



AGENDA OF THE LANDMARKS COMMISSION

**MONDAY, SEPTEMBER 9, 2019, 4:30 PM
CITY HALL, ROOM 310**

A. Roll Call.

- I. Members: Paul Martzke, Susan Ley, Ald. Veronica Corpus-Dax, Justin Balsley, Ron Dehn, Ian Griffiths, and David Siegel

B. Approval of the Agenda.

- I. Approval of the agenda for the September 9, 2019, meeting of the Landmarks Commission.

C. Approval of Minutes.

- I. Approval of the minutes from the August 21, 2019, special meeting of the Landmarks Commission.

D. Regular Business.

- I. (COA 19-11) Consideration with possible action on a design review for a roof redesign located at 1014 S. Jackson Street.
2. (COA 19-31) Consideration with possible action on a design review for siding, soffit, and window replacement at 1008 S. Webster Avenue.
3. (COA 19-32) Consideration with possible action on a design review for roof and wall work located at 218 N. Adams Street.
4. (COA 19-33) Consideration with possible action on a design review for a window replacement at 504 Porlier.
5. (COA 19-34) Consideration with possible action on a design review for a new awning sign located at 228 N. Adams Street.
6. (COA 19-35) Consideration with possible action on a design review for a replacement window and deck replacement at 840 S. Quincy Street.

E. Informational.

1. Staff-Level COA Applications
2. Review City Raze/Repair Orders and Demolitions
3. Staff Update
4. Date of next meeting: Monday, October 7, 2019

F. Adjournment.

- 1) THIS MEETING IS RECORDED: THE VIDEO OF THIS MEETING AND MINUTES ARE AVAILABLE ONLINE AT www.greenbaywi.gov
- 2) ACCESSIBILITY: Any person wishing to attend who requires special accommodation because of a disability, should contact the City Safety Manager at 920-448-3125 at least 48 hours before the scheduled meeting time so that arrangements can be made.
- 3) QUORUM: Please take notice that a majority or quorum of the Common Council will attend this Landmarks Commission meeting and will constitute a meeting of the Common Council for purposes of discussion and information gathering relative to this agenda.
- 4) REPRESENTATION: The party requesting the communication, or their representative, should be present at this meeting.



MINUTES OF THE LANDMARKS COMMISSION

**WEDNESDAY, AUGUST 21, 2019, 4:30 PM
CITY HALL, ROOM 310**

A. ROLL CALL.

I. Members: Paul Martzke, Susan Ley, Ald. Veronica Corpus-Dax, Justin Balsley, Ron Dehn, Ian Griffiths, and David Siegel

Present: Justin Balsley, Paul Martzke, Ian Griffiths (left at Item D2), Ron Dehn, Susan Ley (arrived at Item D4), Ald. Veronica Corpus-Dax (arrived during Item D4), Excused: David Siegel

B. APPROVAL OF THE AGENDA.

I. Approval of the agenda for the August 21, 2019, special meeting of the Landmarks Commission.

Moved by Ron Dehn, seconded by Justin Balsley to amend the agenda to move item D4 to top of Regular Business.

Motion carried.

Yes- Ian Griffiths, Paul Martzke, Ron Dehn, Justin Balsley, No- None, Abstain- None

Moved by Ron Dehn, seconded by Ian Griffiths to approve the agenda. Motion carried.

Yes- Ian Griffiths, Paul Martzke, Ron Dehn, Justin Balsley, No- None, Abstain- None

C. APPROVAL OF MINUTES.

I. Approval of the minutes from the July 8, 2019, meeting of the Landmarks Commission.

Moved by Ron Dehn, seconded by Ian Griffiths to approve the minutes. Motion carried.

Yes- Ian Griffiths, Paul Martzke, Ron Dehn, Justin Balsley, No- None, Abstain- None

D. REGULAR BUSINESS.

1. (COA 19-28) Consideration with possible action on a design review for new siding, windows, and porch addition located at 1007-1011 S. Van Buren Street.

Moved by Paul Martzke, seconded by Ald. Veronica Corpus-Dax to approve the COA with the following conditions:

1. The replacement of the garage door, removal of the exterior stairwell at the rear of property, and all other staff-level projects are approved.

2. The addition of the deck and railing in front of the enclosed front porch and the installation of a new front door are both denied.

Motion carried.

Yes- Paul Martzke, Ron Dehn, Susan Ley, Ald. Veronica Corpus-Dax, Justin Balsley, No- None, Abstain- Ian Griffiths

2. (COA 19-29) Consideration with possible action on a design review for window and door replacements located at 241 N. Broadway.

Moved by Ron Dehn, seconded by Susan Ley to approve the COA. Motion carried.

Yes- Paul Martzke, Ron Dehn, Susan Ley, Ald. Veronica Corpus-Dax, Justin Balsley, No- None, Abstain- None

3. (COA 19-30) Consideration with possible action on a design review for a new sign located at 304 N. Adams Street.

Moved by Ron Dehn, seconded by Susan Ley to approve the COA. Motion carried.

Yes- Paul Martzke, Ron Dehn, Susan Ley, Ald. Veronica Corpus-Dax, Justin Balsley, No- None, Abstain- None

4. (COA 19-31) Consideration with possible action on a design review for siding, soffit, and window replacement at 1008 S. Webster Avenue.

Moved by Ron Dehn, seconded by Ian Griffiths, to open the floor for discussion. Motion carried.

Yes- Ian Griffiths, Paul Martzke, Ron Dehn, Susan Ley, Justin Balsley, No- None, Abstain-None

Moved by Ian Griffiths, seconded by Susan Ley to close the floor for discussion. Motion carried.

Yes- Ian Griffiths, Paul Martzke, Ron Dehn, Susan Ley, Justin Balsley, No- None, Abstain- None

Moved by Paul Martzke, seconded by Ron Dehn to table this COA until the next available meeting.

Motion carried.

Yes- Ian Griffiths, Paul Martzke, Ron Dehn, Susan Ley, Justin Balsley, No- None, Abstain- Ald.

Veronica Corpus-Dax

E. INFORMATIONAL.

1. Staff-Level COA Applications

2. Review City Raze/Repair Orders and Demolitions

3. Staff Update

4. Date of next meeting: Monday, September 9, 2019

F. ADJOURNMENT.

Moved by Paul Martzke, seconded by Susan Ley to adjourn. Motion carried.

Yes- Paul Martzke, Ron Dehn, Susan Ley, Ald. Veronica Corpus-Dax, Justin Balsley, No- None, Abstain- None



Report to the
Landmarks Commission
of the City of Green Bay

MEETING DATE

September 9, 2019

PREPARED BY

Jason Flatt, Staff

AGENDA ITEM # D.I.

(COA 19-11) Consideration with possible action on a design review for a roof redesign located at 1014 S. Jackson Street.

BACKGROUND

1014 S. Jackson is a contributing property in the Astor NRHP District, built in 1936.

This project is described as the removal of the hipped roof in favor of a flat, rear-sloping roof hidden from view on three sides by the existing parapet. The rear (4th side) of the parapet is to be removed. This is a change from the earlier proposal in May 2019 to remove the parapet and build an enlarged, overhanging hipped roof.

Per the Secretary of the Interior's Standards for rehabilitation, "the removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided." Furthermore, "distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved."

RECOMMENDATION

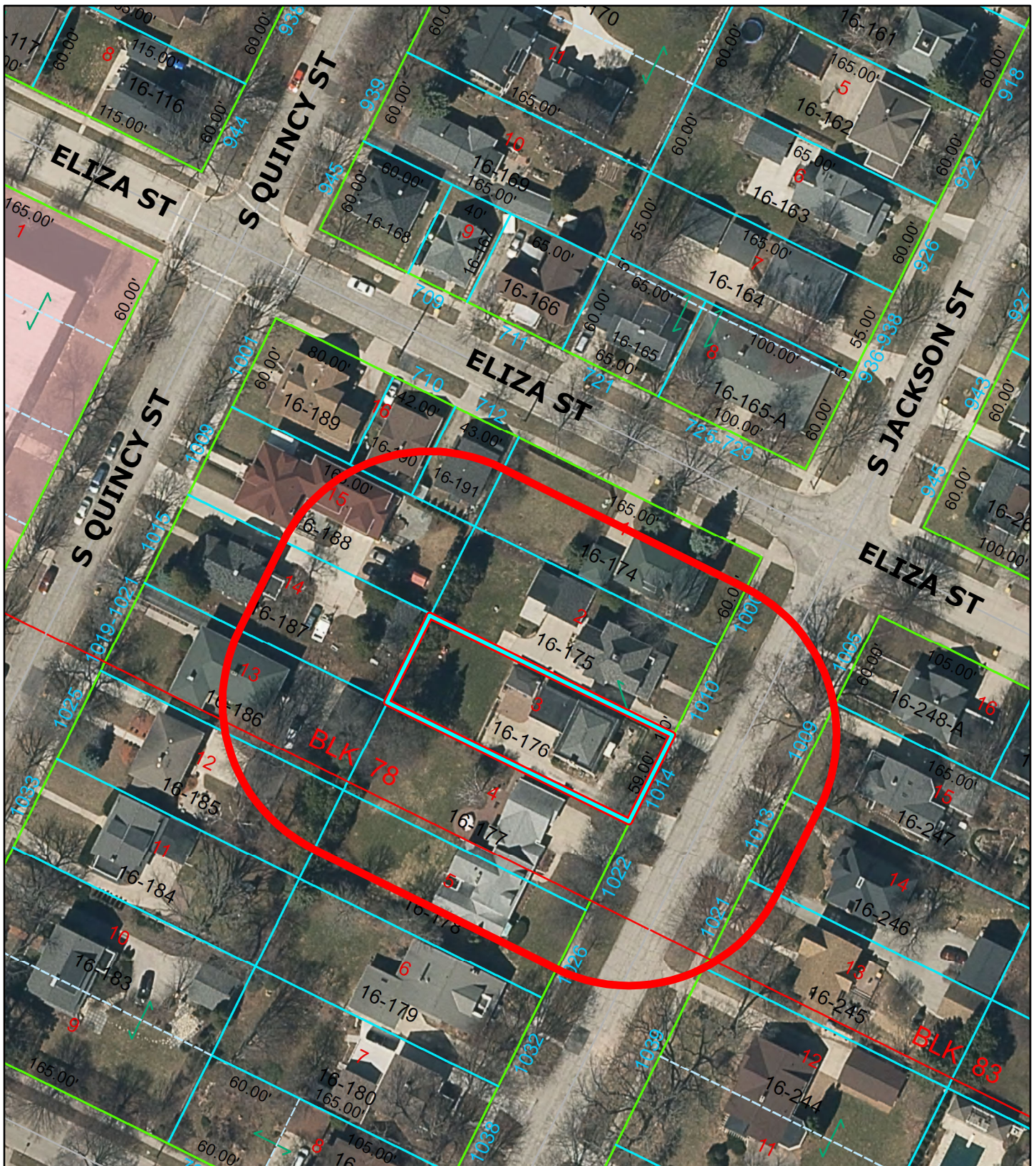
LC staff is of the opinion that the parapet is a character-defining feature of the property and is of significantly greater importance than the hipped roof. The hipped roof is hidden by the parapet as viewed from the adjacent sidewalk. The top of the hipped roof is slightly visible from the middle of the street and increasingly (half or more) visible from the opposite sidewalk. LC staff is of the opinion that the design of the house suggests an intentional effort to hide the parapet roof or minimize its appearance and visual impact on the character of the house.

LC staff is of the opinion that the presence of the hipped roof helps to maintain the historic character and integrity of the house, but the possible absence of the hipped roof does not irrecoverably destroy the character or integrity of the house, nor would it have a significant impact on the character or integrity of the district. Additionally, the removal of the rear parapet wall is not visible from a public right-of-way.

LC staff notes that the Secretary of the Interior's Standards suggest that the hipped roof should remain in place. LC staff further notes that the proposed work very likely does not meet the requirements of the Wisconsin State Historic Preservation Office for state tax credits and may result in the property becoming ineligible for future tax credits.

FISCAL IMPACT**ATTACHMENTS**

1. COA 19-11 Map
2. 1014 S. Jackson picture
3. 1014 S. Jackson Property Detail Sheet
4. 1014 S. Jackson from middle of street September 2019
5. 1014 S. Jackson from opposite sidewalk September 2019
6. 1014 S. Jackson from adjacent sidewalk September 2019
7. COA 19-11, Updated Project Details



(COA 19-11) Window Replacement, Roofing, & Addition at 1014 S Jackson Street

0 20 40 80 Feet



This is a compilation of records and data located in various City of Green Bay offices and is to be used for reference purposes only. The City of Green Bay is not responsible for any inaccuracies or unauthorized use of the information contained within. No warranties are implied. Map prepared by City of Green Bay Department of Community and Economic Development. SJH 07 May 2019 X:\Planning\Basemaps\template_8.5x11.mxd

- Subject Parcel
- 100' Notification Area



Address: 1014 S Jackson St
Parcel No.: 16-176
WI AHI No.: 52497

Historic Name: Roland Johns House
Mary Schils and LeRoy Geil House

Built: 1936
Historic Use: house
Architectural Style: vernacular
Wall Material: stone - unspecified
Architect:

National Register: 2/27/1980
State Register: 1/1/1989
Other:

NRHP nomination link:
<http://focus.nps.gov/pdfhost/docs/NRHP/Text/80000107.pdf>
(district nomination)

Notes:
"This two story stone house has interesting stonework under the eaves.
Owner: John J. & RebeccaA. Arneth"
- per NRHP nomination

Stewardship:

Character - Overall form & fenestration. Hipped roof hidden by parapet. Stone house with random ashlar pattern. Windows with flat lintels with keystones. Front building corners project from body of house. Eave below parapet with wide-spaced dentil detail. Small neoclassical entry porch with Doric columns & pilasters; dentil molding above frieze. Fan window above door with sidelights. Minimal/modern Italian Renaissance style.

Features - Stone. Entry elements (columns, pilasters, sidelights, fan window, etc).

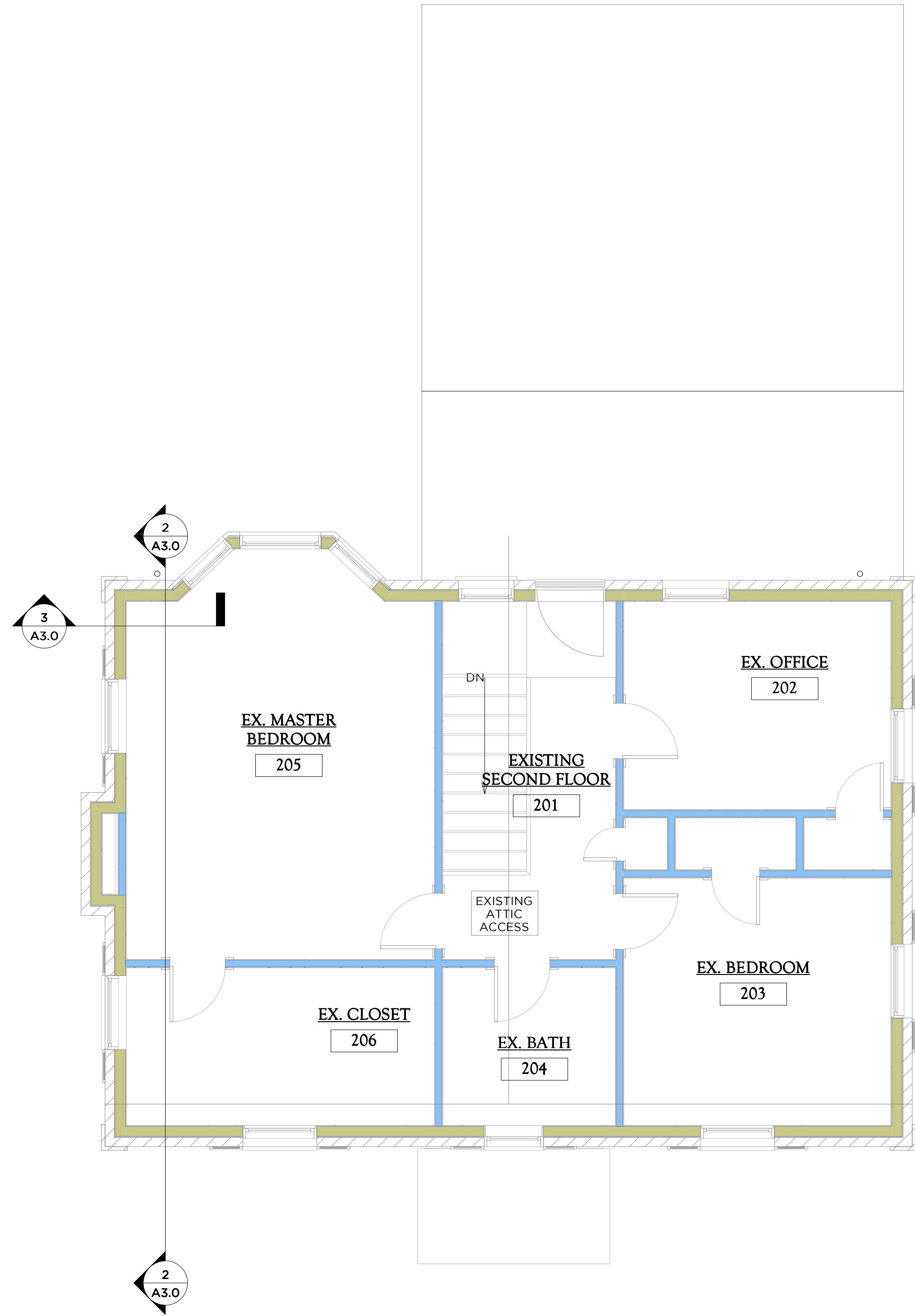
Alterations - Unknown.

Misc -

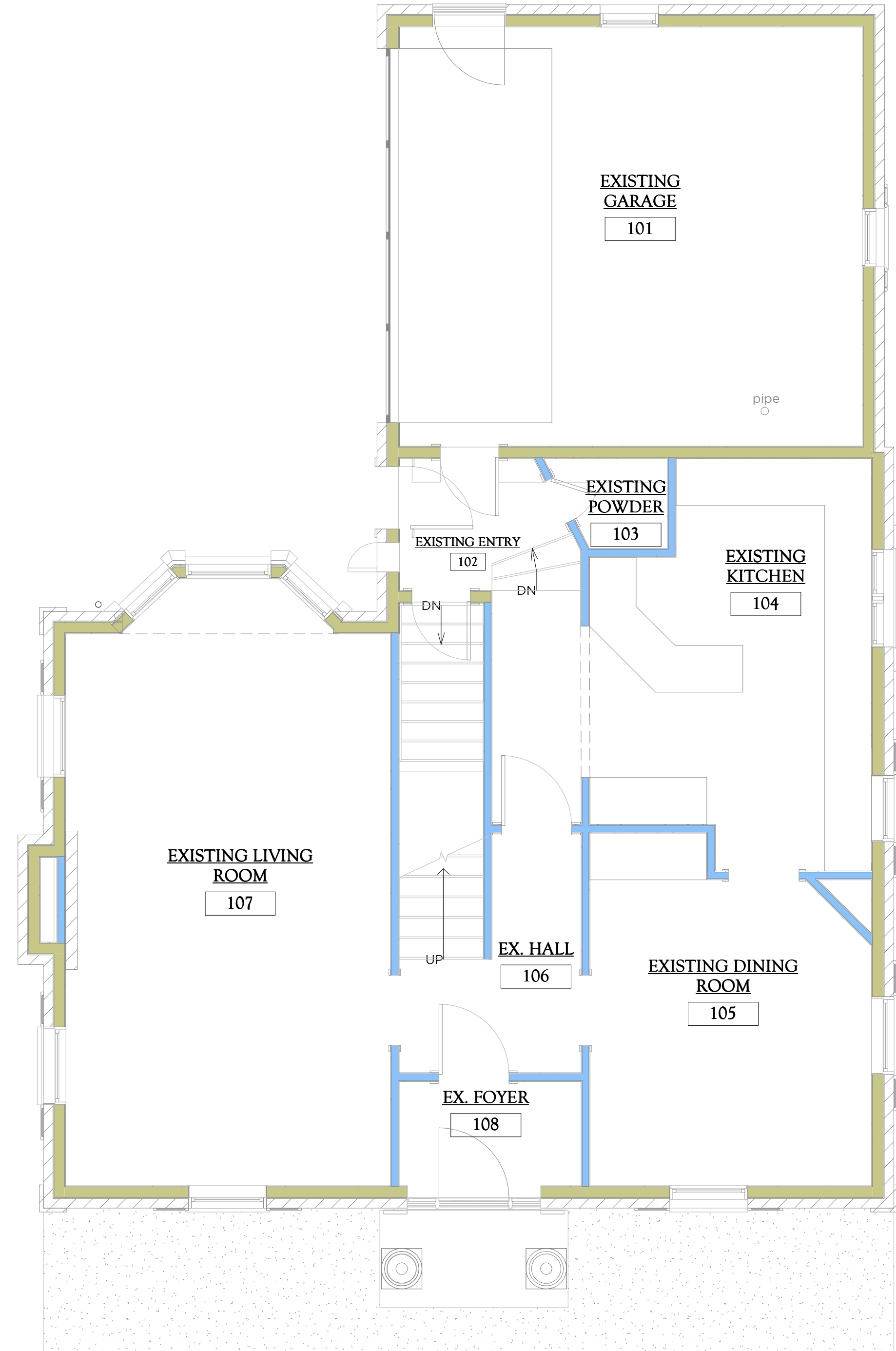








2 EXISTING SECOND FLOOR PLAN
A1.0 1/4" = 1'-0"



1 EXISTING FIRST FLOOR PLAN
A1.0 1/4" = 1'-0"

BID SET

CONSTRUCTION SET REVISIONS

DATE: 9/3/2019
SHEET: A1.0

B.D.A.	Ryan Kraft	PRE-CONTRACT UPDATES:
DESIGNER:	JUL	...
DRAWN BY:	JUL	11.6.19
DESIGN NO:	19-21-01	02.07.2019-DVG
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08.21.19 BLV		08.30.19 BV
...		...

Laluzerne Residence
1014 S. Jackson St. Green Bay, WI 54301



CONSTRUCTION SET REVISIONS		DATE:	
			9/3/2019
SHEET:		A2.0	

B.D.A.:	DESIGNER:	DRAWN BY:	DESIGN NO:	PRE-CONTRACT UPDATES:
	JUL	JUL	116.19	Ryan Kraft
			02.07.2019-DVG	...
			03.05.2019-DVG	
			08.21.19 BLV	
			08.30.19 BV	
			...	

