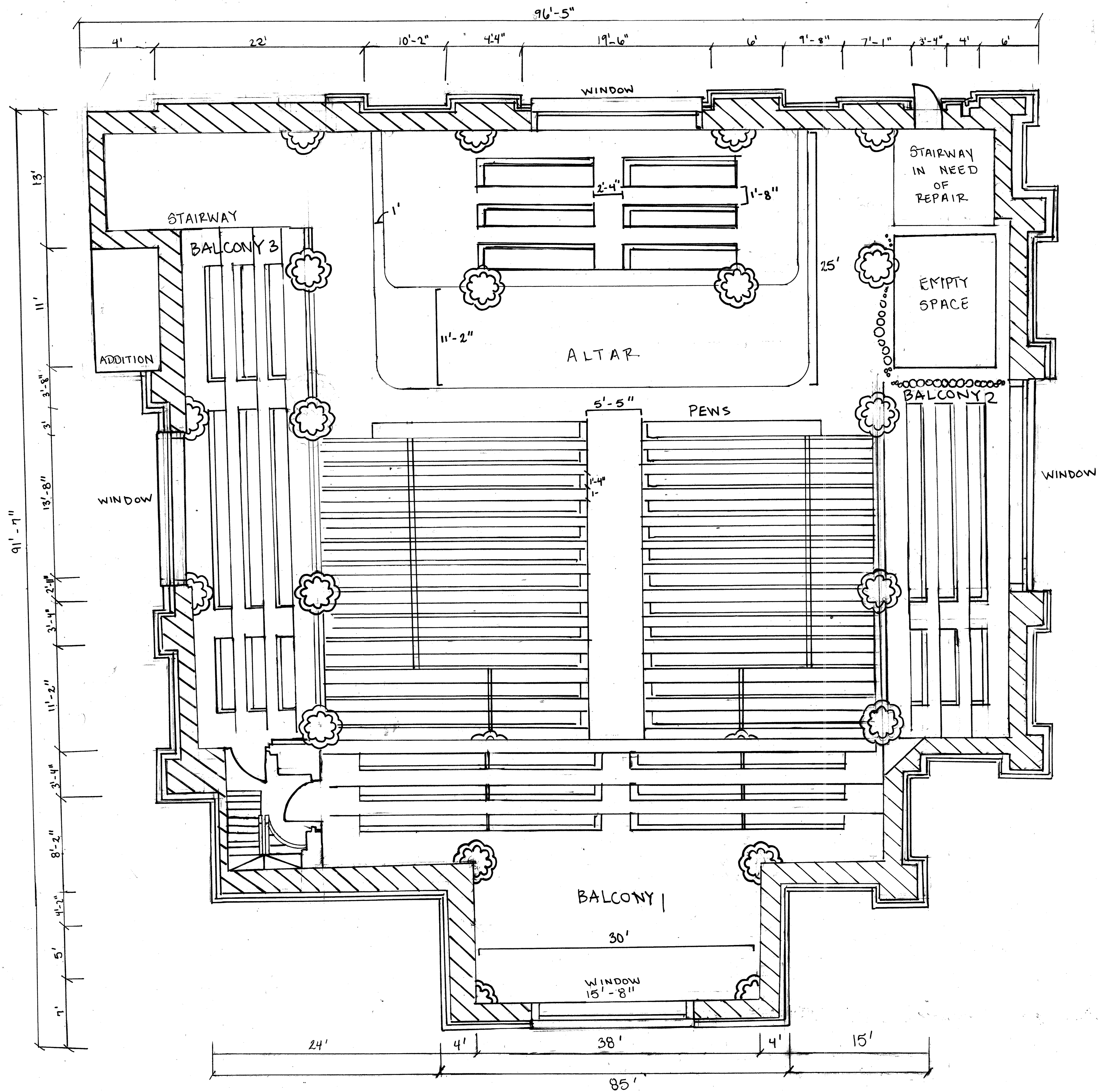
ASSIGNMENT NO:

DATE: 4/2/13

DRAWING PREPARED BY (TEAM/INDIVIDUAL):
 EMILY PIGOTT, ELAINA GYURE

SCALE 3/16" SHEET 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



KEY	
	EXTERIOR BRICK
	WINDOW
	DOOR
	COLUMN
	ORGAN

NOTES

MEASUREMENTS TAKEN WITH MEASURING TAPE AND LASER MEASURING TOOL


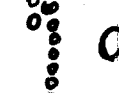
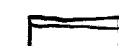

MEASUREMENTS ROUNDED TO NEAREST INCH

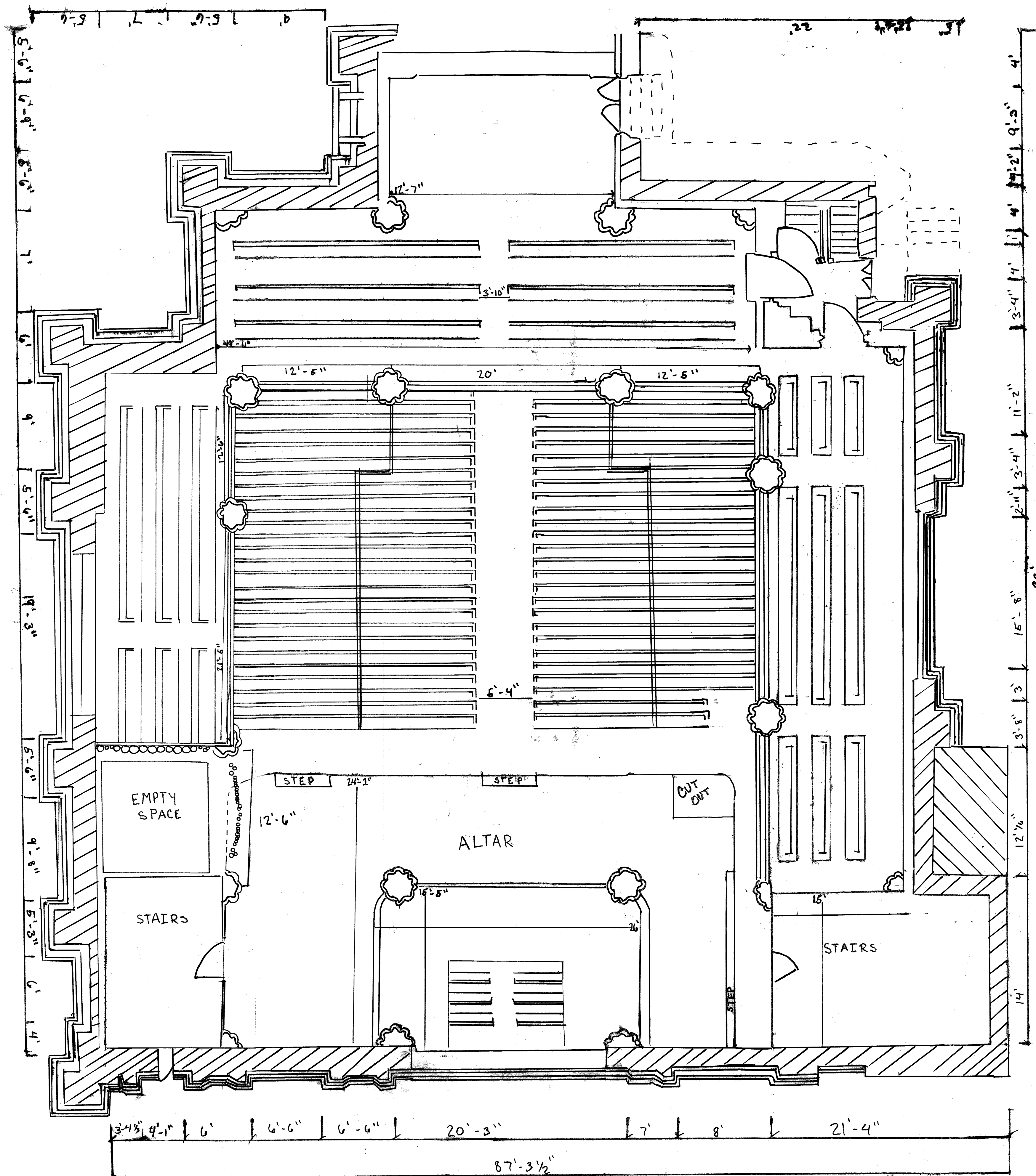
FLOOR UNDER PENS IS WOODEN.

JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299		PROJECT: NEW TABERNACLE 4TH BAPTIST	
HISTORIC PRESERVATION & COMMUNITY PLANNING		DRAWING TITLE: PLAN (INTERIOR + EXTERIOR)	
ASSIGNMENT NO: 5		DRAWING PREPARED BY (TEAM/INDIVIDUAL): WARD / MCDERMOTT / PERSON	
DATE: 3/29/2013		SCALE: 3/16" = 1'	SHEET: 4
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

INTERIOR PLAN

KEY

-  COLUMNS
-  ORGAN PIPES
-  PEWS
-  DOORS



NOTES

- WESTERN WALL MEASUREMENTS NOT PROVIDED

1 2 3 4
3/16" = 1'-0"



JAMES L. WARD
ASSISTANT PROFESSOR
COLLEGE OF CHARLESTON
ARTH 299
HISTORIC PRESERVATION &
COMMUNITY PLANNING

PROJECT:
New Tabernacle Fourth Baptist Church

DRAWING TITLE:
Floor Plan

ASSIGNMENT NO:

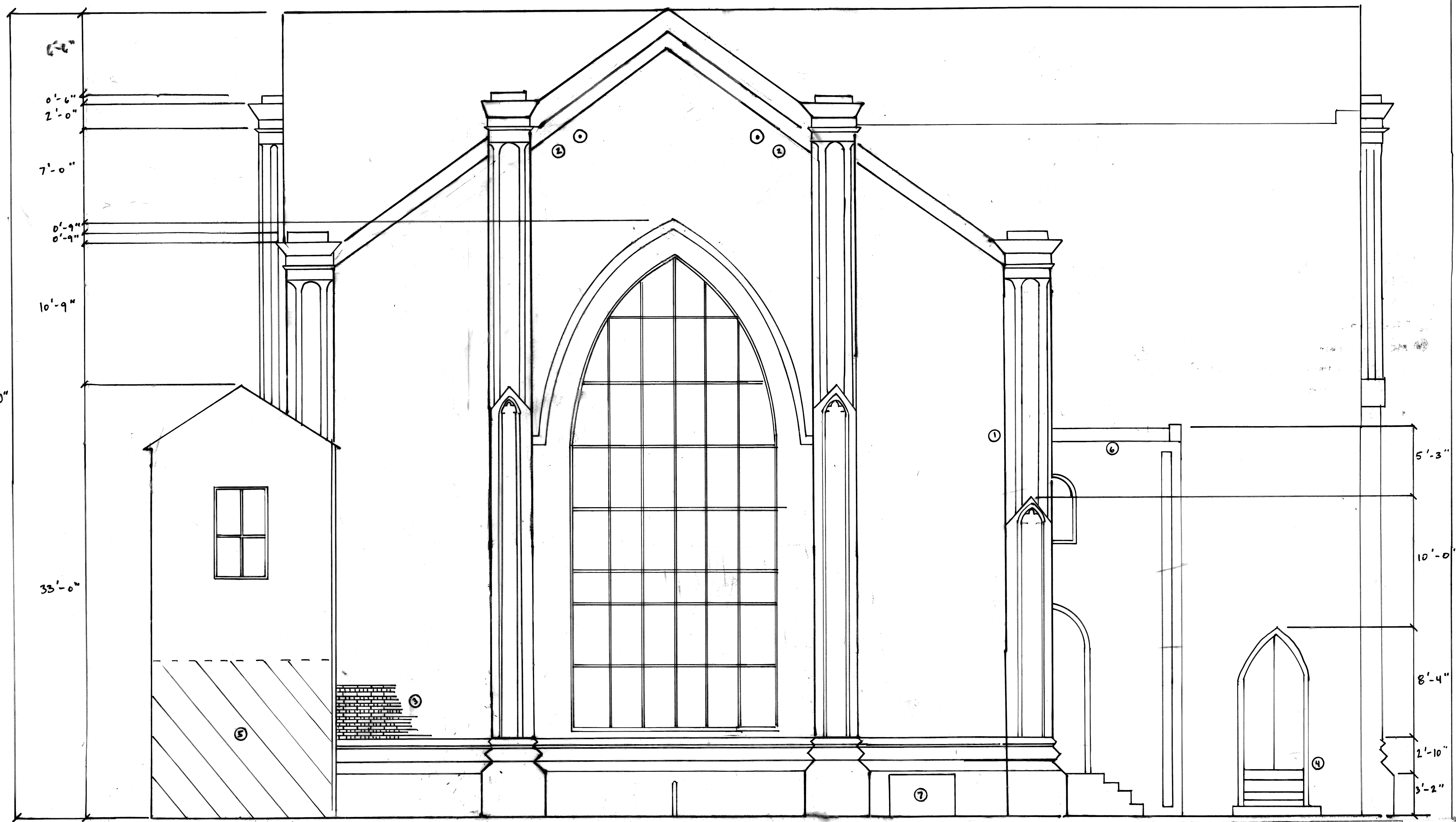
DRAWING PREPARED BY (TEAM/INDIVIDUAL):
Emily Floyd, Patrick Hayes, Kim Palermo, Eliza Bower

DATE:
4/19/2013

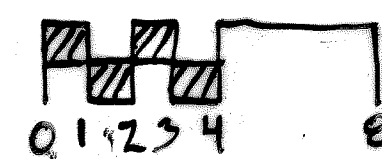
SCALE: 3/16" = 1'-0" SHEET: 5

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

- NOTES:
- ① GUTTER
 - ② HURRICANE BOLTS
 - ③ BRICK TYP.
 - ④ METAL HANDRAILS
 - ⑤ WOOD ADDITION (NOT SHOWN)
 - ⑥ REPLACED BRICK
 - ⑦ CISTERN ACCESS

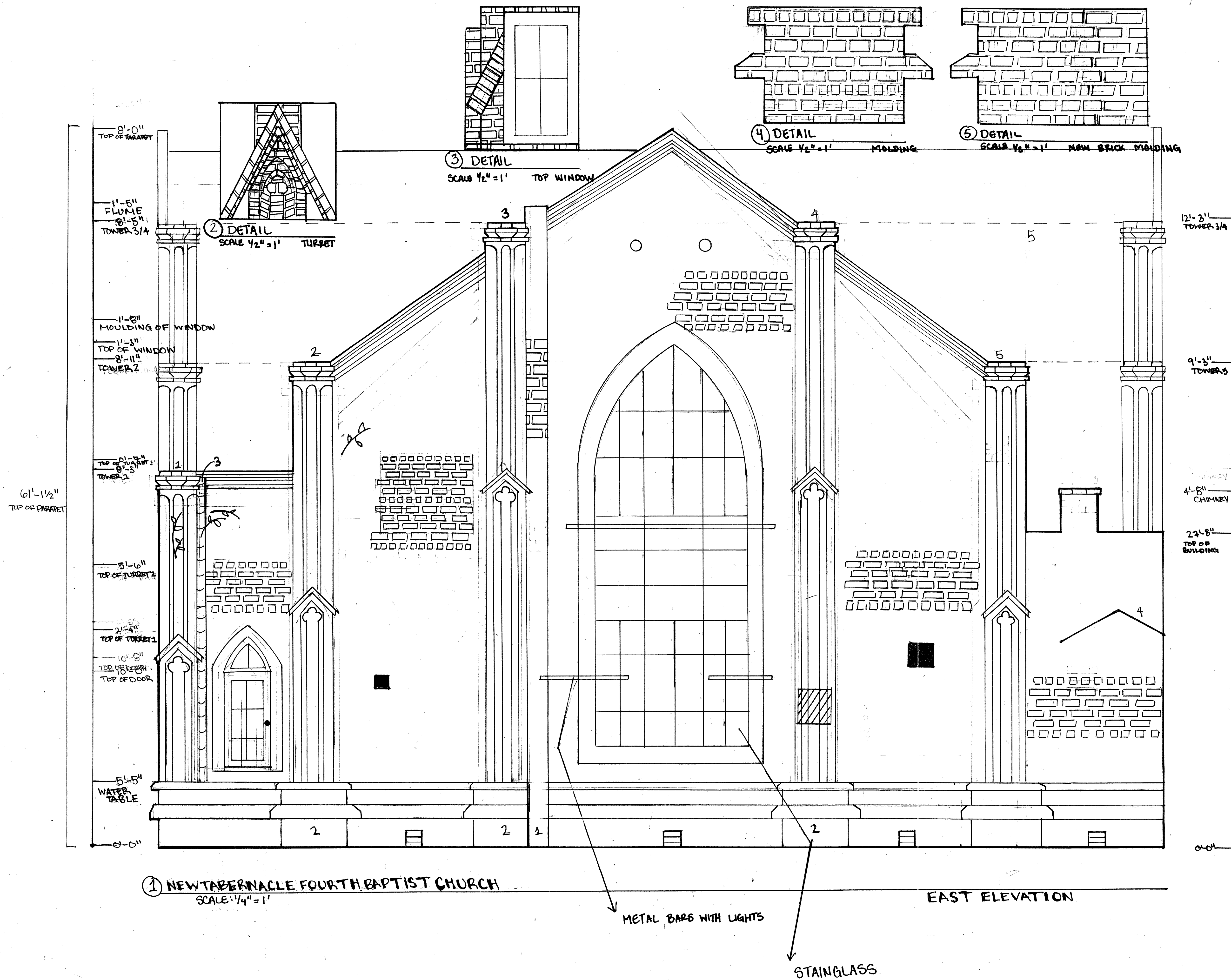


NORTH ELEVATION
SCALE 1/4" = 1'-0"



JAMES L. WARD
ASSISTANT PROFESSOR
COLLEGE OF CHARLESTON
ARTH 299
HISTORIC PRESERVATION &
COMMUNITY PLANNING
ASSIGNMENT NO. 3
DATE: 4-4-13

PROJECT:
ST. LUKE'S
DRAWING TITLE:
NORTH ELEVATION
DRAWING PREPARED BY (TEAM/INDIVIDUAL):
BROOKS BAILENTINE, SOPHIA JALSBERY,
JOSH SPENNER
SCALE: 1/4" = 1'
SHEET (OF) 6



KEY

- MISSING BRICK
- MISSING MORTAR
- METAL BASEMENT VENTS
- EARTHQUAKE BOLTS
- PLANTS GROWING IN MORTAR

NOTES

- NEW BRICK ADDED FOR FLUME
- IN APPROPRIATE POINTING BELOW WATER TABLE
- DRAIN PIPE
- REMOVED ORIGINAL STRUCTURE
 - USED LASER MEASURE AND BRICK COUNT
 - BRICK ON ELEVATION SHOWS LARGER VIEW
- UNSURE HOW NORTH SIDE LINES UP WITH EAST



SCALE: 1/4" = 1'-0"

JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION & COMMUNITY PLANNING		PROJECT: INK ELEVATION DRAWING TITLE: NEW TABERNACLE FOURTH BAPTIST CHURCH DRAWING PREPARED BY (TEAM/INDIVIDUAL): MCDERMOTT/PERSON/WARD SCALE 1/4"=1' SHEET 7	
ASSIGNMENT NO: 9	DATE: 4/5/13		
REV	DESCRIPTION	DATE	APPROVED
1			



NEW TABERNACLE FOURTH BAPTIST CHURCH

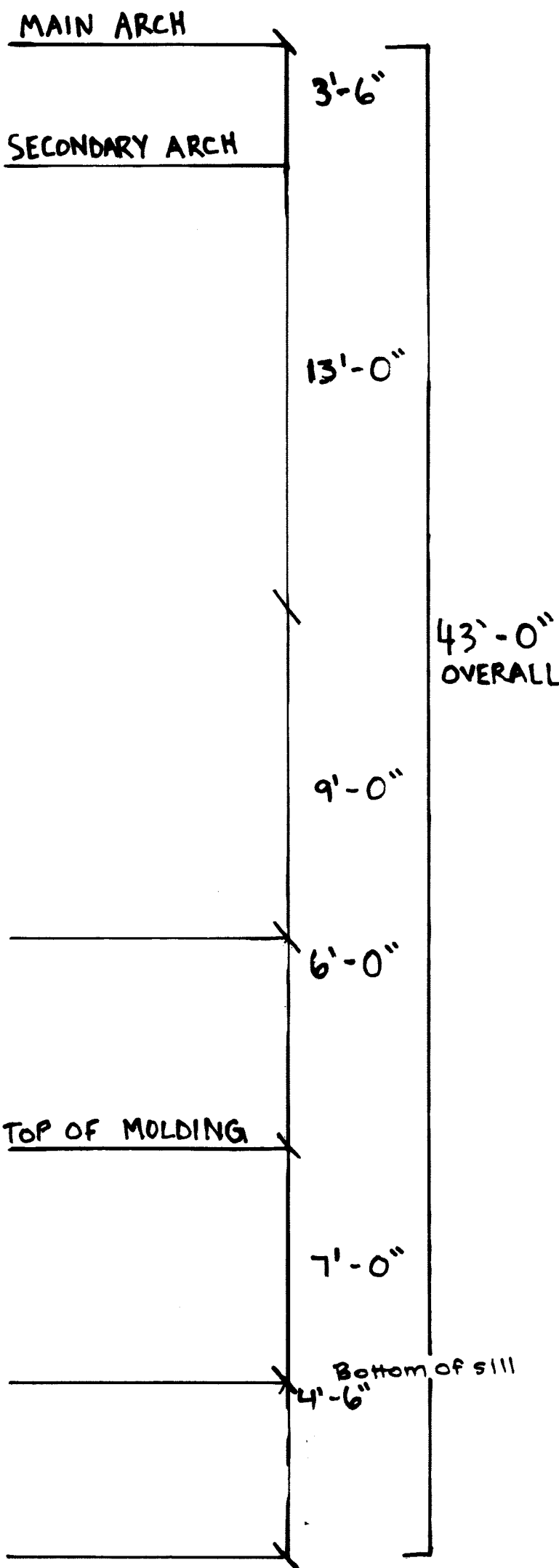
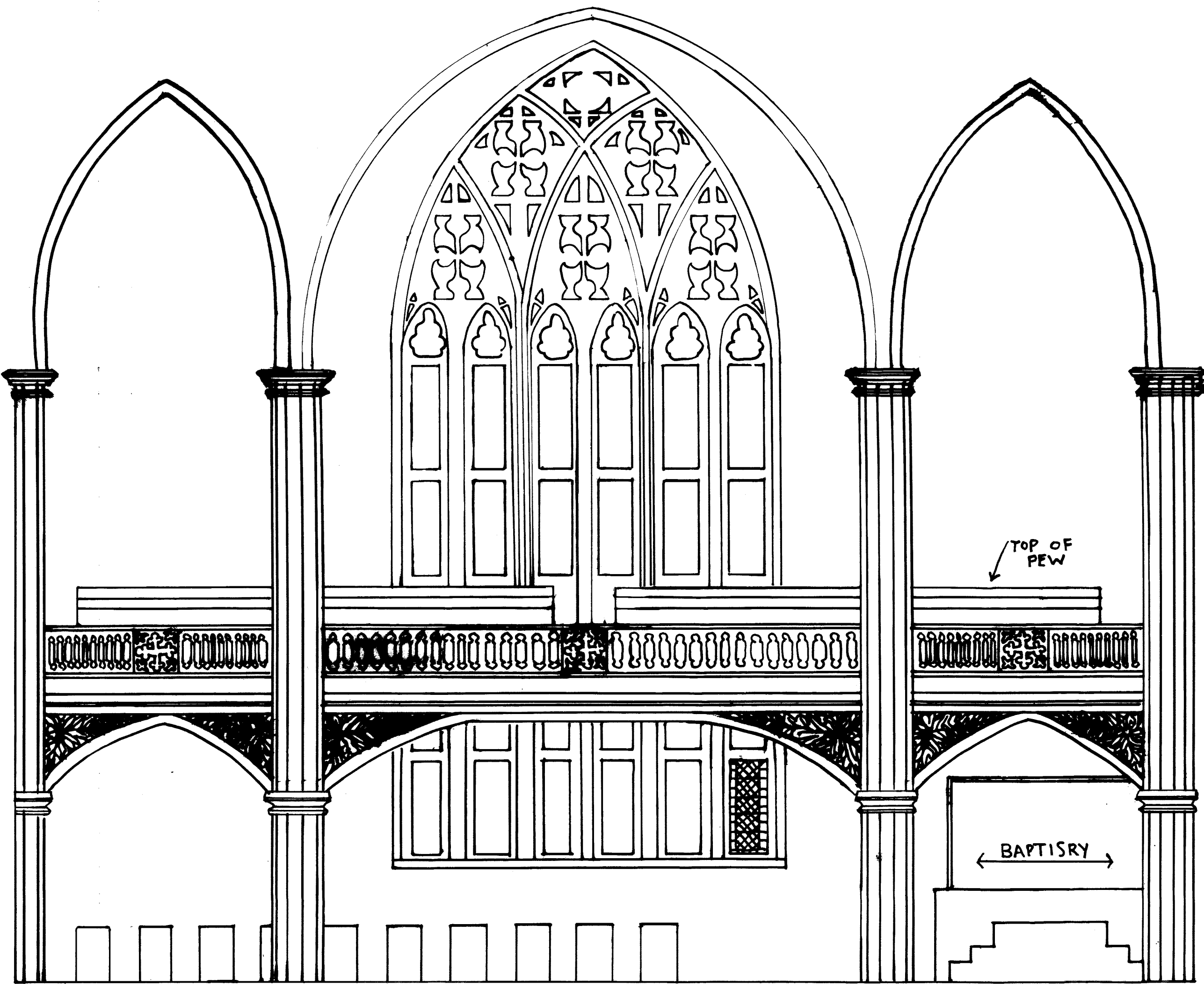
GRAPHIC SCALE

