City of Ann Arbor

PLANNING & DEVELOPMENT SERVICES — PLANNING SERVICES

100 North Fifth Avenue | P.O. Box 8647 | Ann Arbor, Michigan 48107-8647

p. 734.794.6265 | f. 734.994.8312 | planning@a2gov.org

ANN ARBOR HISTORIC DISTRICT COMMISSION APPLICATION

Section 1: Property Being Reviewed and Ownership Information

Address of Property: 217 North Fifth Avenue

Historic District: Kerry town

Name of Property Owner *(If different than the applicant)*:
Jon & Lisa Rye

Address of Property Owner: 735 Forest Ave., Loft 308, Birmingham, MI. 48009

Daytime Phone and E-mail of Property Owner: (248) 765-2325

Signature of Property Owner: (see above) *Date:* 9/20/13

Section 2: Applicant Information

Name of Applicant: Mitchell and Mouat Architects

Address of Applicant: 113 South Fourth Avenue

Daytime Phone: (734) 662-6070 Fax:(_____)_____

E-mail: kstansbury@mitchellandmouat.com

Applicant's Relationship to Property: ____owner ✓ architect ____contactor ____other

Signature of applicant: _____ *Date:* 9/20/13

Section 3: Building Use (check all that apply)

X Residential X Single Family _____ Multiple Family _____ Rental

_____ Commercial _____ Institutional

Section 4: Stille-DeRossett-Hale Single State Construction Code Act
(This item **MUST BE INITIALED** for your application to be **PROCESSED**)

Public Act 169, Michigan's Local Historic Districts Act, was amended April 2004 to include the following language: "*...the applicant has certified in the application that the property where the work will be undertaken has, or will have before the proposed completion date, a a fire alarm or smoke alarm complying with the requirements of the Stille-DeRossett-Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1501 to 125.1531.*"

Please initial here: _____

Section 5: Description of Proposed Changes (attach additional sheets as necessary)

1. Provide a brief summary of proposed changes. Note: this application is for a 'Notice to Proceed'. The Owners wish to replace each and every existing window on the property with a new painted wood window. Window operation and mullion/muntin configurations of the new windows will match the existing windows.

2. Provide a description of existing conditions. Refer to 'Historic Window Review', by Blackberry Window and Door Systems, attached as Exhibit E.

3. What are the reasons for the proposed changes? Refer to 'Submission of Jonathon and Lisa Rye in support of the use of replacement windows in lieu of renovated windows', by Plunkett Cooney, attached separately.

4. Attach any additional information that will further explain or clarify the proposal, and indicate these attachments here.
Refer to 'Affidavit of Dinesh Khanna, MD, MSC', attached as Exhibit C.

5. Attach photographs of the existing property, including at least one general photo and detailed photos of proposed work area.

STAFF USE ONLY

Date Submitted: _____ Application to _____Staff or _____HDC

Project No.: ____ **HDC**_____ Fee Paid: _____

Pre-filing Staff Reviewer & Date: _____ Date of Public Hearing: _____

Application Filing Date: _____ Action: _____HDC COA _____HDC Denial

Staff signature: _____ _____HDC NTP _____ Staff COA

Comments:

PLUNKETT COONEY
Est. 1913
A CENTURY OF DISTINCTIVE SERVICE

September 19, 2013

Ann Arbor Historic District Commission
301 E. Huron Street
Ann Arbor, MI. 48107

Dear Commissioners:

RE: Submission of Jonathan and Lisa Rye in Support of the Use of Replacement Windows in Lieu of Renovated Windows

The Ryes seek to use replacement windows instead of restoring the existing windows mainly due to health concerns that are documented below. These health concerns represent new information for the HDC to consider in its deliberations concerning the use of replacement windows in lieu of restoration. Allowing the use of replacement windows is a reasonable accommodation to the Ryes' documented and confirmed health concerns, as better explained below.