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3 EXISTING SOUTH ELEVATION
A2.1 1/4" = 1'-0"



1 EXISTING EAST ELEVATION
A2.1 1/4" = 1'-0"



2 EXISTING NORTH ELEVATION
A2.1 1/4" = 1'-0"



4 EXISTING WEST ELEVATION
A2.1 1/4" = 1'-0"

BID SET

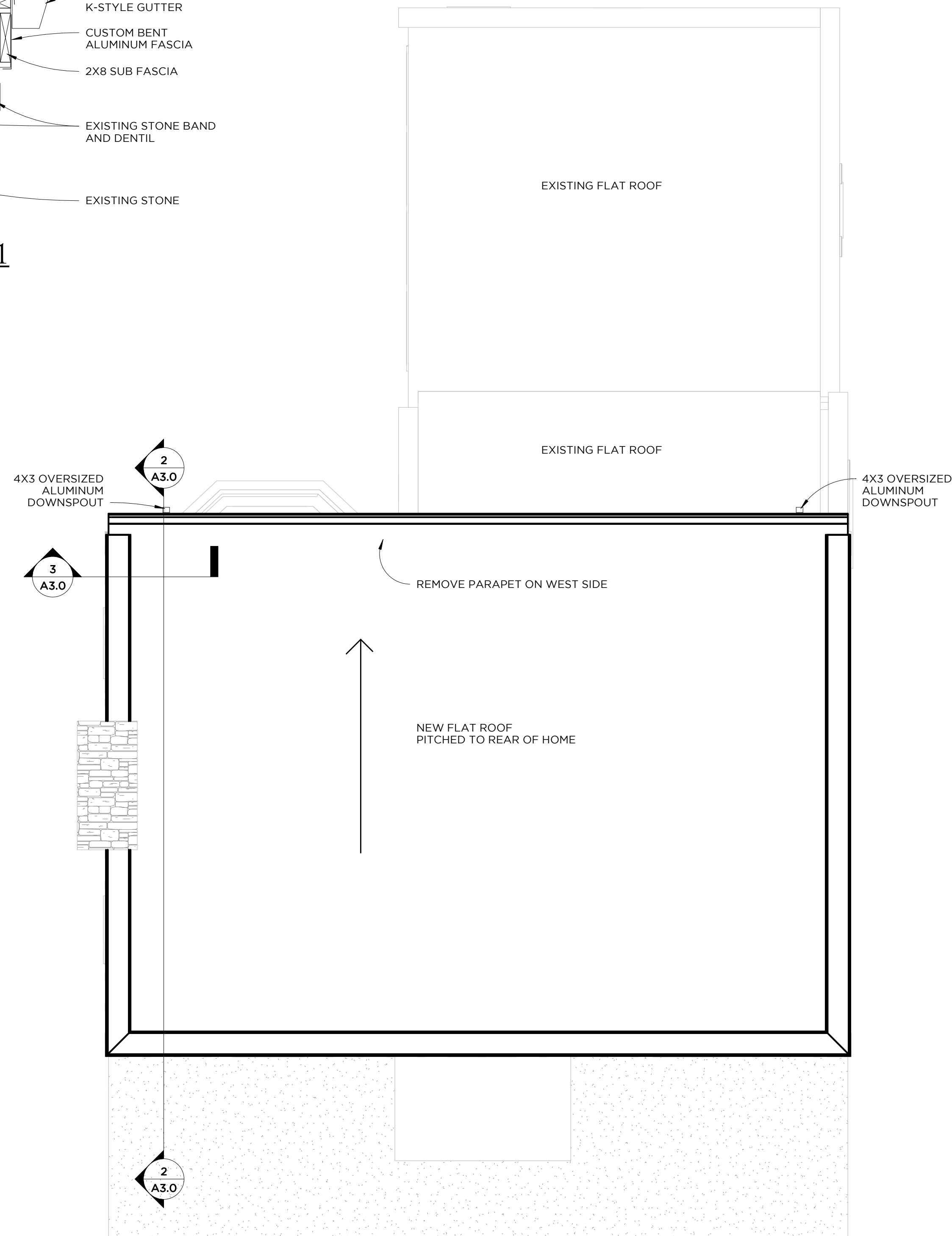
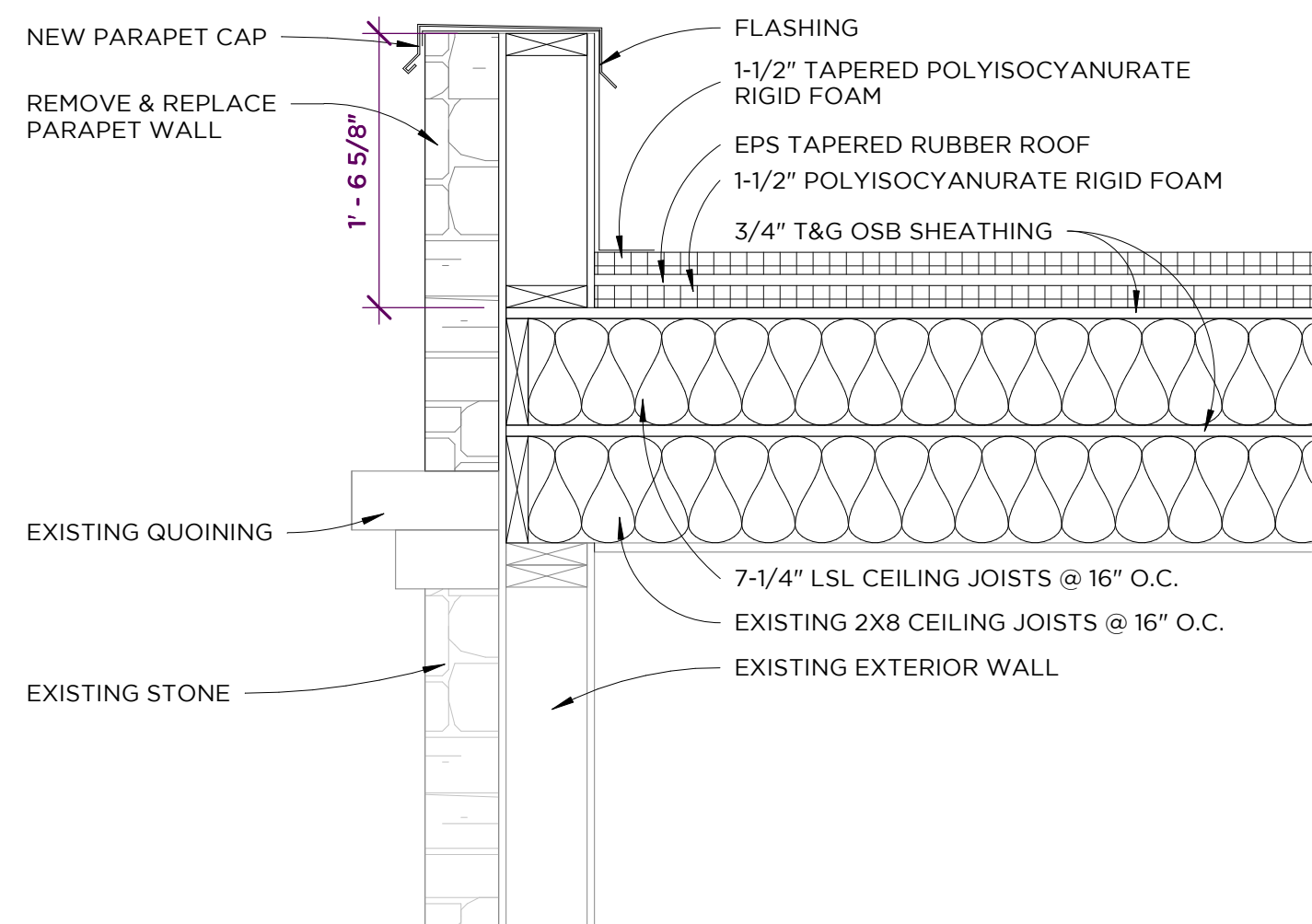
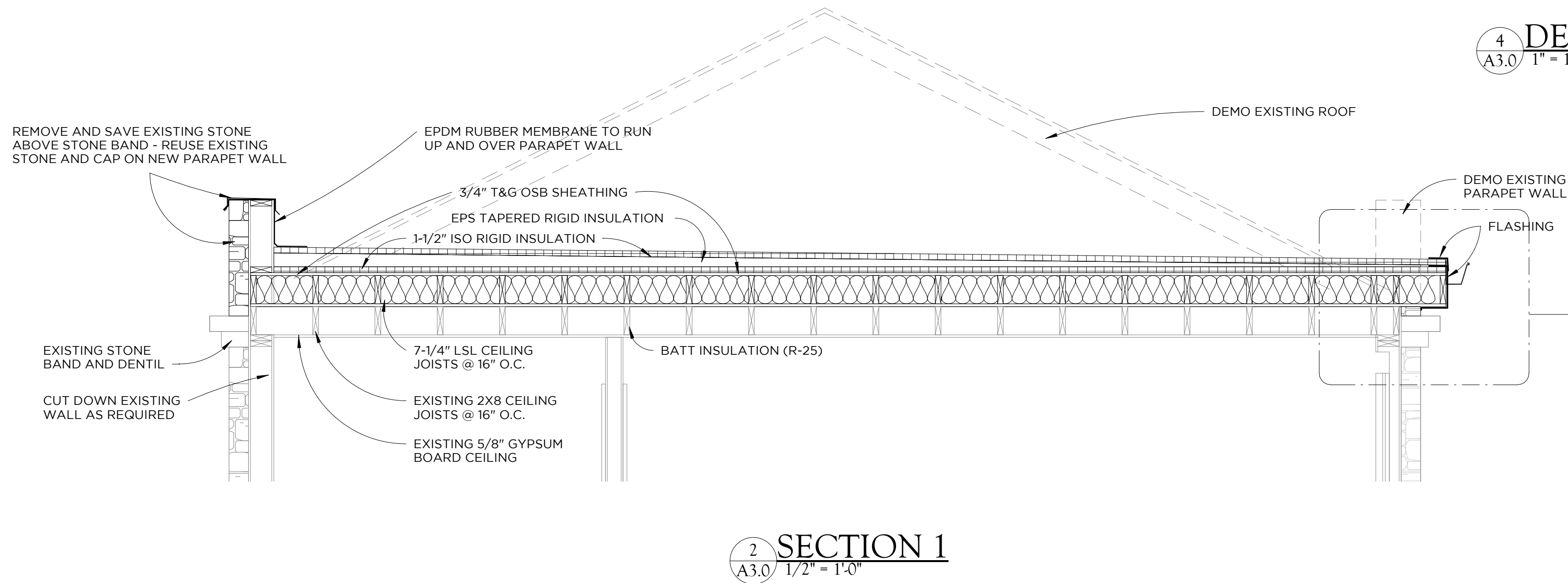
CONSTRUCTION SET REVISIONS

DATE: 9/3/2019
SHEET: A2.1

B.D.A.:	Ryan Kraft	PRE-CONTRACT UPDATES:
DESIGNER:	JUL	..
DRAWN BY:	JUL	1.16.19
DESIGN NO:	19-21-01	02.07.2019-DVG
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Laluzerne Residence
1014 S. Jackson St. Green Bay, WI 54301

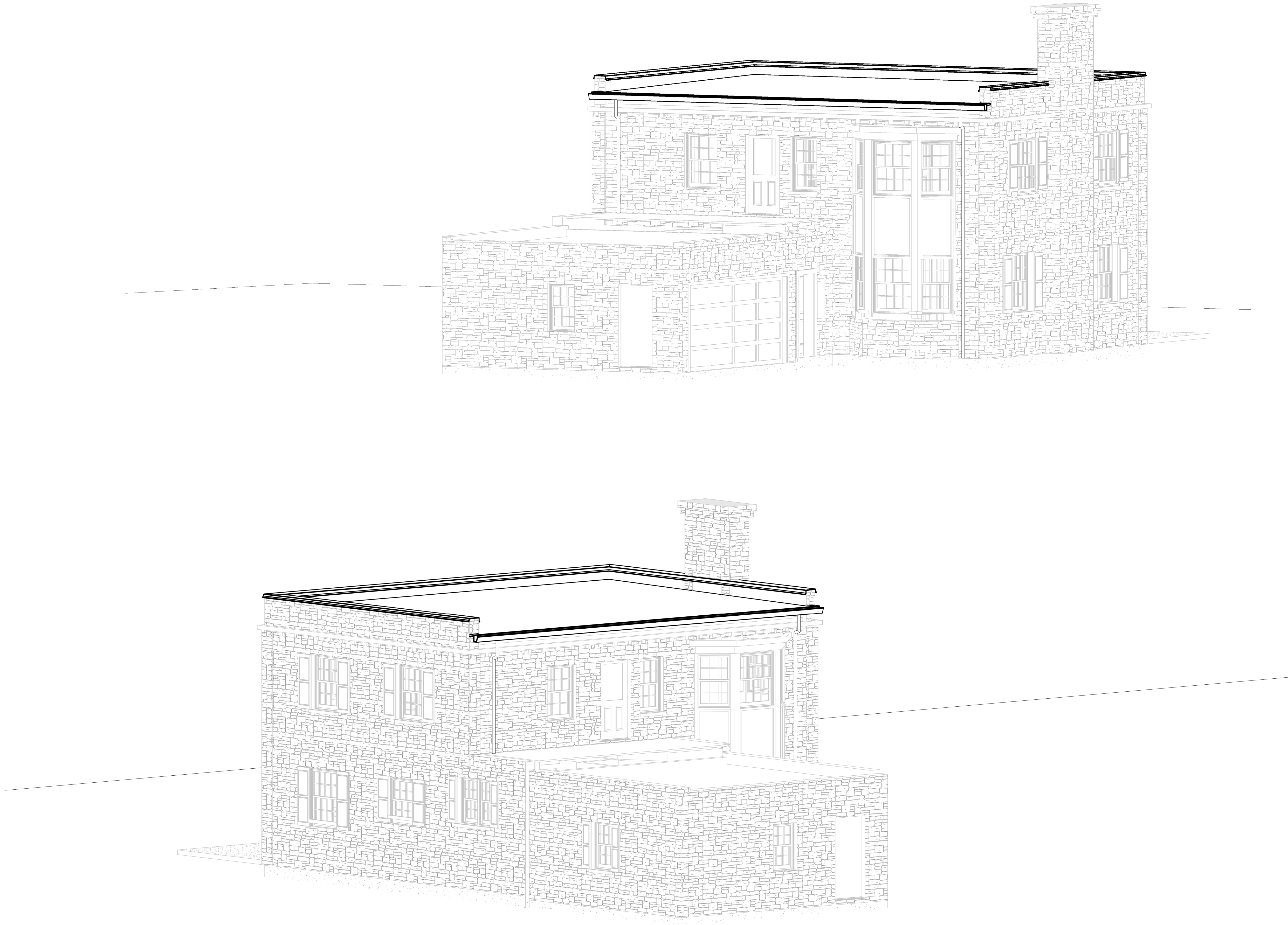


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CONSTRUCTION, INC.
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Laluzerne Residence
1014 S. Jackson St. Green Bay, WI 54301

CONSTRUCTION SET REVISIONS	PRE-CONTRACT UPDATES:	
	DESIGNER:	DATE:
	RYAN KRAFT	JUL 11/16/19
	DRAWN BY:	JUL 11/16/19
	DESIGN NO:	19-21-01
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	DATE: 9/3/2019	
	SHEET: A3.0	

BID SET



BID SET

CONSTRUCTION SET REVISIONS	

B.D.A.	Ryan Kraft	PRE-CONTRACT UPDATES:
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DRAWN BY:	JUL	11.6.19
DESIGN NO:	19-21-01	02.07.2019-DVG
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		08.21.19 BLV
		08.30.19 BV
		...

Laluzerne Residence

1014 S. Jackson St. Green Bay, WI 54301



Report to the
Landmarks Commission
of the City of Green Bay

MEETING DATE

September 9, 2019

PREPARED BY

Jason Flatt, Staff

AGENDA ITEM # D.2.

(COA 19-31) Consideration with possible action on a design review for siding, soffit, and window replacement at 1008 S. Webster Avenue.

BACKGROUND

1008 S. Webster Avenue is a contributing property in the Astor NRHP District, built c. 1910. The house exhibits a mix of Prairie form and Colonial Revival style. The house features many original windows, wood clapboard siding (with mitered corners at the porch), original soffits, and original window casings (see also attached data sheet).

The request for COA calls for:

1. Replace all wood siding and soffits with vinyl on the house and garage.
2. Replace 30 windows and wrap the window casings.

LC staff notes that the Secretary of the Interior's Standards for Rehabilitation states:

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

RECOMMENDATION

LC staff recommends denial of the COA application.

All work proposed is incompatible with the Secretary of the Interior's Standards for Rehabilitation which states that deteriorated features shall be repaired rather than replaced, and replacement material is to match the original in materials. This is echoed in the Wisconsin Historical Society's guidance for selecting appropriate exterior materials and appropriate replacement windows. The information provided does not demonstrate that the entirety of the historic siding, soffits, and/or 30 windows are deteriorated beyond repair, but rather appear to demonstrate a lack of normal maintenance.

The wholesale replacement of siding and windows is typically sufficient to render an individual property ineligible for National Register listing and may cause a contributing property within a historic district to become non-contributing. Replacement siding and replacement windows also detract from the historic integrity of the Astor district which, in turn, will contribute to the possible future removal of Astor's NRHP district designation.

Costs to repair, maintain, and replace (where demonstrated to be necessary) existing historic materials are eligible for Wisconsin's historic preservation tax credit program (a 25% credit) as well as the city's Historic Preservation Revolving Loan Fund.

FISCAL IMPACT

ATTACHMENTS

1. COA 19-31 Map
2. 1008 S. Webster
3. 1008 S. Webster Property Sheet
4. COA 19-31 Project Description
5. COA 19-31 Photos A
6. COA 19-31 Photos B
7. COA 19-31 Photos C
8. Selecting an Appropriate Replacement Window for Your Historic Building _ Wisconsin Historical Society
9. Selecting Appropriate Exterior Materials for Your Historic Building _ Wisconsin Historical Society
10. COA 19-31, E-mail with SHPO



Address: 1008 S Webster St
Parcel No.: 16-299
WI AHI No.: 53566

Historic Name:

Built: 1910 c. 1910
Historic Use: house
Architectural Style: vernacular
Wall Material:
Architect:

National Register: 2/27/1980
State Register: 1/1/1989
Other:

NRHP nomination link:

<http://focus.nps.gov/pdfhost/docs/NRHP/Text/80000107.pdf>

(district nomination)

Notes:

"A protruding central entrance with two rounded columns is featured in this two story frame house.
Owner: Elizabeth DeFrance"
- per NRHP nomination

Stewardship:

Character - Overall form & fenestration. Hipped roof with overhanging eaves. Molded cornice abuts top window casing of 2nd story windows. Symmetric front façade with 1-story wing to south. 2nd story has center 1/1 window with paired 1/1 windows to either side. 1st story entry vestibule bump-out, with a band of three 1/1 windows to either side under a cornice board similar to that in the 2nd story. Small entry porch with two Tuscan columns and a 2nd story balustrade above. Clapboard profile siding with corner boards (mitred corners at entry vestibule). A mix of Prairie form and Colonial Revival style. Brick chimney, right of center.

Features - Many original windows (?). Clapboard siding (possible replacement). Porch columns. Cornice boards. Original soffits & window casings.

Alterations - 2nd story porch balustrade covered/altered. K-style gutters.

Misc -

Project: Domestic Siding Upgrade for 1008 S Webster Ave

Description and Existing Condition: Replacement of current rotting wood siding with vinyl siding to restore the look of this historic 1920s home.

- Pictures A: There is substantial damage due to rotting wood on several sides of the house as these images show, the entire home will need to be resided.
- Pictures B: I have one wall that needs to be completely repaired due to rot. We have made some temporary patches where boards just fell off, but there are still more holes to repair. This same wall also has damage to the inside which will be repaired at the same time.
- Pictures C: rotten soffits in need of repair

Proposed Work and Vendors:

- Ken Falish Construction, (920) 639-0948
 - Siding to maintain the historic look of the house, using 6" smart trim band board and CertainTeed Restoration Classic (selected for its reputation for historic styles and high quality) double 4" vinyl siding on entire home. The entire home will also receive new aluminum soffit and fascia. The garage will be included to match the house.
 - Cost for the siding is estimated at \$34,962.
- Window World, (920) 321-0415
 - Wrapping the windows and putting in Series 4000 DH All-Welded windows. There will be 30 windows replaced.
 - Cost of the windows is estimated at \$13,700.

These proposed updates would improve the architectural features of the home by restoring its original quality and beauty. Wood has been considered for the project but is not a feasible option as the repair costs are estimated at three times this cost, requiring repairs to be staged over several years and allowing additional damage to occur to my home. Therefore, Ken and I have worked to find the best solution so the home will have the same appearance with vinyl instead of the currently failing wood. Ken wanted me to let you know that if you have questions, he is more than willing to talk with you and that you should feel free to contact him if needed.

The pictures are labeled and included.









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GENERAL INFORMATION

Selecting an Appropriate Replacement Window for Your Historic Building

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If an original window in your historic house or building has deteriorated beyond repair (or is simply missing), you will need to replace it with a window that closely matches the original windows. You should consult a contractor, such as a carpenter or painter who is experienced with historic houses, to determine if your window is deteriorated beyond repair.

When you are working with a window manufacturer to design a replacement window for your historic house or building, you should make certain your replacement window matches these three characteristics of your original windows:

- Design
- Dimensions



In this example, notice the replacement windows do not fit the masonry opening of

Explore the Category

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Have Questions?

- Material (when possible)

Replacement Window Checklist

The checklist below describes various design considerations for a replacement window. You might find it useful to bring this list with you when you meet with a window manufacturer.

- **Window unit placement.** The location of the window within the wall plane affects the overall appearance of your historic house. If you still have an original window in place, look at the window unit placement in relation to the wall plane.
- **Window frame size and shape.** Your replacement window should be the same size and shape as the original window. Even a slight modification to either the size or shape of the window can greatly impact the overall appearance of your historic house or building. For a wood window, you should also match the original casing, which includes the brick mold, blind stop and sill. Steel windows were nearly always installed while the building's walls were being constructed, so they have very little of their outer frame exposed. Your replacement steel window will need some added dimension, but this added dimension must be minimal.
- **Glass size and divisions.** Historic windows were constructed with single panes of glass held together with wood pieces and glazing compound. These wood pieces formed a grid called a muntin. Modern window units have two panes of glass. The appearance of your original window (several small pieces of glass held together with muntins) can be reproduced as simulated divided lights. The reproduction should have an exterior grid, spacer bars between the glass and an interior grid. If the dimensions and profile of the exterior grid are the same as the historic muntin, and the interior and exterior grids are permanently affixed tight to the glass, your replacement window will approximate the original appearance of your historic house or building.
- **Sash elements.** The sash elements of a wood window include the rails, stiles, and muntins. The sash elements of a steel window include the operator frame and muntins. Make certain to use the same sash depth, or thickness, as your original window. The depth of the sash in a double-hung window affects the depth of the offset (the separation between the two panes of glass) at the meeting rail of a hung window, and this depth is perceived through the shadow that it creates. Because a muntin is small, even a slight change in the dimensions of a muntin will also have a noticeable effect on the overall character of a window. The visual effect of a muntin is also affected by its shape.

the original window. Instead the new window was reduced in size dramatically changing the historic appearance of this commercial building. Source: Bob Yapp



A replacement window should match the original in design, dimension and, where possible, materials. Here is an excellent example of a replacement window. Source: Bob Yapp

Contact Jen Davel by phone at 608-264-6490 or by email:

jen.davel@wisconsinhistory.org

affected by its shape.