SOUTH ELEVATION

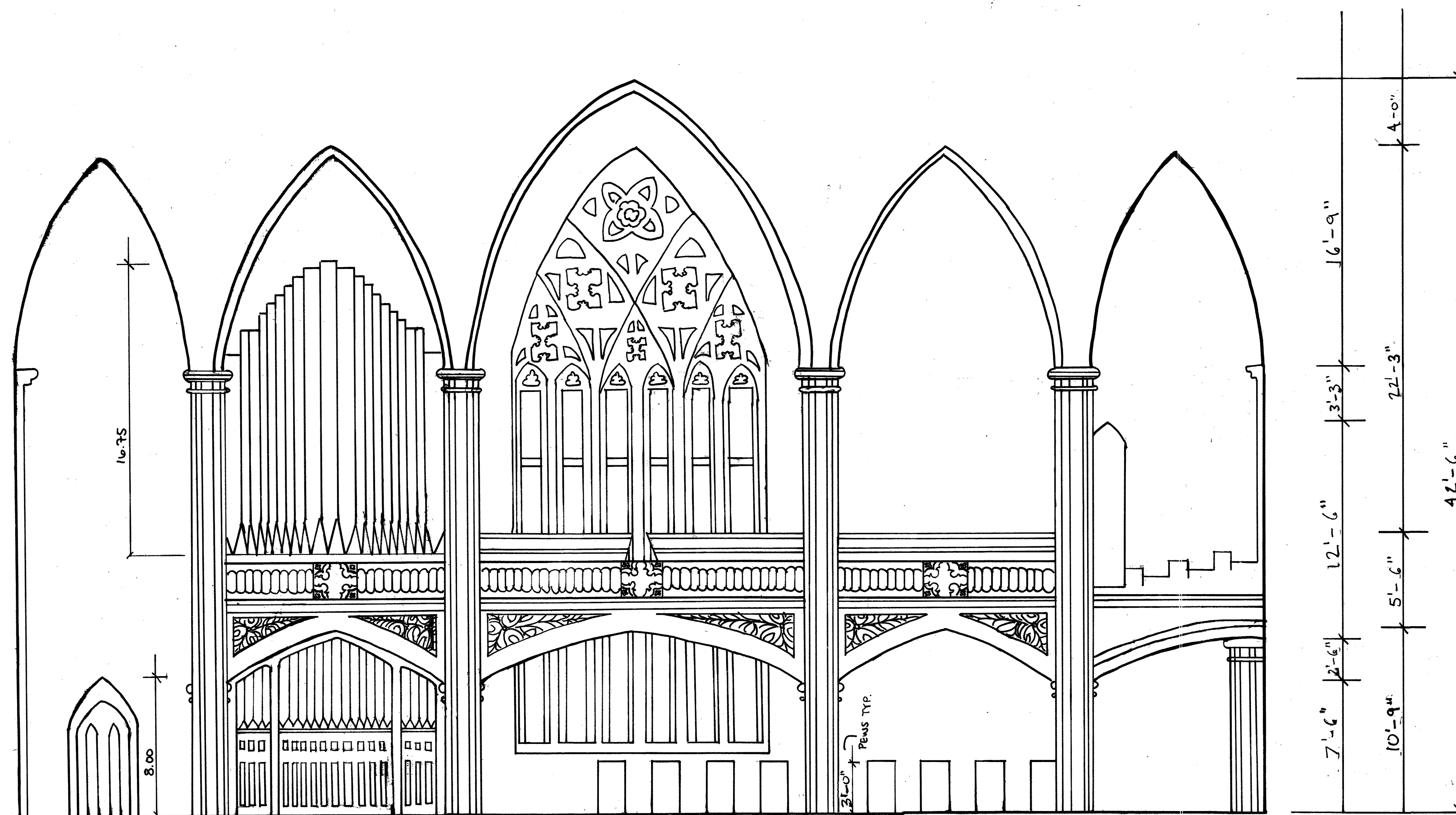
JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION & COMMUNITY PLANNING	PROJECT: NEW TABERNACLE FOURTH BAPTIST CHURCH	
	DRAWING TITLE: SOUTHERN ELEVATION	
	DRAWING PREPARED BY (TEAM/INDIVIDUAL): ALAINA WATKINS, EMMALEE KUNZE, GRACE BEALL	
ASSIGNMENT NO: 3	DATE: APRIL 22, 2013	SCALE: 3/16"=1'0"
REVISIONS		SHEET
REV	DESCRIPTION	DATE
1	AS PER COMMENTS/GRADE	APPROVED

NORTH WALL ELEVATION

SCALE: 1/4" = 1'-0"



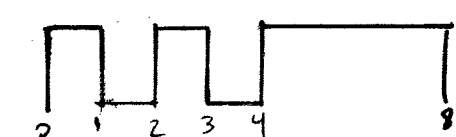
JAMES L WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION COMMUNITY PLANNING	PROJECT: FOURTH BAPTIST CHURCH		
	DRAWING TITLE: INK NORTH WALL ELEVATION FINAL		
ASSIGNMENT No: 9	DRAWING PREPARED BY (TEAM/INDIVIDUAL): CAROLINE AGID, CHARLES RIVERS, JASE GEIGER		
DATE: APRIL 22, 2013	SCALE 1/4"	SHEET 9	
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



SOUTHWALL ELEVATION

NOTES:
 · ORGAN PIPES COULD NOT
 BE MEASURED
 STAINED GLASS TRACED
 FROM SCALED PHOTO

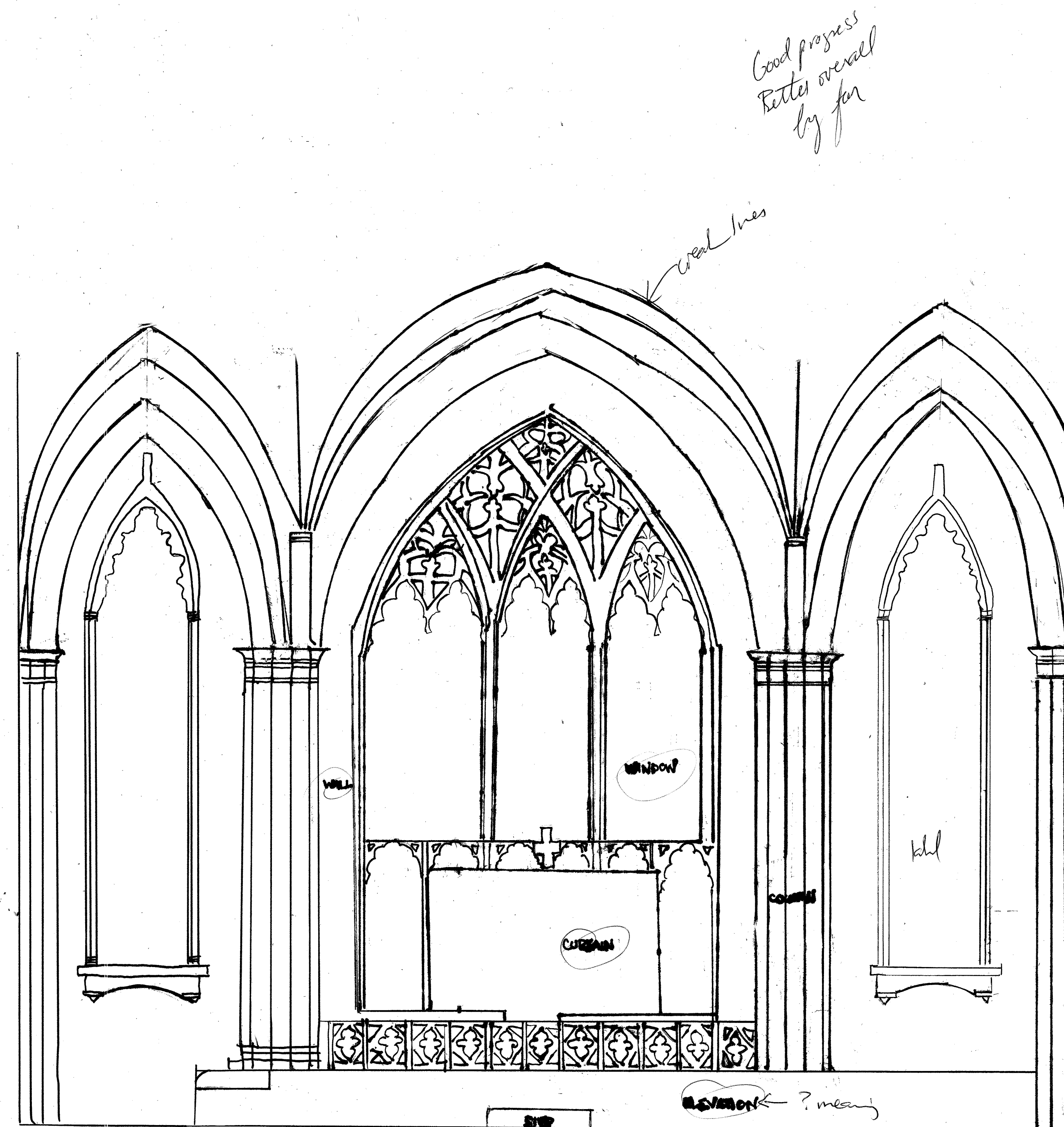
SCALE 1/4" = 1'-0"



JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION & COMMUNITY PLANNING		PROJECT: ST. LUKE'S EPISCOPAL/ NEWTABERNACLE BAPTIST	
DRAWING TITLE: ELEVATION - INK		DRAWING PREPARED BY (TEAM/INDIVIDUAL): EMILY PIGOTT, ELAINA CYURE	
ASSIGNMENT NO: 6		DATE: 4/5/13	
SCALE 1/4"		SHEET 10	
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

NOTES:

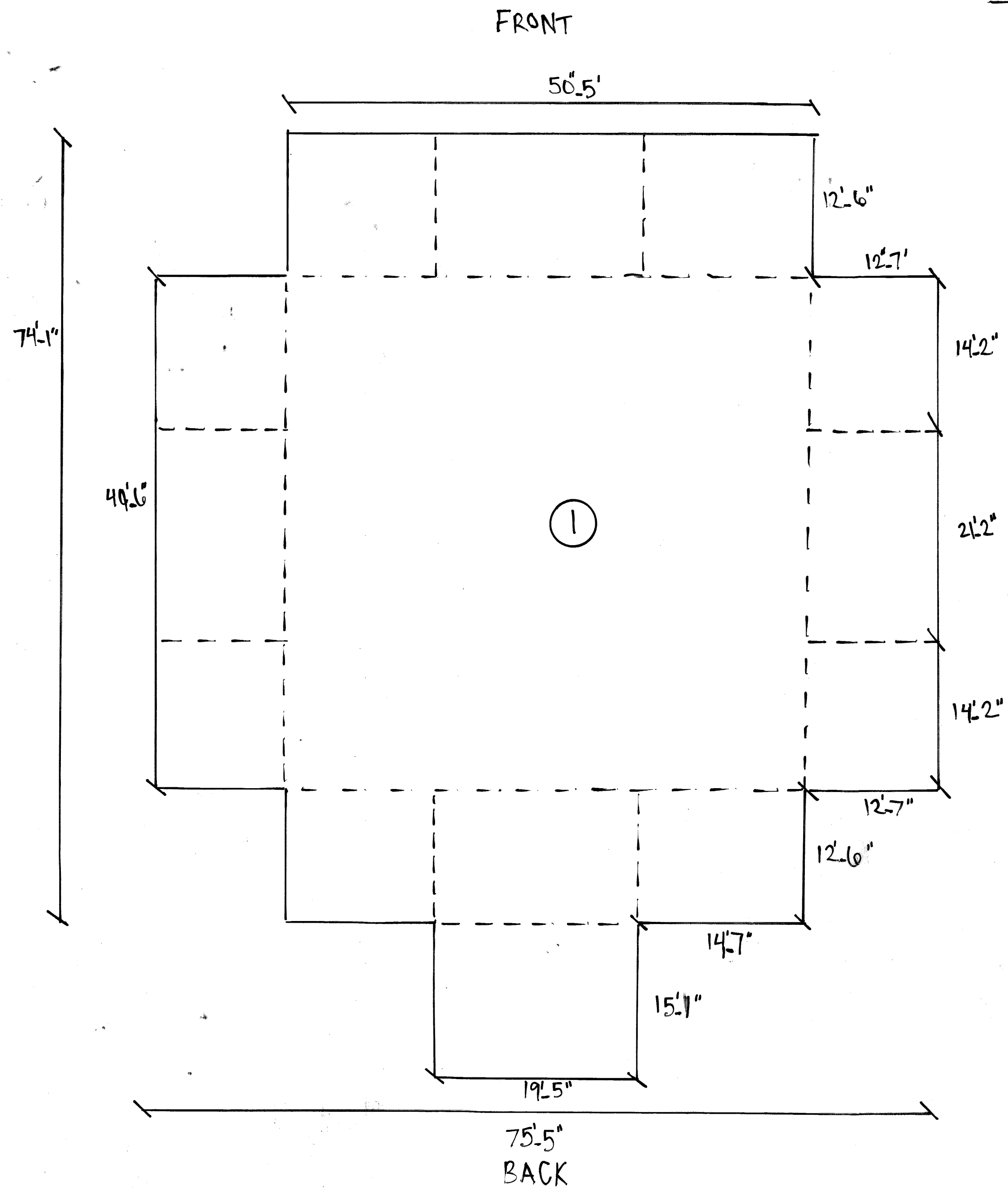
- STAIRWELLS ARE ON BOTH SIDES OF ELEVATION
- EAST SIDE
- STAIN GLASS DETAIL IN CENTER WINDOWS
- WALL SPAN EQUALS 15.5 FEET ON LEFT AND RIGHT SIDE
- 4 RINGS AT COLUMN BASE



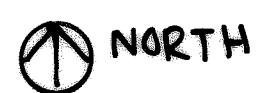
EAST ELEVATION

JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299		PROJECT: NEW TABERNACLE FOURTH BAPTIST CHURCH	
HISTORIC PRESERVATION & COMMUNITY PLANNING		DRAWING TITLE: ELEVATION INK	
ASSIGNMENT NO:		DRAWING PREPARED BY (TEAM/INDIVIDUAL): ELIZA BOWEN EMILY FLOYD KEMPALOMO PATRICK	
DATE: APRIL 5, 2013		SCALE: 1/4" = 1'-0" SHEET 11	
REV	DESCRIPTION	DATE	APPROVED
1	INK EAST SIDE	APRIL 5, 2013	

CEILING DETAIL
NEW TABERNACLE FOURTH BAPTIST CHURCH



CEILING DETAIL PLAN

$$1/8' = 1'' - 0$$


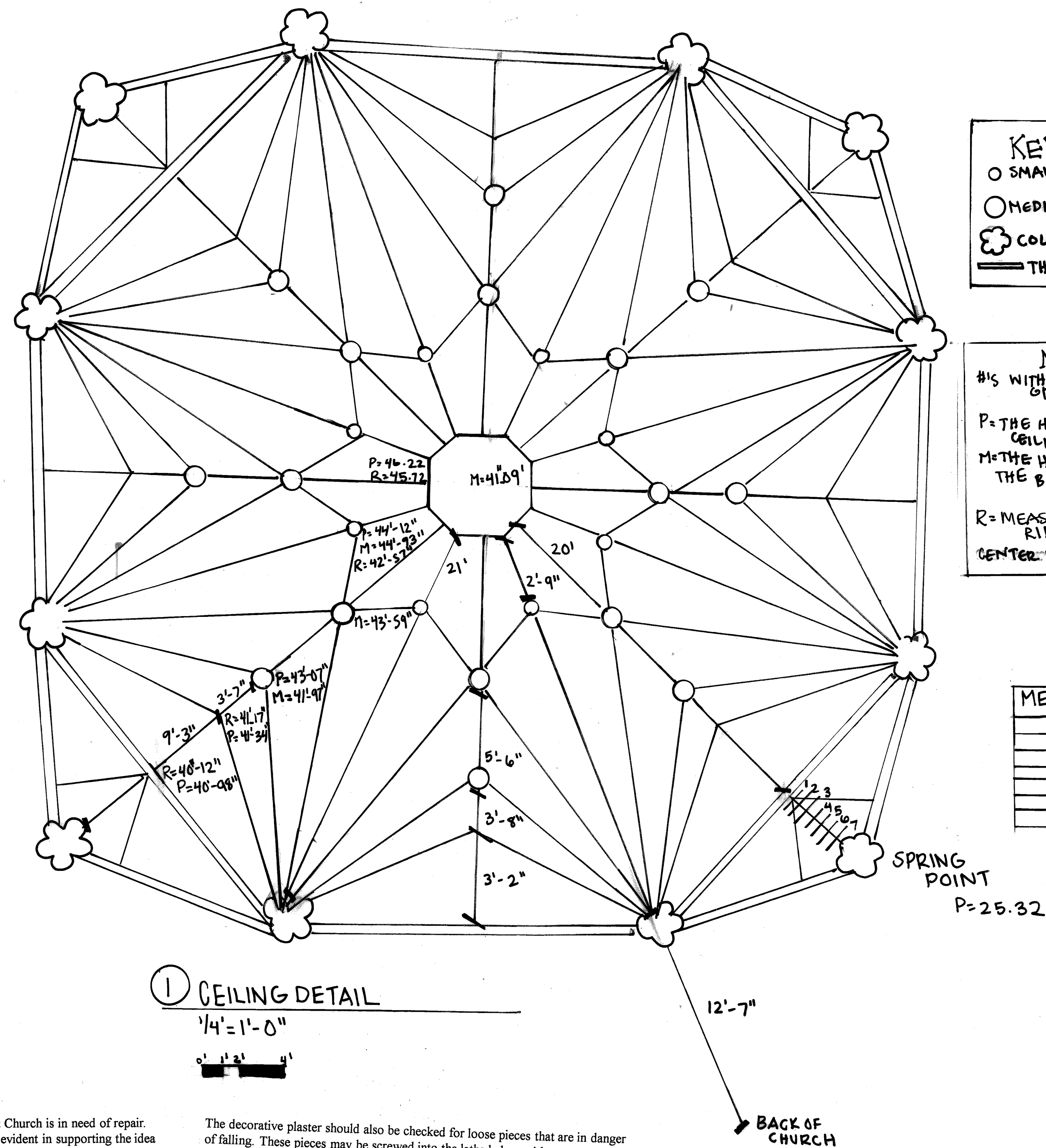
NOTES

1. NUMBER IN CIRCLE ON PLAN CORRESPONDS TO DETAIL
2. MEASURED WITH 200' TAPE AND LASER MEASURING TOOL

The plaster in the New Tabernacle Fourth Baptist Church is in need of repair. The discoloration, cracking, and missing plaster are evident in supporting the idea that the plaster is in bad condition. Since the church was built in the late 1800's, the plaster that is inside is lime plaster and that the rehab of the plaster will be time consuming and expensive. Even with the expense, it is important that the plaster is in good condition so it will not be a hazard if the church is used in an adaptive reuse project.

The way to move forward would be to attempt to repair the lime plaster in a way so that it looks like the original. This means using lime plaster and repairing the spots that need to be fixed without destroying the rest of the walls. If the plaster is lime and gypsum mix is used, the plaster is extra susceptible to water damage. Since there is discoloration in the plaster there is water that is leaking through the roof, flashing, and brick.² The missing pieces of plaster and cracking may also be because of water damage. In order to repair the water damage a new roof as well as mortar must be added to the church before any work is done on the inside of the church.² The mortar must be flexible so the building breathes letting the moisture out so that it does not stay inside of the walls.²

First, the person must evaluate the situation and look to see which spots need repair. Next, the person should remove the plaster that has been damaged to the laths underneath to see what condition they are in. If the laths are in bad shape, use metal laths with small holes to create keys in the laths that will hold the plaster into place. Then new lime plaster should be properly mixed and applied to the spots that are in need of repair. The plaster will need three coats, a scratch coat, a brown coat, and a finish coat. After completing the "match test" on the plaster, attempt to match the paint colour with the rest of the wall². If the plaster is not damaged try not to remove it².



KEY

- SMALL MEDALLIONS
- MEDIUM MEDALLIONS
- ☼ COLUMN
- == THICKER MOULDING

NOTES

#15 WITH 1" ARE DISTANCES MEASURED ON THE
GROUND TO CEILING & TOWARDS CENTER
MEDALLION

P = THE HEIGHT OF THE PLASTER ON THE CEILING FROM THE GROUND

M=THE HEIGHT FROM THE GROUND TO THE BOTTOM OF THE MEDALLION ON CEILING

R = MEASUREMENT FROM GROUND TO RIB ON MOULDING

CENTER MEDALLION SIZE IS AN ESTIMATE

MEASUREMENTS

1	40.12
2	38.98
3	38.22
4	36.17
5	36.49
6	35.74
7	33.8

SPRING
POINT

$$P = 25.32$$

BACK OF CHURCH

The decorative plaster should also be checked for loose pieces that are in danger of falling. These pieces may be screwed into the laths below with screws to prevent them from falling². The plaster may also be held to the ceiling with plaster that is inserted with syringes into the ceiling in small holes that fill the keys above³. This way of application is slow and expensive⁴.

Overall plaster repair is necessary in order to have a successful adaptive reuse structure. The goal is to have the new plaster be as similar as the old with both the material and application. The damage to the lime plaster in the church is water damage, so the places where water is getting into the walls must be repaired before any work is done on the inside plaster. Plaster must then be repaired of the inside with includes the lath underneath if it is damaged. It is important to employ an expertise in plaster so that it can be applied correctly.

1. English Heritage. *Mortars, Renders, & Plasters*. Farnham, UK: Ashgate Publishing Limited, 2011, (145)
2. Ward, James (2013, April). *Lecture Five: Historic Finishes*. Class lecture for HPCP 299, College of Charleston, Charleston SC.
3. English Heritage. *Mortars, Renders, & Plasters*. Farnham, UK: Ashgate Publishing Limited, 2011, (362).

JAMES L. WARD
ASSISTANT PROFESSOR
COLLEGE OF CHARLESTON
ARTH 299

PROJECT:
CEILING DETAIL

DRAWING TITLE:
CEILING DETAIL NEW TABERNACLE
FOURTH BAPTIST CHURCH

ASSIGNMENT NO: 16

DRAWING PREPARED BY (TEAM/INDIVIDUAL):
MCDERMOTT

DATE: APRIL 19 2013

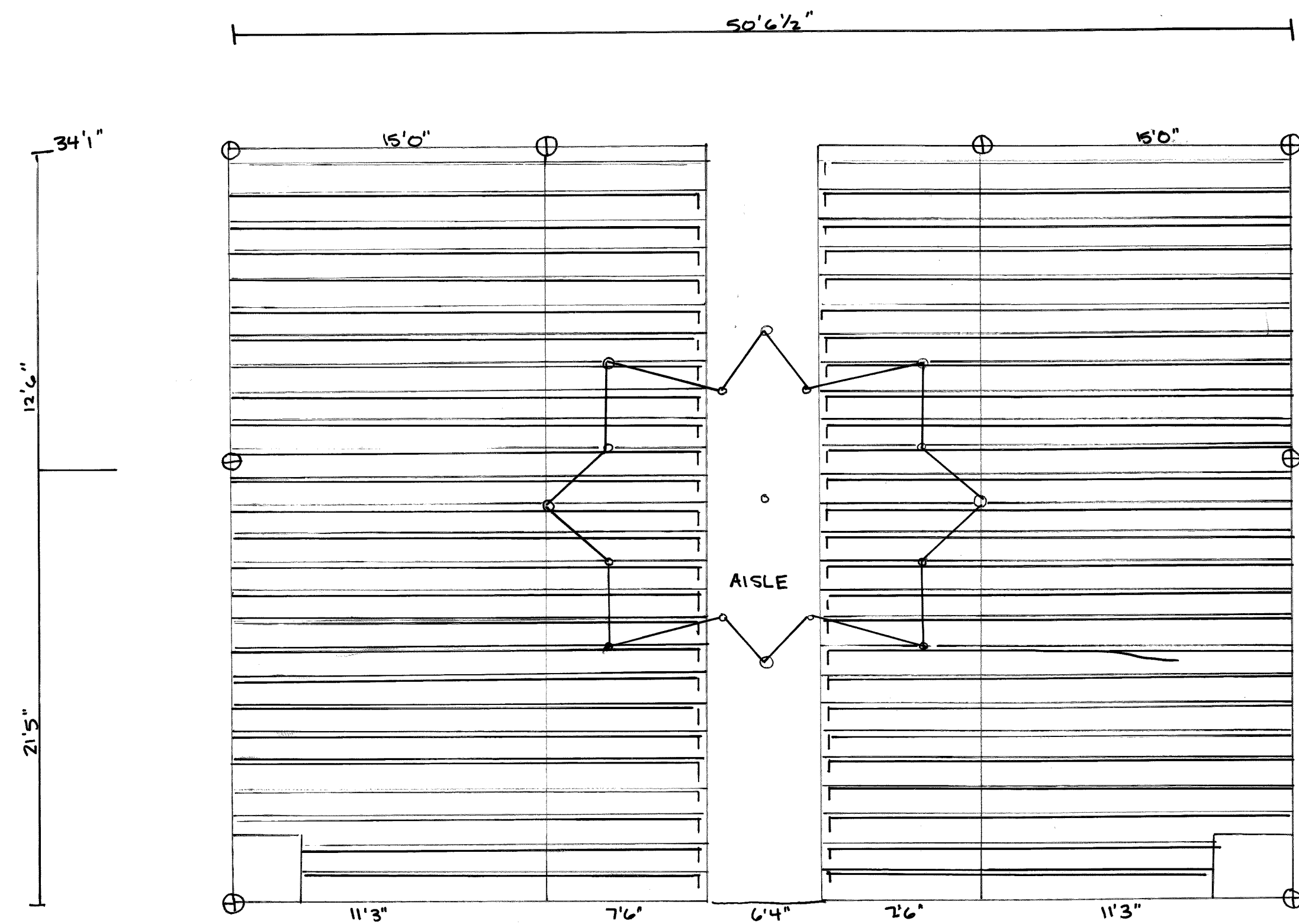
SCALE $1/8" = 1'$

SHEET 13

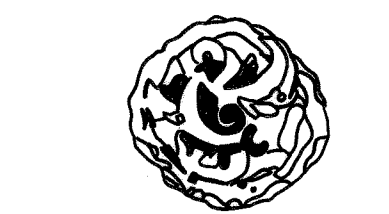
[illegible]