On January 25, 2013, Mitchell and Mouat Architects submitted a project to the City of Ann Arbor Historic District Commission (HDC) on behalf of Jonathan and Lisa Rye (Ryes) for the property located at 217 North Fifth Avenue, Ann Arbor, Michigan (Property). Among the items in the Description of Proposed Changes was the following:

> g. *Building (see Sheets A5.0 through A8.0): equipping the house with functioning windows. Refurbishing or replacing all existing painted wood windows. Refer to the Window Schedule for particulars. New windows will be either Loewen Wood Clad double-hungs or a similar product by another manufacturer, pending bid pricing. Pella is a possible alternate manufacturer. New in-swing wood basement hoppers will be custom fabricated to resemble the former original basement windows. Note: window 'L' is shown as 'new' because it will be restored to it's* [sic] *original double-hung function from the present non-original in-swing casement function. Window 'L' will be custom fabricated to resemble the other original windows in the house. The non-original new windows, specifically 'J', 'X', and 'AB', which, unlike the others, are not replacing existing (or former) windows, are proposed to be equipped with only screens, not storms, therefore appearing distinct from the other original windows. These new windows are fabricated to current energy standards using insulated glass and do not require storms for energy efficiency.* (**Exhibit A**).

The HDC met to discuss the proposed changes for the Property, including the proposal related to the replacement of certain existing windows. According to City Attorney, Christopher Frost, the HDC rejected the proposal as it related to the four windows identified in the proposal:

> After reviewing the previous application submitted for 217 N. Fifth Ave., it appears that your client requested replacement of some, but not all of the windows on the property. It looks like all of the requested replacements were granted except for 4 windows that were denied a certificate of appropriateness. So, for those 4 windows, your client would have to present some evidence showing a substantial change, as described above. For the rest of the windows that were not addressed by the Commission, your client can simply submit an application in the normal course of business and the Commission will address those windows on their merits. (**Exhibit B**).

The Ryes are now submitted a new proposal for certain windows that were the not the subject of the earlier submission and asking for reconsideration of the four windows the HDC had earlier rejected. Consistent with the direction from Mr. Frost, the Ryes are identifying new facts, not previously presented to the HDC, to support the use of replacement windows in lieu of reconstruction.

The HDC may not have been made aware that the Property is intended to serve as a residence for their son, Calvin Rye. In addition, Mrs. Rye is also expected to spend significant amounts of time at the Property. Both Cavin and Lisa Rye have autoimmune diseases, the effects of which could be exacerbated by the chemicals used to restore the windows. The Ryes have attached an affidavit from Dr. Dinesh Khanna, one of the world's foremost experts in the autoimmune diseases Calvin and Lisa suffer from. (**Exhibit C**).

The process for restoring historic windows is described by one restorer, as follows:

> Restoration includes: Removal of window sash, stripping of old paint and putty, repair of any damage by replacement parts or wood grade epoxy, prime, reglaze, and final paint Window frame is stripped of old paint, parting beads replaced as needed, sills repaired and painted. (**Exhibit D**) (http://www.oldewindowrestorer.com/restoration.html).

There is a significant amount of damage to the Ryes' windows, which will require such restoration. To that end, the Ryes' architect received a proposal to do the restoration from Blackberry Window and Door Systems. (**Exhibit E**). According to Blackberry, all windows to be restored will require the use of some "epoxy consolidation and patching." Given the poor condition of the windows, the contractor recommended not to restore the windows, in any event.

Attached is a Materials Safety Data Sheet (MSDS) for the epoxy resin frequently used in such circumstances. (**Exhibit F**). In his affidavit, Dr. Khanna clearly states that exposure to epoxy resins, like the type commonly used by window restorers, has the potential of exacerbating Calvin and Lisa Rye's medical conditions. For this reason, the Ryes seek to replace damaged windows rather than restoring them.

Given how closely the new windows would resemble the old windows, any insistence by the HDC that the windows MUST be restored, rather than replaced, threatens the health of Calvin and Lisa Rye. Risking the fragile health of these two individuals for marginal aesthetic benefits seems unconscionable.