- **Materials and finish.** It is theoretically possible to match all the significant characteristics of a historic window with a substitute material. However, the finish, profiles, dimensions and details of a window will all be affected by the switch to a substitute material. For example, vinyl-clad or enameled aluminum-clad windows may have joints in the cladding that can make them look very different from a painted wood window. Secondary window elements that do not match the finish or color of the window can also diminish the strength of the match. Some examples of secondary window elements include white vinyl tracks on dark-painted wood windows or wide, black, glazing gaskets on white aluminum windows.
- **Glass characteristics.** A replacement window can have insulated glass as long as it does not compromise other important aspects of the window match. The glass must be clear and nonreflective with a visual light transmittance of 72 or higher.

Replacing a Window Where No Historic Window Remains

A replacement window for a missing or non-historic window must be compatible with the historic appearance and character of your house or building. If all of your original windows are missing, you should start the process of designing a replacement window by looking for historic photographs. Even one historic photo of your house or building could offer many clues about your original windows.

If you are unable to find a helpful historic photograph, you should follow a few general guidelines to design your replacement window:

- The appearance of the replacement window must be consistent with the general characteristics of a historic window of the type and period of the house or building.
- The replacement window must always fill the original window opening.
- The appropriate type of window, such as industrial steel or wood double-hung, can usually be determined from the period and historic function of the building, and from the proportions of the window openings.

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Office of Programs and Outreach	Staff Directory	Wisconsin Historical Society Press	Legislators	ENewsletters
Administrative Services	Employment	State Historic Preservation Officer (SHPO)	Local Historians	YouTube
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GENERAL INFORMATION

Selecting Appropriate Exterior Materials for Your Historic Building

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If the exterior materials on your historic house or building are damaged, you will be faced with two choices: repair or replacement of the damaged element. In keeping with historic preservation best practices, you should choose to repair an element whenever possible. If repair is not possible, your next best option is "in-kind" replacement. In-kind replacement means that you replace the original element with a product of a similar shape, texture, size, material and appearance. Some repair and replacement options for common exterior elements are discussed below.

Wood Siding and Trim

The original wood materials on your house or building can last for a long time if you regularly maintain them (prime and paint) and repair them when necessary. The best preservation practice for wood elements is always to keep your original wood features and repair your wood trim elements and wood siding when necessary.

If you must replace some original wood elements, you will find that most of the exterior wood materials on your house or building are still available today. These materials may be available as either as salvaged or new wood. It is never a good practice to replace original wood elements with plastic trim, decking or

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Have Questions?

or new wood. It is never a good practice to replace original wood elements with plastic trim, decking or siding for these three reasons:

- These substitute materials can negatively alter the historic appearance of your house or building.
- These products are environmentally unsound because they are made with oil and/or polyvinyl chloride (PVC).
- These products are unsustainable because they break down when exposed to ultraviolet (UV) light.

Contact Jen Davel by
phone at 608-264-6490 or
by email:

jen.davel@wisconsinhistory.org

CONTACT US

Replacement Siding

Two common replacement materials for original wood siding are cement board and vinyl. These two products do not make good replacement siding for several reasons:

- **Cement board siding.** Cement board siding is similar in appearance to wood siding and may be appropriate in some circumstances as a siding material on a new outbuilding, such as a garage. However, it is not a good substitute for original wood siding due to its surface texture. Cement board siding often has an embossed wood grain to simulate a rough-sawn look that does not match the smooth appearance of original wood siding. It is possible to find cement board siding with a smooth surface, but it will never look quite the same as the original wood. Because wood siding has different thicknesses, the depth of cement board siding is different than original wood siding and produces a different shadow, which makes the cement board siding look artificially uniform.
- **Vinyl siding.** One of the most common types of replacement siding today is PVC, or vinyl. There are many reasons why vinyl is not a good replacement siding:
 1. The maximum lifespan of vinyl is 15 to 20 years before it becomes brittle from exposure to UV light.
 2. Vinyl siding will fade in time and no longer match the color of your original siding.
 3. When vinyl burns, it releases a poisonous gas that can harm or kill people, amplifying the risks of a house fire.
 4. Vinyl siding is always installed on backer board. This insulation board must be installed over the original siding to create a flat surface for the vinyl siding. This extra layer over the original siding can trap moisture from rain as well as water vapor that is generated in the interior of the structure. This trapped moisture can damage the bottom one-third of the original wood siding, creating an environment that is more vulnerable to termites, carpenter ants and mold.

Porches

Your original wood porch may contain several components, including the flooring, columns and decorative trim work.

- **Flooring.** Your original porch floors are most likely smooth surfaced 3-1/4-inch-wide x 3/4-inch-thick tongue and grooved (T&G) fir or pine wood that is primed and painted. Modern plastic- and resin-based T&G floors have an embossed wood grain and cannot be painted. Because of these characteristics, none of these products would be considered an in-kind replacement for your

characteristics, none of these products would be considered an in-kind replacement for your original wood porch flooring. Many other alternative porch flooring products are not T&G, so they are installed with a butt joint. Any replacement porch flooring you choose should be T&G like your original flooring.

- **Columns.** If you must replace original porch columns, you will find that structural, exterior-grade wood columns are still available and cost-competitive with their synthetic counterparts. They are also available in a wider selection of styles to match your original wood columns. Synthetic plastic, aluminum, fiberglass and resin-based columns are available in a variety of styles. Among the synthetic options, fiberglass columns hold paint the best and look the most like wood columns. Be sure the fiberglass columns you use mimic the style of your original columns.
- **Decorative elements.** Your best approach with your decorative porch elements is to repair them. If one of your porch elements is deteriorated beyond repair, you should be able to have a replica made based on the original design. You should only add a decorative element that is an exact reproduction of your original element. Although plastic, aluminum and fiberglass elements like brackets, corbels and gingerbread are available for porches and eaves, none of these generic elements will replicate your original wood elements. If you add these decorative elements to your porch or eave, you will create a false sense of history.

Original Exterior Stucco

Your original stucco can last for several centuries if you maintain and repair it. Repair is always the best option. If a large section or the entire stucco coating on the outside of your house or building has failed, you should replace it with three coats of real stucco in the same manner the original stucco was installed. Stucco is a cement-based coating that is still readily available in Wisconsin. Masons are still able to perform this work at a competitive cost with synthetic stucco application.

Neither of the two primary substitute products for original stucco will match your original stucco. In addition, their installation cost per square foot is similar to real stucco. These products are cement board panels and synthetic stucco.

- **Cement board panels.** Cement board panels are manufactured with cement and other binders to create large panels that range from 3 x 5 feet to 4 x 8 feet. Cement board panels must be nailed or screwed onto the wall, which creates multiple breaches in the panel surface where water can penetrate. Because cement boards are panels, it is impossible to press them together on a large wall without revealing the seams between the panels. You might find it difficult to recreate the texture of your original stucco with cement board panels, because only a few texture options are available.
- **Synthetic stucco.** Synthetic stucco is known as an exterior insulation finishing system or EIFS. EIFS is essentially a foam insulation board attached to the wall and coated with one coat of a synthetic product to replicate the look of stucco. The foam board is attached to the wall with a fiberglass mesh embedded onto the insulation board. Water penetration behind the foam-based insulation board has been an issue with this product since its introduction. Because EIFS is vulnerable to moisture damage and cannot match the heavier textures common with many traditional stucco finishes, EIFS is not a good substitute to replace your traditional stucco.

Masonry Exteriors

Your original brick or stone exterior can last for several centuries if you maintain and repair it. You should only replace bricks and stones that have been structurally compromised. If your original masonry has a major failure, the most appropriate treatment would be to disassemble and reassemble the original masonry material.

If you need to replace any of your bricks or stones, you should choose replacement bricks or stones that match your originals. Replacement bricks should match the original in size, color, texture and strength. The replacement mortar is equally important. Have your original mortar tested so the new mortar matches its color, texture, composition and strength. If your replacement mortar is stronger than the original bricks, it could cause severe damage to the adjacent bricks. Replacement stones should match in color, size, shape and texture to the original stones. Stone is still being quarried and is readily available.

A variety of synthetic bricks and stones are available on the market today. Large panels of plastic siding with brick embossed onto the surface are available, but these synthetic reproductions will not match your historic house or building.



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Stephanie Hummel

From: MARK T BUECHEL <mtbuechel@wisc.edu>
Sent: Tuesday, August 27, 2019 3:13 PM
To: Jason Flatt
Subject: RE: vinyl siding question - Green Bay precedent case

SHPO never approves of vinyl windows or siding on a historic property we have review over. The standards say to retain and repair and if rotted or damaged beyond repair replacement is in kind. Even if the siding and windows are demonstrated to be severely damaged they must be replaced wood for wood. We do not approve of vinyl or cement board, they are not considered an equal to the historic. Another issue with vinyl and cement board is they often have a fake wood grain stamped in them, this is not historic, historic siding was smooth not rough sawn so any material with a fake wood grain is something we would also deny since it is not the same appearance. Sheen is also something to consider, vinyl siding can have a glare or reflectively that is different than painted wood. It also has different shadow lines. It also has a different installed final appearance because there are a bunch of "J" channels around every window and edge which are highly noticeable. Shadow lines are a huge issue with cement board because it is typically half the thickness of wood siding significantly diminishing the shadow lines. There is a preservation brief that details when a substitute material is considered appropriate and vinyl does not meet the guidance. We would approve of a metal clad wood window in lieu of an all wood window but never a vinyl window.

<https://www.nps.gov/tps/how-to-preserve/briefs/8-aluminum-vinyl-siding.htm>

<https://www.nps.gov/tps/how-to-preserve/briefs/16-substitute-materials.htm>

Vinyl windows are cheap for a reason, they fail quicker than all other windows. Vinyl expands and contracts greater than any product used in construction. Given we can have 100 degree days in the summer and -38 degree days in the winter the vinyl expands and contracts blowing the seal on the glass and wrecking the window. Vinyl windows last as little as ten years in Wisconsin. Another issue with vinyl windows is they are generally flat and void of shadow lines. Historic windows have putty lines that create shadow lines. Wood windows have a simulated putty line. I have never seen a vinyl window that had a simulated putty line. So installing vinyl results in loss of all the shadow lines present in a historic window. Vinyl siding can also often buckle and bulge with the expansion and contraction. Even if the windows were marginally repairable the only compromise SHPO would consider is letting them replace them if they were wood for wood or metal clad wood as long as it had simulated putty lines to maintain the shadow lines.

You are correct in that rarely is 100% replacement of siding necessary. Buildings rot from the bottom up and the top down. Often the bottom few bards need work but the main body of the building is in a good repairable state and can be reused. Contractors often propose full replacement because it is easier for them and all they care about is getting in and out and maximizing their profit. They do not want to take the time to selectively repair. The purpose of the tax credit program is to offset the added costs of doing it right. Following the standards and getting 25% back in a credit will result in a building that lasts significantly longer. if you look at life cycle costs the wood replacements will last 25-30 years and the vinyl will last 10-12 years so you get twice the life out of them.

When it comes to the program if they did go ahead and install vinyl windows and vinyl siding they are automatically prohibited from participating in the tax credit program for a period equal to five years past the date the inappropriate work was completed so if they need a new boiler or A/C, something that would normally be eligible, it would automatically be denied because they undertook the inappropriate work. Then once five years has passed if a project is submitted it goes to the resource evaluation committee to verify if the property is still eligible. When an exterior is 100% vinyl, siding and windows, it is often declared noncontributing to the district at that time meaning they are not eligible for tax credits for life and the home is now a noncontributing home in the district. This would not in itself jeopardize the

district listing, it would take more than one noncontributing property to generate reconsideration of the entire district so while it's a dent in the armor it doesn't result in delisting of the district. However if you set a precedent and allow vinyl siding and windows in historic districts there will come a point in time where the district can be considered for delisting due to loss of integrity because of a multitude of properties now having vinyl siding and windows.

Mark T Buechel, AIA
Senior Preservation Architect
State Historic Preservation Office

Wisconsin Historical Society
816 State Street, Madison, Wi. 53706
608-264-6491 (O)
mark.buechel@wisconsinhistory.org

Wisconsin Historical Society
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From: Jason Flatt [mailto:jasonfl@greenbaywi.gov]
Sent: Tuesday, August 27, 2019 10:09 AM
To: MARK T BUECHEL
Subject: vinyl siding question - Green Bay precedent case

Mark:

The City of Green Bay's Landmark Commission has an application for a COA that involves the wholesale replacement of all wood clapboard siding and soffits with vinyl as well as the replacement of 30 original window with vinyl windows.

The house is 1008 S Webster in Green Bay's Astor neighborhood (a CONTRIBUTING property), WI AHI # 53566 (<https://www.wisconsinhistory.org/Records/Property/HI53566>).

I already have the following briefs from the Wisconsin Historical Society:

- Wisconsin Historical Society's "Selecting Appropriate Exterior Materials for Your Historic Building" (<https://www.wisconsinhistory.org/Records/Article/CS4295>)
- Wisconsin Historical Society's "Selecting an Appropriate Replacement Window for Your Historic Building" (<https://www.wisconsinhistory.org/Records/Article/CS4308>)

The homeowner claims that they cannot afford to fix, but can afford to replace. I think that I can counter this with homeowner tax credits and disproving the need to replace 100% of the existing siding.

Can you please provide a short statement regarding the impact to the integrity of this house and the larger district should the owner be granted a COA to proceed with an all-vinyl house? Would the house become ineligible for tax credits for a certain number of years?...or even effectively become non-contributing for an indefinite period of time? I think that the Landmark Commission here would make a better decision if other voices, in addition to my own, draw their attention to the severity of such a change to this house. Alternatively, maybe going all vinyl isn't such a big deal from your perspective. I kind of doubt this though.

This is the first case of "I want all vinyl" to come before the Landmark Commission under Green Bay's revised & BINDING preservation ordinance. The outcome here will likely set a precedent for future requests from property owners who wish to remove or cover historic clapboard siding with vinyl. Your input on this particular case will have a lasting influence in Green Bay.

Thank you,

+ Jason

Wm. Jason Flatt, PE
Historic Preservation Specialist
City of Green Bay



Report to the
Landmarks Commission
of the City of Green Bay

MEETING DATE

September 9, 2019

PREPARED BY

Jason Flatt, Staff

AGENDA ITEM # D.3.

(COA 19-32) Consideration with possible action on a design review for roof and wall work located at 218 N. Adams Street.

BACKGROUND

218-220 N. Adams is a contributing property in the Downtown Historic District, built c. 1883, with the current façade (excluding storefronts) dating to 1929. As originally designated in 2018, this historic district consisted of 42 buildings (37 contributing, 5 non-contributing). Since that time, one contributing building (the neighboring building at 222-224 N. Adams) has been altered with the loss of integrity (likely non-contributing as a result of changes).

The request for COA calls for:

1. New roof (incl. short curbs, drains, coping, refastening loose roofing, and new spray roof)
2. Replace approximately 4' x 20' section of brick on north wall.
3. Pressure wash and paint brick wall with elastomeric paint.

LC staff is concerned about the pressure washing and application of elastomeric paint to an entire wall of historic masonry.

Per Wisconsin State Statute 101.1215, use of high pressure water to clean a historic building (public or private) is illegal:

101.1215 Abrasive cleaning of historic buildings.

(1) In this section:

(a) "Abrasive cleaning method" means any cleaning procedure that uses any of the following materials or tools:

1. Abrasive materials, including sand, glass beads, ground slag, volcanic ash, crushed nutshells, rice husks, ground corncobs or crushed eggshells, carried in high-pressure or low-pressure air or water.

2. High-pressure water.

(b) "Qualified historic building" has the meaning given in s. 101.121 (2) (c).

(2) No person may use an abrasive cleaning method on the exterior of qualified historic buildings, except as authorized by department rule.

(3) The department, in consultation with the state historical society and the department of administration, shall promulgate rules on the use of abrasive cleaning methods on the exterior of qualified historic buildings. The department may permit the use of any specific abrasive cleaning method on any specific building material only if it determines that the abrasive cleaning method will not cause irreparable damage to the building material to which it is applied.

(4)

(a) Any person who uses an abrasive cleaning method in violation of this section may be required to forfeit not less than \$100 nor more than \$1,000 for each offense. Each day of continued violation constitutes a separate offense.

(b) Any owner of a qualified historic building who causes or permits the use of an abrasive cleaning method in violation of this section may be required to forfeit not less than \$100 nor more than \$1,000 for each offense. Each

day of continued violation constitutes a separate offense.

Per Wisconsin Historical Society's "Identifying Problems with Your Historic Brick Building" (which addresses State Statute 101.1215(3) and represents a legal limit):

*If you wash your bricks, never allow the water pressure to exceed 1000 pounds per square inch (PSI). Place the spray wand tip no closer than 12 inches from the surface of the brick. *Also, a fan tip nozzle must be used (per Mark Buechel, Wisconsin State Historic Preservation Office Senior Architect)*

[LC staff notes that gas-powered pressure washing units typically deliver 2,000-3,000 PSI; electric units 1,300-1,700 PSI (although I see at least one rated at 1,000 PSI); and that 1,000 PSI at 12" from brick surface using a fan-tip nozzle effectively makes the state statute a "gentle washing"]

Per the National Park Service "Preservation Brief #1 – Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings":

If historic masonry buildings are kept watertight and in good repair, water-repellant coatings should not be necessary.

There are some instances when a water-repellent coating may be considered appropriate to use on a historic masonry building. Soft, incompletely fired brick from the 18th-and early-19th centuries may have become so porous that paint or some type of coating is needed to protect it from further deterioration or dissolution. When a masonry building has been neglected for a long period of time, necessary repairs may be required in order to make it watertight. If, following a reasonable period of time after the building has been made watertight and has dried out completely, moisture appears actually to be penetrating through the repointed and repaired masonry walls, then the application of a water-repellent coating may be considered in selected areas only. This decision should be made in consultation with an architectural conservator. And, if such a treatment is undertaken, it should not be applied to the entire exterior of the building.

In most instances, waterproof coatings should not be applied to historic masonry. The possible exception to this might be the application of a waterproof coating to below-grade exterior foundation walls as a last resort to stop water infiltration on interior basement walls. Generally, however, waterproof coatings, which include elastomeric paints, should almost never be applied above grade to historic masonry buildings.

Per Practical Building Conservation, English Heritage Technical Handbook, Volume 3 - MORTARS, PLASTERS AND RENDERS by John Ashurst and Nicola Ashurst:

Paints which provide a tough impervious envelope especially those which are sprayed on, should be avoided for historic buildings...Water and salt trapped behind an impervious paint film will result in loss of adhesion and can increase dampness in a building and the risk of persistent deterioration behind the paint...Limewash is likely to be the most usual finish."

Per the Wisconsin Historical Society's "Repainting Exterior Masonry on Your Historic Building":

Do not use high-pressure washing to clean a masonry surface. High-pressure washing can damage masonry surfaces. It is also a major cause of catastrophic paint failure. High-pressure washing will drive so much moisture deep into the masonry that it could take months to dry enough for painting.

If you've determined that repainting is critical to save or maintain your damaged masonry, use a highly vapor-permeable paint.

RECOMMENDATION

LC staff recommends approval of the roof work and replacing the area of damaged brick with new brick.

LC staff is concerned that pressure washing the exterior brick wall will introduce high levels of moisture into the brick (per Wisconsin Historical Society). Wisconsin State law effectively prohibits pressure washing of a historic building.

LC staff is further concerned that the application of low-permeability elastomeric paint will accelerate the deterioration of the brick wall. LC staff recommends:

1. A gentle, non-abrasive cleaning in accordance with the Wisconsin Historical Society's "Repainting Exterior Masonry on Your Historic Building";
2. Professional, historic repair and replacement of mortars with traditional lime mortars;
3. Where painting is desired and approved, painting of any masonry should be with a highly vapor-permeable paint (preservation experts suggest that painting is preferably done with lime washes/paints);
4. Elastomeric, or any highly water repellant or specially constituted waterproof paint, should not be used on historic masonry structures. Such unbreathable coatings inappropriately trap moisture inside the historic masonry (including moisture introduced through pressure washing), damaging the structural integrity of the masonry, and possibly resulting in the eventual growth of molds and/or mildew.

FISCAL IMPACT

ATTACHMENTS

1. COA 19-32 Map
2. COA 19-32 Application
3. Repainting Exterior Masonry on Your Historic Building _ Wisconsin Historical Society
4. Identifying Problems with Your Historic Brick Building _ Wisconsin Historical Society
5. Preservation Brief 1 _ Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings



www.greenbaywi.gov

CERTIFICATE OF APPROPRIATENESS APPLICATION

Department of Community
and Economic Development
100 N. Jefferson Street, Rm 608
Green Bay, WI 54301-5026
(920) 448-3300 - phone
(920) 448-3426 - fax
www.greenbaywi.gov

All fields must be completed before application will be processed.

File Number: PARCEL 12-145

1. Address: 218-220 NORTH ADAMS STREET

2. Parcel #: 12-145

3. Owner of record: VICE ENTERPRISES Phone: 920-265-0347

<u>4588 CHOCTAW TRAIL</u>	<u>GREEN BAY</u>	<u>WI</u>	<u>54313</u>
(Address)	(City)	(State)	(Zip)

4. Applicant's Name: PATRICK NEPH

<u>4588 CHOCTAW TRAIL</u>	<u>GREEN BAY</u>	<u>WI</u>	<u>54313</u>
(Address)	(City)	(State)	(Zip)

<u>/ 920-265-0347</u>	<u>/</u>	<u>PATRICK.NEPH@REPUBLICCHOPHOUSE.COM</u>
(Office Phone #)	(Cell Phone #)	(E-mail Address)

5. Present use of Property: RESTAURANT

6. Description of Project: Describe each item of the project separately.
Include existing condition(s) when describing item. Also, describe the proposed work, material(s) to be used and the impact the item would have on existing historic or architectural features of the property. (Attach additional sheets if necessary.)