CENTER OF REFLECTED CEILING

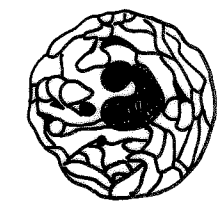
LOCATION OF MOLDING RELATIVE TO FLOOR PLAN $\frac{3}{16}"$



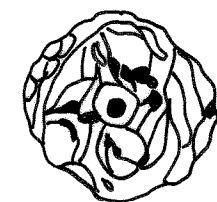
MOLDINGS ON REFLECTED CEILING



FURTHEST MOLDING OF CEILING

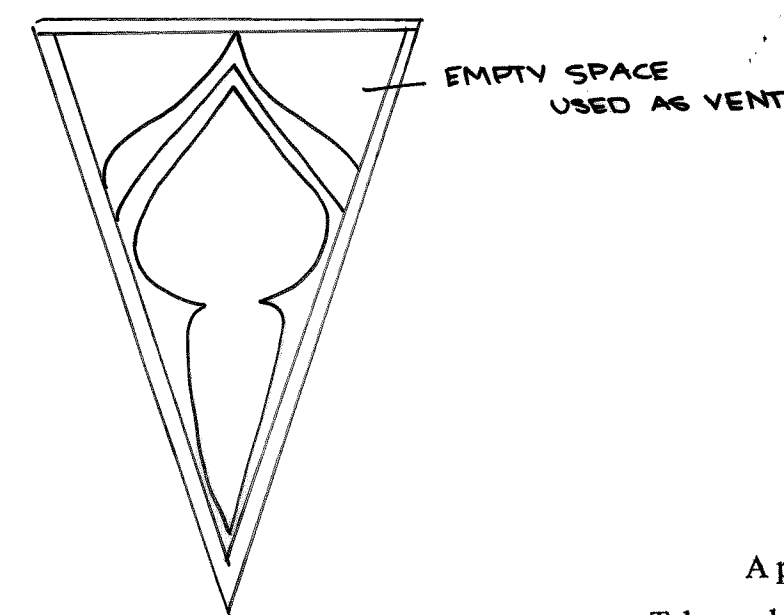


INNERMOST MOLDING OF CENTER



OUTERMOST MOLDING OF CENTER

DETAIL OF CENTER MOLDING



NORTHERNMOST MOLDING FROM IMAGE ON RIGHT

NOTES

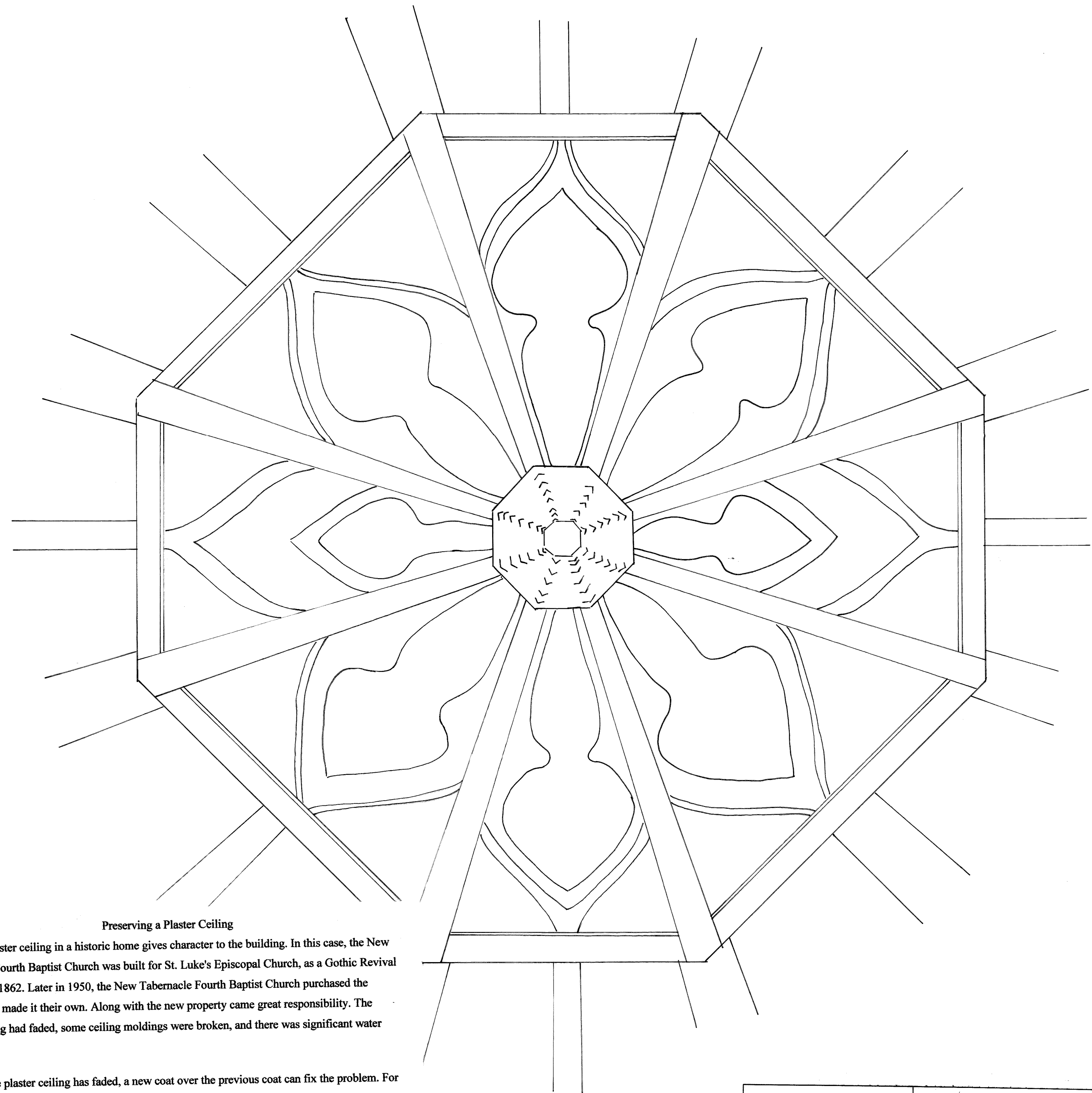
- . AISLE MADE OF MARBLE
- . PEWS MADE OF WOOD
- ⊕ COLUMN
- ▬ PEW
- INDICATES CEILING MOLD

Preserving a Plaster Ceiling

A plaster ceiling in a historic home gives character to the building. In this case, the New Tabernacle Fourth Baptist Church was built for St. Luke's Episcopal Church, as a Gothic Revival structure, in 1862. Later in 1950, the New Tabernacle Fourth Baptist Church purchased the property and made it their own. Along with the new property came great responsibility. The plaster ceiling had faded, some ceiling moldings were broken, and there was significant water damage.

If the plaster ceiling has faded, a new coat over the previous coat can fix the problem. For the ceiling medallions, some have been broken off completely, so using research to find the specific details for how the plaster medallions was originally designed should be used in restoring the medallions of New Tabernacle. According to Preservation Brief 23, historic ornamental plaster is made of gypsum and lime which are stable and durable materials. An extremely versatile material, plaster can be modeled, cast, incised, colored, stamped, or stenciled. However, as an integral part of the building system it is subject to the typical problems of water intrusion, structural movement, vibration and insensitive alterations, and pieces that are deteriorated or damaged beyond plain patching must be removed and replaced with new pieces that exactly match the existing historic plaster. There are multiple sources of water damage in the Church, occurring from the walls, windows, drainage, and roof leaks. Preservation Brief 21 explains that with roof leaks causing ceiling damage, coatings applied to the interior are not effective in the long run. The moisture problem must be stopped on the outside of the wall.

The ceiling at New Tabernacle Fourth Baptist Church needs to undergo major repairs to stop the historic ceiling from deteriorating, and to stop water damage from influencing the deterioration.



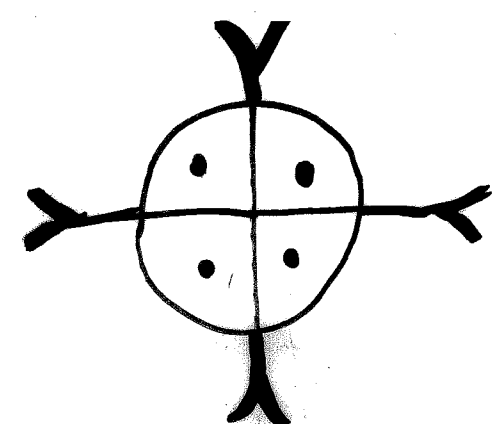
JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299		PROJECT: REFLECTIVE CEILING DETAIL	
HISTORIC PRESERVATION & COMMUNITY PLANNING		DRAWING TITLE: NTFBC DETAIL	
ASSIGNMENT NO:		DRAWING PREPARED BY (TEAM/INDIVIDUAL): KIMBERLY PALOMO	
DATE: 12 APRIL 2013		SCALE $\frac{3}{16}"$	SHEET 14
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	INK, DIMENSION	04-19-13	

THE PULPIT:
AN AXIOMETRIC DRAWING

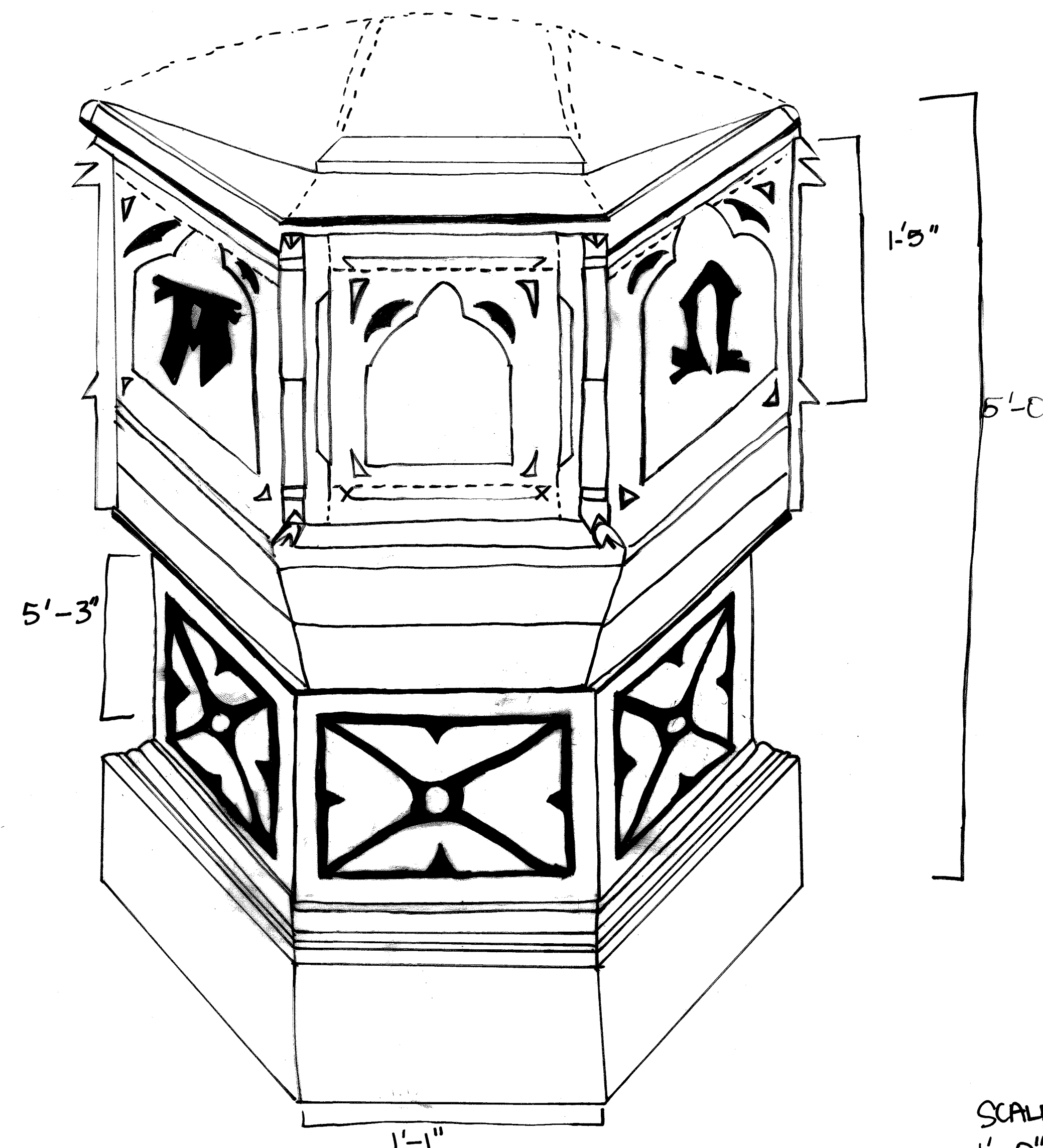
NOTES

- ALL MADE OF MAHOGANY
- GOLD PLATED FRONT PANEL WITH INSCRIPTION
- MEASUREMENTS USED ON 45° ANGLE

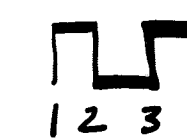
FRONT PANEL
DETAIL:



In God's Glory
In
GRATEFUL MEMORY
of his
SAVING MERCEIES
ON THE
EARTHQUAKE NIGHT
AUGUST 31 1886



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



The pulpit and overhang sounding board in the New Baptist Tabernacle Church is made of mahogany and shifted to the side in front of the organ. The pulpit itself contains wooden details including two symbols on two side panels and detail work surrounding the base and sides. The middle panel seems to gold plated with an inscription of dedication to God for protection during the Earthquake. This Gothic-revival small "wine-glass" pulpit contains small stairs in the back and a light in the sounding board. The sounding board connects to the ceiling with a simple cable and stretches 2 inches out from the sides of the pulpit. With research of the stairs, the idea of the stairs in the back with brass hand railings stem from Ireland. Compared to other pulpits in Charleston, this individual one is smaller than it counter parts like the one from 1872 seen in St. Matthew's German Evangelical Lutheran Church with a very tall base and sweeping stairs to the side which stem from English pulpit architecture.

This deep rich mahogany pulpit has an overall structure in good condition. The preservation of mahogany wood only requires some basic cleaning with no abrasive solutions and polishing. A soft damp cloth will easily remove any dirt or grime. Heavy heat, sunlight and water can easily damage a piece of this magnitude.

JAMES L. WARD
ASSISTANT PROFESSOR
COLLEGE OF CHARLESTON
ARTH 299
HISTORIC PRESERVATION &
COMMUNITY PLANNING

ASSIGNMENT NO:

DATE: 4/19/2013

PROJECT:
New Tabernacle Fourth Baptist Church

DRAWING TITLE:
Pulpit - Detail

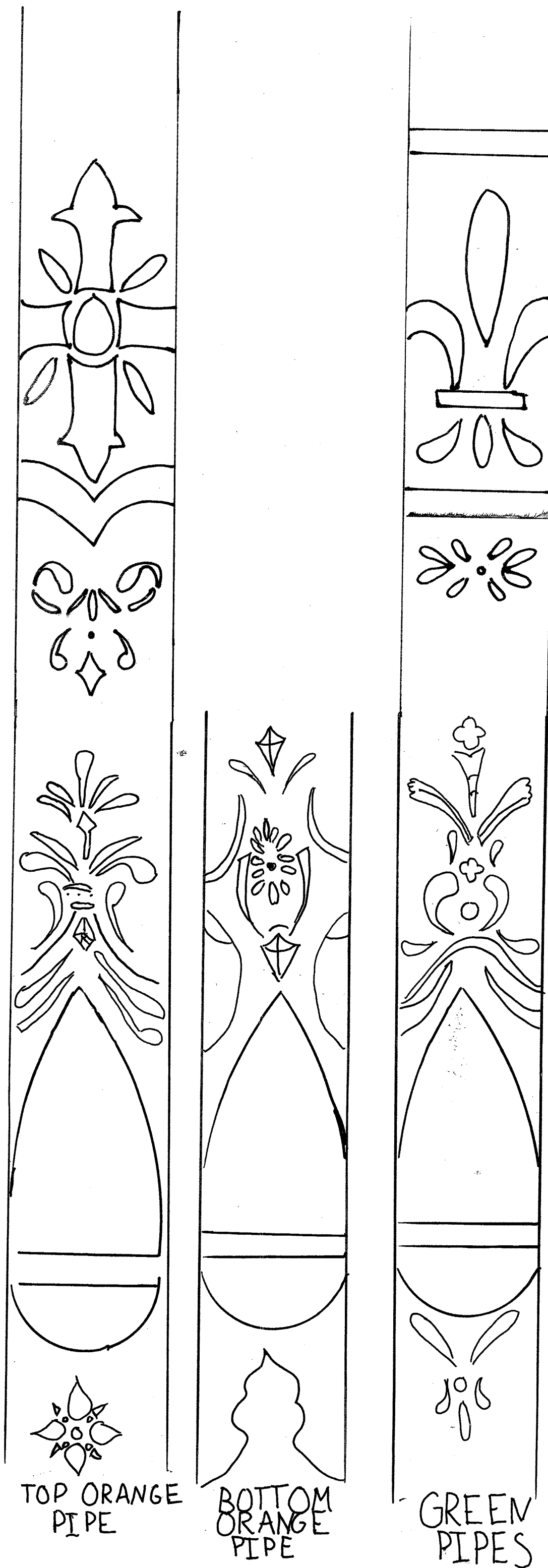
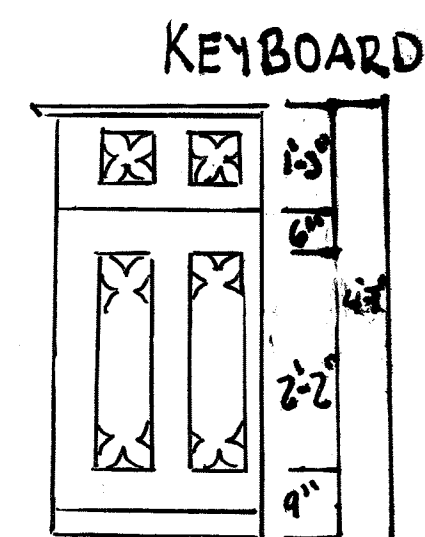
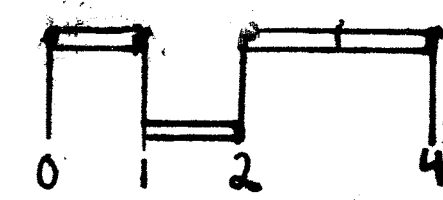
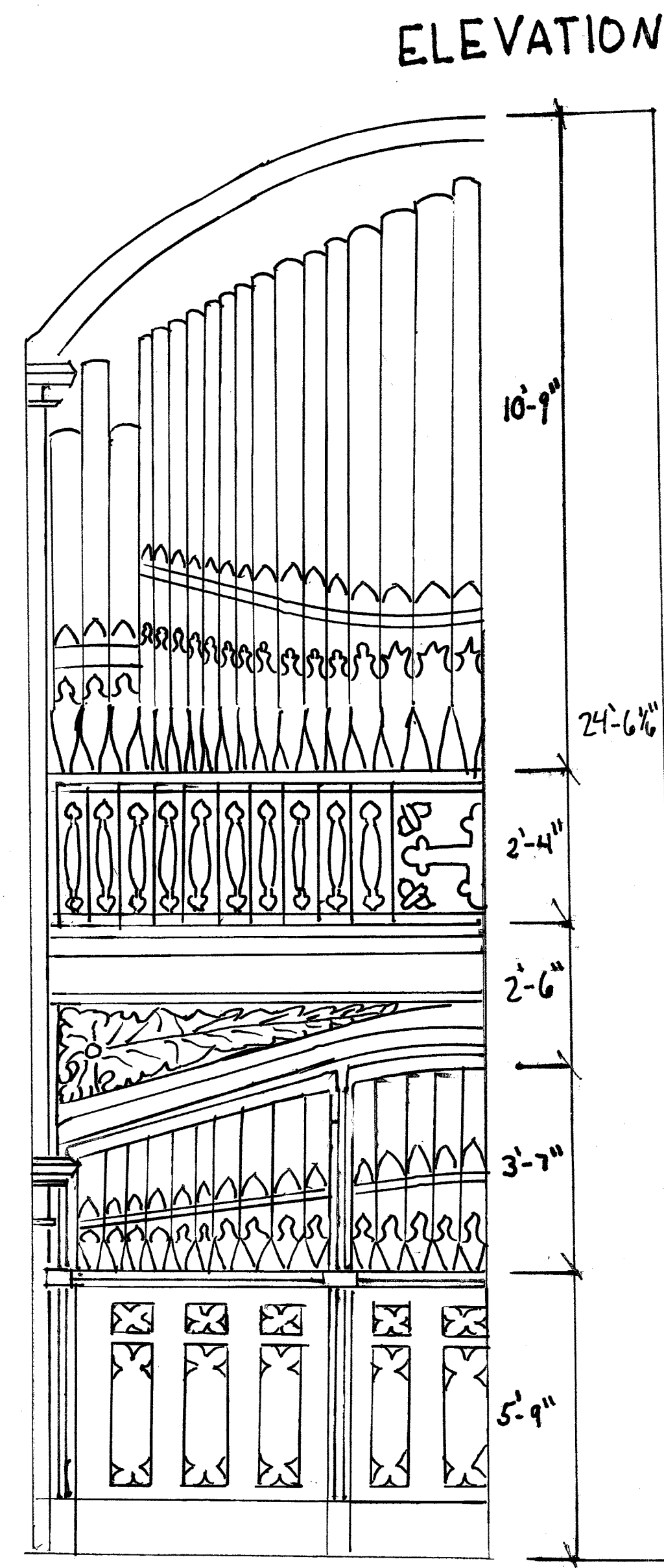
DRAWING PREPARED BY (TEAM/INDIVIDUAL):
Emily Floyd

SCALE: 3/16"

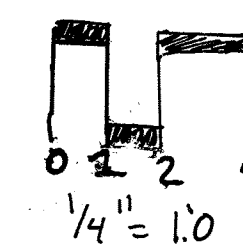
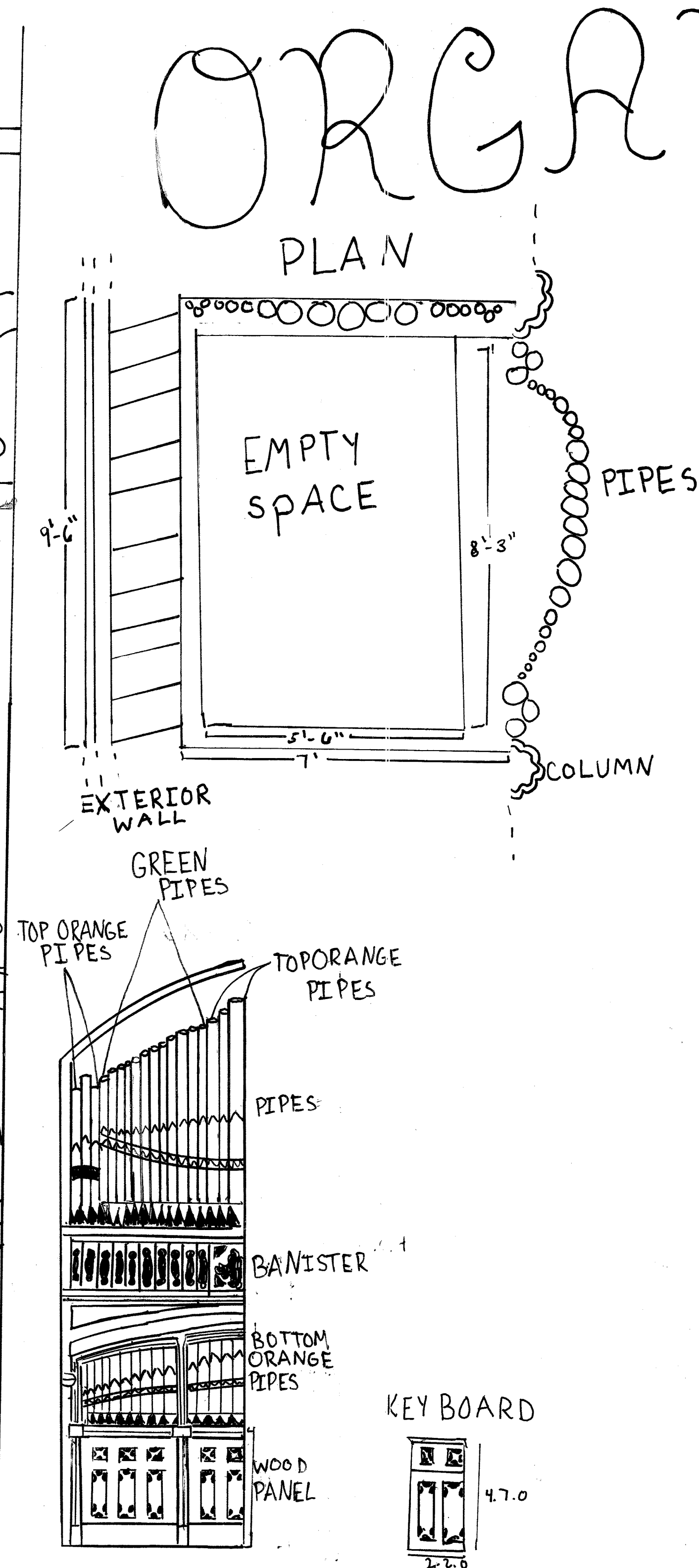
SHEET 15