The HDC should be aware that in restoring the Property, the Ryes have taken great pains to address significant indoor air issues precisely because of the potential health effects on Calvin and Lisa Rye. To that end, the Ryes commissioned the following activities, which were not required, but addressed specifically as a result of current health issues with the prospective occupants:

1. The Ryes had two separate companies analyze the house, one for radon and another for lead and asbestos.

2. Radon levels were high, so the architects have planned for a passive radon system, capable of becoming active should measured levels not meet the Ryes' expectations.

3. Asbestos was found as duct wrap throughout the house and in all exterior door and window caulking. Lead paint was found on the windows. All asbestos and lead paint will be removed from the premises.

4. The Ryes removed the entire HVAC system, including ducts, and will install a new, state-of-the-art HVAC system.

5. All plaster has been removed and will be replaced with drywall. The sub-structure of the entire house has been exposed and will be thoroughly sanitized before drywalling.

The Ryes' request to use replacement windows, which are a close match to existing windows, is entirely consistent with their prior efforts to alleviate any potential health issues. Both Calvin and Lisa Rye will be spending a significant amount of time in the Property and exposure to environmental contaminants, including epoxy offgassing from reconstructed windows would jeopardize their health. Dr, Khanna, a world-renown expert in such diseases, has supported this conclusion through his affidavit.

The Ryes understand the HDC's concerns with respect to preserving the historic nature of the Property and have taken great pains to comply with the intent of the ordinance. However, the Ryes should not be forced to risk the health of their son and of Lisa Rye in

order to preserve certain windows. The replacement windows selected by the Ryes and their architect closely approximate the existing windows and will likely not be noticeable in the historic district in which the Property sits. Allowing the replacement windows in lieu of restoration is a reasonable and necessary accommodation to the Ryes' documented and substantiated health concerns.

Sincerely,

PLUNKETT COONEY

/s/ Saulius K. Mikalonis

Saulius K. Mikalonis
Direct Dial: (248) 901-4022
Email: smikalonis@plunkettcooney.com

SKM/cmw
Attachments
Open.19701.11602.13270772-1

Exhibit A

Mitchell and Mouat architects

January 25, 2013

Ann Arbor Historic District Commission
100 North Fifth Avenue
Ann Arbor, Michigan 48107

Re: 217 North Fifth Avenue

Dear Commissioners.

We are excited to bring this project to the Commission for approval. Following is Section 5 from the HDC Application.