REPLACEMENT OF ROOF ON BUILDING - ROOF LOCATION AT REAR OF BUILDING, 2ND STORY SECTION OF PROPERTY

REPAIR OF 4X10 SECTION OF DETERIORATED EXTERIOR BRICK ON NORTH WALL

POWER WASHING OF EXTERIOR TO CLEAN SURFACE TO ALLOW APPLICATION OF ELASTOMERIC PAINT TO EXTERIOR BRICK TO SEAL

EXTERIOR SURFACE TO PREVENT FURTHER EROSION OF BRICK

7. Attachments:

- ☒ Site Plan of the lot (Please indicate direction of north, dimensions, structures, etc.)
- ☒ Sketches, drawings, building and streetscape elevations, and/or annotated photos
- ☒ Exterior photos
- ☒ Specifications (materials) for the project
- ☐ Phased development plan for the project (if proposed in phases)
- ☐ Inspection report (required for demolition requests only)
- ☒ Cost estimates for all the proposed work
- ☐ Other (please explain): _____

CERTIFICATE OF APPROPRIATENESS APPLICATION (Continued)

8. The following action is requested:

☐ **Approval of COA by Landmarks Commission** (projects not listed below)

☒ **Approval of COA by staff:** (Check all that apply)

☒ Roof repair/replacement

☐ Gutter repair/replacement

☐ Private sidewalk and driveway repair/replacement of the same dimensions and orientation

☐ Chimney repair and tuckpointing according to the Secretary of the interior standards and in appropriate color and design

☐ Installation of fences

☐ Storm window or storm door installation, repair, or replacement

☐ Installation of glass blocks in basement window openings

☒ Painting of existing unpainted brick (CLEANING PAINTED EXTERIOR BRICK TO ALLOW ELASTOMERIC PAINT TO ADHERE TO EXISTING SURFACE TO PREVENT FURTHER DECAY)

☐ Unattached nonvisible accessory structures

☐ Replacement of identical siding

☐ Replacement or repair to porches identical to existing style and materials

☐ Commercial sign replacement of identical dimensions

Petitioner Signature: Patrick Neph

Owner Signature: Patrick Neph

Date Received: _____ Staff: _____



August 16, 2019

Pat Neph
218 N Adams Street
Green Bay, WI 54301

901 VANDERBRAAK STREET
P.O. Box 1835
GREEN BAY, WI 54305-1835
920.437.5426 tel
920.437.6662 fax
www.zeiseconstruction.com

Re: Chop House Roof Replacement-Revised 1

Gentlemen:

Thank you for allowing us to provide you with this budget proposal. We will supply labor, materials and equipment to add short curbs at 5 condensers without disconnecting them, clean and refasten existing loose roofing, replace roof drains and decking as needed, spray new roofing, and add 8" metal copings at the edges. We also include replacing approximately 4 by 20 feet of loose brick on the North wall. Re recommend pressure washing then painting the existing brick walls with this project. I have requested a price from Corcoran see price below. The following is a Budgetary breakout. We recommend proceeding T & M not to exceed this number per Hurckman's recommendation.

- Zeise \$ 14,212.00
- Corcoran Roofing \$ 27,225.00
- HMI \$ 24,365.00
- Metzler Electric \$ 1,850.00

ALL FOR THE BUDGET SUM OF SIXTY SEVEN THOUSAND SIX HUNDRED FIFTY TWO DOLLARS (\$67,652.00).

We exclude permits and the exterior painting of the walls. I will forward that cost when I receive it.

Please **ADD \$6,600.00** to pressure wash and paint the existing brick walls.

If you should have any questions, please contact me.

Respectively,

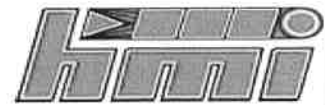
FRANK O. ZEISE CONSTRUCTION CO., INC.

Craig M. Cornell

Craig M. Cornell
CMC/cc

HURCKMAN MECHANICAL INDUSTRIES, INC.
 1450 Velp Avenue 54303
 PO Box 10977, Green Bay, WI 54307-0977
 (920) 499-8771

"NO EMPTY PROMISES"



Time and Material Form

Project Name Republic Chophouse - Reroofing Project
 HMI Project No. N/A

Contract No. This is to set rough budget for Time and Material
 Payment Request No. N/A

Details of this Billing

☐ First Billing
☐ Progress Billing
☐ Final Billing

Todays Date August 15, 2019
 Current Completion Date _____
 Contract Days Changed (if applicable) _____
 Revised Completion Date (if applicable) _____

Description of Time and Material Based Work

Estimation of equipment rails, curbs, and durablock pipe rails. HMI will replace smaller AC units curbs, and add flashing to the larger MAU unit.
 NOT included: pull down, repipe, and refill of refrigeration system. Includes fixing and strengthening MAU ductwork that is currently dented and water logged.
 Please see attached photos for reference work to be included. Pricing based on straight-time. *This is rough budget to be used for a Time and Material basis*
 Includes time and material for roof drain. - but we will need Zeise to open up the roof so we can move the roof drain.

Hurckman Mechanical Project Manager

Name Jake Warden
 Phone No. 9206092786

Owner or Owners Rep

Name _____
 Phone No. _____

A. Labor Summary

Labor - Sheetmetal Foreman	24.00 hours	X	\$	95.00 /hour	=	\$	2,280.00
Labor - Sheetmetal Journeyman	24.00 hours	X	\$	90.00 /hour	=	\$	2,160.00
Labor - Sheetmetal Apprentice	24.00 hours	X	\$	85.00 /hour	=	\$	2,040.00
Labor - Sheetmetal Shop	40.00 hours	X	\$	90.00 /hour	=	\$	3,600.00
Labor - Pipefitter/Plumber Foreman	0.00 hours	X	\$	95.00 /hour	=	\$	-
Labor - Pipefitter/Plumber Journeyman	12.00 hours	X	\$	90.00 /hour	=	\$	1,080.00
Labor - Pipefitter/Plumber Apprentice	0.00 hours	X	\$	85.00 /hour	=	\$	-
Labor - Pipefitter/Plumber Shop	_____ hours	X	\$	- /hour	=	\$	-
Labor - Insulator	0.00 hours	X	\$	65.00 /hour	=	\$	-
Labor - Shipping/Receiving/Helper Class	8.00 hours	X	\$	65.00 /hour	=	\$	520.00
Labor - Service Tech/Engineering/Supervision	20.00 hours	X	\$	95.00 /hour	=	\$	1,900.00
TOTAL HOURS	152.00 hours			Total (A)	\$		13,580.00
TOTAL OT AND DT HOURS From (A.1)	0.00 hours			Total (A.1)	\$		-
				5.00%	Total (A) Plus Markup	\$	14,259.00

B. Material and Miscellaneous Costs - Details Continued on Separate Sheets (If Applicable)

Item	QTY	UNIT Cost	Description	Cost
1	24	\$ 50.00	Durablock style pipe supports for gas piping and refer piping	\$ 1,200.00
2	7	\$ 400.00	Curbs for Smaller units	\$ 2,800.00
3	2	\$ 600.00	Sheeting for larger units	\$ 1,200.00
4	4	\$ 250.00	Stands for ductwork	\$ 1,000.00
5	1	\$ 1,200.00	Misc ducting material	\$ 1,200.00
			Total from attached sheet (B.1):	\$ -

Total (B) \$ 7,400.00
 Total (B) Plus Markup 15.00% \$ 8,510.00

C. Equipment Rental

Total (C) \$ -

5.00% Total (C) Plus Markup \$ -

D. Inventory

Total (D) \$ 500.00

15.00% Total (D) Plus Markup \$ 575.00

E. Trucking/Freight

Total (E) \$ -

0.00% Total (E) Plus Markup \$ -

F. Subcontracts

Total (F) \$ -

0.00% Total (F) Plus Markup \$ -

G. Miscellaneous (Markups added in total)

1. Additional bond/insurance cost
2. Fees for permits, licenses, inspection, tests, etc.
3. Subsistence
- 4 Other _____

0.00% \$ -
 5.00% \$ 500.00
 0.00% \$ -
 0.00% \$ -
 Total (G) Plus Markups \$ 525.00

H. State Tax on Inventory and Material Costs (If Applicable)

5.50% TAX \$ 495.55

Total \$ 24,364.55
 Total From Previous Billings \$ -
 This Invoice Total \$ 24,364.55

Approver

Name _____ Signature _____
 Date _____

Sheet 1 of 1



June 4, 2019

Zeise Construction
ATTN: Craig Cornell

RE: Republic Chophouse Roof Coating, Green Bay

Labor and materials to:

- Power wash and clean entire roof
- Install chimney flashing
- Flash all wooden supports for ductwork
- Install perimeter cap flashing
- Caulk all flashing and other miscellaneous areas as required
- Prime with OR811 Primer, followed by a minimum 50 mil coating of OR93SLM Roof Coating

FOR THE SUM OF: \$27,225.00

NOTE: The remainder of the chimney demo is to be done by others.

Should you have any questions, feel free to contact me.

Thank you.

Paul Schroepfer
Corcoran Glass & Paint, Inc.
060419psa/mg

Direct Office Line: 920-560-5355
Cell: 920-427-5238
Email: pschroepfer@corcoranglass.com



PRODUCT DATA SHEET

ELASTAGUARD

ELASTOMERIC COATING

180

DESCRIPTION

hallman/lindsay's *ProSeries* is our full line of finishes designed for the professional contractor.

ELASTAGUARD ELASTOMERIC COATING is a 100% acrylic elastomeric coating for exterior concrete, masonry and stucco. It is designed to be used as a system that protects, decorates and is water resistant when a continuous, pinhole-free finish is achieved. It has the ability to bridge hairline cracks and move with the substrate.

ELASTAGUARD provides long-term adhesion as well as protection against moisture caused by wind-driven rain. It also offers low-temperature flexibility. It has excellent protection against ultraviolet rays and a high level of mildew resistance

FEATURES

- ✓ 100% Acrylic
- ✓ Flexible, Water-Resistant Coating
- ✓ High Build
- ✓ Mildew-Resistant
- ✓ Bridges Hairline Cracks
- ✓ Excellent Adhesion

PERFORMANCE DATA

- ✓ Performance alternate (MPI) # 38
- ✓ Performance alternate for Federal Paint Specification TT-P-25 F

<u>Property</u>	<u>Test</u>	<u>Result</u>
Elongation	ASTM -412	300% @ 77° F

PRECAUTIONS/LIMITATIONS

- ✓ Please refer to Safety Data Sheets.
- ✓ Apply only if air, surface and material temperatures remain 50° F or above during application and drying.
- ✓ Not intended for use below grade, on sloped or horizontal surfaces, on surfaces where water ponds or as a roof coating.

TECHNICAL SERVICES



FACTORY & MAIN OFFICES

Ph. 608/834-8844

Fax 608/837-1064

www.hallmanlindsay.com

TECHNICAL DATA

- ✓ Color/Tinting:
White. May be tinted, up to 2 oz. per gallon, with low VOC colorants.
- ✓ Vehicle Type:
100% Acrylic/Elastomer
- ✓ Gloss: Eggshell
5-12 units @ 60°
- ✓ Percent Solids:
Weight: 56% ± 2
Volume: 45% ± 2
- ✓ Recommended Spreading Rate:
Apply at 80 sq.ft./gal. to achieve
18 mils Wet Film Thickness
8 mils Dry Film Thickness
When calculating working coverage, allow for application losses, texture and porosity of surface, application technique, etc.
- ✓ Drying Time at 77°F 50% R.H.:
To touch: 4 hours
Recoat: 24 hours
Extended drying time may be expected when conditions such as high humidity, high dew point, low temperature, etc are present. Allow product to dry thoroughly before topcoating.
- ✓ Thinning:
Do not thin.
- ✓ Cleanup:
Water
- VOC:
30 g/L 0.26 lbs./gal.

SURFACE PREPARATION

Surfaces must be clean and free of dust, dirt, chalk, grease, rust or any other contaminants. Remove all loose, scaling or peeling paint by power washing, scraping and/or wire brushing. Spot prime as required with appropriate primer. All chalky surfaces should be primed using suitable primer. Cracks and other voids should be filled with a non-plasticized filler or caulk. pH test and moisture test area required prior to project start. ***Care must be taken, especially with foam-filled or styrofoam- insulated concrete block so as not to trap moisture behind the coating/substrate interface. hallman/lindsay assumes no liability (express or implied) when used over these surfaces without prior inspection and/or written approval.*** Warning! If you scrape, sand or remove old paint, you may release lead dust. Lead is toxic. Exposure to lead dust can cause serious illness, such as brain damage, especially in children. Pregnant women should also avoid exposure. Wear a NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

hallman/lindsay PRIMER RECOMMENDATIONS

NEW WORK

Rough Masonry, Brick:	179, 181
Concrete Block, Above Grade:	179, 181
Pre-Cast, Tilt-Up, etc., Above Grade:	166
Wood	One coat 111 or 112
Metal, Ferrous (Steel)	One coat 330 or 338
Metal, Non-Ferrous (Galvanized)	One coat 338

REPAINT WORK

All surfaces: Spot prime all bare areas with suitable primer

hallman/lindsay FINISH RECOMMENDATIONS

Two coats of 180.

APPLICATION

Designed primarily for spray application so the specified mil thickness is achieved. To attain maximum waterproofing protection, each coat of ELASTAGUARD should be at a minimum of 18 mils wet/10 mils dry. It is recommended that two coats of ELASTAGUARD be applied. Mix thoroughly before use. Apply by brush, roller or airless spray. Flow and leveling is best achieved by applying a full, uniform coating and working to a wet edge using overlapping strokes. Surfaces should be dry prior to paint application. For best filling of voids, apply by spray and backroll surface with ¾" roller cover, pushing paint into voids. Roller application will require 3 coats to achieve film build.

EQUIPMENT REQUIREMENTS

- ✓ Airless: Minimum 1 GPM with .025" tip @ 2500 PSI
- ✓ Conventional: Not recommended
- ✓ HVLP: Not recommended
- ✓ Roller: ¾"-1" nap shed-resistant or lambswool cover
- ✓ Brush: 100% nylon or synthetic blend



FACTORY & MAIN OFFICES

1717 N. Bristol Street ☒ Sun Prairie, WI 53590
 ☎ (608) 834-8844 ☎ FAX (608) 837-1064 ☎ www.hallmanlindsay.com

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1658 Cass Street
Green Bay, WI 54302
Phone: (920) 406-7515
Fax: (920) 884-5037
Email: rory@metzlerelectric.com

Estimate

Date: 8/1/2019

TO: Zeise Construction
ATTN: Craig Cornell

JOB: Rooftop electrical
disconnect/reconnect

Our total Price for the above job is not to exceed: **N.T.E. \$1,850⁰⁰**

Notes: This estimate is based on plans and specifications received at time of event. Please read through the following details below.

1. No electrical permit is figured into estimate.
2. All work is to be done during normal working hours. Typical 7:00 am to 3:30 pm.
3. Rubber boots to be installed prior to new roof spray on material.
4. (5) Central Air condensing units disconnected and reconnected.
 - a. (5) Rubber boots included.
 - b. (1) Nema 3R junction box.
 - c. Up to 50' of 1/2" liquidtight power whips.
 - d. (1) 4"x4"x8' treated wood post.
5. (1) Ice machine condensing unit disconnect and reconnect.
 - a. (1) Rubber boot.

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Proposal is based on a 40-hour workweek and does not include overtime, holidays, or weekend unless specifically noted above. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements are contingent upon strikes, accidents, or delays beyond our control. This proposal is subject to acceptance within 30 days and is void thereafter at the option of the undersigned.

PLEASE NOTE: Monthly payments are required with the balance of the contract due within 30 days of project completion. Interest charges of 1.5% monthly will be assessed on delinquent balances. Lien rights will be executed when necessary.

Sincerely,
METZLER ELECTRIC, INC., Contractor

By:

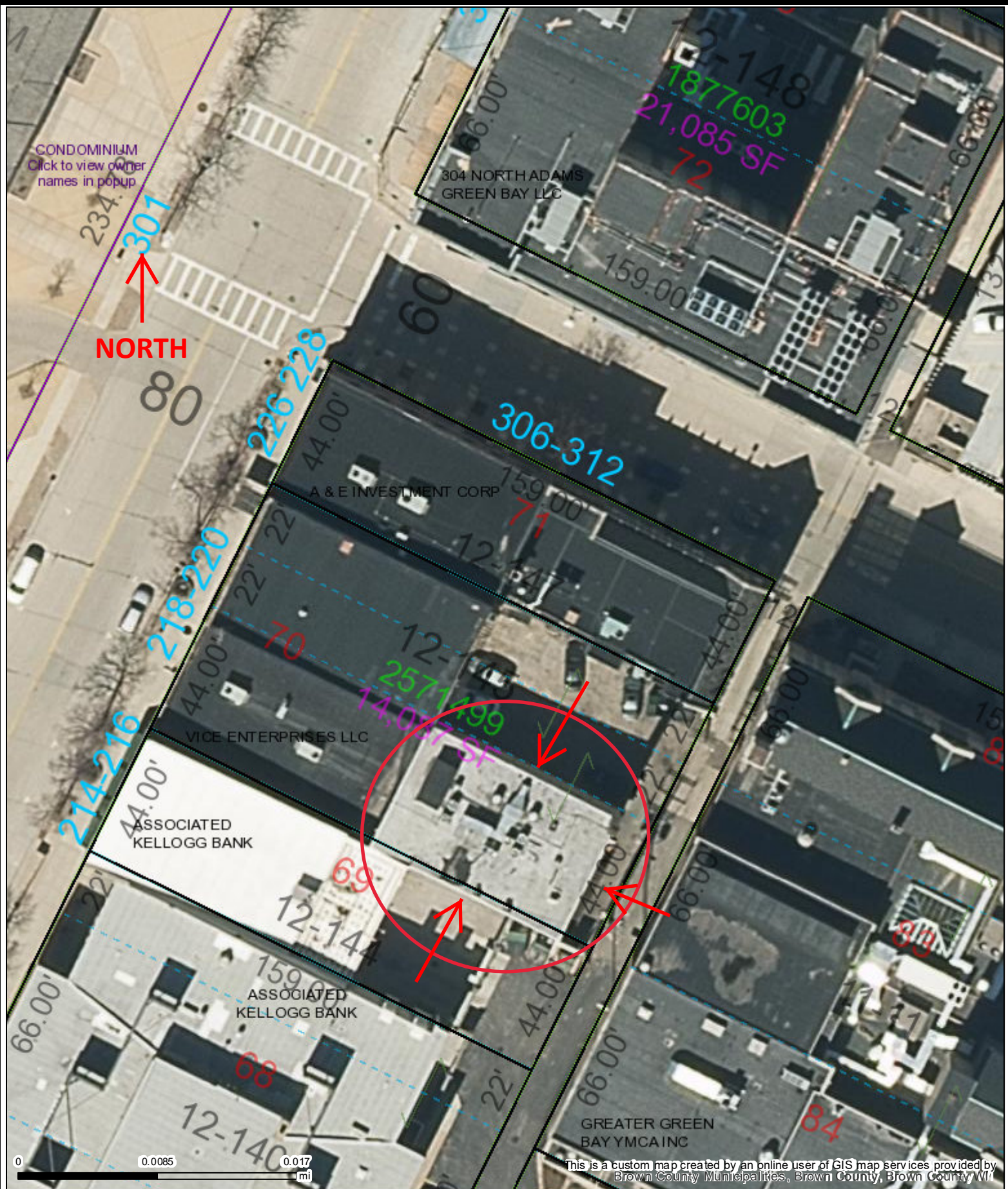
ACCEPTANCE

The above prices, specifications and conditions are hereby accepted. You are authorized to do the work as specified. **No work shall be commenced until this proposal is returned to the contractor signed below by the customer.**

This Estimate is hereby accepted by Customer:

Print Name: _____
Date Signed: _____

Print Name: _____
Date Signed: _____



Part of Brown County WI

Map printed on 8/21/2019

1:480
1 inch = 40 feet*
1 inch = 0.00758 miles*
**original page size: 8.5"x11"*
Appropriate format depends on zoom level

Parcel ownership key

- Parcel Boundary
- Condominium
- Gap or Overlap

- Parcel line
- Right of Way line
- Meander line
- Lines between deeds or lots
- Historic Parcel Line
- Vacated Right of Way
- "hooks" indicate parcel ownership crosses a line

SC-190-2 Parcel ID Number
 2880257 Document Number
 0.814 AC Area of parcel
 279.8' Line Distance
 3547 Address

A complete key (legend) is available at:
<https://tinyurl.com/BrownDogKey>



(920) 448-6480
maps.gis.co.brown.wi.us

BRICK REPAIR AREA

**POTENTIAL COLOR TO BE
APPLIED TO OLD BRICK
SHOWN TO LEFT - COLOR
OPTIONS AVAILABLE IF
NEEDED**

NORTH FACING EXTERIOR WALL





GUIDE OR INSTRUCTION

Repainting Exterior Masonry on Your Historic Building

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MORE...

According to preservation best practices, unpainted masonry houses and buildings should not be painted. If your historic house or building has been painted for years, your masonry was probably deteriorating or damaged. Deterioration can happen if bricks are too soft. Damage can be caused by sandblasting and high-pressure washing. An experienced preservation mason should be able to tell you whether your brick can be stripped back to its natural state or must remain painted due to earlier damage.

Difficulty:
Moderate

If you've determined that repainting is critical to save or maintain your damaged masonry, use a highly vapor-permeable paint. Historic preservation masonry supply companies are available across the country to provide you with the right breathable paint for your project. Follow the steps below to prepare your masonry surfaces for paint.

Gather Your Tools and Materials

Explore the Category

Category: [How to Preserve Your Historic Building](#)

Topics in This Category

[Building Systems](#)[Energy Efficiency](#)[Exterior Features](#)[Financing](#)[Interior Features](#)[Paint](#)[Plan Your Project](#)[Roofs and Gutters](#)[Windows and Doors](#)[Understanding Historic Preservation](#)

Have Questions?

To repaint a previously painted masonry surface painting, you will need the following tools and materials:

- Thin-blade putty knife
- Paint stripper designed to remove paint from masonry surfaces
- Double cartridge respirator rated for lead paint
- Ladders and/or scaffolding
- Ground tarps
- Spray bottles with water to wet-scrape old paint
- Scrub brush on an extension pole for scrubbing
- Plastic buckets for cleaning solution
- Trisodium phosphate (TSP), regular or synthetic
- HEPA filtered vacuum
- Garden hose with a spray nozzle
- Safety glasses and rubber gloves
- Moisture meter

Contact Jen Davel by
phone at 608-264-6490 or
by email:

jen.davel@wisconsinhistory.org

Step 1: Scrape or Remove Paint

Your masonry house or building may have many coats of paint on its exterior. The presence of many paint layers can lead to paint failure due to the incompatibility of the different paints. If your house or building has fewer than three complete paint jobs (fewer than nine coats of paint), you can carefully remove loose paint with a thin-blade putty knife. Avoid scraping historic masonry with a carbide scraper or anything that could damage the historic exterior surface.

If your house or building has three or more complete paint jobs, you should remove all the paint using specialized chemical paint removers, or strippers, designed to safely remove paint from masonry. There are many manufacturers of these strippers, and they have decades of experience in specifying the right products to use. When you contact these companies to find the right stripper for your project, describe your masonry in very specific terms.