REVISIONS		DATE	APPROVED
REV	DESCRIPTION		

- NOTES
- PIPES OF THE ORGAN COULD NOT BE MEASURED
 - LEFT AND RIGHT SIDE IDENTICAL
 - KEY BOARD IN FRONT OF FAR RIGHT SIDE
 - THICKER TOP PIPES ARE ORANGE OTHERS ARE GREEN
 - BOTTOM PIPES ARE ORANGE



PIPE
DETAIL



Eliza Bower
Prof Ward
4/11/13

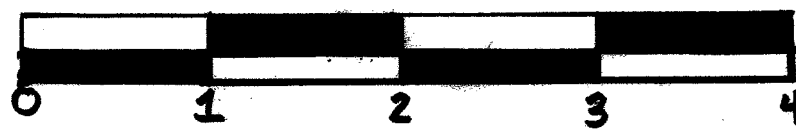
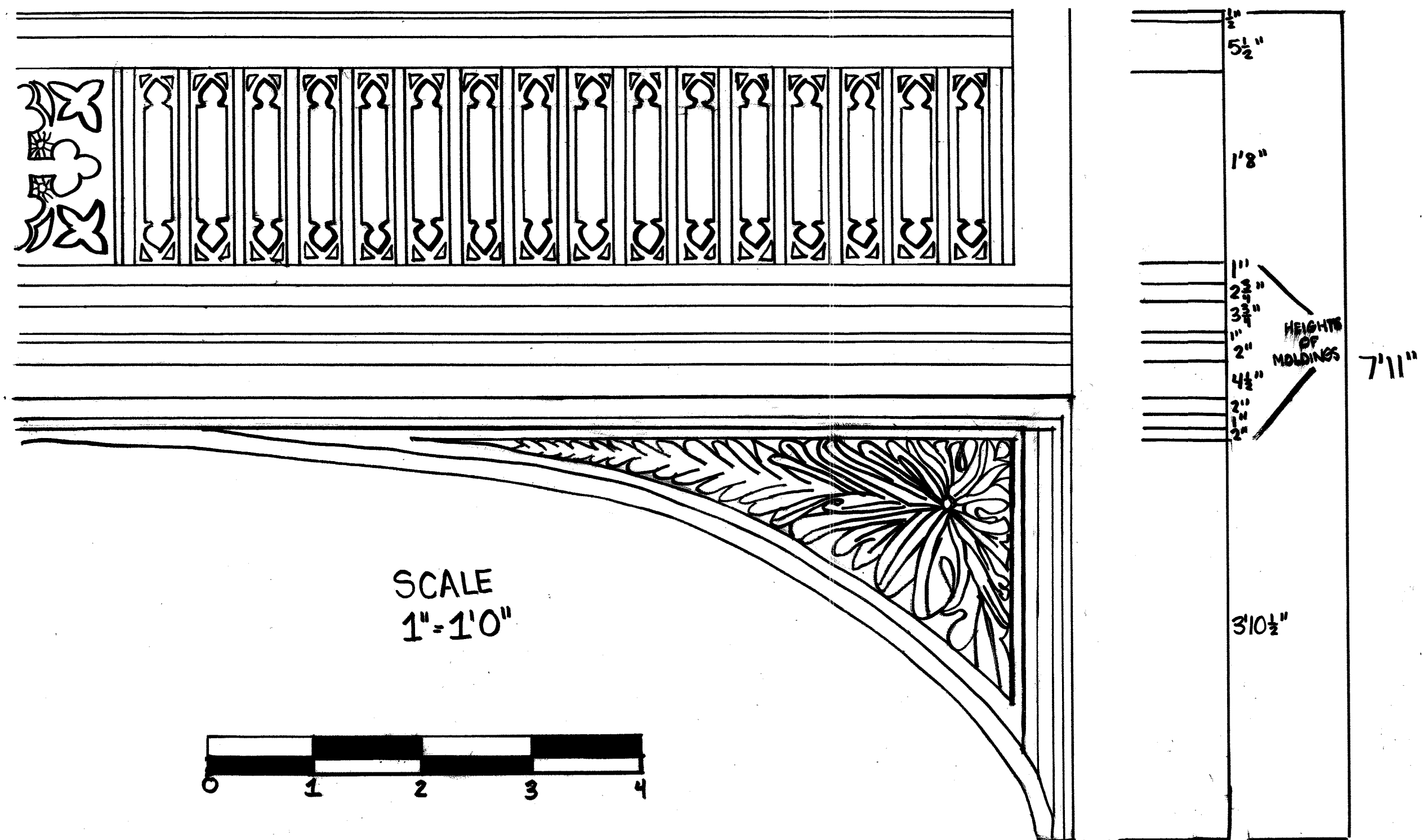
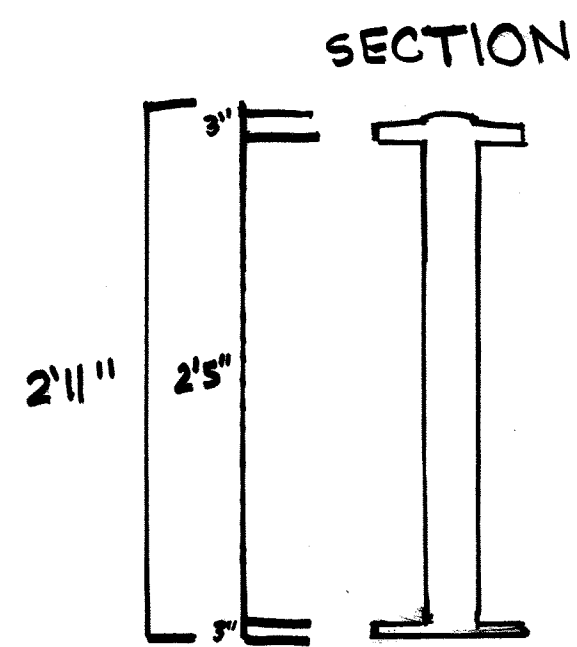
Organ Maintenance

The organ in the church is a handcrafted piece of artwork that should be maintained. The Painted pipes on an organ are rare so extra care should be given to the up keep. This organ is not the original from when the church was built, but it is just as important. This organ was installed in 1905 in the back of the church, and was moved to the front at some point. The organ right now is not working.

The first step in maintaining this organ is to check all the systems in it. The pipes of the organ need to be cleaned so there are no foreign substances lodged in the pipes. To do this, the pipes must be gently brushed. No harsh cleaners can be used or abrasive brushing/ blowing methods. The stoppers, which control pitch, have to be checked to make sure they have not moved. The move when temperature changes dramatically. The keys on the organ need to be looked out. They have to have the right amount of friction to be effective. Moisture and dust in the pin and felt of a key, which help is where a key is connected to make vibrations, can cause too much or not enough friction. In cleaning the keyboard there needs to be care if the keys are handled roughly they can break. In general, organs do not react well in humidity. Their needs to be a balanced temperature and moisture content in the church to make sure the organ does not deteriorate. Along with a steady atmosphere, a professional should do an annual maintenance on it. Also the general public should not handle it.

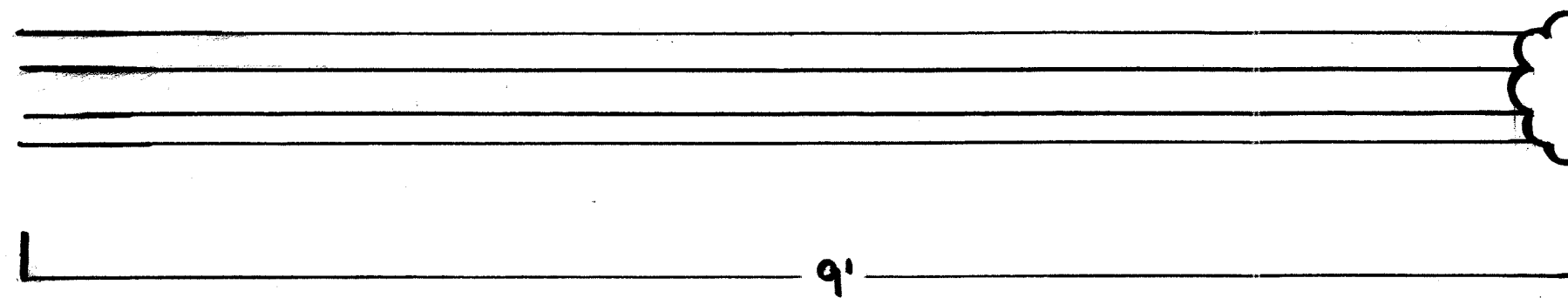
JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299		PROJECT: ORGAN DETAIL	
HISTORIC PRESERVATION & COMMUNITY PLANNING		DRAWING TITLE:	
ASSIGNMENT NO:		INK- ORGAN DETAIL	
DATE: 4/22/13		DRAWING PREPARED BY (TEAM/INDIVIDUAL): ELIZA BOWER	
SCALE		SHEET 10	
REV	DESCRIPTION	DATE	APPROVED

BALCONY RAILING AND SPANDREL



PLAN

TYPICAL PEW



Caroline Agid
Ward
Detail Spec
April 22, 2013

Gilding

In my research, I looked up gilding, because I believe the spandrels in the church that I have been drawing were made out of a different material, either wood or plaster, and then were gilded over in order to make an impression.

Gilded was seen as early as the Ancient Greeks and Egyptians. A lot of the recovered artifacts were gold-plated wood or ivory statues. Ancient Romans used gilding on the ceilings of their temples, the first of those buildings to be treated being the Capitol.

There is a huge variety of techniques that can be used in gilding, including but not limited to: mechanical gilding, chemical gilding, cold gilding, wet gilding, and fire gilding. A majority of these techniques are used on metallic surfaces. Through my analysis of the spandrel, I would believe them to be either mechanically gilded or wet gilded. It is more likely that if the spandrel was made out of wood underneath (which I would guess over it being made of a metallic substance) which makes it a more desirable candidate for water gilding. When the wooden base is created, one uses a very light grade of sandpaper to smooth the entire surface. In order to account for the porous nature of wood, a sort of glue is normally put over the wood with a soft, small brush to create a firm base. Later a dilute solution of gold chloride and ether are agitated and allowed to rest then put through a funnel. Then the combo is applied to the surface again with a small brush and when left to rest, the ether evaporates leaving the gold on the surface. The best way to preserve this would be to apply another layer of mixture over a sanded down level surface, of course checking beforehand that the surface underneath is not compromised in any way so that the work you are putting into the gilding isn't going to waste right away. If everything is good to go, just start the process.

The gold on the spandrel definitely evokes richness in the architecture and of the care the builders showed in building and detailing this church. They clearly wanted the spandrels to stand out and their deeply decorated finishes to be apparent to all in the building. I believe this part of the church is one of the most beautiful and character-defining aspects of it and has been a pleasure to draw.

JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION & COMMUNITY PLANNING		PROJECT: FOURTH BAPTIST CHURCH DRAWING TITLE: DETAIL OF RAILING AND SPANDREL	
ASSIGNMENT NO: 10		DRAWING PREPARED BY (TEAM/INDIVIDUAL): CAROLINE AGID	
DATE: 4/22/13		SCALE 1"	SHEET 17
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	redrawn, write-up added, plan+section	4/22/13	

NORTH ELEVATION

NOTES

1. + - INDICATES GIVE OR TAKE A 1/4 OF THE MEASUREMENT
2. COLUMN CAPS ARE NOT ADDED
B/C IT IS ONLY A PORTION OF THE FEATURE
3. SOME RENDERING IS REFERENCED

INK DETAIL DRAWING

SCALE: 1/4" = 1' 0"



Preservation Specifications

The Impact of Use:

The impact of the detail featured in the drawing is to remain as historic as possible in its original state if possible. The condition needs proper care and changes need to be made in order to maintain the function of the balcony as well as its historic features and design. In order to preserve the balcony and its features, one needs to take into consideration the materials that were used in the initial construction, as well as to make sure that all necessary alterations and fixes are done in the proper manner to preserve its character.

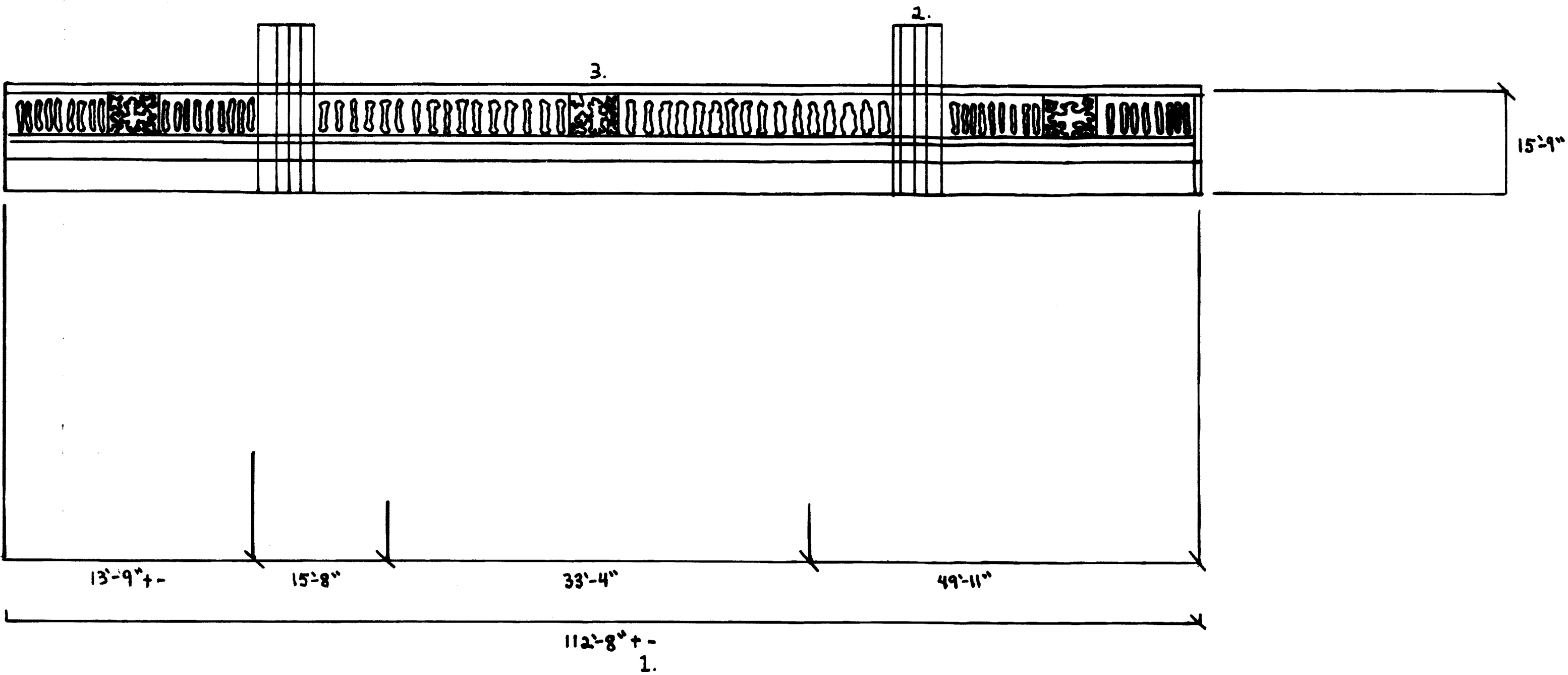
Repair of Historic Wood:

When seeking the proper technique to restore and preserve the wooden feature, one may suggest a number of techniques that may be applied to the finish. One is the West System, which can be used to fix rot where necessary. It requires a number of steps to adequately work. Filler material may be applied to affected areas to build up the finish and then a 1 to 1 proportion of hardener to glue is used to set the wood back in place. It may be thinned in places where necessary if it is being applied through a sprayer.

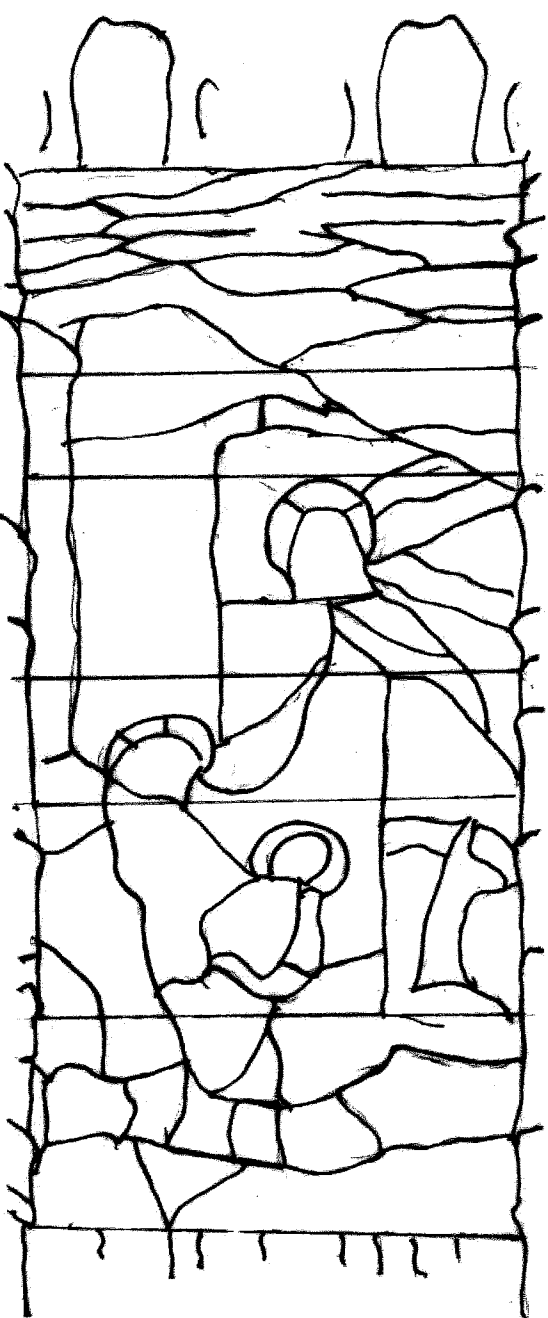
Another technique is the Flex-tex system, which requires the digging out of rot in places and applying a pre-curing setting agent that will allow for the wood to expand and contract in the designated places. Abatron and Bondo are other products, but only necessary for very brittle or fragile areas, which is not really the case in the featured drawing.

Repair Suggestion:

As a preservationist, I would suggest using the West Systems to repair any affected areas on the balcony and surrounding detail, mainly because it appears to be the most affective. Sanding down the balcony for repainting also needs to be done in order to restore the entire finish of the wood. Proper paint needs to be matched as closely to the original paint as possible in order to keep as much historic character as possible. Any support that needs to be done for the entire structure also needs to be considered during repair. Always consider proper safety measures for the structure, and furthermore for whoever may be making the repairs to protect themselves from exposure to paint and other harmful agents.

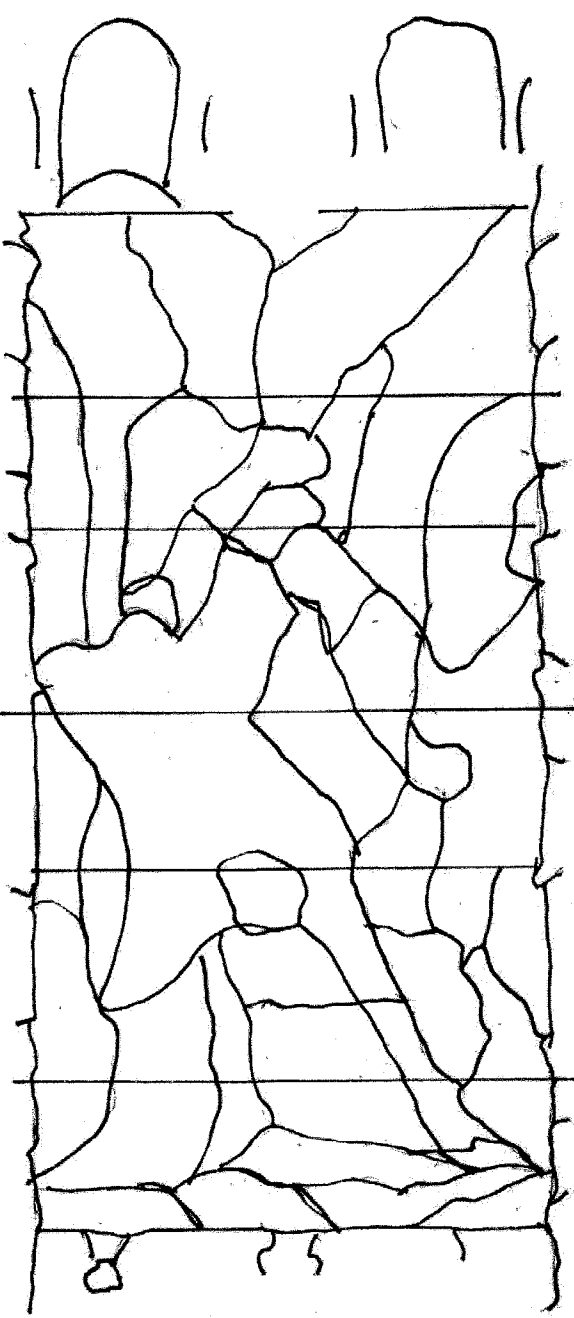


JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 249 HISTORIC PRESERVATION & COMMUNITY PLANNING		PROJECT: FOURTH BAPTIST CHURCH	
DRAWING NO: 10		DRAWING TITLE: INK FINAL DETAIL DRAWING	
DATE: APRIL 22, 2013		DRAWING PREPARED BY (TEAM/INDIVIDUALS): CHARLES RIVERS	
SCALE: 1/4"		SHEET 18	
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