Step 1

Source: Bob Yapp

When you are removing exterior paint, it is critical for you to wear a properly fitted double cartridge respirator rated for lead paint. You should also follow all other practices for safely managing lead paint on your property.

Step 2: Clean the Surfaces to be Painted

You should use a mixture of synthetic TSP and water to hand-wash all bare masonry and solid paint that remains on your masonry surfaces. Use $\frac{1}{4}$ cup of TSP for every gallon of water. Before you begin, tarp off the area where you are working to prevent the TSP from seeping into the ground. Be sure to wear eye protection and gloves. When you are done scrubbing, rinse the masonry surfaces with clear water from your garden hose.

Do not use high-pressure washing to clean a masonry surface. High-pressure washing can damage masonry surfaces. It is also a major cause of catastrophic paint failure. High-pressure washing will drive so much moisture deep into the masonry that it could take months to dry enough for painting.



Step 2

Source: Bob Yapp

Step 3: Repair Damaged Components

Repair or replace any rotted or cracked brick moldings, eaves, or other wood components surrounding the masonry. Repair any failing mortar with mortar that is softer than your brick or stone. Allow the mortar to cure thoroughly before you prime, caulk or paint the masonry.



Step 3

Source: Bob Yapp

Step 4: Check Moisture Content

Before you apply any primer, paint or caulk, use a moisture meter to test the moisture content of the masonry. Paint will not adhere to any masonry surface with a moisture content that exceeds 15 percent. You can purchase a masonry grade moisture meter at masonry supply stores and sometimes lumberyards.

The information presented here is not intended to provide comprehensive technical advice or instructions on solving historic preservation issues. Any information contained or referenced is meant to provide a basic understanding of historic preservation practices. Read full disclaimer.



Step 4

Note: while the photo shows a clapboard wall, the equipment and process is the same. Source: Bob Yapp





Explore these events and more!

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GENERAL INFORMATION

Identifying Problems with Your Historic Brick Building

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MORE...

If your historic house or building is constructed with brick, your maintenance routine should include an annual inspection to evaluate the condition of your bricks. By making this annual effort to review your building's masonry exterior, you can identify potential issues that could turn into significant problems if not addressed. The most common problems you may encounter with your brick masonry are described below.

Mortar Deterioration

If your house or building has existed for 100 years or more, you will probably find mortar missing or deteriorating between your bricks. Mortar deterioration is caused primarily by moisture penetration. Other factors can include wind erosion, or bricks that have been coated with paint or sealants that do not allow moisture vapor to escape.

If your mortar has deteriorated significantly or is missing altogether, you will need to replace the mortar by repointing. Repointing is the act of carefully removing the failed mortar and replacing it with mortar that matches the look, texture, color, composition and hardness of your original mortar. (The original act of installing the finish layer to a mortar joint is referred to as "pointing.") You should hire an experienced

Explore the Category

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Have Questions?

of installing the finish layer to a mortar joint is referred to as pointing. You should hire an experienced preservation mason to repoint your mortar.

Brick Deterioration

During your annual masonry inspection, you might find that some of your bricks are cracking or spalling. These problems occur under the following conditions:

- **Excessive moisture enters the bricks and freezes in the winter.** Bricks naturally take in and let out moisture, but excessive moisture can enter through failed mortar joints, exposure to cascading water due to a lack of effective gutters or sealants that do not allow normal water vapor to escape.
- **Repointing work is done with mortar that is harder than the bricks.** As a brick contracts and expands by taking in and letting out moisture, it puts pressure on the adjacent mortar. If the mortar is harder than the brick, this pressure will crack and spall the faces of the bricks. Even if the mortar is softer than the brick, the same results are possible if the mortar is harder than the original mortar. Make sure your repointing mortar is equal to or softer than the historic mortar behind it.
- **Foundation settling puts downward pressure on the bricks.** Downward pressure from foundation settling can cause your bricks to crack.

If you must replace your original bricks, try to find salvaged bricks that match the size, texture, color and age of your original bricks. Many communities in Wisconsin have architectural salvage or just salvage yards that reclaim these bricks from demolished buildings. A few companies also make reproduction bricks. You can find these companies by doing a web search for "reproduction historic bricks."

In rare instances, you might be able to remove a brick that is damaged on its face, turn it around and



Dane County. The brick on this chimney has experienced severe deterioration - the brick has shifted, cracked and spalled. Source: WHS - Historic Preservation - Public History.



Madison, Wisconsin. Even though this is brick building has been painted, the joint cracking is evident. Source: Photographer Mark Fay.

Contact Jen Davel by
phone at 608-264-6490 or
by email:

jen.davel@wisconsinhistory.org

reinstall it in the same location so its undamaged backside becomes the visible face of the brick.

Brick Erosion

Your annual masonry inspection could reveal brick erosion or excessive wear. Some early houses and buildings were built with bricks that were very soft. Bricks are fired in a kiln, and early kilns were not able to control the firing process as well as they are today. Brick erosion and wear can also be caused by bricks that were formed from clay that is not dense enough to hold up over time.

Brick erosion can also occur if your house or building was treated with an abrasive cleaning technique such as sand blasting or high-pressure washing. Even soft bricks have a harder exterior, so sandblasting and high-pressure washing can remove the harder crust on the outside of the bricks. These cleaning techniques are so damaging to bricks and mortar that both practices are banned in all preservation best practices guidelines. If your house or building is listed on the National Register of Historic Places, it is against the law in Wisconsin (WI Statute 101.1215) to use an abrasive blasting technique on the exterior of your historic building.

Structural Failures in Your Brick Walls

Your annual masonry inspection could reveal that sections of your brick walls are bowing inward, outward or even collapsing. These problems are considered catastrophic structural failures. These problems will typically be caused by excessive foundation settling or heaving, or massive amounts of water entering your brick walls. This water problem most commonly occurs from a roof leaking over a long period of time.

You will have to address the underlying problem or problems to remedy a collapsing brick wall area. When you have solved the underlying problem, you will have to hire a preservation mason under the guidance of a preservation-oriented structural engineer to carefully take down and rebuild your brick wall.

Stair-Step Mortar Cracks

You might find cracks in the mortar between your bricks that look like stair steps. These mortar cracks are primarily caused by foundation settling or upward heaving. Often when stair-step cracks happen, they never get any worse. Old houses and buildings can settle a bit over many years, and if no other moisture or structural problems exist, you can repair cracked mortar joints by repointing them. If a crack does get worse, you will have to address the structural foundation problems with a preservation mason under the guidance of a preservation-oriented structural engineer.

Bricks Covered with a White Powdery Substance

During your annual inspection, you might spot efflorescence, a white powdery substance on your bricks. Efflorescence happens when salts in the mortar or brick are dissolved by excess moisture and migrate to the surface of the bricks. When the moisture evaporates, the remaining salts leave behind a white powdery film. Efflorescence rarely happens to brick houses and buildings built before 1920, because the lime and sand mortar used up to this time did not contain Portland cement. Lime-based mortars have few, if any, salts in them.

Efflorescence indicates there is too much moisture in your brick walls, so you should hire a masonry expert to help you fix the moisture problem first. When you have solved the moisture problem, clean the efflorescence off your bricks with this two-step procedure:

1. Scrub off the white powder with a stiff scrub brush and water.
2. Clean the brick surface with a biodegradable detergent.

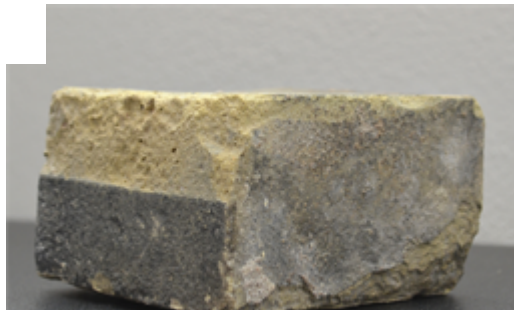
Bricks Containing Surface Debris: Dirt, Moss and Mold

You might find bricks that are dirty or have moss or mold growing on them. Dirty bricks are usually the result of exposure to airborne pollution and particulates in the air that attach to the bricks and mortar. Often this natural patina is not damaging to your bricks and can be considered protective, so cleaning may not be necessary. If you find moss or mold, or discoloration that is beyond what seems “normal,” then you should try to clean the surface using the gentlest means possible. Use the same cleaning procedure described above for efflorescence.

CAUTION: Never remove dirt, moss or mold with high-pressure washing or any kind of high-pressure blasting, such as sand blasting. If you wash your bricks, never allow the water pressure to exceed 1000 pounds per square inch (PSI). Place the spray wand tip no closer than 12 inches from the surface of the brick. The use of higher-pressure power washing will erode the harder surface of your bricks and cause



Madison, Wisconsin. Efflorescence can be found on all types of masonry walls - here the efflorescence is evident on the brick surface below the window. Source: Photographer Mark Fay.



permanent damage.

The top half of this brick was sandblasted. Note the sandblasting not only removed the hard outer layer (still evident on the lower half), it also damaged the inner, softer brick. Pock marks are evidence of sandblasting. Source: WHS - State Historic Preservation Office.

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Technical Preservation Services

National Park Service
U.S. Department of the Interior



[Home](#) > [How to Preserve](#) > [Preservation Briefs](#) > 1 Cleaning and Water-Repellent Treatments

Some of the web versions of the Preservation Briefs differ somewhat from the printed versions. Many illustrations are new and in color; Captions are simplified and some complex charts are omitted. To order hard copies of the Briefs, see [Printed Publications](#).

PRESERVATION BRIEFS

1

Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings

Robert C. Mack, FAIA, and Anne E. Grimmer

[Preparing for a Cleaning Project](#)

[Understanding the Building Materials](#)

[Cleaning Methods and Materials](#)

[Planning a Cleaning Project](#)

[Water-Repellent Coatings and Waterproof Coatings](#)

[Summary and References](#)

[Reading List](#)

[Download the PDF](#) 



Appropriate cleaning of historic masonry. Photo: NPS files.

Inappropriate cleaning and coating treatments are a major cause of damage to historic masonry buildings.

While either or both treatments may be appropriate in some cases, they can be very destructive to historic masonry if they are not selected carefully. Historic masonry, as considered here, includes stone, brick, architectural terra cotta, cast stone, concrete and concrete block. It is frequently cleaned because cleaning is equated with improvement. Cleaning may sometimes be followed by the application of a water-repellent coating. However, unless these procedures are carried out under the guidance and supervision of an architectural conservator, they may result in irrevocable damage to the historic resource.



Ninety years of accumulated dirt and pollutants are being removed from this historic theater using an appropriate chemical cleaner, applied in stages. Photo: Richard Wagner, AIA.

The purpose of this Brief is to provide information on the variety of cleaning methods and materials that are available for use on the *exterior* of historic masonry buildings, and to provide guidance in selecting the most appropriate method or combination of methods. The difference between water-repellent coatings and waterproof coatings is explained, and the purpose of each, the suitability of their application to historic masonry buildings, and the possible consequences of their inappropriate use are discussed.

The Brief is intended to help develop sensitivity to the qualities of historic masonry that makes it so special, and to assist historic building owners and property managers in working cooperatively with architects, architectural conservators, and contractors. Although specifically intended for historic buildings, the information is applicable to all masonry buildings. This publication updates and expands *Preservation Briefs 1: The Cleaning and Waterproof Coating of Masonry Buildings*. The Brief is not meant to be a cleaning manual or a guide for preparing specifications. Rather, it provides general information to raise awareness of the many factors involved in selecting cleaning and water-repellent treatments for historic masonry buildings.

Preparing for a Cleaning Project

Reasons for Cleaning

First, it is important to determine whether it is appropriate to clean the masonry. The objective of cleaning a historic masonry building must be considered carefully before arriving at a decision to clean. There are several major reasons for cleaning a historic masonry building: **improve the appearance of the building** by removing unattractive dirt or soiling materials, or non-historic paint from the masonry; **retard deterioration** by removing soiling materials that may be damaging the masonry; or **provide a clean surface** to accurately match repointing mortars or patching compounds, or to conduct a condition survey of the masonry.

Identify What is to be Removed

The general nature and source of dirt or soiling material on a building must be identified to remove it in the gentlest means possible--that is, in the most effective, yet least harmful, manner. Soot and smoke, for example, require a different cleaning agent to remove than oil stains or metallic stains. Other common cleaning problems include biological growth such as mold or mildew, and organic matter such as the tendrils left on masonry after removal of ivy.

Consider the Historic Appearance of the Building

If the proposed cleaning is to remove paint, it is important in each case to learn whether or not unpainted masonry is historically appropriate. And, it is necessary to consider why the building was painted. Was it to cover bad repointing or unmatched repairs? Was the building painted to protect soft brick or to conceal deteriorating stone? Or, was painted masonry simply a fashionable treatment in a particular historic period? Many buildings were painted at the time of construction or shortly thereafter; retention of the paint, therefore, may be more appropriate historically than removing it. And, if the building appears to have been painted for a long time, it is also important to think about whether the paint is part of the character of the historic building and if it has acquired significance over time.

Consider the Practicalities of Cleaning or Paint Removal

Some gypsum or sulfate crusts may have become integral with the stone and, if cleaning could result in removing some of the stone surface, it may be preferable not to clean. Even where unpainted masonry is appropriate, the retention of the paint may be more practical than removal in terms of long range preservation of the masonry. In some cases, however, removal of the paint may be desirable. For example, the old paint layers may have built up to such an extent that removal is necessary to ensure a sound surface to which the new paint will adhere.

Study the Masonry

Although not always necessary, in some instances it can be beneficial to have the coating or paint type, color, and layering on the masonry researched before attempting its removal. Analysis of the nature of the soiling or of the paint to be removed from the masonry, as well as guidance on the appropriate cleaning method, may be provided by professional consultants, including architectural conservators, conservation scientists, and preservation architects. The State Historic Preservation Office (SHPO), local historic district commissions, architectural review boards, and preservation-oriented websites may also be able to supply useful information on masonry cleaning techniques.

Understanding the Building Materials

The construction of the building must be considered when developing a cleaning program because inappropriate cleaning can have a deleterious effect on the masonry as well as on other building materials. The masonry material or materials must be correctly identified. It is sometimes difficult to distinguish one type of stone from another; for example, certain sandstones can be easily confused with limestones. Or, what appears to be natural stone may not be stone at all, but cast

stone or concrete. Historically, cast stone and architectural terra cotta were frequently used in combination with natural stone, especially for trim elements or on upper stories of a building where, from a distance, these substitute materials looked like real stone. Other features on historic buildings that appear to be stone, such as decorative cornices, entablatures and window hoods, may not even be masonry, but metal.

Identify Prior Treatments

Previous treatments of the building and its surroundings should be researched and building maintenance records should be obtained, if available. Sometimes if streaked or spotty areas do not seem to get cleaner following an initial cleaning, closer inspection and analysis may be warranted. The discoloration may turn out not to be dirt but the remnant of a water-repellent coating applied long ago which has darkened the surface of the masonry over time. Successful removal may require testing several cleaning agents to find something that will dissolve and remove the coating. Complete removal may not always be possible. Repairs may have been stained to match a dirty building, and cleaning may make these differences apparent. De-icing salts used near the building that have dissolved can migrate into the masonry. Cleaning may draw the salts to the surface, where they will appear as efflorescence (a powdery, white substance), which may require a second treatment to be removed. Allowances for dealing with such unknown factors, any of which can be a potential problem, should be included when investigating cleaning methods and materials. Just as more than one kind of masonry on a historic building may necessitate multiple cleaning approaches, unknown conditions that are encountered may also require additional cleaning treatments.



The decorative trim on this brick building is architectural terra-cotta intended to simulate the limestone foundation. Photo: NPS files.



Any cleaning method should be tested before using it on historic masonry. Photo: NPS files.

Choose the Appropriate Cleaner

The importance of testing cleaning methods and materials cannot be over emphasized. Applying the wrong cleaning agents to historic masonry can have disastrous results. Acidic cleaners can be extremely damaging to acid-sensitive stones, such as marble and limestone, resulting in etching and dissolution of these stones. Other kinds of masonry can also be damaged by incompatible cleaning agents, or even by cleaning agents that are usually compatible. There are also numerous kinds of sandstone, each with a considerably different geological composition. While an acid-based cleaner may be safely used on some sandstones, others are acid-sensitive and can be severely etched or dissolved by an acid cleaner. Some sandstones contain water-soluble minerals and can be eroded by water cleaning. And, even if the stone type is correctly identified, stones, as well as some bricks, may contain unexpected impurities, such as iron particles, that may react negatively with a

particular cleaning agent and result in staining. Thorough understanding of the physical and chemical properties of the masonry will help avoid the inadvertent selection of damaging cleaning agents.

Other building materials also may be affected by the cleaning process. Some chemicals, for example, may have a corrosive effect on paint or glass. The portions of building elements most vulnerable to deterioration may not be visible, such as embedded ends of iron window bars. Other totally unseen items, such as iron cramps or ties which hold the masonry to the structural frame, also may be subject to corrosion from the use of chemicals or even from plain water. The only way to prevent problems in these cases is to study the building construction in detail and evaluate proposed cleaning methods with this information in mind. However, due to the very likely possibility of encountering unknown factors, any cleaning project involving historic masonry should be viewed as unique to that particular building.

Cleaning Methods and Materials

Masonry cleaning methods generally are divided into three major groups: water, chemical, and abrasive. *Water methods* soften the dirt or soiling material and rinse the deposits from the masonry surface. *Chemical cleaners* react with dirt, soiling material or paint to effect their removal, after which the cleaning effluent is rinsed off the masonry surface with water. *Abrasive methods* include blasting with grit, and the use of grinders and sanding discs, all of which mechanically remove the dirt, soiling material or paint (and, usually, some of the masonry surface). Abrasive cleaning is also often followed with a water rinse. *Laser cleaning*, although not discussed here in detail, is another technique that is used sometimes by conservators to clean small areas of historic masonry. It can be quite effective for cleaning limited areas, but it is expensive and generally not practical for most historic masonry cleaning projects.

Although it may seem contrary to common sense, masonry cleaning projects should be carried out starting at the bottom and proceeding to the top of the building always keeping all surfaces wet below the area being cleaned. The rationale for this approach is based on the principle that dirty water or cleaning effluent dripping from cleaning in progress above will leave streaks on a dirty surface but will not streak a clean surface as long as it is kept wet and rinsed frequently.

Water Cleaning

Water cleaning methods are generally the *gentlest means possible*, and they can be used safely to remove dirt from all types of historic masonry.* There are essentially four kinds of water-based methods: soaking; pressure water washing; water washing supplemented with non-ionic detergent; and steam, or hot-pressurized water cleaning. Once water cleaning has been completed, it is often necessary to follow up with a water rinse to wash off the loosened soiling material from the masonry.

**Water cleaning methods may not be appropriate to use on some badly deteriorated masonry because water may exacerbate the deterioration, or on gypsum or alabaster, which are very soluble in water.*

Soaking

Prolonged spraying or misting with water is particularly effective for cleaning limestone and marble. It is also a good method for removing heavy accumulations of soot, sulfate crusts or gypsum crusts that tend to form in protected areas of a building not regularly washed by rain. Water is distributed to lengths of punctured hose or pipe with non-ferrous fittings hung from moveable scaffolding or a swing stage that continuously mists the surface of the masonry with a very fine spray. A timed on-off spray is another approach to using this cleaning technique. After one area has been cleaned, the apparatus is moved on to another. Soaking is often used in combination with water washing and is also followed by a final water rinse. Soaking is a very slow method—it may take several days or a week—but it is a very gentle method to use on historic masonry.

Water Washing

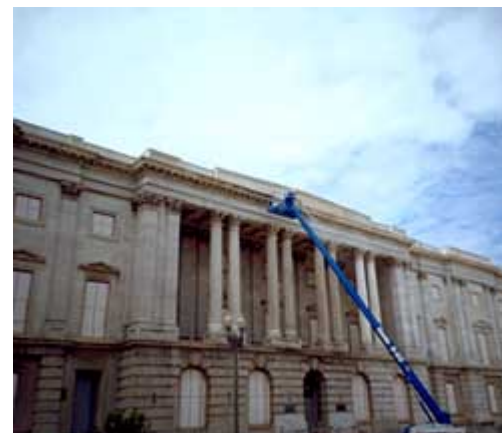
Washing with low-pressure or medium-pressure water is probably one of the most commonly used methods for removing dirt or other pollutant soiling from historic masonry buildings. Starting with a very low pressure (100 psi or below), even using a garden hose, and progressing as needed to slightly higher pressure—generally no higher than 300-400 psi—is always the recommended way to begin. Scrubbing with natural bristle or synthetic bristle brushes—never metal which can abrade the surface and leave metal particles that can stain the masonry—can help in cleaning areas of the masonry that are especially dirty.

Water Washing with Detergents

Non-ionic detergents—which are not the same as soaps—are synthetic organic compounds that are especially effective in removing oily soil. (Examples of some of the numerous proprietary non-ionic detergents include Igepal by GAF, Tergitol by Union Carbide and Triton by Rohm & Haas.) Thus, the addition of a non-ionic detergent, or surfactant, to a low- or medium-pressure water wash can be a useful aid in the cleaning process. (A non-ionic detergent, unlike most household detergents, does not leave a solid, visible residue on the masonry.) Adding a non-ionic detergent and scrubbing with a natural bristle or synthetic bristle brush can facilitate cleaning textured or intricately carved masonry. This should be followed with a final water rinse.

Steam/Hot-Pressurized Water Cleaning

Steam cleaning is actually low-pressure hot water washing because the steam condenses almost immediately upon leaving the hose. This is a gentle and effective method for cleaning stone and particularly for acid-sensitive stones. Steam can be especially useful in removing built-up soiling deposits and dried-up plant materials, such as ivy disks and tendrils. It can



Low-to-medium-pressure steam (hot-pressurized water washing) is a gentle method of softening heavy soiling deposits and cleaning historic marble. Photo: NPS files.

also be an efficient means of cleaning carved stone details and, because it does not generate a lot of liquid water, it can sometimes be appropriate to use for cleaning interior masonry.

Potential Hazards of Water Cleaning

Despite the fact that water-based methods are generally the most gentle, even they can be damaging to historic masonry. Before beginning a water cleaning project, it is important to make sure that all mortar joints are sound and that the building is watertight. Otherwise water can seep through the walls to the interior, resulting in rusting metal anchors and stained and ruined plaster.

Some water supplies may contain traces of iron and copper which may cause masonry to discolor. Adding a chelating or complexing agent to the water, such as EDTA (ethylene diamine tetra-acetic acid), which inactivates other metallic ions, as well as softens minerals and water hardness, will help prevent staining on light-colored masonry.

Any cleaning method involving water should never be done in cold weather or if there is any likelihood of frost or freezing because water within the masonry can freeze, causing spalling and cracking. Since a masonry wall may take over a week to dry after cleaning, no water cleaning should be permitted for several days prior to the first average frost date, or even earlier if local forecasts predict cold weather.

Most important of all, it is imperative to be aware that using water at too high a pressure, a practice common to "power washing" and "water blasting", is very abrasive and can easily etch marble and other soft stones, as well as some types of brick. In addition, the distance of the nozzle from the masonry surface and the type of nozzle, as well as gallons per minute (gpm), are also important variables in a water cleaning process that can have a significant impact on the outcome of the project. This is why it is imperative that the cleaning be closely monitored to ensure that the cleaning operators do not raise the pressure or bring the nozzle too close to the masonry in an effort to "speed up" the process. The appearance of grains of stone or sand in the cleaning effluent on the ground is an indication that the water pressure may be too high.

Chemical Cleaning

Chemical cleaners, generally in the form of proprietary products, are another material frequently used to clean historic masonry. They can remove dirt, as well as paint and other coatings, metallic and plant stains, and graffiti. Chemical cleaners used to remove dirt and soiling include **acids**, **alkalies** and **organic compounds**. Acidic cleaners, of course, should not be used on masonry that is acid sensitive. Paint removers are **alkaline**, based on **organic solvents** or other chemicals.

Chemical Cleaners to Remove Dirt

Both alkaline and acidic cleaning treatments include the use of water. Both cleaners are also likely to contain surfactants (wetting agents), that facilitate the chemical reaction that removes the dirt. Generally, the masonry is wet first for both

types of cleaners, then the chemical cleaner is sprayed on at very low pressure or brushed onto the surface. The cleaner is left to dwell on the masonry for an amount of time recommended by the product manufacturer or, preferably, determined by testing, and rinsed off with a low- or moderate-pressure cold, or sometimes hot, water wash.

More than one application of the cleaner may be necessary, and it is always a good practice to test the product manufacturer's recommendations concerning dilution rates and dwell times. Because each cleaning situation is unique, dilution rates and dwell times can vary considerably. The masonry surface may be scrubbed lightly with natural or synthetic bristle brushes prior to rinsing. After rinsing, pH strips should be applied to the surface to ensure that the masonry has been neutralized completely.

Acidic Cleaners

Acid-based cleaning products may be used on **non-acid sensitive masonry**, which generally includes: granite, most sandstones, slate, unglazed brick and unglazed architectural terra cotta, cast stone and concrete. Most commercial acidic cleaners are composed primarily of hydrofluoric acid, and often include some phosphoric acid to prevent rust-like stains from developing on the masonry after the cleaning. Acid cleaners are applied to the pre-wet masonry which should be kept wet while the acid is allowed to "work", and then removed with a water wash.

Alkaline Cleaners

Alkaline cleaners should be used on **acid-sensitive** masonry, including: limestone, polished and unpolished marble, calcareous sandstone, glazed brick and glazed architectural terra cotta, and polished granite. (Alkaline cleaners may also be used sometimes on masonry materials that are not acid sensitive--after testing, of course--but they may not be as effective as they are on acid-sensitive masonry.) Alkaline cleaning products consist primarily of two ingredients: a non-ionic detergent or surfactant; and an alkali, such as potassium hydroxide or ammonium hydroxide. Like acidic cleaners, alkaline products are usually applied to pre-wet masonry, allowed to dwell, and then rinsed off with water. (Longer dwell times may be necessary with alkaline cleaners than with acidic cleaners.) Two additional steps are required to remove alkaline cleaners after the initial rinse. First the masonry is given a slightly acidic wash--often with acetic acid--to neutralize it, and then it is rinsed again with water.

Chemical Cleaners to Remove Paint and Other Coatings, Stains and Graffiti

Removing paint and some other coatings, stains and graffiti can best be accomplished with alkaline paint removers, organic solvent paint removers, or other cleaning compounds. The removal of layers of paint from a masonry surface usually involves applying the remover either by brush, roller or spraying, followed by a thorough water wash. As with any chemical cleaning, the manufacturer's recommendations regarding application procedures should always be tested before beginning work.

Alkaline Paint Removers

These are usually of much the same composition as other alkaline cleaners, containing potassium or ammonium hydroxide, or trisodium phosphate. They are used to remove oil, latex and acrylic paints, and are effective for removing multiple layers of paint. Alkaline cleaners may also remove some acrylic water-repellent coatings. As with other alkaline cleaners, both an acidic neutralizing wash and a final water rinse are generally required following the use of alkaline paint removers.

Organic Solvent Paint Removers

The formulation of organic solvent paint removers varies and may include a combination of solvents, including methylene chloride, methanol, acetone, xylene and toluene.

Other Paint Removers and Cleaners

Other cleaning compounds that can be used to remove paint and some painted graffiti from historic masonry include paint removers based on N-methyl-2-pyrrolidone (NMP), or on petroleum-based compounds. Removing stains, whether they are industrial (smoke, soot, grease or tar), metallic (iron or copper), or biological (plant and fungal) in origin, depends on carefully matching the type of remover to the type of stain. Successful removal of stains from historic masonry often requires the application of a number of different removers before the right one is found. The removal of layers of paint from a masonry surface is usually accomplished by applying the remover either by brush, roller or spraying, followed by a thorough water wash.

Potential Hazards of Chemical Cleaning

Since most chemical cleaning methods involve water, they have many of the potential problems of plain water cleaning. Like water methods, they should not be used in cold weather because of the possibility of freezing. Chemical cleaning should never be undertaken in temperatures below 40 degrees F (4 degrees C), and generally not below 50 degrees F. In addition, many chemical cleaners simply do not work in cold temperatures. Both acidic and alkaline cleaners can be dangerous to cleaning operators, and clearly, there are environmental concerns associated with the use of chemical cleaners.

If not carefully chosen, chemical cleaners can react adversely with many types of masonry. Obviously, acidic cleaners should not be used on acid-sensitive materials; however, it is not always clear exactly what the composition is of any stone or other masonry material. For this reason, testing the cleaner on an inconspicuous spot on the building is always necessary. While certain acid-based cleaners may be appropriate if used as directed on a particular type of masonry, if left too long or if not adequately rinsed from the masonry they can have a negative effect. For example, hydrofluoric acid can etch masonry leaving a hazy residue (whitish deposits of silica or calcium fluoride salts) on the surface. While this efflorescence may usually be removed by a second cleaning—although it is likely to be expensive and time-consuming—**hydrofluoric acid** can also leave calcium fluoride salts or a colloidal silica deposit on masonry which may be impossible to remove. Other acids, particularly **hydrochloric (muriatic) acid**, which is very powerful, should not be used on historic

masonry, because it can dissolve lime-based mortar, damage brick and some stones, and leave chloride deposits on the masonry.

Alkaline cleaners can stain sandstones that contain a ferrous compound. Before using an alkaline cleaner on sandstone it is always important to test it, since it may be difficult to know whether a particular sandstone may contain a ferrous compound. Some alkaline cleaners, such as **sodium hydroxide (caustic soda or lye)** and **ammonium bifluoride**, can also damage or leave disfiguring brownish-yellow stains and, in most cases, should not be used on historic masonry. Although alkaline cleaners will not etch a masonry surface as acids can, they are caustic and can burn the surface. In addition, alkaline cleaners can deposit potentially damaging salts in the masonry which can be difficult to rinse thoroughly.

Poulticing to Remove Stains and Graffiti

Graffiti and stains, which have penetrated into the masonry, often are best removed by using a poultice. A poultice consists of an absorbent material or clay powder (such as kaolin or fuller's earth, or even shredded paper or paper towels), mixed with a liquid (a solvent or other remover) to form a paste which is applied to the stain. The poultice is kept moist and left on the stain as long as necessary for it to draw the stain out of the masonry. As it dries, the paste absorbs the staining material so that it is not redeposited on the masonry surface.

Some commercial cleaning products and paint removers are specially formulated as a paste or gel that will cling to a vertical surface and remain moist for a longer period of time in order to prolong the action of the chemical on the stain. Pre-mixed poultices are also available as a paste or in powder form needing only the addition of the appropriate liquid. The masonry must be pre-wet before applying an alkaline cleaning agent, but not when using a solvent. Once the stain has been removed, the masonry must be rinsed thoroughly.

Abrasive and Mechanical Cleaning

Generally, abrasive cleaning methods are not appropriate for use on historic masonry buildings. Abrasive cleaning methods are just that—abrasive. Grit blasters, grinders, and sanding discs all operate by abrading the dirt or paint off the surface of the masonry, rather than reacting with the dirt and the masonry which is how water and chemical methods work. Since the abrasives do not differentiate between the dirt and the masonry, they can also remove the outer surface of the masonry at the same time, and result in permanently damaging the masonry. Brick, architectural terra cotta, soft stone, detailed carvings, and polished surfaces, are especially susceptible to physical and aesthetic damage by abrasive methods. Brick and architectural terra cotta are fired products which have a smooth, glazed surface which can be removed by abrasive blasting or grinding. Abrasively-cleaned masonry is



The iron stain on this granite post may be removed by applying a commercial rust-removal product in a poultice. Photo: NPS files

damaged aesthetically as well as physically, and it has a rough surface which tends to hold dirt and the roughness will make future cleaning more difficult. Abrasive cleaning processes can also increase the likelihood of subsurface cracking of the masonry. Abrasion of carved details causes a rounding of sharp corners and other loss of delicate features, while abrasion of polished surfaces removes the polished finish of stone.

Mortar joints, especially those with lime mortar, also can be eroded by abrasive or mechanical cleaning. In some cases, the damage may be visual, such as loss of joint detail or increased joint shadows. As mortar joints constitute a significant portion of the masonry surface (up to 20 per cent in a brick wall), this can result in the loss of a considerable amount of the historic fabric. Erosion of the mortar joints may also permit increased water penetration, which will likely necessitate repointing.



Sandblasting has permanently damaged this brick wall. Photo: NPS files

Abrasive Blasting

Blasting with abrasive grit or another abrasive material is the most frequently used abrasive method. Sandblasting is most commonly associated with abrasive cleaning. Finely ground silica or glass powder, glass beads, ground garnet, powdered walnut and other ground nut shells, grain hulls, aluminum oxide, plastic particles and even tiny pieces of sponge, are just a few of the other materials that have also been used for abrasive cleaning. Although abrasive blasting is not an appropriate method of cleaning historic masonry, it can be safely used to clean some materials. Finely-powdered walnut shells are commonly used for cleaning monumental bronze sculpture, and skilled conservators clean delicate museum objects and finely detailed, carved stone features with very small, micro-abrasive units using aluminum oxide.

A number of current approaches to abrasive blasting rely on materials that are not usually thought of as abrasive, and not as commonly associated with traditional abrasive grit cleaning. Some patented abrasive cleaning processes—one dry, one wet—use finely-ground glass powder intended to "erase" or remove dirt and surface soiling only, but not paint or stains. Cleaning with baking soda (sodium bicarbonate) is another patented process. Baking soda blasting is being used in some communities as a means of quick graffiti removal. However, it should not be used on historic masonry which it can easily abrade and can permanently "etch" the graffiti into the stone; it can also leave potentially damaging salts in the stone which cannot be removed. Most of these abrasive grits may be used either dry or wet, although dry grit tends to be used more frequently.

Ice particles, or pelletized dry ice (carbon dioxide or CO₂), are another medium used as an abrasive cleaner. This is also too abrasive to be used on most historic masonry, but it may have practical application for removing mastics or asphaltic coatings from some substrates.

Some of these processes are promoted as being more environmentally safe and not damaging to historic masonry buildings. However, it must be remembered that they are abrasive and that they "clean" by removing a small portion of the masonry surface, even though it may be only a minuscule portion. The fact that they are essentially abrasive treatments must always be taken into consideration when planning a masonry cleaning project. In general, abrasive methods should not be used to clean historic masonry buildings. In some, very limited instances, highly-controlled, gentle abrasive cleaning may be appropriate on selected, hard-to-clean areas of a historic masonry building if carried out under the watchful supervision of a professional conservator. But, abrasive cleaning should never be used on an entire building.

Grinders and Sanding Disks

Grinding the masonry surface with mechanical grinders and sanding disks is another means of abrasive cleaning that should not be used on historic masonry. Like abrasive blasting, grinders and disks do not really clean masonry but instead grind away and abrasively remove and, thus, damage the masonry surface itself rather than remove just the soiling material.

Planning a Cleaning Project

Once the masonry and soiling material or paint have been identified, and the condition of the masonry has been evaluated, planning for the cleaning project can begin.

Testing Cleaning Methods

In order to determine the *gentlest means possible*, several cleaning methods or materials may have to be tested prior to selecting the best one to use on the building. Testing should always begin with the gentlest and least invasive method proceeding gradually, if necessary, to more complicated methods, or a combination of methods. All too often simple methods, such as a low-pressure water wash, are not even considered, yet they frequently are effective, safe, and not expensive. Water of slightly higher pressure or with a non-ionic detergent additive also may be effective. It is worth repeating that these methods should always be tested prior to considering harsher methods; they are safer for the building and the environment, often safer for the applicator, and relatively inexpensive.

The level of cleanliness desired also should be determined prior to selection of a cleaning method. Obviously, the intent of cleaning is to remove most of the dirt, soiling material, stains, paint or other coating. A "brand new" appearance, however, may be inappropriate for an older building, and may require an overly harsh cleaning method to be achieved. When undertaking a cleaning project, it is important to be aware that some stains simply may not be removable. It may be wise, therefore, to agree upon a slightly lower level of cleanliness that will serve as the standard for the cleaning project. The precise amount of residual dirt considered acceptable may depend on the type of masonry, the type of soiling and difficulty of total removal, and local environmental conditions.

Cleaning tests should be carried out in an area of sufficient size to give a true indication of their effectiveness. It is preferable to conduct the test in an inconspicuous location on the building so that it will not be obvious if the test is not successful. A test area may be quite small to begin, sometimes as small as six square inches, and gradually may be increased in size as the most appropriate methods and cleaning agents are determined. Eventually the test area may be expanded to a square yard or more, and it should include several masonry units and mortar joints. It should be remembered that a single building may have several types of masonry and that even similar materials may have different surface finishes. Each material and different finish should be tested separately. Cleaning tests should be evaluated only after the masonry has dried completely. *The results of the tests may indicate that several methods of cleaning should be used on a single building.*

When feasible, test areas should be allowed to weather for an extended period of time prior to final evaluation. A waiting period of a full year would be ideal in order to expose the test patch to a full range of seasons. If this is not possible, the test patch should weather for at least a month or two. For any building which is considered historically important, the delay is insignificant compared to the potential damage and disfigurement which may result from using an incompletely tested method. *The successfully cleaned test patch should be protected as it will serve as a standard against which the entire cleaning project will be measured.*

Environmental Considerations

The potential effect of any method proposed for cleaning historic masonry should be evaluated carefully. Chemical cleaners and paint removers may damage trees, shrubs, grass, and plants. A plan must be provided for environmentally safe removal and disposal of the cleaning materials and the rinsing effluent before beginning the cleaning project. Authorities from the local regulatory agency--usually under the jurisdiction of the federal or state Environmental Protection Agency (EPA)--should be consulted prior to beginning a cleaning project, especially if it involves anything more than plain water washing. This advance planning will ensure that the cleaning effluent or run-off, which is the combination of the cleaning agent and the substance removed from the masonry, is handled and disposed of in an environmentally sound and legal manner. Some alkaline and acidic cleaners can be neutralized so that they can be safely discharged into storm sewers. However, most solvent-based cleaners cannot be neutralized and are categorized as pollutants, and must be disposed of by a licensed transport, storage and disposal facility. Thus, it is always advisable to consult with the appropriate agencies before starting to clean to ensure that the project progresses smoothly and is not interrupted by a stop-work order because a required permit was not obtained in advance.

Vinyl guttering or polyethylene-lined troughs placed around the perimeter of the base of the building can serve to catch chemical cleaning waste as it is rinsed off the building. This will reduce the amount of chemicals entering and polluting the soil, and also will keep the cleaning waste contained until it can be removed safely. Some patented cleaning systems have developed special equipment to facilitate the containment and later disposal of cleaning waste.

Concern over the release of volatile organic compounds (VOCs) into the air has resulted in the manufacture of new, more environmentally responsible cleaners and paint removers, while some materials traditionally used in cleaning may no longer be available for these same reasons. Other health and safety concerns have created additional cleaning challenges, such as lead paint removal, which is likely to require special removal and disposal techniques.

Cleaning can also cause damage to non-masonry materials on a building, including glass, metal and wood. Thus, it is usually necessary to cover windows and doors, and other features that may be vulnerable to chemical cleaners. They should be covered with plastic or polyethylene, or a masking agent that is applied as a liquid which dries to form a thin protective film on glass, and is easily peeled off after the cleaning is finished. Wind drift, for example, can also damage other property by carrying cleaning chemicals onto nearby automobiles, resulting in etching of the glass or spotting of the paint finish. Similarly, airborne dust can enter surrounding buildings, and excess water can collect in nearby yards and basements.

Safety Considerations

Possible health dangers of each method selected for the cleaning project must be considered before selecting a cleaning method to avoid harm to the cleaning applicators, and the necessary precautions must be taken. The precautions listed in Material Safety Data Sheets (MSDS) that are provided with chemical products should always be followed. Protective clothing, respirators, hearing and face shields, and gloves must be provided to workers to be worn at all times. Acidic and alkaline chemical cleaners in both liquid and vapor forms can also cause serious injury to passers-by. It may be necessary to schedule cleaning at night or weekends if the building is located in a busy urban area to reduce the potential danger of chemical overspray to pedestrians. Cleaning during non-business hours will allow HVAC systems to be turned off and vents to be covered to prevent dangerous chemical fumes from entering the building which will also ensure the safety of the building's occupants. Abrasive and mechanical methods produce dust which can pose a serious health hazard, particularly if the abrasive or the masonry contains silica.



The lower floors of this historic brick and architectural terra-cotta building have been covered during chemical cleaning to protect pedestrians and vehicular traffic from potentially harmful overspray. Photo: NPS files.

Water-Repellent Coatings and Waterproof Coatings

To begin with, it is important to understand that waterproof coatings and water-repellent coatings are not the same. Although these terms are frequently interchanged and commonly confused with one another, they are completely different materials. **Water-repellent coatings**—often referred to incorrectly as "sealers", but which do not or should not "seal"—are intended to keep liquid water from penetrating the surface but to allow water vapor to enter and leave, or pass through, the surface of the masonry. Water-repellent coatings are generally transparent, or clear, although once applied some may

darken or discolor certain types of masonry while others may give it a glossy or shiny appearance. **Waterproof coatings** seal the surface from liquid water and from water vapor. They are usually opaque, or pigmented, and include bituminous coatings and some elastomeric paints and coatings.

Water-Repellent Coatings

Water-repellent coatings are formulated to be vapor permeable, or "breathable". They do not seal the surface completely to water vapor so it can enter the masonry wall as well as leave the wall. While the first water-repellent coatings to be developed were primarily acrylic or silicone resins in organic solvents, now most water-repellent coatings are water-based and formulated from modified siloxanes, silanes and other alkoxysilanes, or metallic stearates. While some of these products are shipped from the factory ready to use, other water-borne water repellents must be diluted at the job site. Unlike earlier water-repellent coatings which tended to form a "film" on the masonry surface, modern water-repellent coatings actually penetrate into the masonry substrate slightly and, generally, are almost invisible if properly applied to the masonry. They are also more vapor permeable than the old coatings, yet they still reduce the vapor permeability of the masonry. Once inside the wall, water vapor can condense at cold spots producing liquid water which, unlike water vapor, cannot escape through a water-repellent coating. The liquid water within the wall, whether from condensation, leaking gutters, or other sources, can cause considerable damage.

Water-repellent coatings are not consolidants. Although modern water-repellents may penetrate slightly beneath the masonry surface, instead of just "sitting" on top of it, they do not perform the same function as a consolidant which is to "consolidate" and replace lost binder to strengthen deteriorating masonry. Even after many years of laboratory study and testing, few consolidants have proven very effective. The composition of fired products such as brick and architectural terra cotta, as well as many types of building stone, does not lend itself to consolidation.

Some modern water-repellent coatings which contain a binder intended to replace the natural binders in stone that have been lost through weathering and natural erosion are described in product literature as both a water repellent and a consolidant. The fact that the newer water-repellent coatings penetrate beneath the masonry surface instead of just forming a layer on top of the surface may indeed convey at least some consolidating properties to certain stones. However, a water-repellent coating cannot be considered a consolidant. In some instances, a water-repellent or "preservative" coating, if applied to already damaged or spalling stone, may form a surface crust which, if it fails, may exacerbate the deterioration by pulling off even more of the stone.



This clear coating has failed and is pulling off pieces of the stone as it peels. Photo: NPS files

Is a Water-Repellent Treatment Necessary?

Water-repellent coatings are frequently applied to historic masonry buildings for the wrong reason. They also are often applied without an understanding of what they are and what they are intended to do. And these coatings can be very difficult, if not impossible, to remove from the masonry if they fail or become discolored. Most importantly, the application of water-repellent coatings to historic masonry is usually unnecessary.

Most historic masonry buildings, unless they are painted, have survived for decades without a water-repellent coating and, thus, probably do not need one now. Water penetration to the interior of a masonry building is seldom due to porous masonry, but results from poor or deferred maintenance. Leaking roofs, clogged or deteriorated gutters and downspouts, missing mortar, or cracks and open joints around door and window openings are almost always the cause of moisture-related problems in a historic masonry building. **If historic masonry buildings are kept watertight and in good repair, water-repellent coatings should not be necessary.**

Rising damp (capillary moisture pulled up from the ground), or condensation can also be a source of excess moisture in masonry buildings. A water-repellent coating will not solve this problem either and, in fact, may be likely to exacerbate it. Furthermore, a water-repellent coating should never be applied to a damp wall. Moisture in the wall would reduce the ability of a coating to adhere to the masonry and to penetrate below the surface. But, if it did adhere, it would hold the moisture inside the masonry because, although a water-repellent coating is permeable to water vapor, liquid water cannot pass through it. In the case of rising damp, a coating may force the moisture to go even higher in the wall because it can slow down evaporation, and thereby retain the moisture in the wall.

Excessive moisture in masonry walls may carry waterborne soluble salts from the masonry units themselves or from the mortar through the walls. If the water is permitted to come to the surface, the salts may appear on the masonry surface as efflorescence (a whitish powder) upon evaporation. However, the salts can be potentially dangerous if they remain in the masonry and crystallize beneath the surface as subflorescence. Subflorescence eventually may cause the surface of the masonry to spall, particularly if a water-repellent coating has been applied which tends to reduce the flow of moisture out from the subsurface of the masonry. Although many of the newer water-repellent products are more breathable than their predecessors, they can be especially damaging if applied to masonry that contains salts, because they limit the flow of moisture through masonry.