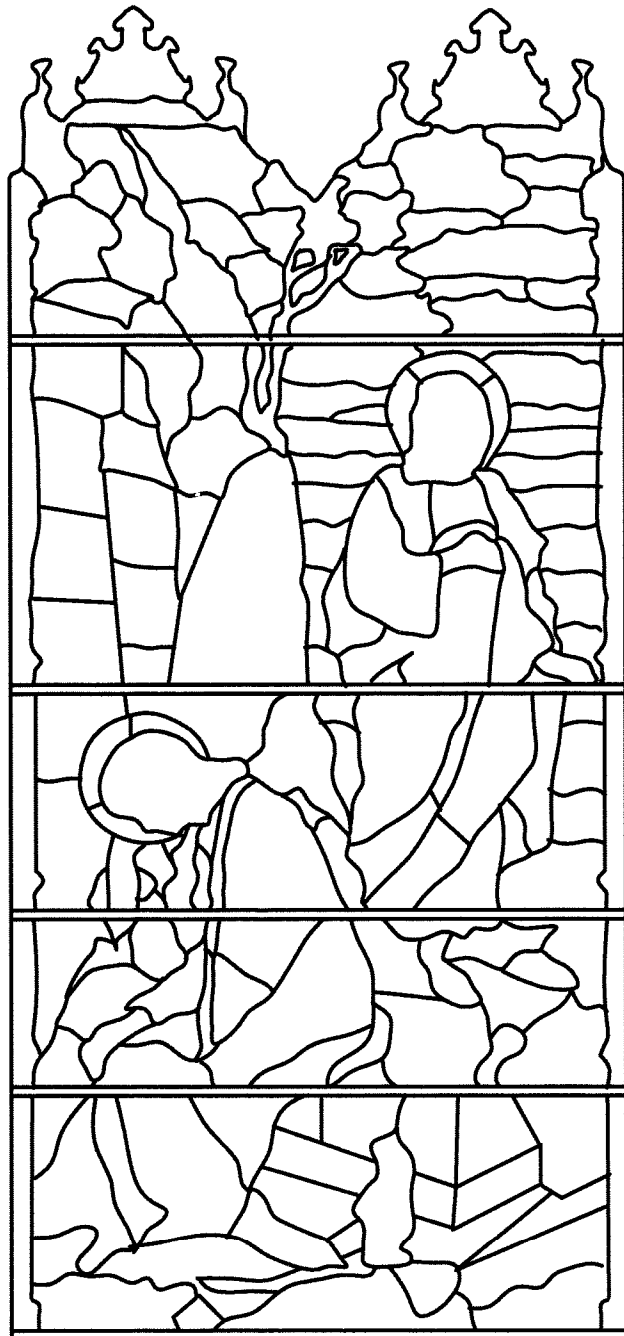
A-LEFT PANEL: THE BIRTH

LEAD CAME- PANEL A



B-CENTER PANEL: GARDEN OF GETHSEMANE

LEAD CAME- PANEL B

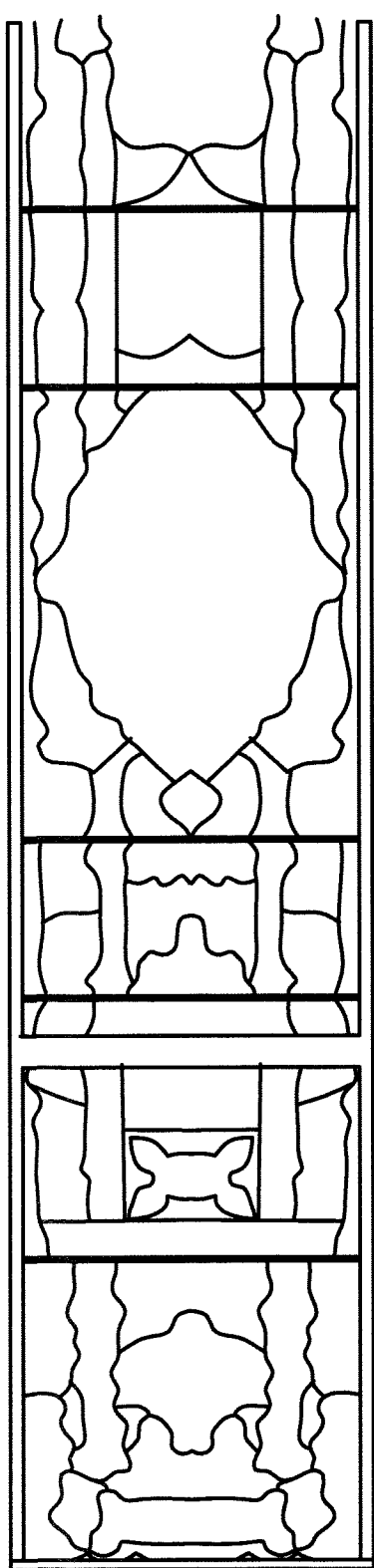


C-RIGHT PANEL: THE RESUR- RECTION

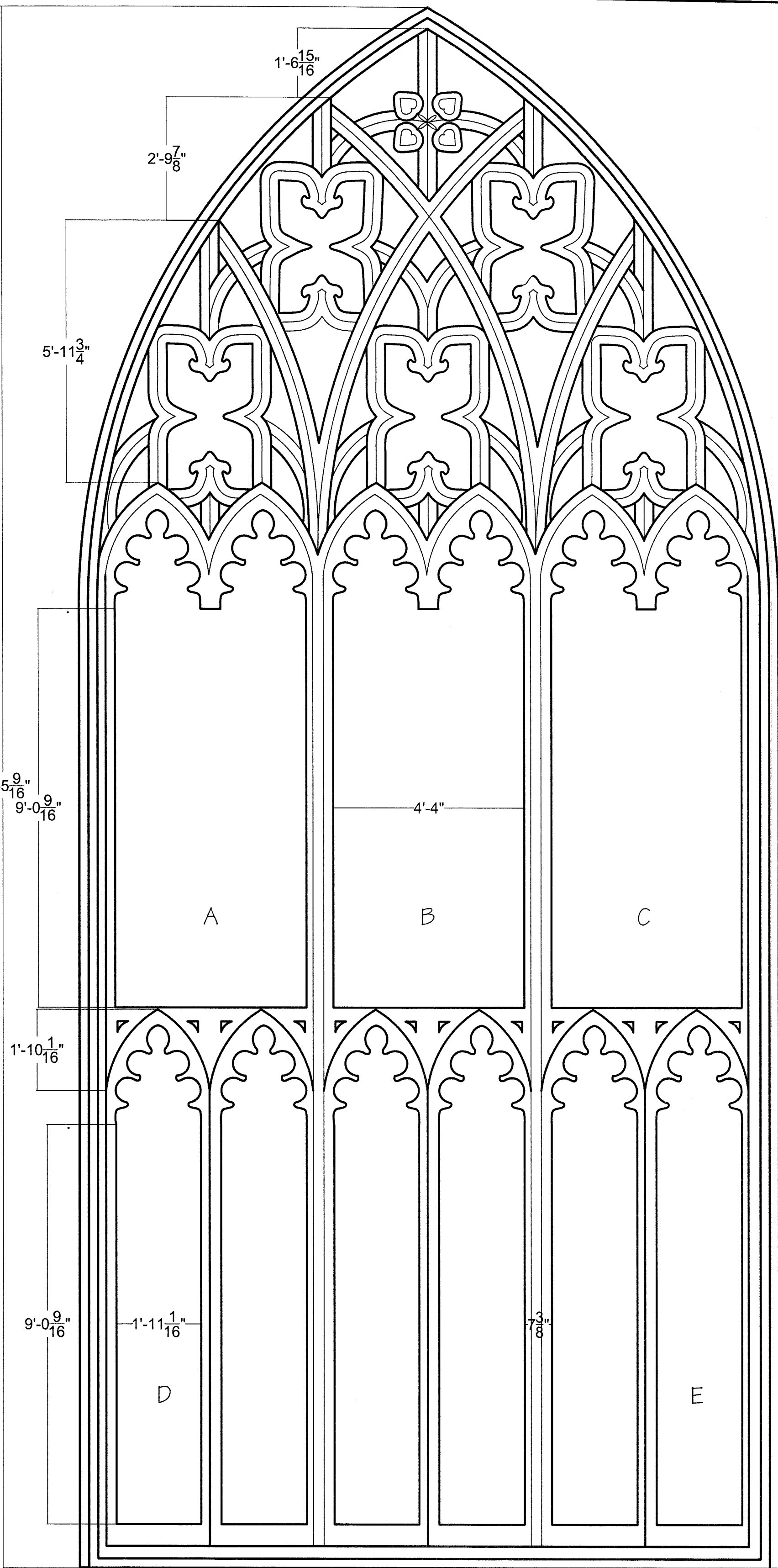
LEAD CAME- PANEL C



PANEL D



LEAD CAME- PANEL D



THE STAINED GLASS WINDOWS AT THE NEW TABERNACLE FOURTH BAPTIST CHURCH REPRESENTS AN IMPORTANT PART OF ITS HISTORY AND INTRICATE DETAIL. THE CHURCH WAS BUILT AT THE BEGINNING CUSP OF THE "STAINED GLASS MOVEMENT" IN THE UNITED STATES (FROM 1870 TO 1930). STAINED GLASS REPRESENTS A PARTICULARLY CHALLENGING PRESERVA- TION TOPIC, AS IT COMBINES SEVERAL DIFFERENT BUILDING ELEMENTS THAT DO NOT NECESSARILY REPRESENT SEVERE STRUCTURAL THREATS TO BUILDING AND THEREFORE MAY NOT BE SEEN AS PRIORITY. HOWEVER, THE STAINED GLASS AT NEW TABERNACLE IS EXTREMELY PRECIOUS, ESPECIALLY THE EASTERN WINDOW. UNFORTUNATELY, THE WINDOW HAS NOT BEEN TAKEN PROPER CARE OF, AND RIGHT NOW IS INCREDIBLY DIRTY. STEPS MUST BE TAKEN TO PRESERVE AND MAINTAIN THIS BEAUTIFUL ELEMENT OF THE CHURCH.

GLASS

THE GREATEST THREAT TO THE WINDOW MATERIALS THEMSELVES IS PHYSICAL IMPACT. THIS IS ESPECIALLY TRUE AT NEW TABERNACLE WHERE THE WINDOWS TAKE UP SUCH A LARGE SURFACE AREA OF THE FACADES AND THE BUILDING IS LOCATED ON SUCH A PROMINENT STREET CORNER, UPPING ITS EXPOSURE TO FLYING ROCKS AND OTHER THREATS. GLASS CAN ALSO CRACK WHEN EXPOSED TO TOO MUCH PRESSURE OR VIBRATION FROM NOISE AND TRAFFIC. THE PAINTING ON STAINED GLASS IS ALSO AN IMPORTANT CONSIDERATION, AS THE WINDOWS SIGNIFICANCE IS REFLECTED IN THE SCENE IT PORTRAYS. IMPROPERLY FIRED GLASS CAN LEAD TO PAINT DETERIORATION AND FLAKING. THIS WINDOW IS MADE OF PAINTED GLASS AND THEREFORE MUST BE CLEANED VERY GENTLY.

REPAIR

THE WINDOWS SHOULD BE GENTLY CLEANED AND THE PROPER PRECAUTIONS SHOULD BE USED TO REINFORCE THE WATERPROOFING AROUND AND WITHIN THE WOODEN FRAME. THIS MAY REQUIRE RECAULKING OF THE STRUCTURE AND A RE- POINTING OF THE SURROUNDING MASONRY. THE GLAZING WHICH ADHERES THE LEAD CAME TO THE GLASS SHOULD ALSO BE CHECKED FOR CONDITION AND THE PROPER REPAIRS SHOULD BE MADE.

PROTECTION

SOME STEPS HAVE BEEN TAKEN TO PROTECT THE GLASS AT NEW TABERNACLE. LEX- AN WINDOW COVERS WERE PLACED ON THE EXTERIOR OF THE WINDOWS TO PROTECT THEM FROM FLYING DEBRIS, BUT THE RESULT, ALTHOUGH IN LINE WITH NATIONAL STANDARDS, DOES LITTLE TO SHOWCASE THE BEAUTY OF THE BUILDING. ALTERNA- TIVE METHODS OF PROTECTION SHOULD BE EXPLORED AND STEPS SHOULD BE TAK- EN TO ALLOW PASSERBY TO REDISCOVER THE BEAUTY OF NEW TABERNACLE. THERE ARE OTHER TYPES OF PLASTIC AND GLASS COVERINGS THAT WILL MORE READILY SHOWCASE THE STAINED GLASS. METHODS AS SIMPLISTIC AS GUARDING THE WIN- DOWS WITH CHICKEN WIRE OFFER AN INEXPENSIVE AND NON OBTRUSIVE MEANS TO SHIELDING THE WINDOWS FROM FURTHER HARM.

LEAD CAME

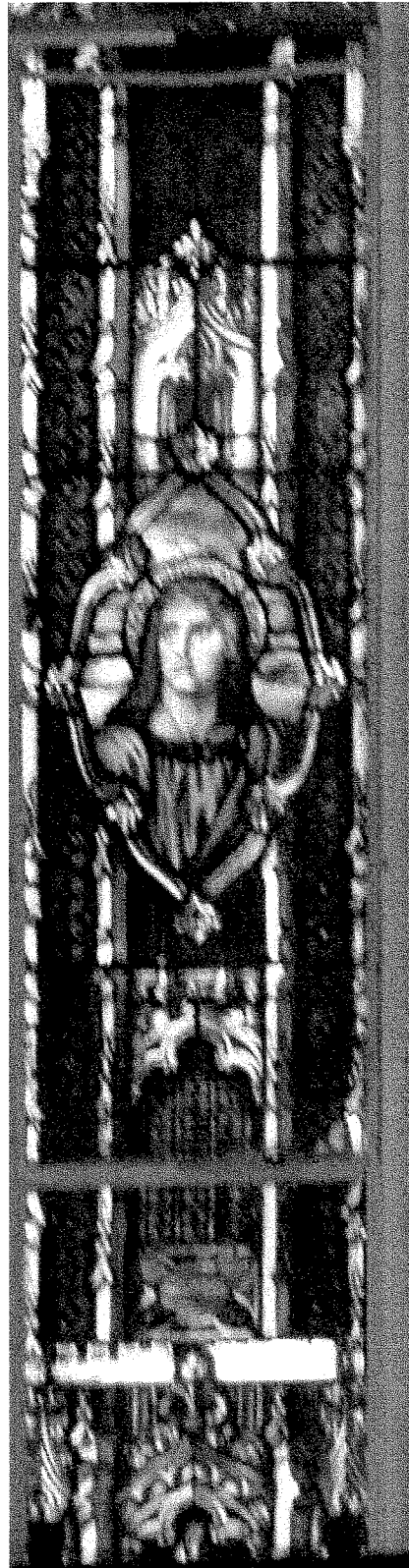
DIFFERENT PIECES AND COLORS OF GLASS ARE SUPPORTED AND HELD IN PLACE BY THIN LEAD BARS CALLED LEAD CAME. IF THESE METAL PIECES ARE TO CORRODE OR FAIL, THE GLASS WILL FOLLOW SUIT AND BEGIN TO CRACK. THE STRENGTH OF THE LEAD CAME IS DEPENDENT UPON ITS CROSS SECTION AND THE RATIO OF THE HEART TO FLANGES. OVERLAPPING THE CAME ALSO LEADS TO AN INCREASED STRENGTH OF THE STRUCTURE. THE LEAD CAME IN THIS EASTERN WINDOW IS OF PARTICULAR IMPORTANCE AS IT WAS CUSTOM DESIGNED FOR THESE PAINTED GLASS PIECES. THIS MEANS THAT THE QUALITY AND CRAFTSMANSHIP OF THIS WINDOW ARE OF THE HIGHEST DEGREE. IT ALSO MAKES THEIR PRESERVATION BOTH IMPORTANT AND DIF- FICULT.

WOOD FRAME

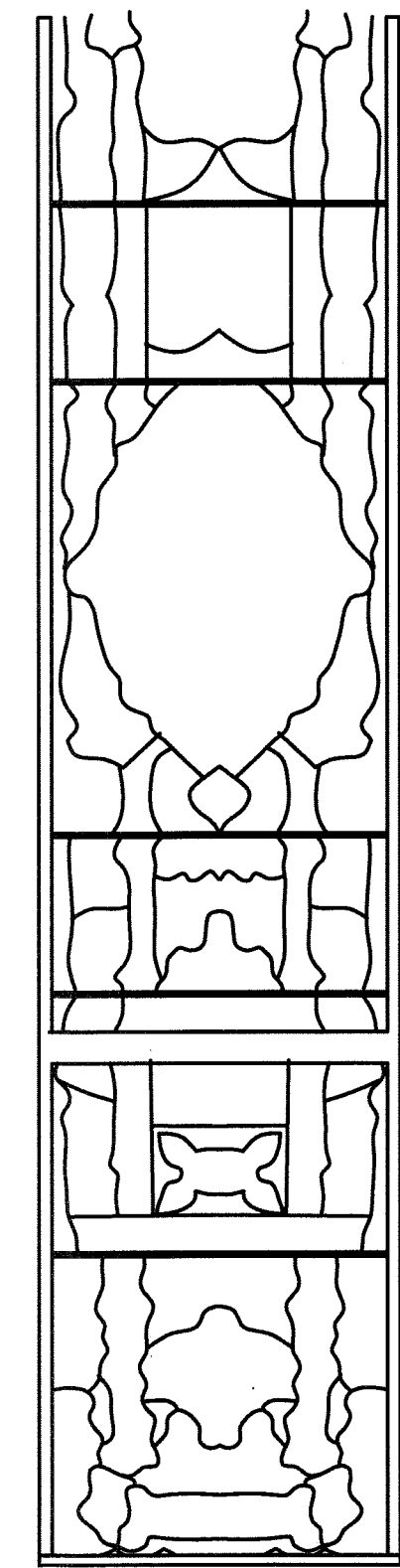
THE WINDOWS AT NEW TABERNACLE ARE FRAMED IN WOOD WHICH LEADS TO SEVER- AL ISSUES. MOISTURE INTRUSION IS PARTICULARLY EVIDENT AT WINDOW OPENINGS AND AS THE WOOD ROTS IT BECOMES A THREAT TO THE INTEGRITY OF THE ENTIRE STRUCTURE.

CLEANING

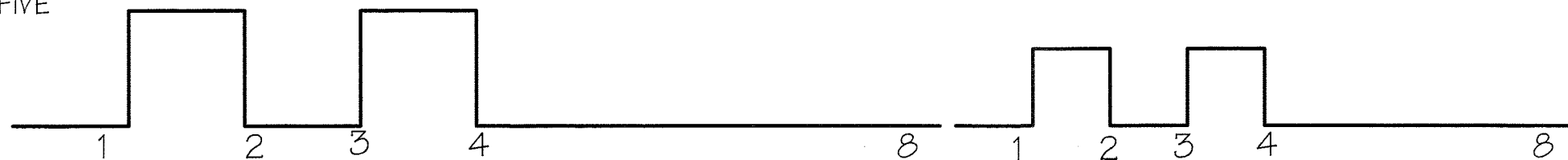
IMPROPERLY CARED FOR GLASS AND LEAD CAME ARE MUCH MORE LIKELY TO DE- TERIORATE. YET, IT IS IMPORTANT TO MAINTAIN THAT THE WINDOWS ARE CARED FOR IN THE GENTLEST MEANS POSSIBLE, AS HARSH CHEMICAL SUBSTANCES CAN RE- MOVE PAINT AND LEAD TO FURTHER LEAD CAME CORROSION. THE WINDOWS NOW, HAVE NOT BEEN PROPERLY CLEANED AND THE DIRT AND DEBRIS IS LEADING TO A MORE RAPID BREAKDOWN OF THE PAINTED SCENES. MAINTENANCE, PROTECTION AND PRESERVATION SHOULD START BY CONTACTING A CERTIFIED STAINED GLASS STUDIO TO EVALUATE THE WINDOWS. AFTER THE INITIAL EVALUATION A PRESER- VATION AND MAINTENANCE PLAN SHOULD BE MADE SPECIFIED TO THE WINDOWS. THE SPECIALIST CAN ALSO COME UP WITH A CLEANING PLAN FOR THE CONGREGATION. IT IS RECOMMENDED THAT THE SPECIALIST CHECK UP ON THE WINDOWS EVERY FIVE YEARS



PANEL E



LEAD CAME- PANEL E



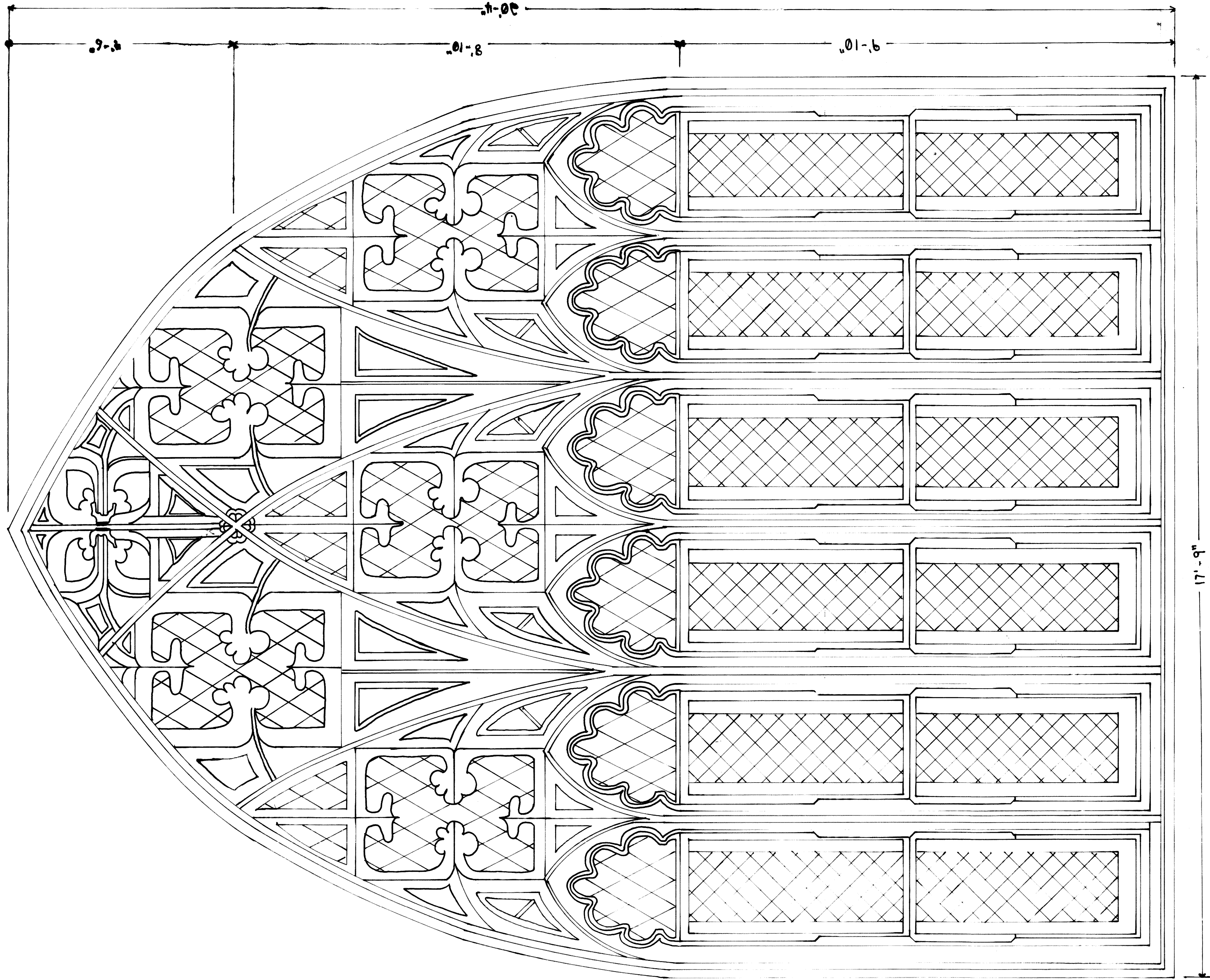
3/4"=1'0"
GRAPHIC SCALE PANELS

1/2"=1'0"
GRAPHIC SCALE WHOLE WINDOW

EASTERN WINDOW DETAIL

JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION & COMMUNITY PLANNING		PROJECT: NEW TABERNACLE FOURTH BAPTIST CHURCH DRAWING TITLE: EAST ELEVATION WINDOW DETAIL DRAWING PREPARED BY (TEAM/INDIVIDUAL): ALAINA WATKINS AND MARISSA WARD	
ASSIGNMENT NO: 5	DATE: APRIL 19, 2013	SCALE: 1/2"=1'0" AND 3/4"=1'0"	SHEET 19
REV	DESCRIPTION	DATE	APPROVED
1	AS PER COMMENTS/GRADE		

DETAILED ELEVATIONAL
STAINED GLASS WINDOW

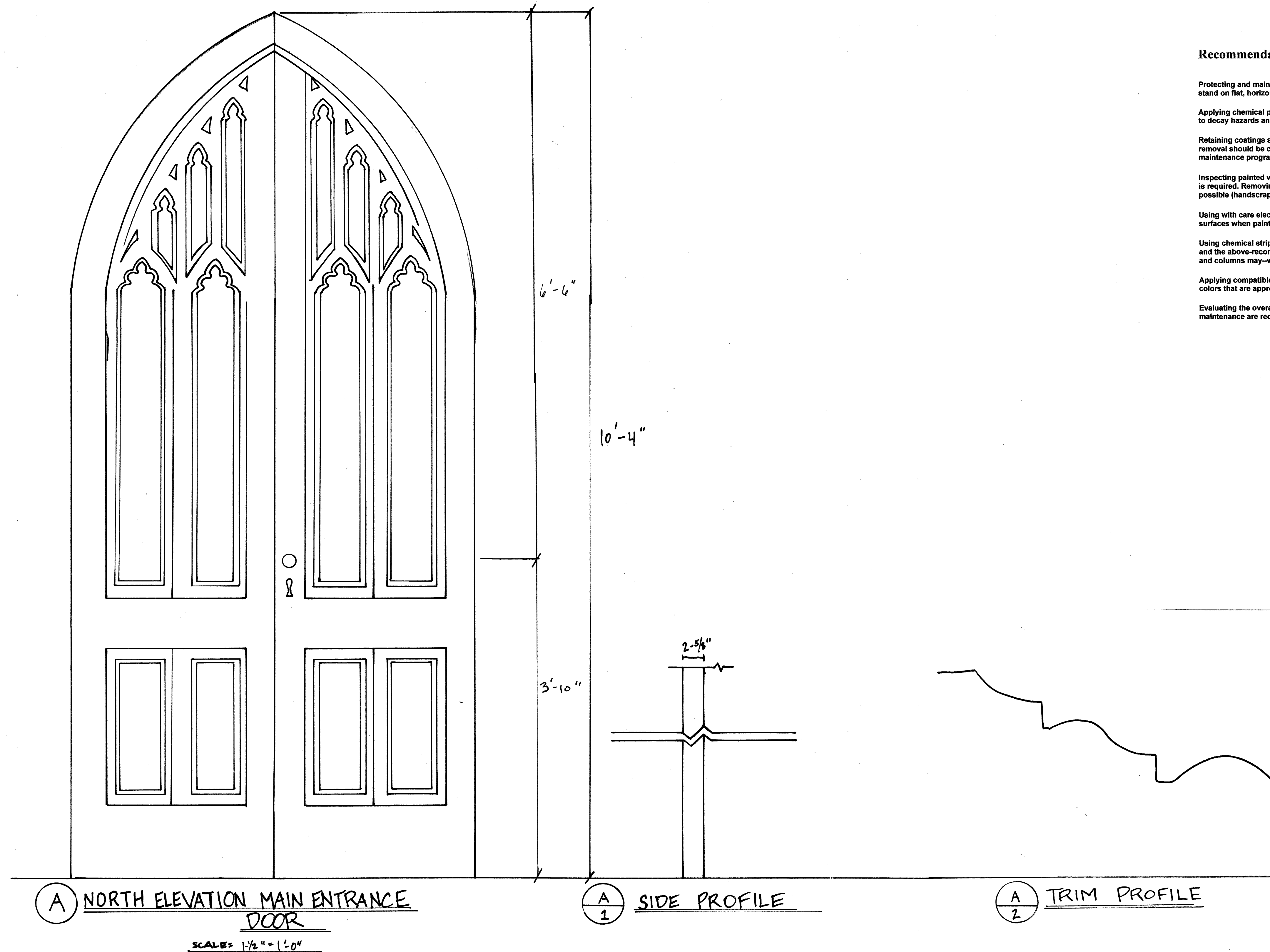


SPECIFICATIONS

- THIS STAINED GLASS WINDOW, LIKE MOST, HAS A SECONDARY LAYER OF PROTECTIVE GLAZING ON THE EXTERIOR KNOWN AS LEXAN.
- LEXAN GLAZING WAS PROMOTED AS AN EFFECTIVE MEANS TO PROTECT AGAINST VANDALISM, WEATHERING, AND IMPROVING THERMAL PERFORMANCE.
- LEXAN HAS BEEN FOUND THROUGH RECENT STUDIES TO HINDER PROTECTION BECAUSE IT'S BLOCKS THE AIR FLOW, ALLOWS MORE CONDENSATION AND HEAT BUILD UP IN THE AIR SPACE, AND PREVENTS MAINTENANCE.
- TO RESOLVE THIS, IT'S RECOMMENDED THAT PROTECTIVE GLAZING NOT BE USED, AND IF NEEDED WHEN POSSIBLE TO VENT THE AIRSPACE AND ALLOW EXTERIOR CIRCULATION, ALLOWING THE EXTERIOR PORTIONS OF THE WINDOW TO BREATHE.

SCALE: 1" = 1'-0"

JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION & COMMUNITY PLANNING		PROJECT: DETAILED DRAWING	
DRAWING NO: 315		DRAWING TITLE: ST. LUKE'S STAINED GLASS WINDOW	
DATE: 4/22/2013		DRAWING PREPARED BY (TEAM/INDIVIDUAL): JASE M. GEIGER	
SCALE: 1" = 1'-0"		SHEET: MYEAR 20	
REV		REVISIONS	
DESCRIPTION		DATE	
ELEVATIONAL / DETAILED		APPROVED	



Recommendations of Exterior Wood Elements per NPS Standards

Protecting and maintaining wood features by providing proper drainage so that water is not allowed to stand on flat, horizontal surfaces or accumulate in decorative features.

Applying chemical preservatives to wood features such as beam ends or outriggers that are exposed to decay hazards and are traditionally unpainted.

Retaining coatings such as paint that help protect the wood from moisture and ultraviolet light. Paint removal should be considered only where there is paint surface deterioration and as part of an overall maintenance program which involves repainting or applying other appropriate protective coatings.

Inspecting painted wood surfaces to determine whether repainting is necessary or if cleaning is all that is required. Removing damaged or deteriorated paint to the next sound layer using the gentlest method possible (handscraping and handsanding), then repainting.

Using with care electric hot-air guns on decorative wood features and electric heat plates on flat wood surfaces when paint is so deteriorated that total removal is necessary prior to repainting.

Using chemical strippers primarily to supplement other methods such as handscraping, handsanding and the above-recommended thermal devices. Detachable wooden elements such as shutters, doors, and columns may—with the proper safeguards—be chemically dip-stripped.

Applying compatible paint coating systems following proper surface preparation. Repainting with colors that are appropriate to the historic building and district.

Evaluating the overall condition of the wood to determine whether more than protection and maintenance are required, that is, if repairs to wood features will be necessary.

JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION & COMMUNITY PLANNING		PROJECT: ST. LUKE'S MAIN ENTRANCE DOOR DETAIL	
ASSIGNMENT NO:		DRAWING TITLE: DOOR DETAIL	
DATE: 4-19-13		DRAWING PREPARED BY (TEAM/INDIVIDUAL): JOSH SPENCER	
SCALE:		SHEET 21	
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

Preservation of Historic Wood Windows

The current windows on St. Luke's Episcopal Church are greatly affected by the rainfall, heat, and humidity that is present in Charleston. These natural elements make it difficult to keep up with the paint on the windows as well as the fluctuating wood due to the bipolar weather. A common problem in the church is the air and moisture that is able to pour through the gap between the bottom sash and the sill. The problem should not be fixed with installing different windows since wooden windows built before 1920 are more decay resistant and more stable than the lumber used today. Unfortunately the window built where the turrent? was meant to be placed was added later due to the change in building plans. The window was built later than the other windows and it is apparent when you look closer at the more simply done construction of the window.

A good way to easily control the flow of elements through this gap would be the installation of a piece of silicone-bulb weatherstripping inserted in a groove in the bottom rail. Whether or not the window was meant to open this piece of material will efficiently close any gaps that may currently be letting in the elements (Yagid, 2010).

Another way to help keep older windows in better shape was discovered in a recently conducted study on the preservation on wooden elements from historic buildings, D'Orazio and Quagliarni found that it would be helpful to use bentonite as a moisture regulating system for the preservation of historic wooden elements. Since the city has an almost constant high percentage of humidity throughout the year the bentonite would serve as a moisture buffering material

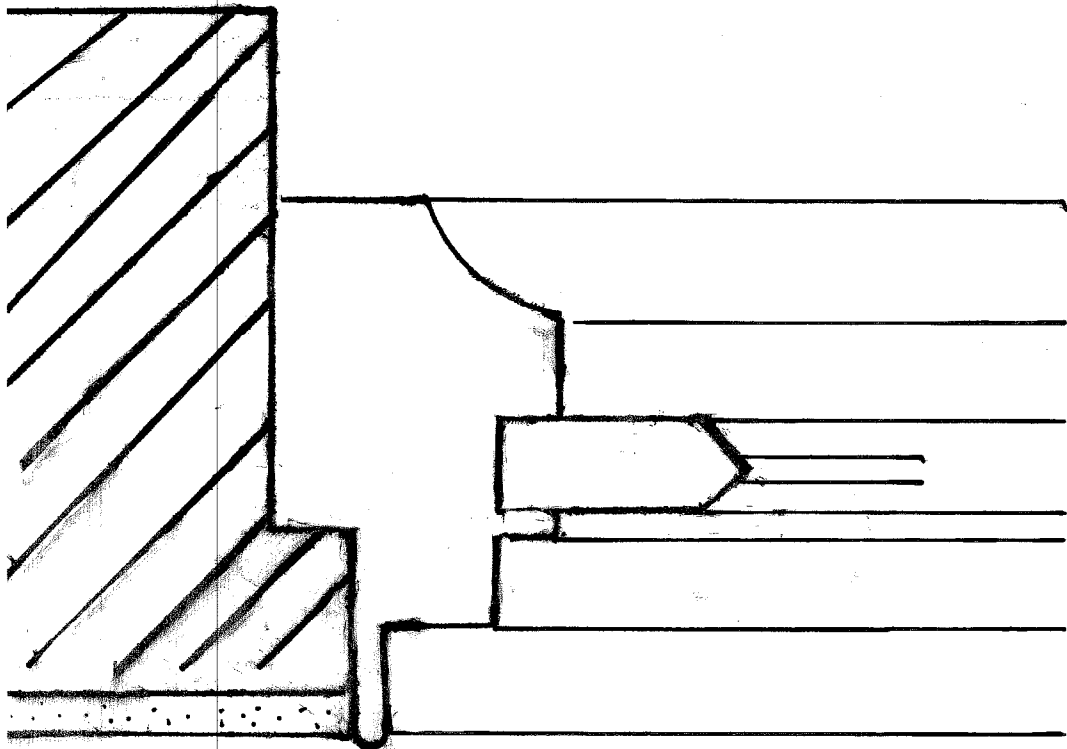
during the absorption phase (D'Orazio, 2010). Although it is not cheap to upgrade or restore old windows, much of the expense can be averted if you do the repairing yourself (Yagid, 2010). Even though this window was probably built some time after the turn of the 19th century it is still consider historic and should not be replaced, but repaired.

Sources

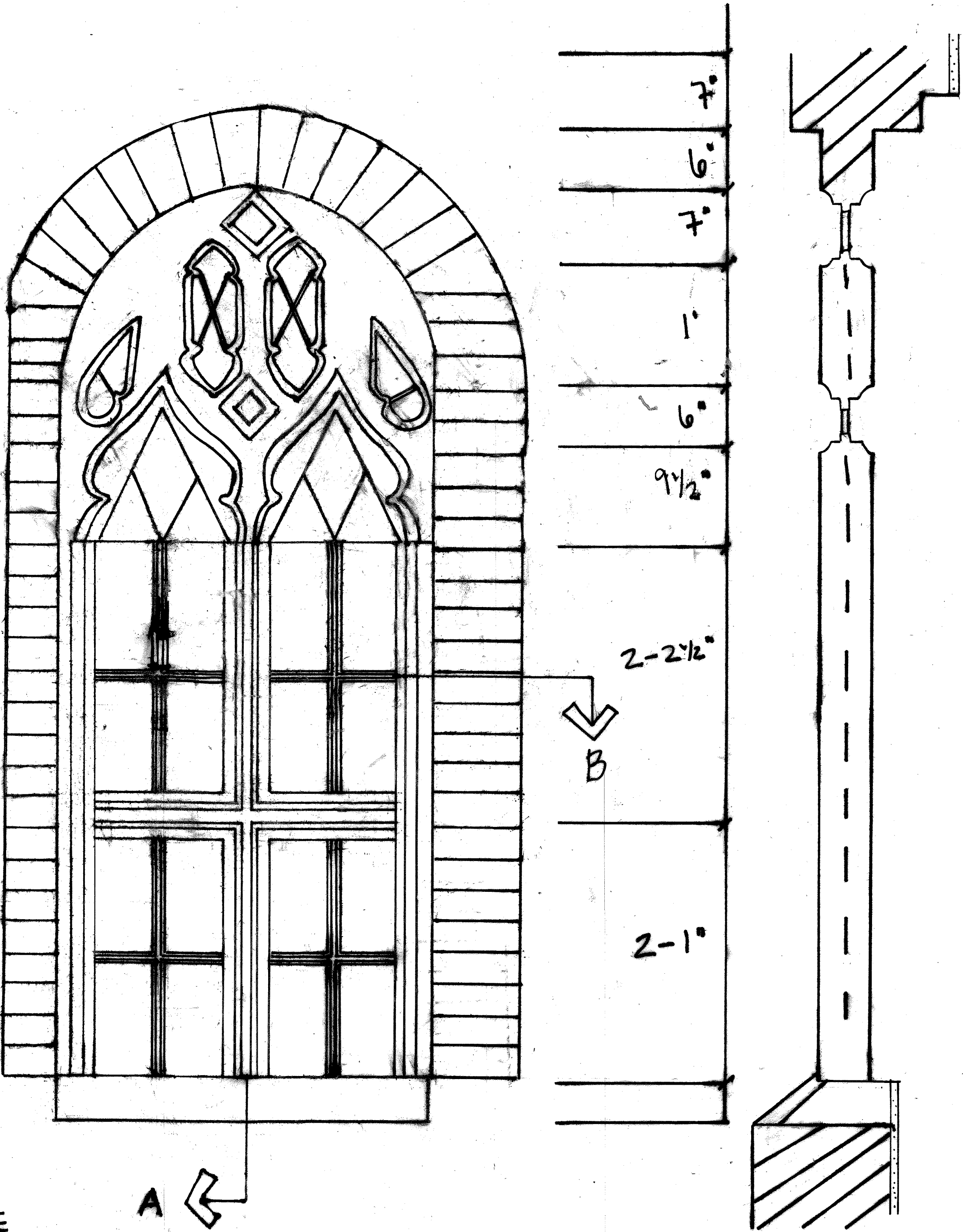
D'Orazio, Marco, & Quagliarni, Enrico. "Study on Some Properties of Treated Bentonites for Their Potential Use as a Moisture Regulating System for Preservation of Historical Wooden Elements." *Journal of Cultural Heritage* 11.2 (2010): 185-95. EBSCOhost. Web. 10 Apr. 2013.

Yagid, Rob. "Should Your Old Wood Windows Be Saved?" Finehomebuilding.com. The Taunton Press Inc., Apr.-May 2010. Web. 10 Apr. 2013.

SECTION B



SECTION A



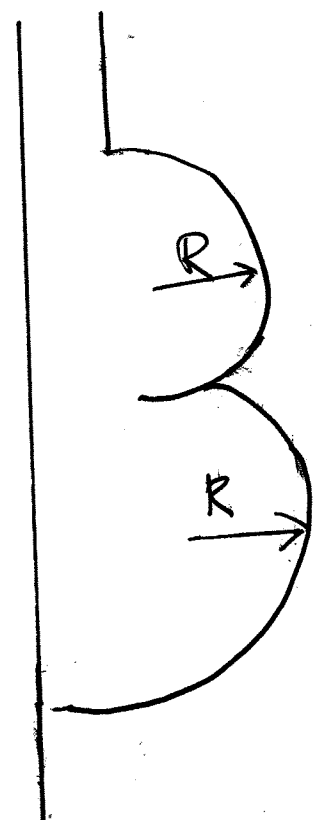
GRAPHIC SCALE
1 1/2" = 1'-0"



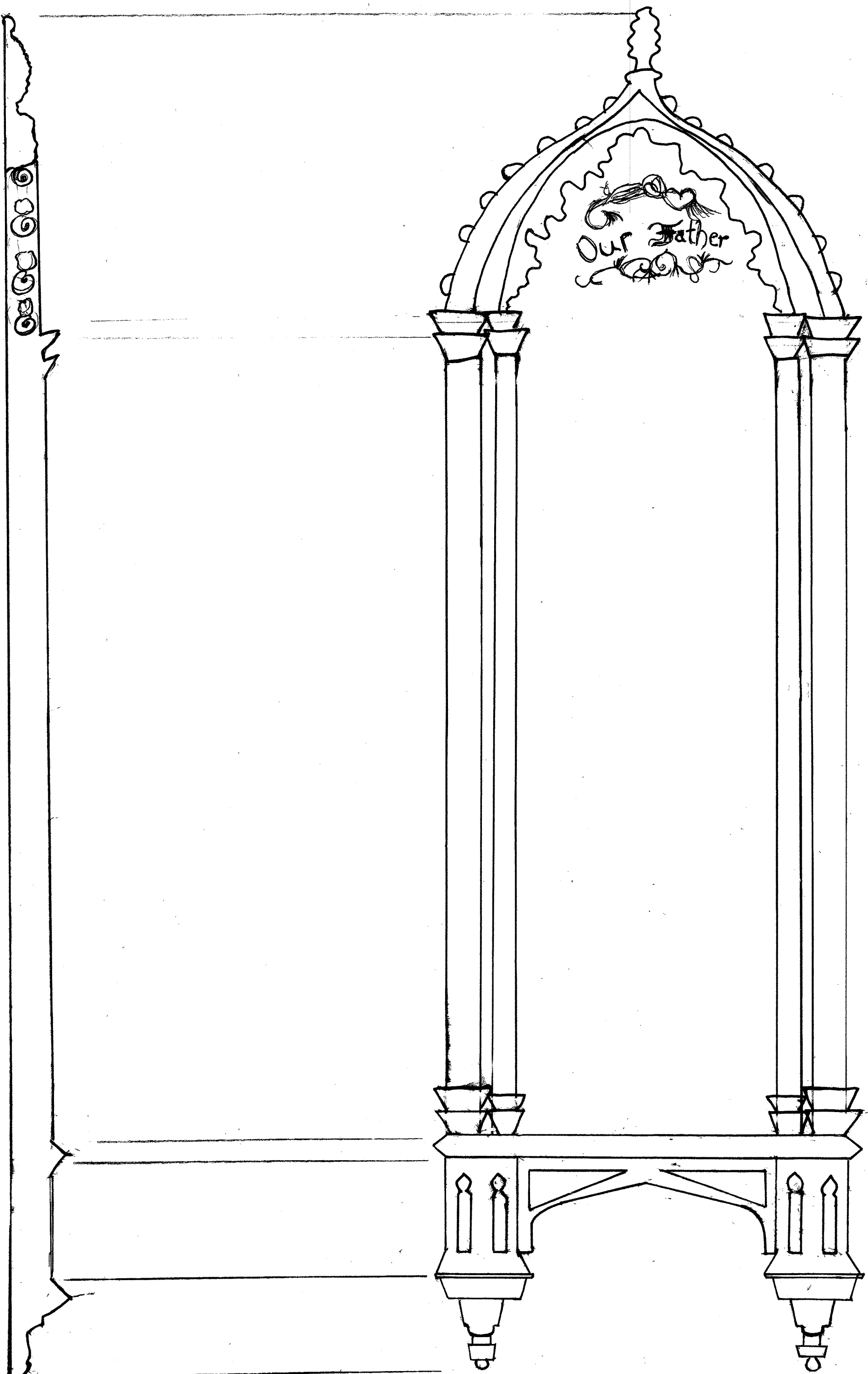
JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION & COMMUNITY PLANNING		PROJECT: <u>St. Luke's</u>	
ASSIGNMENT NO:		DRAWING TITLE: <u>Detail Drawing Revision</u>	
DATE: <u>April 19, 2013</u>		DRAWING PREPARED BY (TEAM/INDIVIDUAL): <u>Sophia Salsbery</u>	
SCALE: <u>1/2"</u>		SHEET <u>22</u>	
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

Preservation and Research of the Memorial Plaque

- Repair to the decorative plaster because it has crumbled off.
- Gently washing the black marble background because it has been stained by the white plaster.
- Repainting the white wooden columns and arches.
- Research would include the place the memorial plaques had when it was an Episcopal church.
- Research will also be done on the plaques below that honor prominent church members, mostly on the role they played in the larger Charleston community.



SECTION B

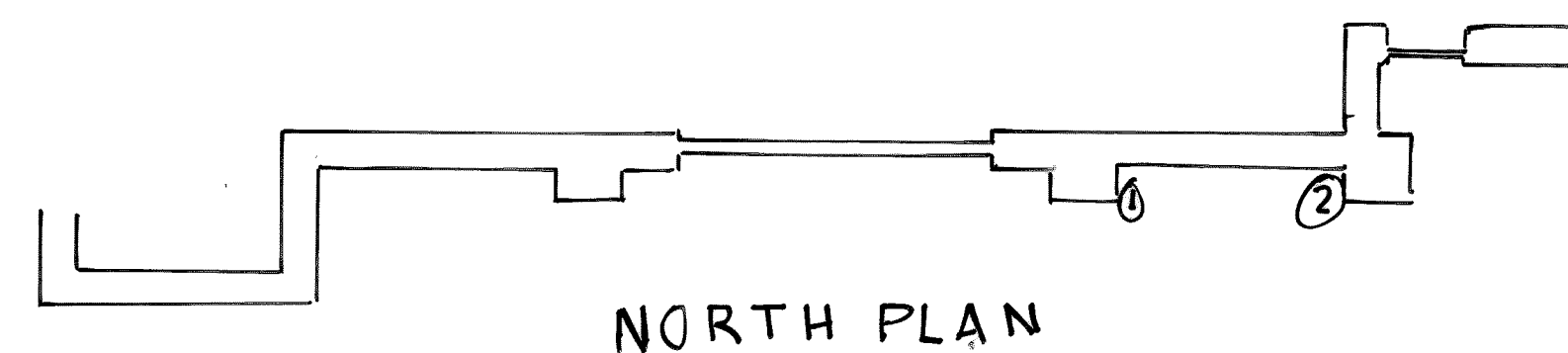
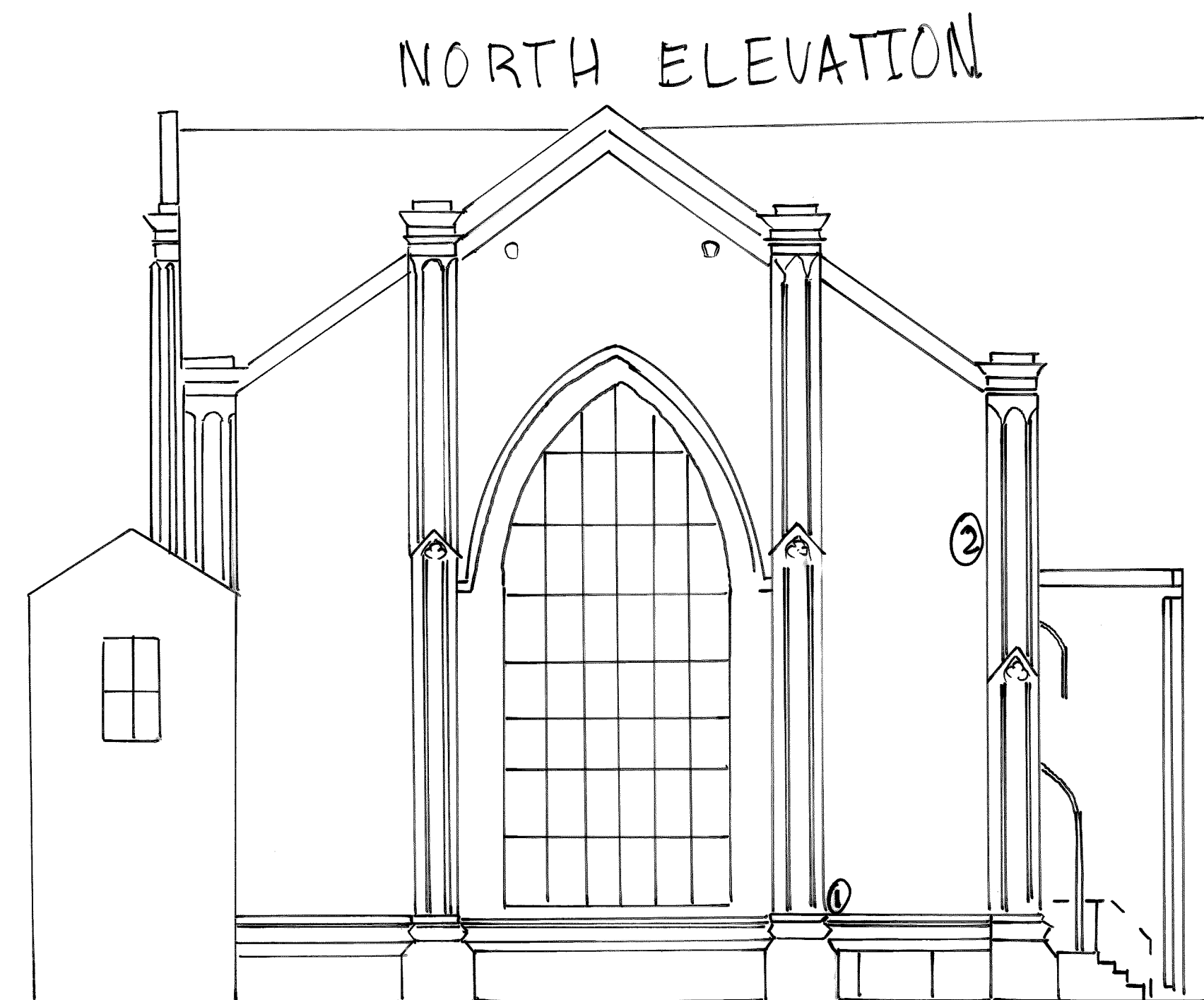


SECTION A-A

NOTES:
• DETAILS OF PLASTER DESIGNS NOT TO SCALE
• DETAILS OF DECORATIONS ON TOP OF ARCH NOT TO SCALE

SCALE:
 $\frac{1}{2}'' = 1'-0''$

JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION & COMMUNITY PLANNING		PROJECT: ST. LUKE'S EPISCOPAL/ NEW TABERNACLE	
ASSIGNMENT NO: 6		DRAWING TITLE: DETAIL OF TABLET	
DATE: 4/17/13		DRAWING PREPARED BY (TEAM/INDIVIDUAL): ELAINA GYURE	
SCALE 1/2"		SHEET	23
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



There are many major issues regarding the mortar at St. Luke's Episcopal Church. To cover such a broad range of issues, a narrowing of focus to three main issues was necessary. Falling rain causes several issues, especially when a building is not equipped to cope. Rising damp can have serious repercussions in correlation to the longevity of the foundation. Miscellaneous damage not caused by water can encompass wind erosion, earthquakes, and poor repairs. All of these will be researched and measures to preventing and preserving will be exemplified.