When a Water-Repellent Coating May be Appropriate

There are some instances when a water-repellent coating may be considered appropriate to use on a historic masonry building. Soft, incompletely fired brick from the 18th- and early-19th centuries may have become so porous that paint or some type of coating is needed to protect it from further deterioration or dissolution. When a masonry building has been neglected for a long period of time, necessary repairs may be required in order to make it watertight. If, following a reasonable period of time after the building has been made watertight and has dried out completely, moisture appears

actually to be penetrating through the repointed and repaired masonry walls, then the application of a water-repellent coating may be considered in *selected areas only*. This decision should be made in consultation with an architectural conservator. And, if such a treatment is undertaken, it should not be applied to the entire exterior of the building.



Improper cleaning methods may have been responsible for the formation of efflorescence on this brick. Photo: NPS files.

Anti-graffiti or barrier coatings are another type of clear coating—although barrier coatings can also be pigmented—that may be applied to exterior masonry, but they are not formulated primarily as water repellents. The purpose of these coatings is to make it harder for graffiti to stick to a masonry surface and, thus, easier to clean. But, like water-repellent coatings, in most cases the application of anti-graffiti coatings is generally not recommended for historic masonry buildings. These coatings are often quite shiny which can greatly alter the appearance of a historic masonry surface, and they are not always effective. Generally, other ways of discouraging graffiti, such as improved lighting, can be more effective than a coating. However, the application of anti-graffiti coatings may be appropriate in some instances on vulnerable areas of historic masonry buildings which are frequent targets of graffiti that are located in out-of-the-way places where constant surveillance is not possible.

Some water-repellent coatings are recommended by product manufacturers as a means of keeping dirt and pollutants or biological growth from collecting on the surface of masonry buildings and, thus, reducing the need for frequent cleaning. While this at times may be true, in some cases a coating may actually retain dirt more than uncoated masonry. Generally, the application of a water-repellent coating is not recommended on a historic masonry building as a means of preventing biological growth. Some water-repellent coatings may actually encourage biological growth on a masonry wall. Biological growth on masonry buildings has traditionally been kept at bay through regularly-scheduled cleaning as part of a maintenance plan. Simple cleaning of the masonry with low-pressure water using a natural- or synthetic-bristled scrub brush can be very effective if done on a regular basis. Commercial products are also available which can be sprayed on masonry to remove biological growth.

In most instances, a water-repellent coating is not necessary if a building is watertight. The application of a water-repellent coating is not a recommended treatment for historic masonry buildings unless there is a specific problem which it may help solve. If the problem occurs on only part of the building, it is best to treat only that area rather than an entire building. Extreme exposures such as parapets, for example, or portions of the building subject to driving rain can be treated more effectively and less expensively than the entire building. Water-repellent coatings are not permanent and must be reapplied periodically although, if they are truly invisible, it can be difficult to know when they are no longer providing the intended protection.

Testing a water-repellent coating by applying it in one small area may not be helpful in determining its suitability for the building because a limited test area does not allow an adequate evaluation of a treatment. Since water may enter and leave through the surrounding untreated areas, there is no way to tell if the coated test area is "breathable." But trying a coating in a small area may help to determine whether the coating is visible on the surface or if it will otherwise change the appearance of the masonry.

Waterproof Coatings

In theory, waterproof coatings usually do not cause problems as long as they exclude all water from the masonry. If water does enter the wall from the ground or from the inside of a building, the coating can intensify the damage because the water will not be able to escape. During cold weather this water in the wall can freeze causing serious mechanical disruption, such as spalling.

In addition, the water eventually will get out by the path of least resistance. If this path is toward the interior, damage to interior finishes can result; if it is toward the exterior, it can lead to damage to the masonry caused by built-up water pressure.

In most instances, waterproof coatings should not be applied to historic masonry. The possible exception to this might be the application of a waterproof coating to below-grade exterior foundation walls as a last resort to stop water infiltration on interior basement walls. **Generally, however, waterproof coatings, which include *elastomeric paints*, should almost never be applied above grade to historic masonry buildings.**

Summary and References

A well-planned cleaning project is an essential step in preserving, rehabilitating or restoring a historic masonry building. Proper cleaning methods and coating treatments, when determined necessary for the preservation of the masonry, can enhance the aesthetic character as well as the structural stability of a historic building. Removing years of accumulated dirt, pollutant crusts, stains, graffiti or paint, if done with appropriate caution, can extend the life and longevity of the historic resource. Cleaning that is carelessly or insensitively prescribed or carried out by inexperienced workers can have the opposite of the intended effect. It may scar the masonry permanently, and may actually result in hastening deterioration by introducing harmful residual chemicals and salts into the masonry or causing surface loss. Using the wrong cleaning method or using the right method incorrectly, applying the wrong kind of coating or applying a coating that is not needed can result in serious damage, both physically and aesthetically, to a historic masonry building. Cleaning a historic masonry building should always be done using the gentlest means possible that will clean, but not damage the building. It should always be taken into consideration before applying a water-repellent coating or a waterproof coating to a historic masonry building whether it is really necessary and whether it is in the best interest of preserving the building.

Acknowledgements

Robert C. Mack, FAIA, is a principal in the firm of MacDonald & Mack Architects, Ltd., an architectural firm that specializes in historic buildings in Minneapolis, Minnesota. **Anne E. Grimmer** is a Senior Architectural Historian in the Technical Preservation Services Branch, Heritage Preservation Services Program, National Park Service, Washington, D.C.

The original version of *Preservation Brief 1: The Cleaning and Waterproof Coating of Masonry Buildings* was written by Robert C. Mack, AIA. It inaugurated the Preservation Briefs series when it was published in 1975.

The following historic preservation specialists provided technical review of this publication: Frances Gale, Training Director, National Center for Preservation Technology and Training, National Park Service, Natchitoches, LA; Judith M. Jacob, Architectural Conservator, Building Conservation Branch, Northeast Cultural Resources Center, National Park Service, N.Y., NY; Robert M. Powers, Architectural Conservator, Powers and Company, Inc., Philadelphia, PA; Antonio Aguilar, Kaaren Dodge, JoEllen Hensley, Gary Sachau, John Sandor and Audrey T. Tepper, Technical Preservation Services Branch, National Park Service, Washington, DC; and Kay D. Weeks, Heritage Preservation Services Program, National Park Service, Washington, DC.

This publication has been prepared pursuant to the National Historic Preservation Act of 1966, as amended, which directs the Secretary of the Interior to develop and make available information concerning historic properties. Technical Preservation Services (TPS), National Park Service prepares standards, guidelines, and other educational materials on responsible historic preservation treatments for a broad public.

November 2000

Reading List

Architectural Ceramics: Their History, Manufacture and Conservation. A Joint Symposium of English Heritage and the United Kingdom Institute for Conservation, September 22-25, 1994. London: English Heritage, 1996.

Ashurst, Nicola. *Cleaning Historic Buildings. Volume One: Substrates, Soiling & Investigation. Volume Two: Cleaning Materials & Processes*. London: Donhead Publishing Ltd., 1994.

Association for Preservation Technology. *Special Issue: Preservation of Historic Masonry*. Papers from the Symposium on Preservation Treatments for Historic Masonry: Consolidants, Coatings, and Water Repellents, New York, New York, November 11-12, 1994. *APT Bulletin*. Vol. XXVI, No. 4 (1995).

Grimmer, Anne E. *Preservation Brief 6: Dangers of Abrasive Cleaning to Historic Buildings*. Washington, DC: Preservation Assistance Division, National Park Service, U.S. Department of the Interior, 1979.

Grimmer, Anne E. *Keeping it Clean: Removing Exterior Dirt, Paint, Stains and Graffiti from Historic Masonry Buildings*. Washington, DC: Preservation Assistance Division, National Park Service, U.S. Department of the Interior, 1988.

Park, Sharon C., AIA. *Preservation Brief 39: Holding the Line: Controlling Unwanted Moisture in Historic Buildings*. Washington, DC: Heritage Preservation Services, National Park Service, U.S. Department of the Interior, 1996.

Powers, Robert M. *Preservation Tech Note, Masonry No. 3, "Water Soak Cleaning of Limestone"*. Washington, DC: Preservation Assistance Division, National Park Service, U.S. Department of the Interior, 1992.

Sinvinski, Valerie. "Gentle Blasting." *Old-House Journal*. Vol. XXIV, No. 4 (July-August 1996), pp. 46-49.

Weaver, Martin E. *Conserving Buildings: A Guide to Techniques and Materials*. New York: John Wiley & Sons, Inc., 1993.

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Report to the
Landmarks Commission
of the City of Green Bay

MEETING DATE

September 9, 2019

PREPARED BY

Jason Flatt, Staff

AGENDA ITEM # D.4.

(COA 19-33) Consideration with possible action on a design review for a window replacement at 504 Porlier.

BACKGROUND

504 Porlier Street is a contributing property in the Astor NRHP District, built in 1897. The building was identified as 1 of 45 “priority” properties in the 1979/1980 NRHP nomination and today retains an exceptionally high degree of integrity.

The request for COA calls for ordinary repairs to exterior shingles and window casing details (turned pilasters)—this ordinary maintenance and replacement of deteriorated shingles with identical new material does not require LC or staff approval. The request for COA also calls for replacing all of the front dormer windows with new custom Pella Architect Series windows that will match the appearance of the original windows.

The original front dormer has three pairs (6 individual windows total) of diamond-pane windows—32 panes per pair of windows, 96 panes total. Owner photos show that the center pair of windows are wood replacements, presumed to date from the 1950s, and were present at time of the NRHP nomination. The flanking pairs of windows appear to be older and possibly original.

The Secretary of the Interior’s Standards call for the repair and maintenance of historic windows. Replacement is only recommended when existing windows are too deteriorated to repair.

RECOMMENDATION

LC staff recommends approval of the proposed replacement windows for the central pair of dormer windows. The existing central pair of windows is not original (and arguably not “historic”) and does not match the original design as nicely as the proposed replacement.

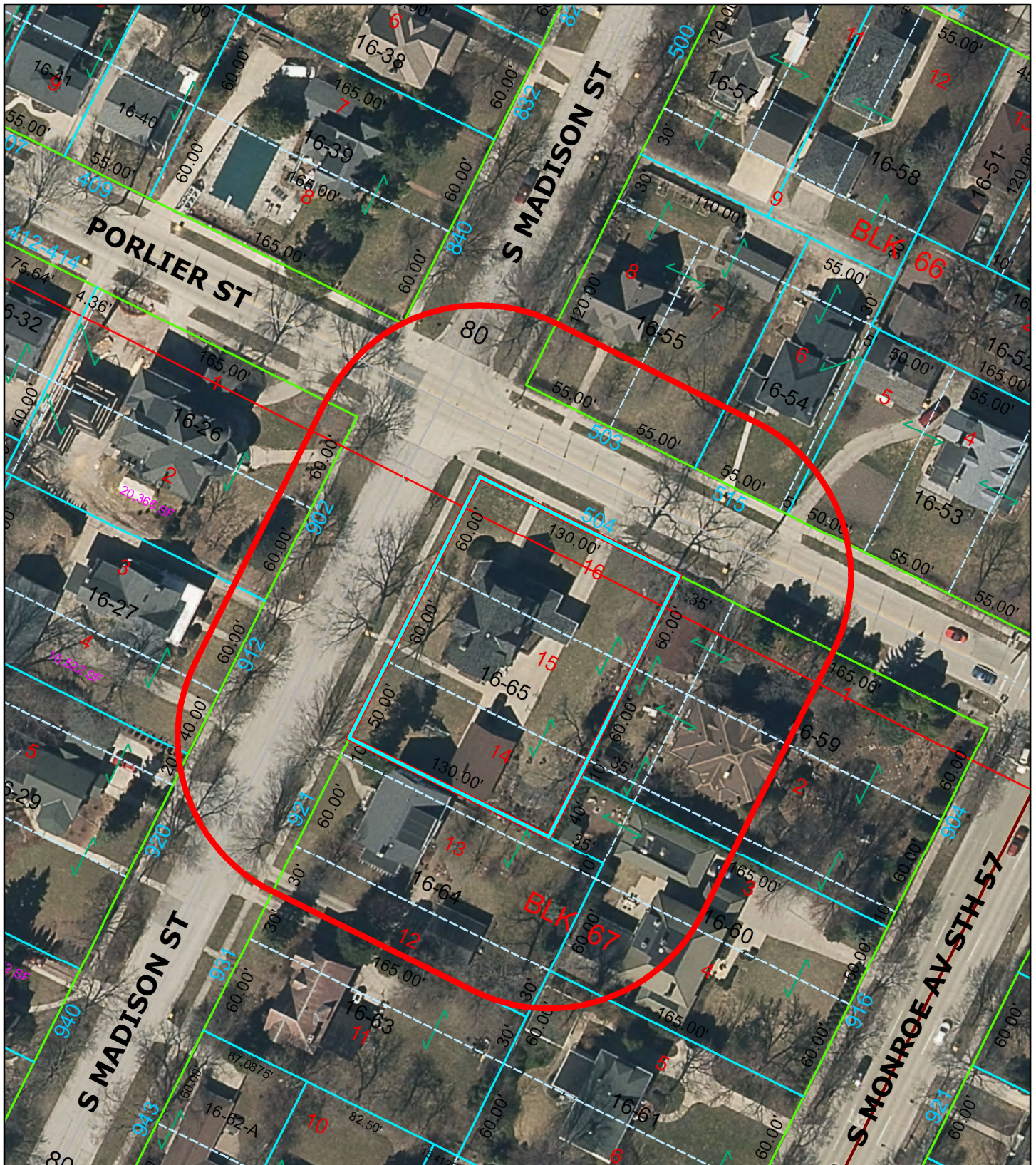
LC staff notes that the two pairs of flanking windows may be original and appear to be repairable. If original and repairable, the Secretary of the Interior’s Standards call for repair rather than replace. LC staff recommends that if a COA is granted to replace these windows, then the current windows should be salvaged and stored with the property--recognizing that this is a “priority” building within the district.

LC staff notes that the replacement windows (brand, style, and quality) are those typically used in historic rehabilitation projects approved by SHPO and the Department of the Interior. New windows will match the appearance of the historic windows, complete with interior and exterior grilles that match the historic muntin appearance.

FISCAL IMPACT

ATTACHMENTS

1. COA 19-33 Map
2. 504 Porlier (current)
3. 504 Porlier Property Detail Sheet
4. 504 Porlier (1927)
5. 504 Porlier (1979)
6. COA 19-33 Specs
7. COA 19-33, Dormer 1
8. COA 19-33 Dormer 2
9. COA 19-33 Dormer 3



COA 19-33 Window Replacement at 504 Porlier Street

0 20 40 80 Feet



This is a compilation of records and data located in various City of Green Bay offices and is to be used for reference purposes only. The City of Green Bay is not responsible for any inaccuracies or unauthorized use of the information contained within. No warranties are implied. Map prepared by City of Green Bay Department of Community and Economic Development. 9.4.19 SJH 04 Sep 2019 X:\Planning\Basemaps\template_8.5x11.mxd



Subject Parcel



100' Notification Area



Address: 504 Porlier St
Parcel No.: 16-65
WI AHI No.: 2292

Historic Name: William Kellogg House
John and Jennifer Steffel House

Built: 1897
Historic Use: house
Architectural Style: Queen Anne
Wall Material: clapboard
Architect:

National Register: 2/27/1980
State Register: 1/1/1989
Other:

NRHP nomination link:
<http://focus.nps.gov/pdfhost/docs/NRHP/Text/80000107.pdf>
(district nomination)

Notes:

containing many features of the Queen Anne Revival in many ways this home has many features of the Colonial Revival. The wide front porch with its Doric columns with spindled balustrade. On the other hand, the variety of surface textures, the open gables, the bay windows, the tall thin chimneys, with the roofs steep and multiple, often intersecting, places it in the school of Queen Anne architecture. It is a two-and-one-half story frame structure with a hipped roof. A wide veranda extends across the front and out to the side, forming a porte-cochere. Large dormers are covered with shingles.

It was built by William B. Kellogg, who was associated with the Kellogg National Bank. In 1912 the home was purchased by George D. Nau, President of the Nau Tug Line and the Green Bay Paper and Fibre Company. Mr. Nau was a director of the Northern Paper Mills and the Citizens National Bank. As President of the Citizens National Bank he was instrumental in bringing about the merger of this bank with the Kellogg National Bank. His greatest contribution was the maintenance of the stability of the paper industry, especially the Hoberg Paper and Fibre Company (Charmin Paper Mills) as treasurer, as well as the banking

industry through his Presidency of the Citizens National Bank.

Reference: Property abstract

Owner: Peter Groessel"

- per NRHP nomination

Stewardship:

Character - Overall form & fenestration. Hipped roof with large dormers.
Clapboard siding on 1st story. Shingle siding on upper stories, with every
4th row showing a very narrow face. Rounded side walls in dormers.
Mostly 1/1 windows. Carport & large porch. Hybrid style drawing
from Queen Anne & Colonial Revival styles. Polygonal bay.

Features - Appears to be mostly original. Partial list of features includes:
Wood shingle siding. Original windows. Original porch elements
(columns, railings, balusters, etc). Brackets under gable dormers.
Decorative scrollwork below central window in 2nd story.
Columns in front gable. Fancy, tall brick chimney.

Alterations - unknown.

Misc - A high priority contributing property per NRHP nomination.





William B. Kellogg Home
504 Porlier

FEB 27 1980

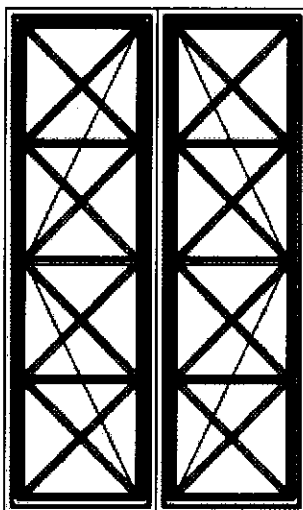
Astor Historic District
Green Bay, Wisconsin
Lefebvre Photo Inc.

JUN 26 1979

Rainey

Customer Approval Form:

Signature: _____ Date: _____



Viewed from the Exterior

Quote Number: 11592827

Line Number: 10

Quote Qty: 1

Scaling: 1/2" = 1'

Description: Special Architect, 2-Wide Casement, 44 X 73, White

Rough Opening: 44.75" X 73.75"

Performance Information: U-Factor 0.29, SHGC 0.24, VLT 0.43, CPD PEL-N-11-21752-00002, Performance Class CW, PG 40, Calculated Positive DP Rating 40, Calculated Negative DP Rating 40, Year Rated 08, Egress Does not meet typical United States egress, but may comply with local code requirements

Performance Information: U-Factor 0.29, SHGC 0.24, VLT 0.43, CPD PEL-N-11-21752-00002, Performance Class CW, PG 40, Calculated Positive DP Rating 40, Calculated Negative DP Rating 40, Year Rated 08, Egress Does not meet typical United States egress, but may comply with local code requirements

These drawings are based on our interpretation of the information provided to us. They are submitted for final approval of the individual** responsible for the project and are not intended to create any warranty or other liability. The user** is responsible for compliance with applicable building codes or other regulations and determining the suitability of the suggestions for the particular application, including the final design of reinforcement, flashing, and sealant systems for all window and door installations.

** building owner, architect, contractor, installer and/or consumer



Quote Name: Architect Series

Project Name: Steffel

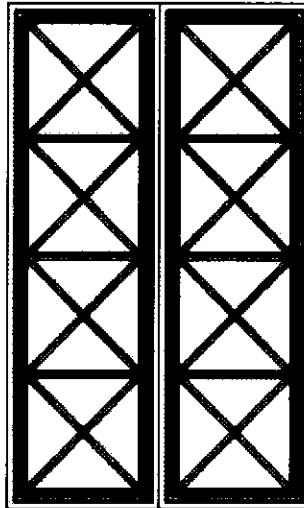
Jobsite Location: ,

Room Location:

Sales Branch Location: 40800 Pella Windows & Doors of Wisconsin

Customer Approval Form:

Signature: _____ Date: _____



Viewed from the Exterior

Quote Number: 11592827

Line Number: 15

Quote Qty: 2

Scaling: 1/2" = 1'

Description: Special Architect, 2-Wide Sash Set, 44 X 73, White

Rough Opening: 44.75" X 73.75"

Performance Information: U-Factor 0.28, SHGC 0.27, VLT 0.50, CPD PEL-N-1-53758-00002, Performance Class CW, PG 40, Calculated Positive DP Rating 40, Calculated Negative DP Rating 40, Year Rated 08

Performance Information: U-Factor 0.28, SHGC 0.27, VLT 0.50, CPD PEL-N-1-53758-00002, Performance Class CW, PG 40, Calculated Positive DP Rating 40, Calculated Negative DP Rating 40, Year Rated 08

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** building owner, architect, contractor, installer and/or consumer



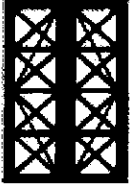
Quote Name: Architect Series

Project Name: Steffel

Jobsite Location: ,

Room Location:

Sales Branch Location: 40800 Pella Windows & Doors of Wisconsin

Line #	Location:	Attributes
10		Special Architect, 2-Wide Casement, 44 X 73, White  Viewed From Exterior PK # 2040 1: Non-Standard Size Left Casement Frame Size: 22 X 73 General Information: Standard, Clad, Pine, 5", 3 11/16" Exterior Color / Finish: Painted, Standard Enduraclad, White Interior Color / Finish: Unfinished Interior Sash / Panel: Ogee, Ogee, Standard Glass: Insulated Dual Low-E Advanced Low-E Insulating Glass Argon Non High Altitude Hardware Options: Wash Hinge Hardware, Fold-Away Crank, Satin Nickel, No Window Opening Control Device, Integrated Sensor Screen: Rolscreen®, Wood Wrapped, Champagne Performance Information: U-Factor 0.29, SHGC 0.24, VLT 0.43, CPD PEL-N-11-21752-00002, Performance Cla Rating 40, Calculated Negative DP Rating 40, Year Rated 08, Egress Does not meet typical United States egress, b requirements Grille: ILT, Yes (Arch Services drawing required), 7/8", Custom Process Grille, Ogee, Ogee Vertical Mull 1: FactoryMull, Standard Joining Mullion, Frame To Frame Width- 0", Mull Design Pressure- 20 2: Non-Standard Size Right Casement Frame Size: 22 X 73 General Information: Standard, Clad, Pine, 5", 3 11/16" Exterior Color / Finish: Painted, Standard Enduraclad, White Interior Color / Finish: Unfinished Interior Sash / Panel: Ogee, Ogee, Standard Glass: Insulated Dual Low-E Advanced Low-E Insulating Glass Argon Non High Altitude Hardware Options: Wash Hinge Hardware, Fold-Away Crank, Satin Nickel, No Window Opening Control Device, Integrated Sensor Screen: Rolscreen®, Wood Wrapped, Champagne Performance Information: U-Factor 0.29, SHGC 0.24, VLT 0.43, CPD PEL-N-11-21752-00002, Performance Cla Rating 40, Calculated Negative DP Rating 40, Year Rated 08, Egress Does not meet typical United States egress, b requirements Grille: ILT, Yes (Arch Services drawing required), 7/8", Custom Process Grille, Ogee, Ogee Wrapping Information: Foldout Fins, Factory Applied, No Exterior Trim, 3 11/16", 5", Factory Applied, Pella Recon 234".

Rough Opening: 44 - 3/4" X 73 - 3/4"

Custom Product Instructions: Custom Diamond Pattern 7/8. Need horizontal bar running between diamond pattern

TVAPILT001 - VHI ILT paint - 1 wide composite

Qty 2

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Printed on 7/18/2019

Contract - Detailed









Report to the
Landmarks Commission
of the City of Green Bay

MEETING DATE

September 9, 2019

PREPARED BY

Jason Flatt, Staff

AGENDA ITEM # D.5.

(COA 19-34) Consideration with possible action on a design review for a new awning sign located at 228 N. Adams Street.

BACKGROUND

228 N. Adams (300-304 Pine Street) is a contributing property in the Downtown Historic District, built 1872, with the current façades showing alterations from changes made in 1905, the 1920s, and sometime prior to the mid-1950s. As originally designated in 2018, this historic district consisted of 42 buildings (37 contributing, 5 non-contributing). Since that time, one contributing building (the neighboring building at 222-224 N. Adams) has been altered with the loss of integrity (likely non-contributing as a result of changes).

Property owner proposes to install awnings over the storefront windows on both N. Adams Street (approx. 22' x 3') and Pine Street (approx. 17' x 3').

It is unclear how the awnings will be attached to the building.

RECOMMENDATION

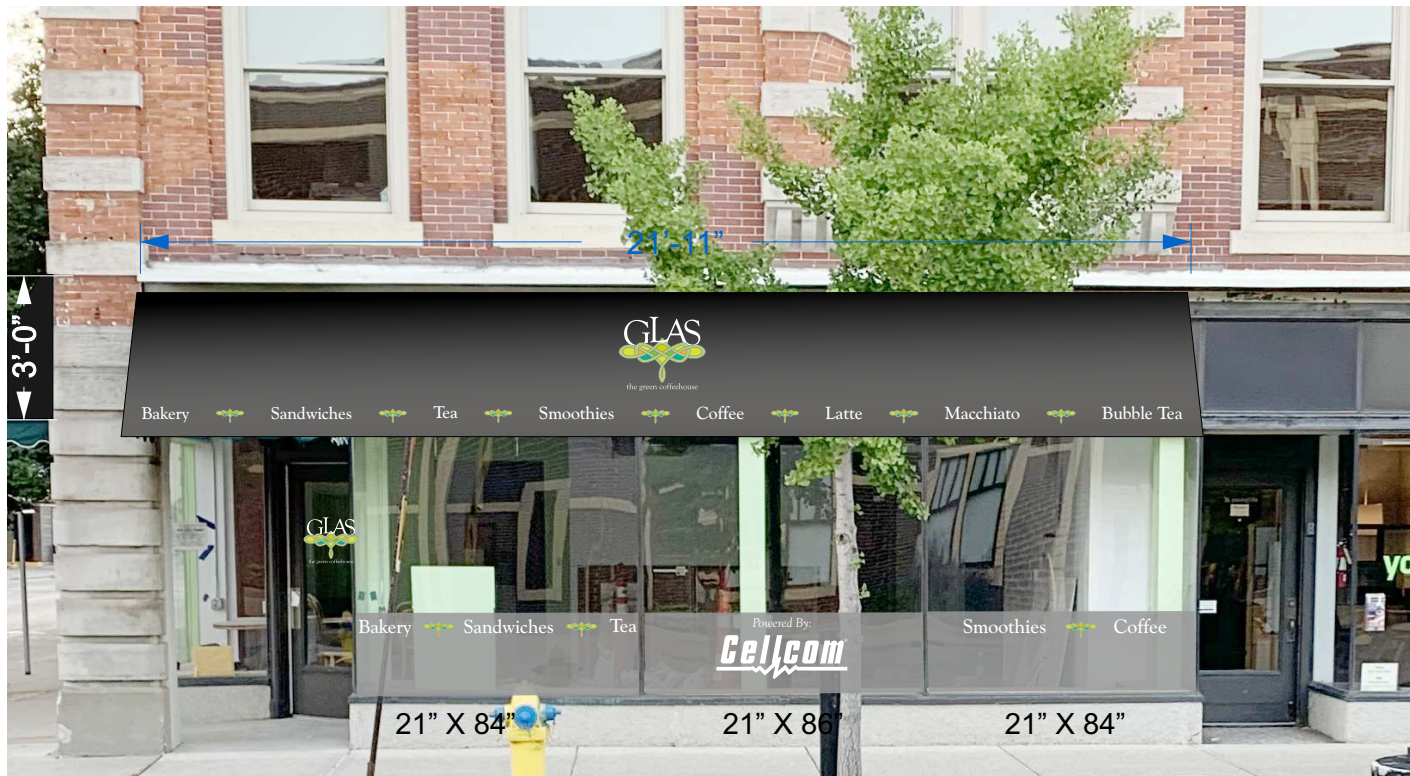
Recommend approval of the COA application for the installation of the proposed awnings. Anchoring hardware shall not be attached to any brick or stone face (mortar joints ok, if needed).

FISCAL IMPACT

ATTACHMENTS

1. COA 19-34 Map
2. 228 N. Adams, Photo
3. COA 19-34 Sign Rendering





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Name GLAS

Address 228 N. ADAMS ST. City GREEN BAY

Date 8/12/19 Scale 1/4"=1' Sketch _____

☐ APPROVED ☐ APPROVED AS CORRECTED
☐ NOT APPROVED ☐ REVISE & RE-SUBMIT

APPROVED BY: _____

DATE: _____ TIME: _____

UNITED SIGN

**1117 SUBURBAN COURT
P.O. BOX 5134
DE PERE, WI 54115**

**PHONE 920-983-5300
FAX 920-983-5304**



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Name GLAS

Address 228 N. ADAMS ST. City GREEN BAY

Date 7/26/19 Scale 1/4"=1' Sketch _____

☐ APPROVED ☐ APPROVED AS CORRECTED
☐ NOT APPROVED ☐ REVISE & RE-SUBMIT

APPROVED BY: _____

DATE: _____ TIME: _____

UNITED SIGN

**1117 SUBURBAN COURT
P.O. BOX 5134
DE PERE, WI 54115**

**PHONE 920-983-5300
FAX 920-983-5304**



Report to the
Landmarks Commission
of the City of Green Bay

MEETING DATE

September 9, 2019

PREPARED BY

Jason Flatt, Staff

AGENDA ITEM # D.6.

(COA 19-35) Consideration with possible action on a design review for a replacement window and deck replacement at 840 S. Quincy Street.

BACKGROUND

840 S. Quincy is a contributing property in the Astor NRHP District, built c. 1899. The historic form and style are present, but very few historic material features remain visible on the exterior.

This project is described as the removal of the back deck, construction of a larger deck, and replacement of a rear oriel window with a similar, but slightly wider, oriel window.

Per the Secretary of the Interior's Standards for Rehabilitation, "new additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment." Furthermore, "new additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired."

LC staff notes that 840 S. Quincy is not on a corner lot and that all proposed work is not visible from a public right-of-way.

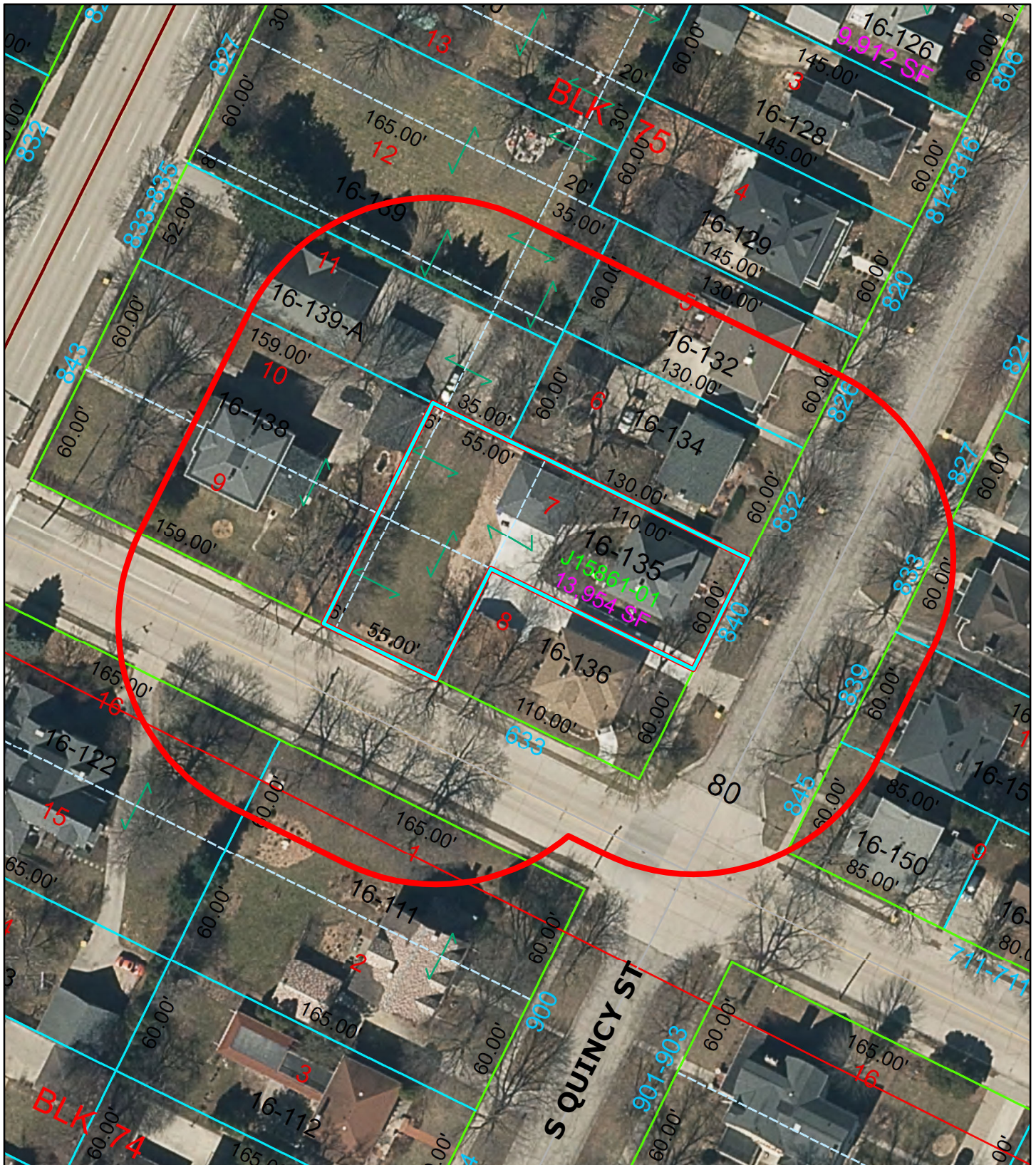
RECOMMENDATION

LC staff recommends approval of the COA application as currently presented. LC staff notes that the proposed changes to the property are in accordance with the Secretary of the Interior's Standards & Guidelines and does not detract from the historic integrity of the house or the district.

FISCAL IMPACT

ATTACHMENTS

1. COA 19-35 Map
2. 840 S. Quincy, Current Photo
3. 840 S. Quincy Property Detail Sheet
4. COA 19-35 Elevations
5. COA 19-35 Photos
6. COA 19-35 Project Description



COA 19-35 Window & Deck Replacement at 840 S Quincy Street

0 15 30 60 Feet



This is a compilation of records and data located in various City of Green Bay offices and is to be used for reference purposes only. The City of Green Bay is not responsible for any inaccuracies or unauthorized use of the information contained within. No warranties are implied. Map prepared by City of Green Bay Department of Community and Economic Development. 9.4.19 SJH 04 Sep 2019 X:\Planning\Basemaps\template_8.5x11.mxd



Subject Parcel



100' Notification Area



Address: 840 S Quincy St
Parcel No.: 16-135
WI AHI No.: 53389

Historic Name:
Janet and Richard Bonkowski House

Built: 1899
Historic Use: house
Architectural Style: American Foursquare
Wall Material: clapboard
Architect:

National Register: 2/27/1980
State Register: 1/1/1989
Other:

NRHP nomination link:
<http://focus.nps.gov/pdfhost/docs/NRHP/Text/80000107.pdf>
(district nomination)

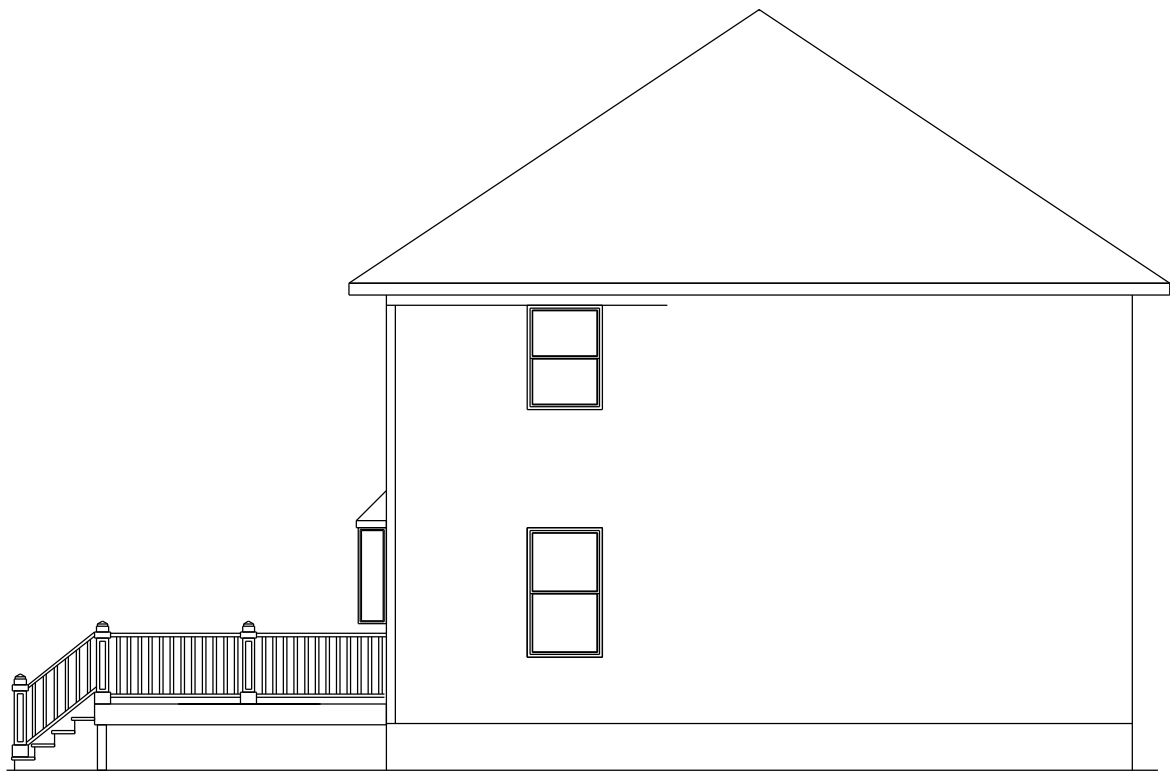
Notes:
"A large porch supported by squared pillars extends across the entire
façade of this 2 1/2 story frame home.
Owner: Dennis Schreiner"
- per NRHP nomination

Stewardship:

- Character - Overall form & fenestration. Hipped roof form. Box-like shape with a prominent 3-story polygonal bay centered in front façade. At 1st story the bay has the front door with 1/1 windows on either side. At 2nd story the bay has a diamond pane "piano window" at center, with 1/1 windows on side. 3rd story of bay takes form of hipped roof dormer. Full-width front porch. Clapboard profile siding. Symmetric front façade. Early Colonial Revival (3-ranked, center entrance) form that has much in common with nascent Prairie style. Queen Anne form influence shown by front, central bay.
- Features - Piano window, center of 2nd story. All other features appear to have been covered or replaced.
- Alterations - Replacement windows, siding, soffits, etc. Porch columns, balusters, & railings recent replacements (no longer square pillars, etc). Fenestration possibly altered (particularly 3rd story front dormer).
- Misc -



RIGHT ELEVATION
SCALE: 1/8" = 1'-0"



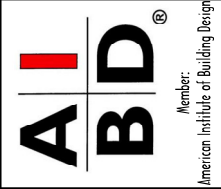
LEFT ELEVATION
SCALE: 1/8" = 1'-0"



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

BONKOWSKI RESIDENCE
840 S. Quincy Street, Green Bay WI

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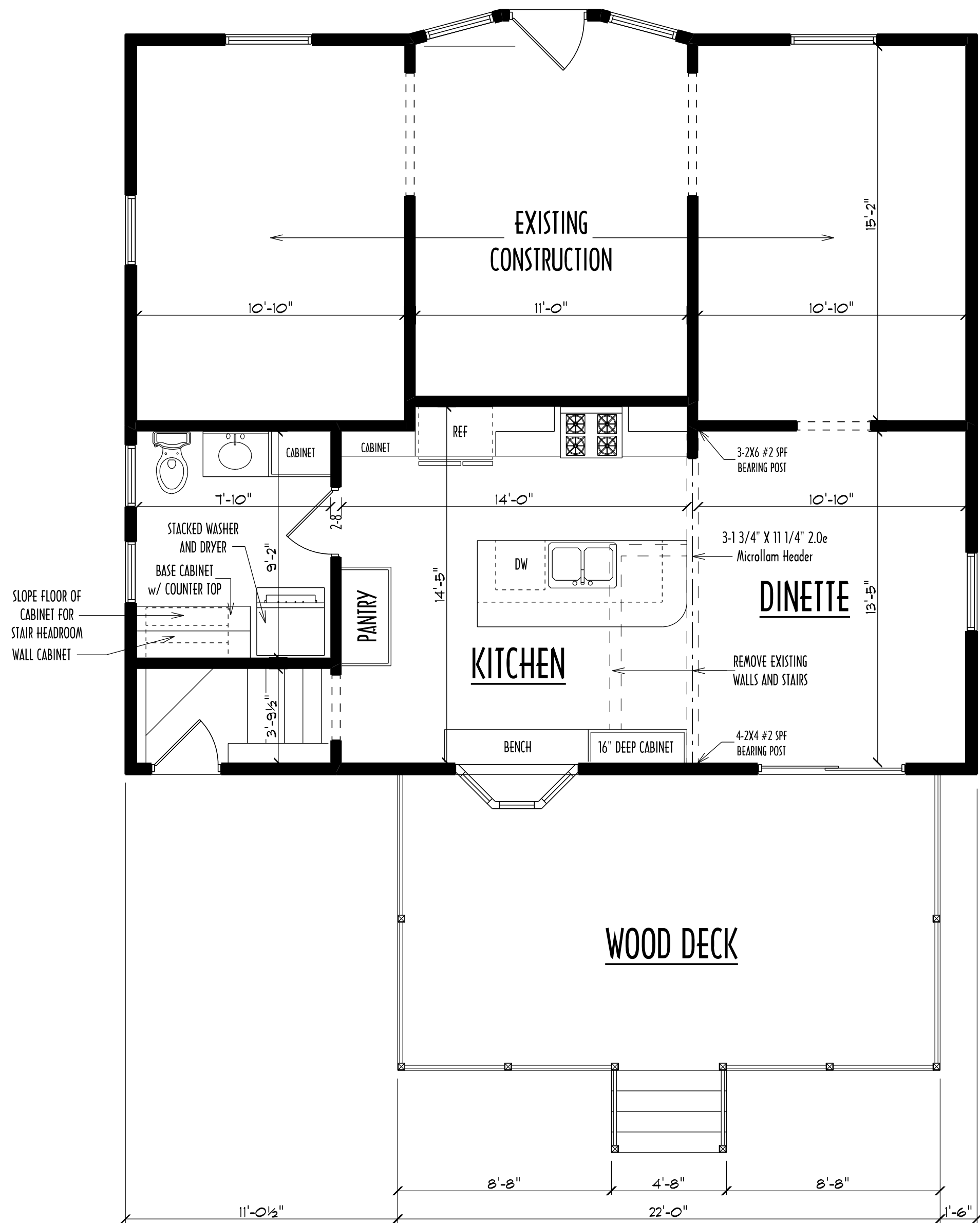


Kaufman
Residential Design, LLC
3528 N. DUNEES ST.
APPLETON, WI 54911
PHONE:
1-920-655-1246

Although every effort
has been made in
preparing these plans
and checking them for
accuracy, the contractor
must check all details
and dimensions and be
responsible for the same.

DATE: 8 JUNE 2018
REVISED: 9 & 25 JULY 18
18 / SEPT 2018
7 FEB 2019
12 APRIL 2019

DRAWN BY: Karl Kaufman
SCALE: 1/4" = 1'-0"
DRAWING NO: KR2D-18-020



PROPOSED FLOOR PLAN

± 9'-0" CEILING HEIGHT
271 SQ. FT. @ NEW CONSTRUCTION

—→ REPRESENTS NEW CONSTRUCTION

All dimensions shown on are approximate and must be verified before construction

		3528 N. DORCEE ST. APPLETON, WI 54911		PHONE: 1-920-655-1746	
		Member: American Institute of Building Design			
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BONKOWSKI RESIDENCE 840 S. Quincy Street, Green Bay WI					
Although every effort has been made in preparing these plans, and checking them for accuracy, the contractor must check all details and dimensions and be responsible for the same.					
DATE: 8 JUNE 2018		DRAWN BY: Karl Kaufman			
REVISED: 25 JULY 2018		DRAWING NO: KPD-18-020			
9 & 29 AUG 2018					
7 FEB 2019					
12 APRIL 2019					
				OF	









Bonkowski Remodel
840 South Quincy Street
Green Bay, WI 54301

1. Existing kitchen bay window will be replaced with similar looking Pella bay window approximately 12" wider
2. Replacement of existing rotting deck. Existing deck is 14'x12'. New deck will be 22'x12' constructed with pressure treated framing, trex decking and rail system.
3. Cost of the exterior work is approximately \$19,462.00



Report to the
Landmarks Commission
of the City of Green Bay

MEETING DATE

September 9, 2019

PREPARED BY

Stephanie Hummel, Staff

AGENDA ITEM # E.I.

Staff-Level COA Applications

BACKGROUND

- COA 19-25, 1120 S. Quincy Street, Driveway
- COA 19-26, 128 N. Broadway, Painted Mural
- COA 19-27, 838 S. Jackson Street, Porch
- COA 19-32, 840 S Madison Street, Fence
- COA 19-36, 918 Emilie Street, Roof

RECOMMENDATION

Receive and Place on File

FISCAL IMPACT

ATTACHMENTS

None