**MISSING
STUCCO
PORTLAND
CEMENT
WATER
DAMAGE
LEGEND**

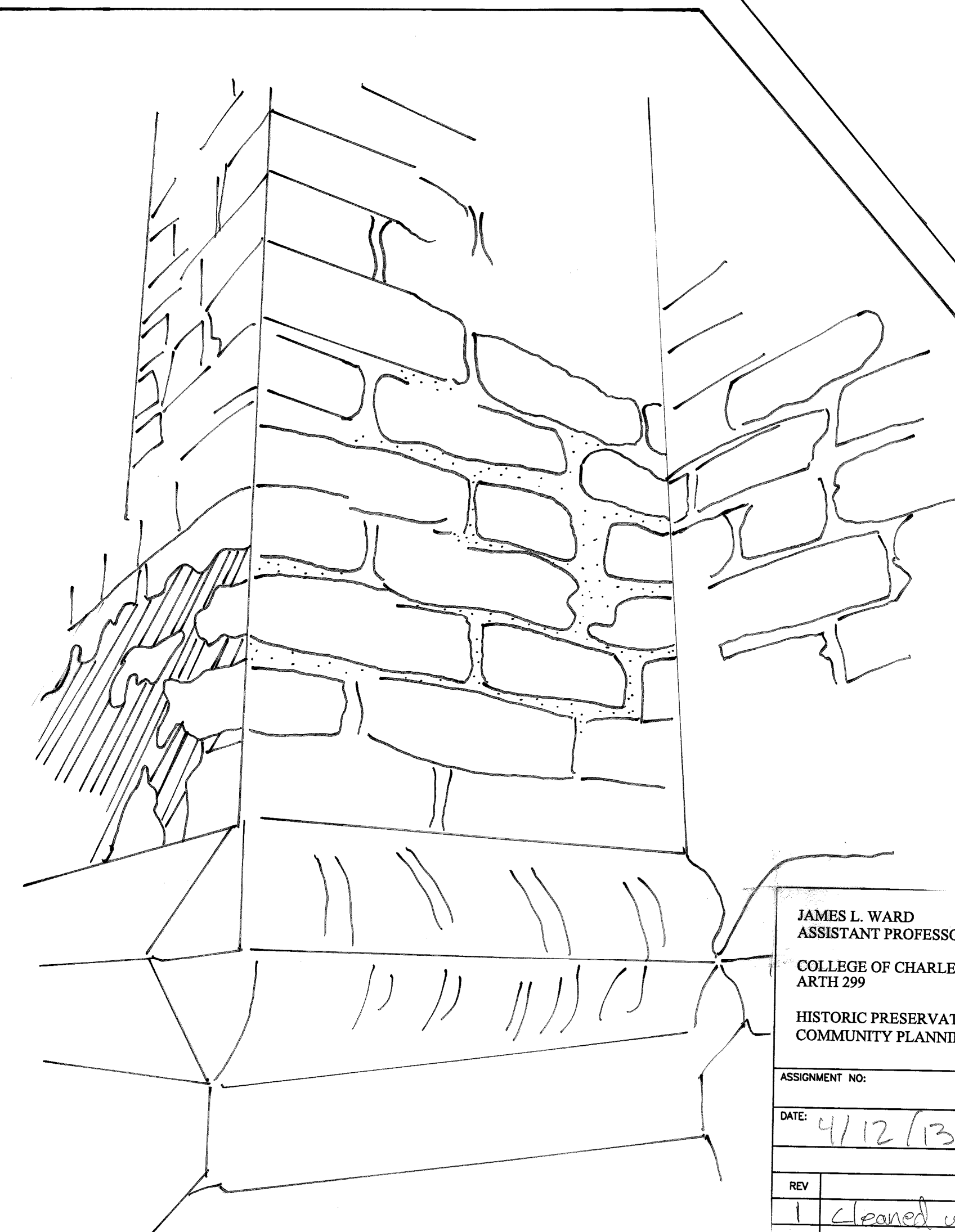
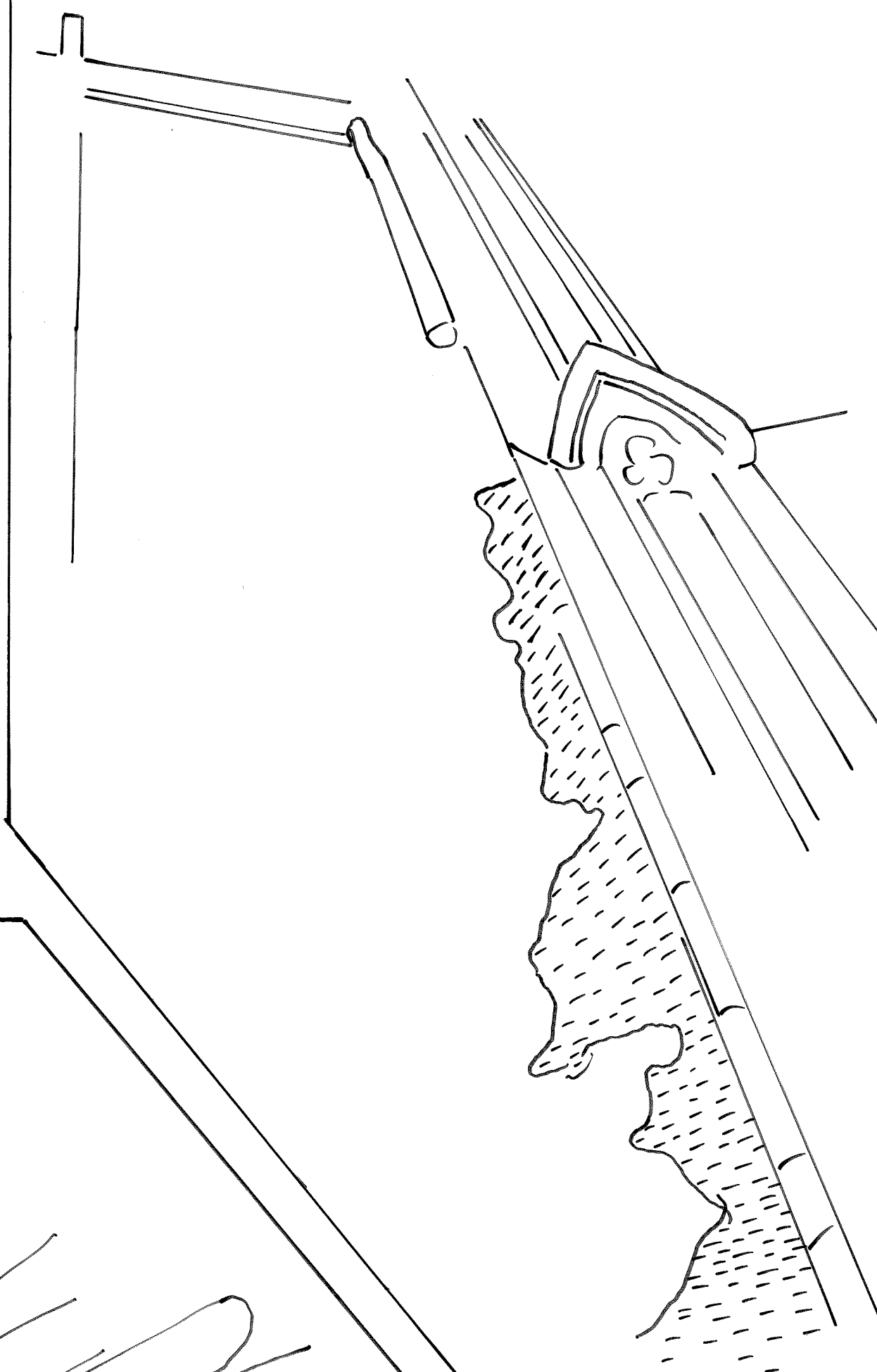
Rising Damp/Portland Cement

Rising damp seems to have caused an issue, but not in the foundation damage, rather the damage has come with the repairs. Along the base of the north face we see Portland cement spread over cracking brick and diminishing mortar. We see this in places similar to and including detail #1. Detail #1 exemplifies a space not only missing mortar, but also implementing Portland cement for repair. This is a poor solution, as Portland cement does not have the long-term strength to hold the foundation of this large structure together. Rising damp has also brought with it biological life, and with the plant life comes damage to the face of the church. Plant life has been cracking the north face's brick as it grows and forces it roots into the building.

Down Rain/Vegetation

Falling rain on the north face is an especially serious issue. Somewhere from transitioning from a cistern system to a gutter system, the church ended up with neither. In many places there are holes in the wall where gutters previously sat or were intended to sit. But even the existing gutters are often incomplete and still drain down the wall face, causing major water damage to the porous brick, as seen in detail #2. The solving of this situation would be simple and not effect the historic image of the church at all, put in functioning gutters. Just draining the water away from the building properly will cut down on most of the water damage on the north face. This change would also cut down on the plant life growing on all sides of the church.

DETAIL # 2

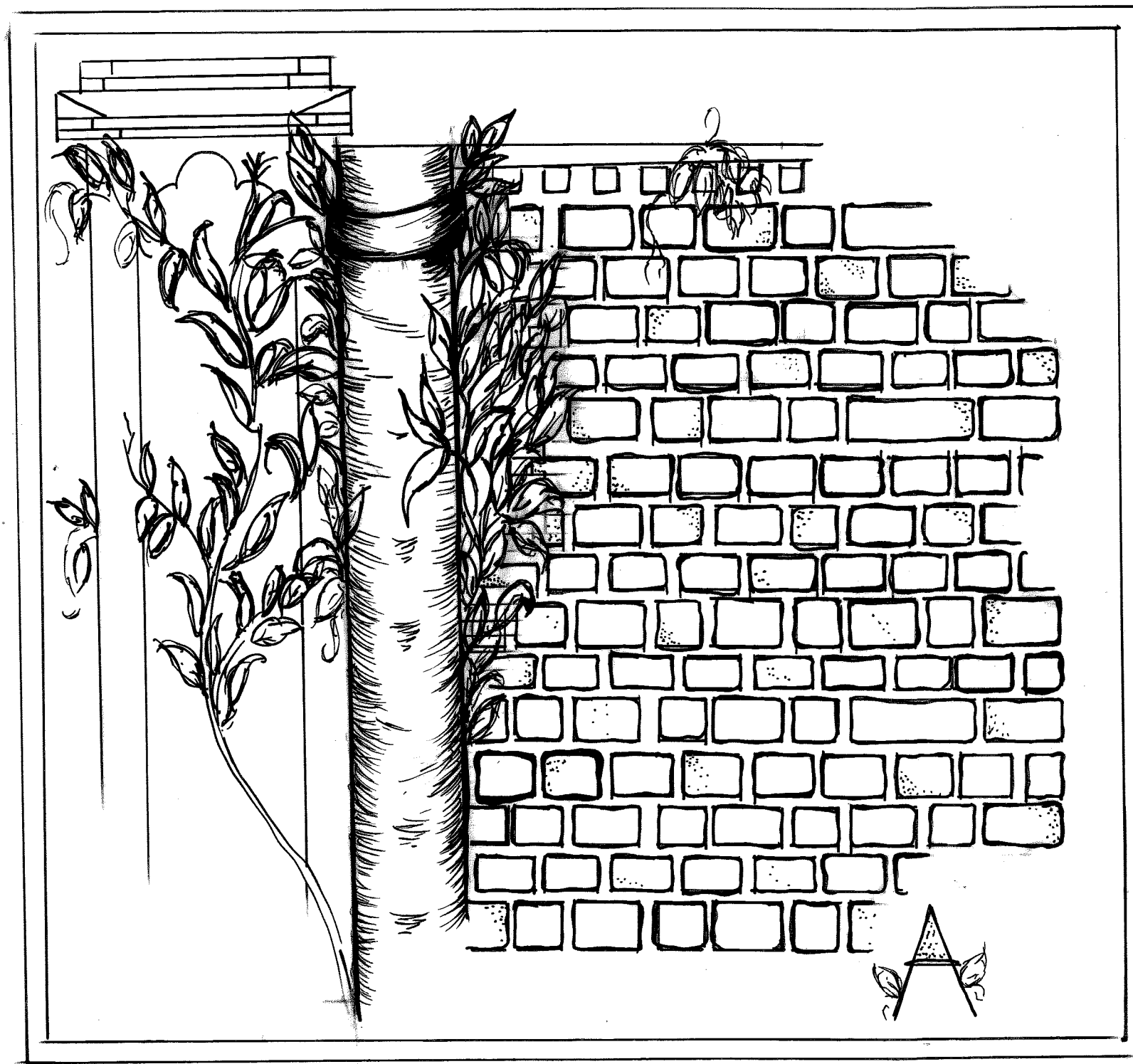


DETAIL # 1

JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299		PROJECT: MORTAR DETAIL	
HISTORIC PRESERVATION & COMMUNITY PLANNING		DRAWING TITLE: NORTH FACE MORTAR	
ASSIGNMENT NO:		DRAWING PREPARED BY (TEAM/INDIVIDUAL): PATRICK HAYES	
DATE: 4/12/13		SCALE:	SHEET 25
REV	DESCRIPTION	DATE	APPROVED
1	Cleaned up writing, New Key, inserted later	4/19/2013	

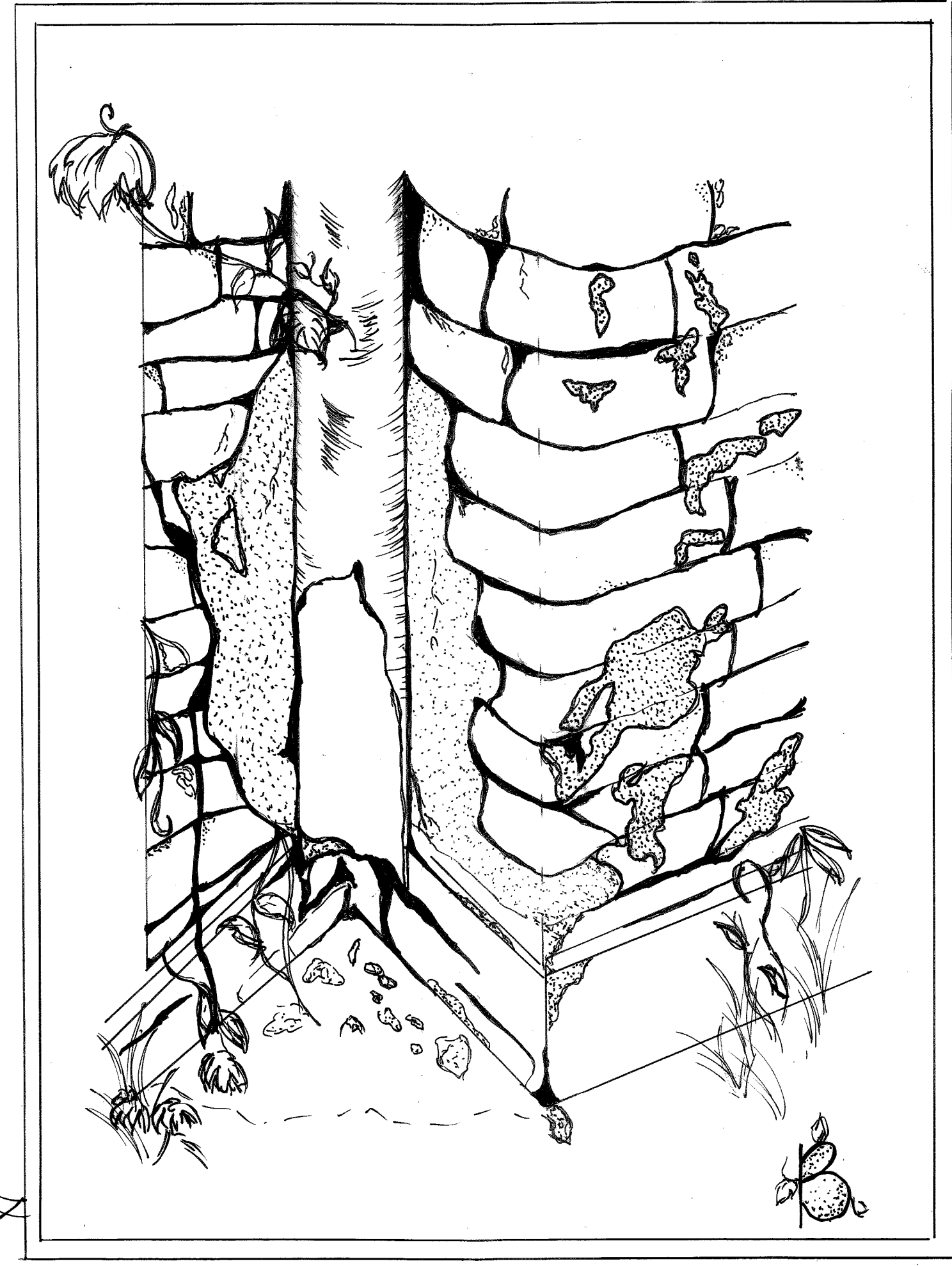
VEGETATION

BY COMBINING BOTH WATER DAMAGE AND RISING DAMP TOGETHER THE CHURCH WILL CONTINUE TO SEE PLANT GROWTH ISSUES. AS SEEN IN BOTH DETAILS, THE CHURCH ACTUALLY HAS VINES AND OTHER GROWTH WITHIN THE STRUCTURE (BRICKS, WALLS, FOUNDATION). THIS CAN BE DETRIMENTAL TO THE CHURCH'S FURTHER USE AND WELL BEING.



WATER DAMAGE

IMPROPER DRAINAGE SYSTEMS, SEEN IN BOTH DETAIL DRAWING, HAVE CAUSED DETERIORATION OF THE BRICK AND FOUNDATION. BY LEAVING GUTTERS AND OTHER FORMS OF DRAINAGE IN DISREPAIR THE CHURCH WILL CONTINUE TO DETERIORATE.

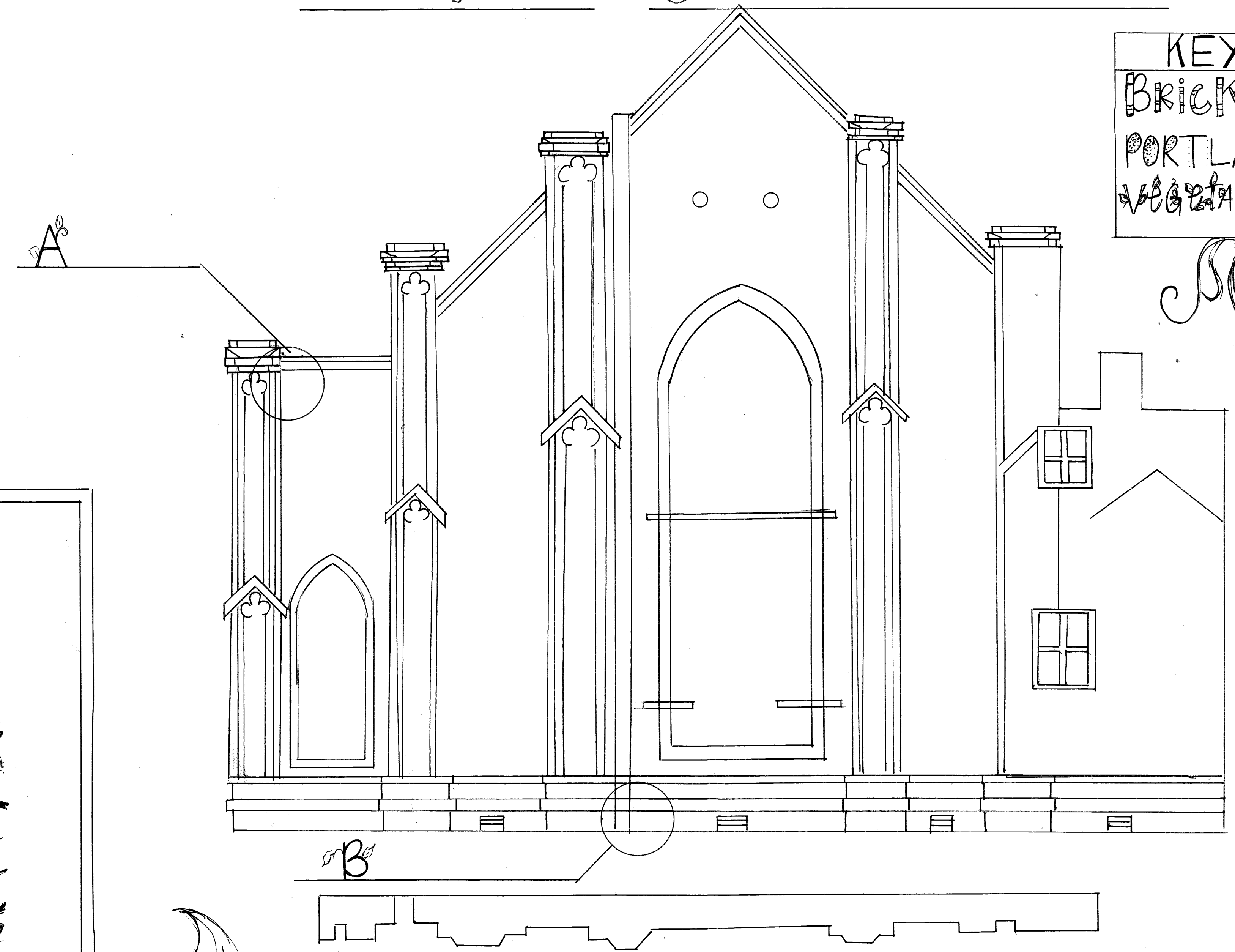


RISING DAMP

ACCURSE WHEN MOISTURE FROM THE OUTSIDE OR CONDENSATION A STRUCTURE DETERIORATES THE BUILDING HSELF. DO TO THE CHURCH'S EXPOSED POROUS BRICK THE STRUCTURE HAS SUFFERED GREATLY. IN ORDER TO CORRECT IS THE CHURCH'S BRICKS WILL HAVE TO BE COVERED BY A SEALANT OR STUCCOED TO PROTECT AGAINST FURTHER EROSION.

east elevation

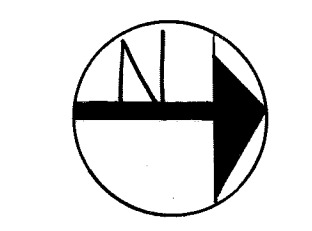
KEY:
BRICK (ONE - FOUR AMERICAN BOND)
PORTLAND CEMENT
VEGETATION



IMPROPER REPAIRS (PORTLAND CEMENT)

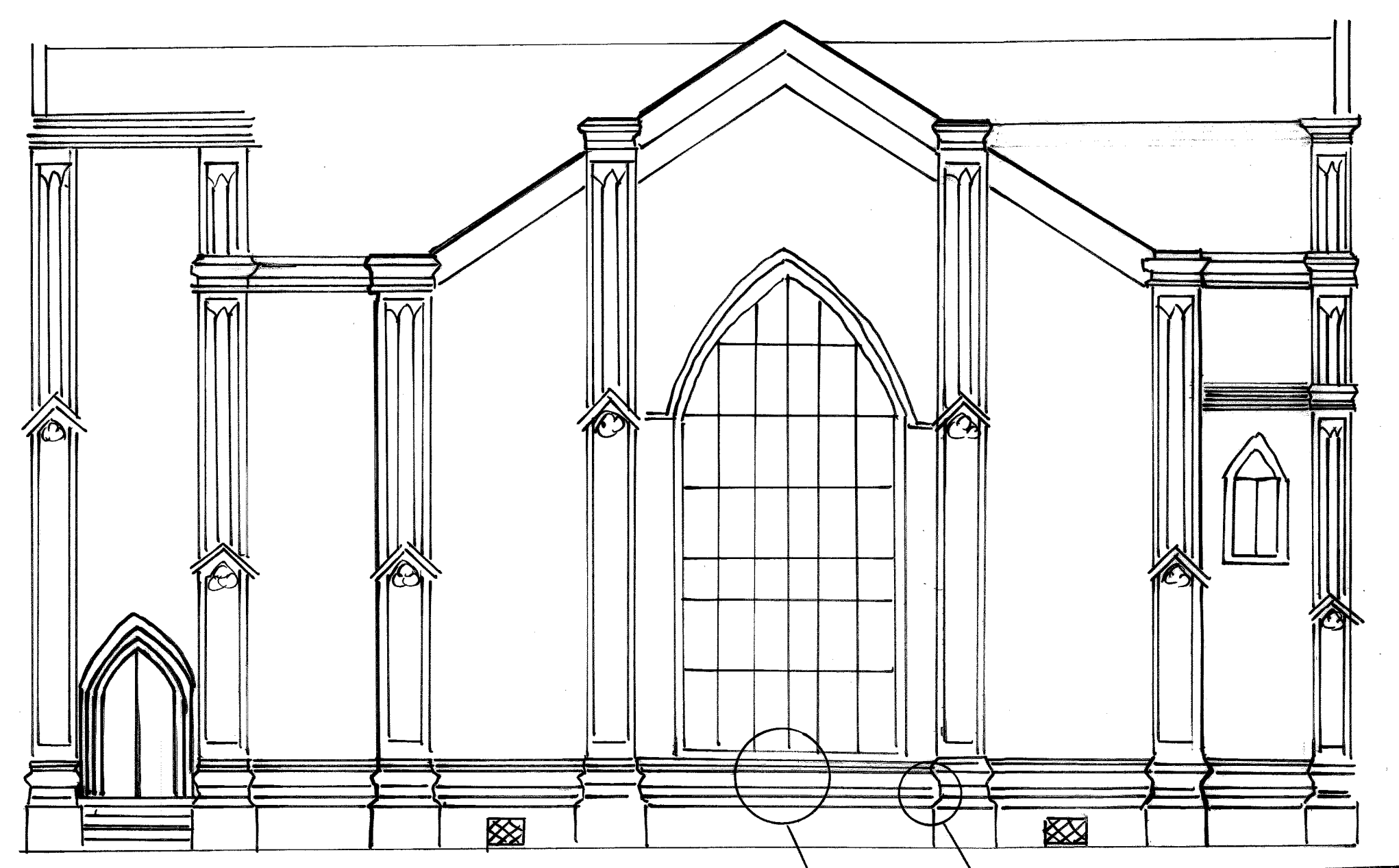
DETAIL B HELPS TO ILLUSTRATE WHAT THE MAJORITY OF THE CHURCH IS FACING. THE EXCESSIVE USE OF PORTLAND CEMENT COMBINE WITH IMPROPER REPAIRS HAS DAMAGED THE CHURCH'S ORIGINAL BRICK. THIS CAN ONLY BE FIXED BY REPOINTING OF THE EXISTING BRICK

PLAN



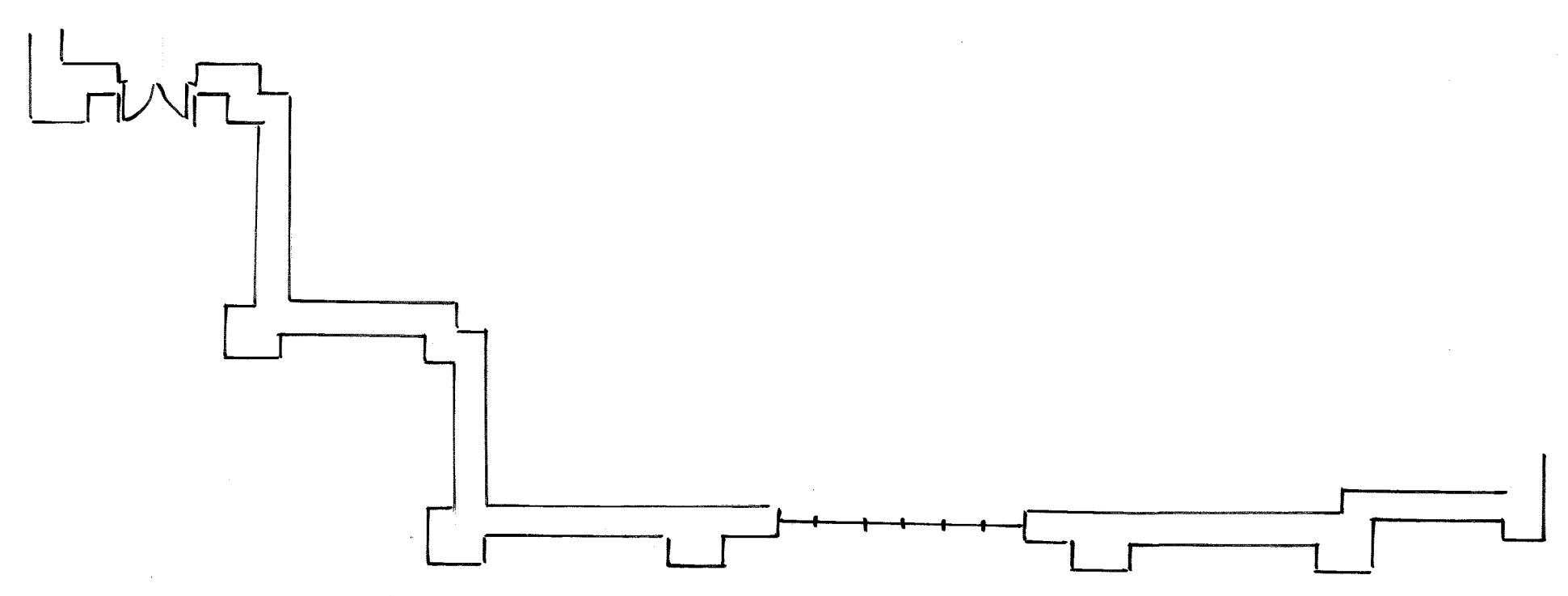
JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299 HISTORIC PRESERVATION & COMMUNITY PLANNING		PROJECT: NEW TABERNACLE FOURTH BAR.	
DRAWING NO: DATE: 4/16/13		DRAWING TITLE: EAST ELEVATION DETAIL	
DRAWING PREPARED BY (TEAM/INDIVIDUAL): EMMALEE KUNZE		SCALE: SHEET 26	
REV	DESCRIPTION	DATE	APPROVED

ELEVATION

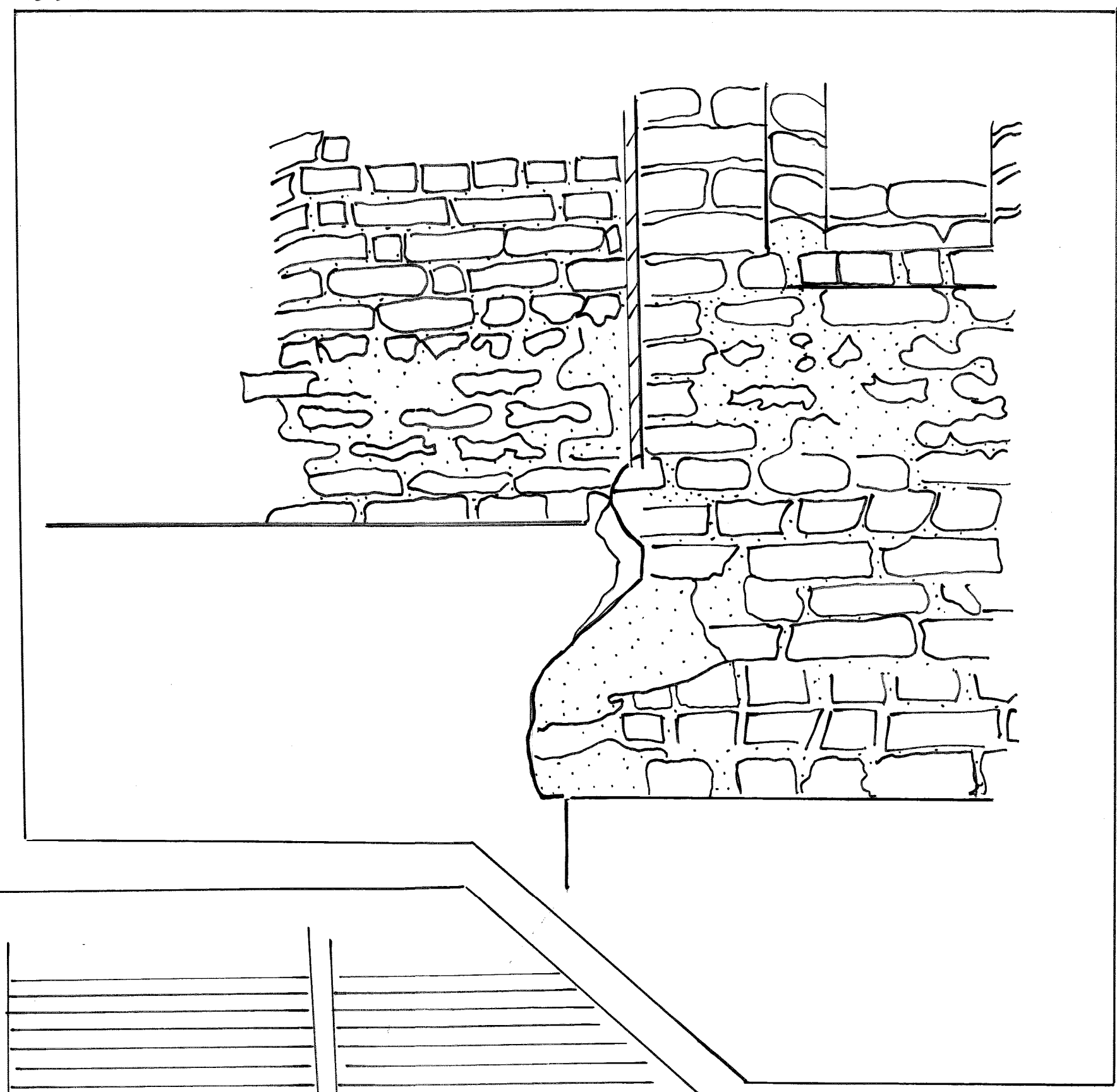


DETAIL A
DETAIL B

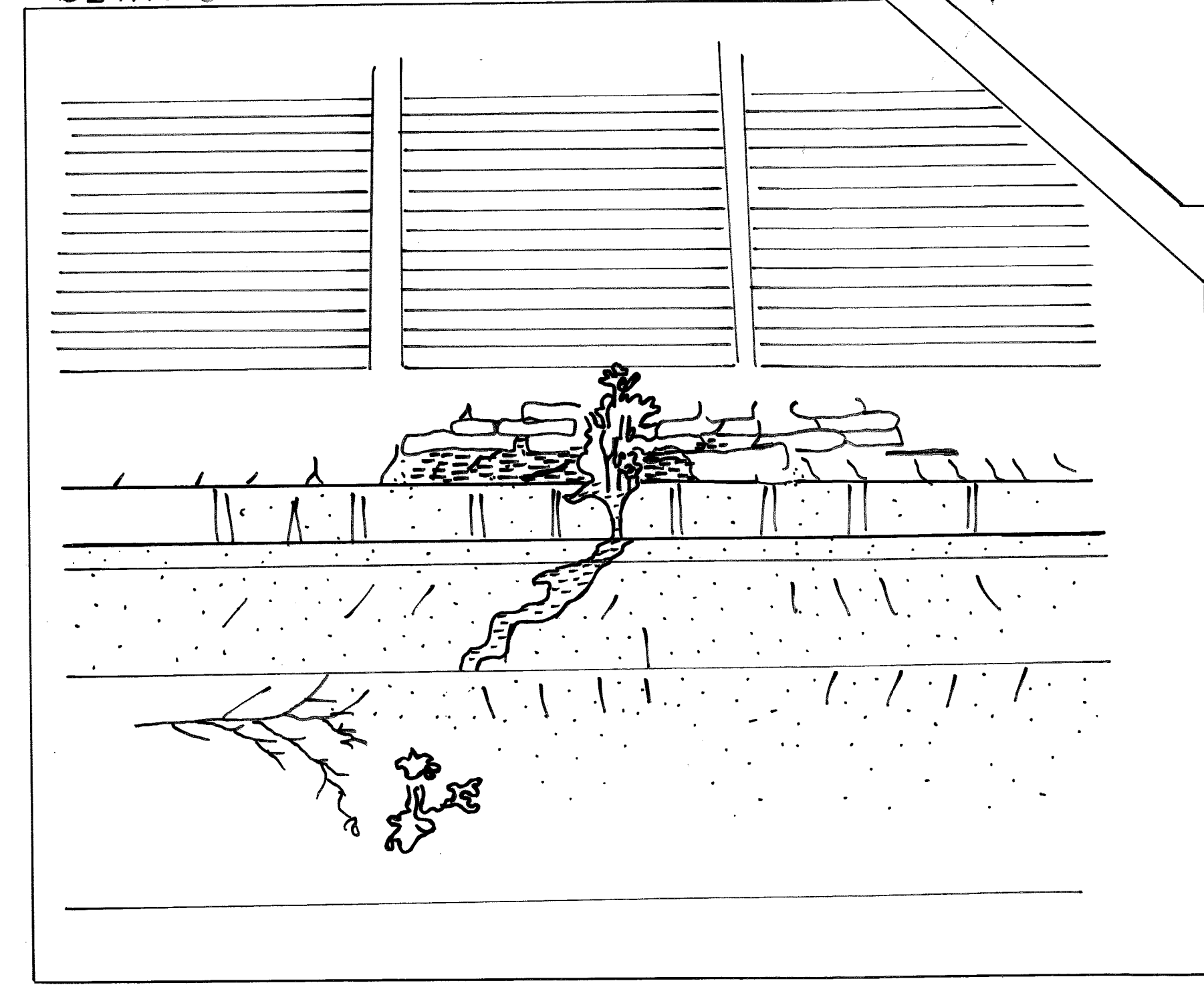
PLAN



DETAIL A



DETAIL B



KEY

	MISSING MORTAR
	PORTLAND CEMENT / IMPROPER MORTAR REPAIRS
	WINDOW GLASS COVERED BY LEXAN
	VEGETATION

MISSING MORTAR
THE AREAS MISSING MORTAR SHOULD BE PROPERLY REPOINTED. THIS REPAIR IS IMPORTANT TO THE PRESERVATION OF THE HISTORIC BRICK, AS WELL AS THE FOUNDATION

VEGETATION
PLANT GROWTH IS EVIDENT ON THE SOUTH ELEVATION. VEGETATION IS FOUND IN AREAS LACKING MORTAR AND/OR BRICK, AS WELL AS THE ROOF LINE. REPAIRING THESE CRACKS AND HOLES AFTER REMOVING THE PLANTS WILL ELIMINATE FUTURE GROWTH IN THOSE AREAS.

IMPROPER REPAIRS
PORTLAND CEMENT WAS USED TO REPAIR VARIOUS CRACKS AND AREAS MISSING MORTAR. DUE TO ITS ABRASIVE QUALITIES, IT HAS CAUSED MORE DAMAGE TO THE HISTORIC BRICKS.

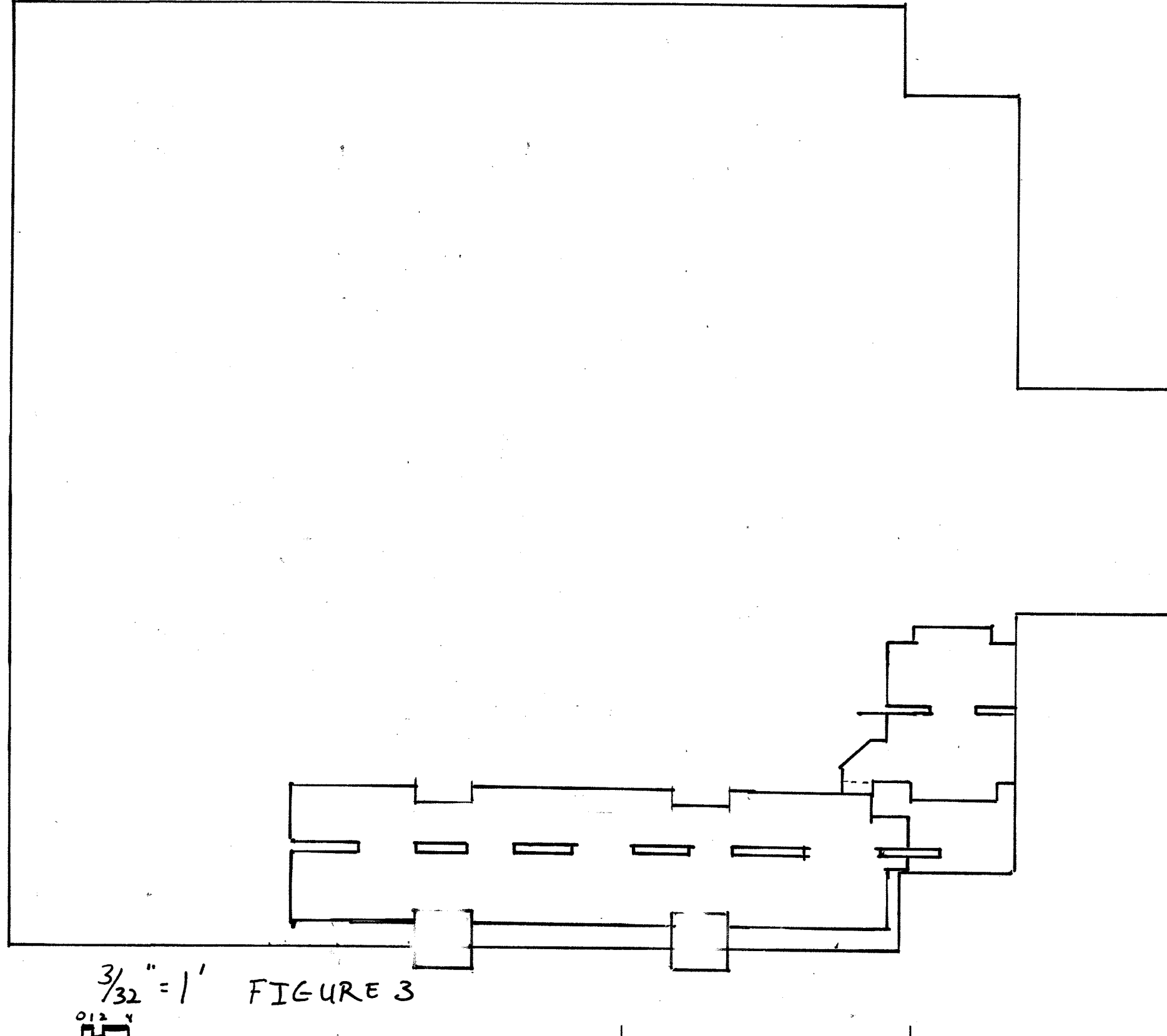
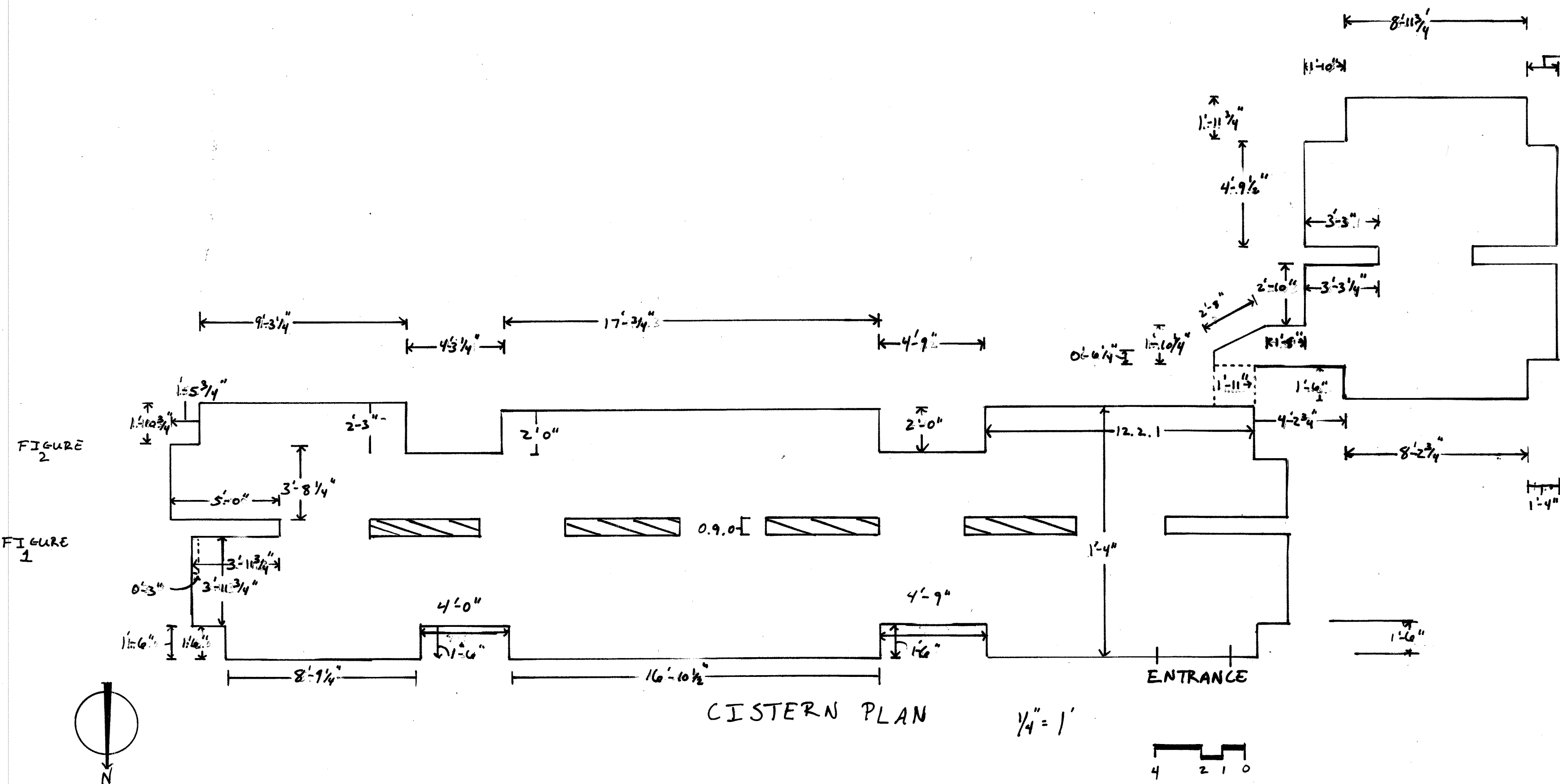
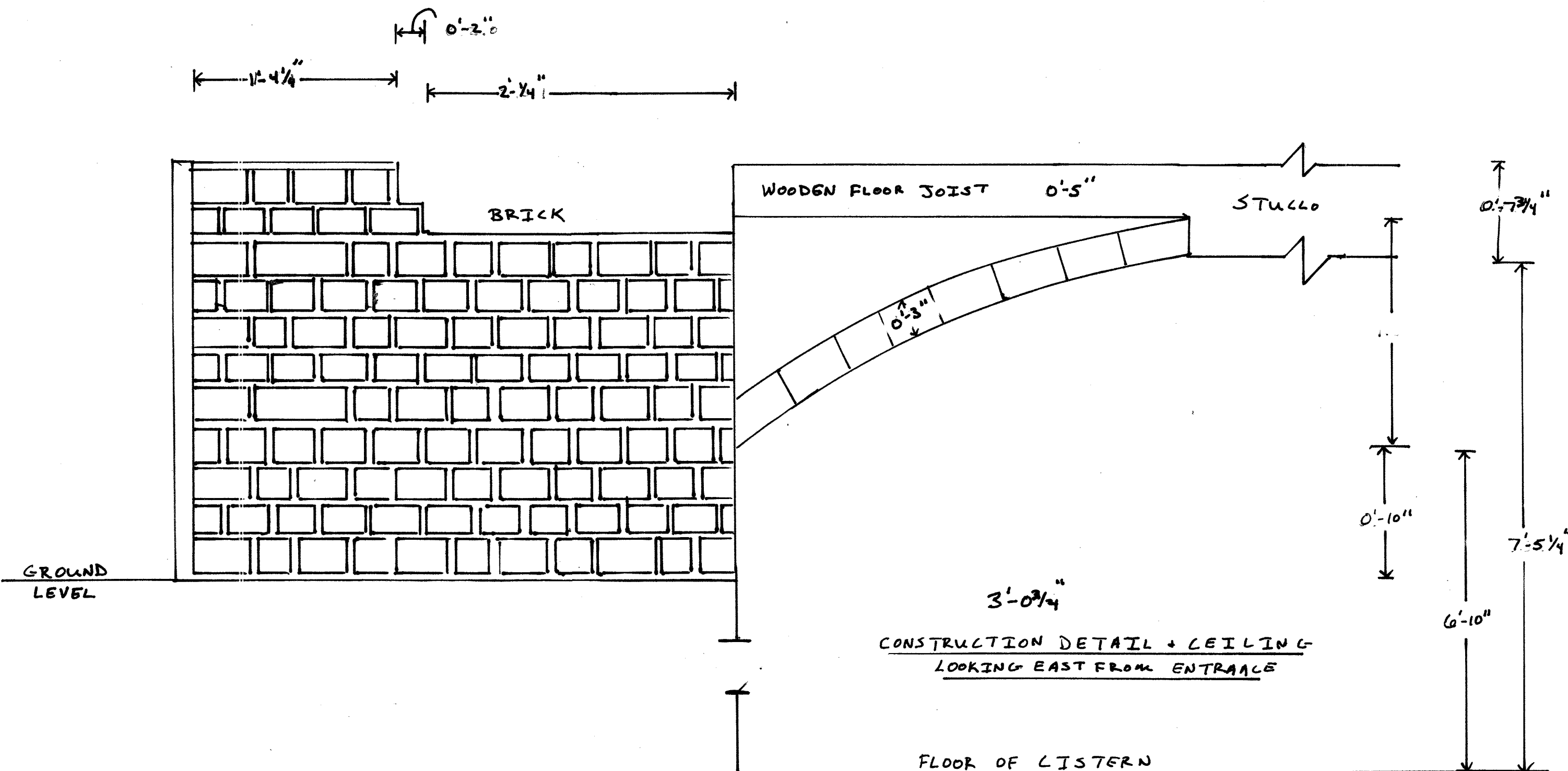
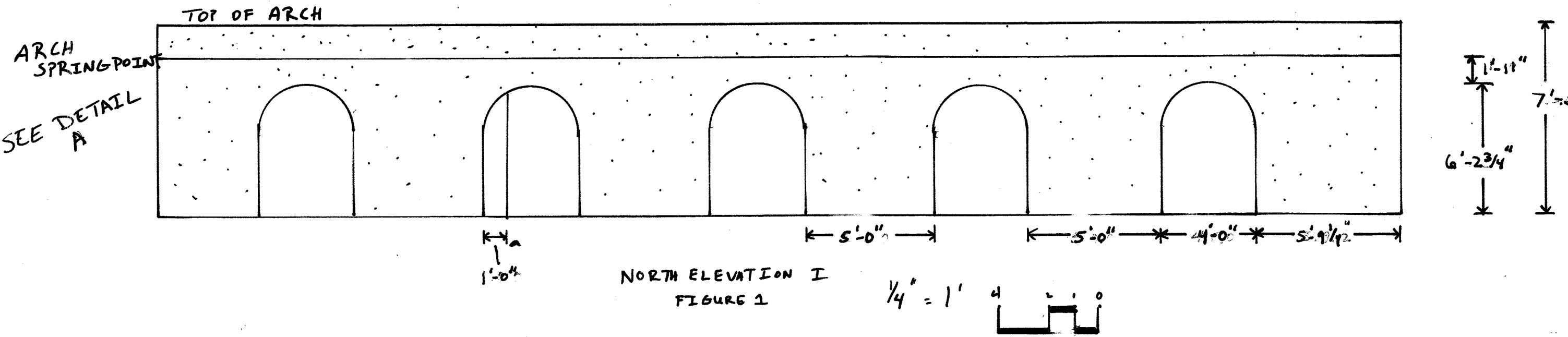
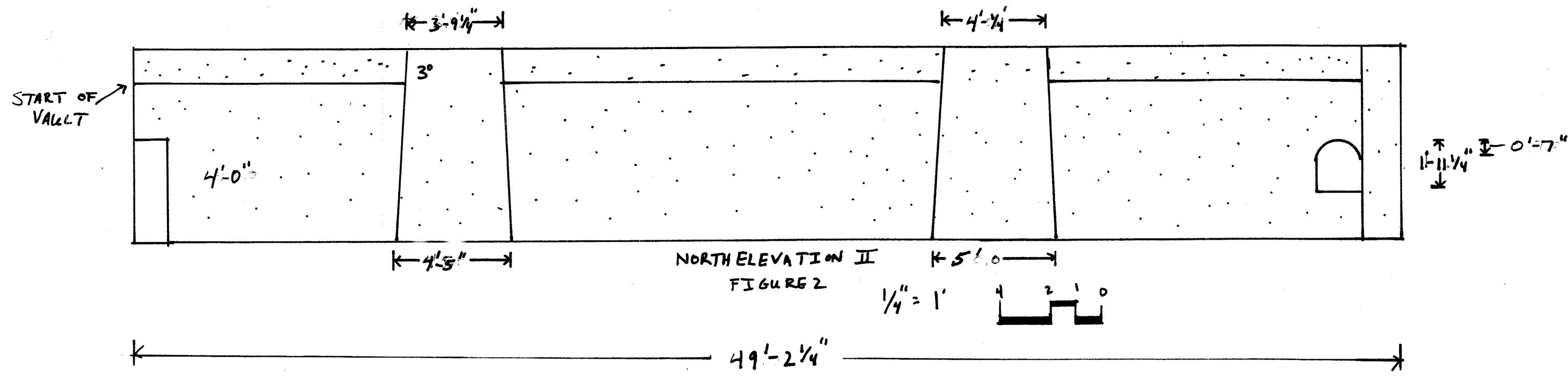
WATER DAMAGE
WATER HAS MADE ITS WAY BETWEEN THE LEXAN AND GLASS, WHICH IS DRAINING DOWN TO THE BRICK. NOT ONLY IS IT CAUSING DAMAGE TO THE STRUCTURE BUT ALSO WATERING THE PLANT LIFE. (EXAMPLE: DETAIL B)

JAMES L. WARD
ASSISTANT PROFESSOR
COLLEGE OF CHARLESTON
ARTH 299
HISTORIC PRESERVATION & COMMUNITY PLANNING

PROJECT: **MORTAR DETAIL**
DRAWING TITLE: **SOUTH SIDE DETAIL**
DRAWING PREPARED BY (TEAM/INDIVIDUAL): **GRACE BEALL**
DATE: **4/19/13**
SCALE: _____ SHEET **27**

REVISIONS		DATE	APPROVED
REV	DESCRIPTION		

NOTE: 1 BRICK AND MORTAR - 3" IN HEIGHT



JAMES L. WARD ASSISTANT PROFESSOR COLLEGE OF CHARLESTON ARTH 299		PROJECT: St. Luke's Cistern	
HISTORIC PRESERVATION & COMMUNITY PLANNING		DRAWING TITLE:	
ASSIGNMENT NO:		DRAWING PREPARED BY (TEAM/INDIVIDUAL): Brooks Ballentine	
DATE:		SCALE: SHEET 28	
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



1500 Feet tall

17x5.0 length