Section 5: Description of Proposed Changes

1. **Provide a Brief Summary of the Proposed Changes:** *The Owners desire to return a parking lot to a usable rear yard and to return a rental unit to a single-family residence. This effort includes:*
   a. *Site (see Sheet C1.0): eliminating an existing concrete and gravel drive. Note: the existing driveway from Fifth Avenue straddles the property to the south (215 North Fifth), relying on areas off site, and is no longer viable. The entire driveway will be removed and converted to a side yard.*
   b. *Site (see Sheet C2.0): defining a new concrete parking area accessible from the rear alley. This will keep vehicles out of the heart of the yard.*
   c. *Site (see Sheet C2.0): creating new lawn, planting, and patio areas in the rear yard. Plantings will include shrubs and cedar perimeter hedges. The patio and associated paths will be made of natural stone. A new 6'-0" Brick 'Trellis' Wall and decorative rose trellis (akin to a site furnishing) will define the patio area along the north property line.*
   d. *Building (see Sheets A5.0, A8.0 and A12.0): making the existing attic more usable and more a part of the house. Both the new north and south dormers and the elimination of the abandoned chimney serve this purpose. Note: bricks from the existing chimney, which will be eliminated down to the basement slab, will be used for brick repair and miscellaneous infills as they are the same brick as on the building's exterior. The new dormer roofs will be either single-ply membrane or metal roofing, depending on bid pricing.*
   e. *Building (see Sheets A10.0 and A11.0): eliminating two steep and unsafe rear stairways. The new south dormer accommodates headroom for a new, code-compliant stair from the second floor to the Attic.*
   f. *Building (see Sheets A5.0 and A8.0): replacing the existing sagging roof rafters on either side of the new dormers.*
   g. *Building (see Sheets A5.0 through A8.0): equipping the house with functioning windows. Refurbishing or replacing all existing painted wood windows. Refer to the Window Schedule for particulars. New windows will be either Loewen Wood Clad double-hungs or a similar product by another manufacturer, pending bid pricing. Pella is a possible alternate manufacturer. New in-swing wood basement hoppers will be custom fabricated to resemble the former original basement windows. Note: window 'L' is shown as 'new' because it will be restored to it's original double-hung function from the present non-original in-swing casement function. Window 'L' will be custom fabricated to resemble the other original windows in the house. The non-original new windows, specifically 'J', 'X', and 'AB', which, unlike the others, are not replacing existing (or former) windows, are proposed to be equipped with only screens, not storms, therefore appearing distinct from the other original windows. These new windows are fabricated to current energy standards using insulated glass and do not require storms for energy efficiency.*
   h. *Building (see sheet A8.0): installing a new basement window (window 'T'), which serves as a code-required egress window from the basement. Window 'T' will be custom fabricated to resemble the former original basement windows, albeit larger for egress.*
   i. *Building (see Sheets A5.0 through A8.0): equipping the house with functioning exterior doors. Refurbishing the main entry door and replacing the two rear doors (matching the original type and detailing to the extent known), including replacing all storm doors with new appropriate wood storms / screens.*

j. *Building (see Sheet A8.0): eliminating the abandoned south door and replacing it with a new wood painted double hung window. The existing stone sill will remain in place and the new brick infill below the former window sill will be recessed 1" to retain the edges of the former door opening.*

k. *Building (See Sheet A7.0): rehabilitating the existing painted wood front porch. Other than the existing non-original railings, which are proposed to be replaced with a more historically accurate design, any replaced wood porch elements will be 'in kind' replacements. The new railings will be re-installed at the same height, which appears to be their historic height. Refer to the attached Historic Photograph which primarily shows 215 North Fifth, but includes the southeast corner of 217 North Fifth. Note: where possible, existing original porch elements will be repaired instead of replaced. A new ceiling-mount light fixture will replace the existing fixture. See the attached cut-sheet. The existing flat roof will be repaired.*

l. *Building (see Sheet A6.0): replacing the rear non-original porch. The new porch will be a simplification of the original front porch, minus decorative trims, and will include a new ceiling-mount light. Note: the railings are proposed to match the front porch railing height. The new porch roof will be either single-ply membrane or metal roofing.*

m. *Building (see Sheets A5.0 through A8.0): replacing asphalt shingle roofing with new asphalt shingle or cedar shake roofing and replacing the 'mushroom' attic vents with continuous ridge vents. Bid pricing will be a factor in the final selection.*

n. *Building (see Sheets A5.0 through A8.0): replacing the gutters and downspouts with copper versions.*

o. *Building (see Sheets A5.0 through A8.0): making selective brick repair using matching salvaged brick.*

p. *Building (see Sheets A5.0 through A8.0): re-pointing existing brick and stone base joints, where required.*

q. *Building (see Sheets A5.0 through A8.0): selectively rehabilitating dilapidated exterior painted wood architectural elements, sidings, soffits, fascias, and trims. Where possible, existing elements will be repaired instead of replaced. Any replacements will be 'in kind'. All will be repainted.*

2. **Provide a Description of Existing Conditions:** *The existing two-story structure has most recently been used as a rental property with its rear yard used entirely for parking. Both the structure and the yard have suffered from years of neglect (refer to the attached photos). The presence of hazardous substances including mold, asbestos, and radon has been confirmed through environmental testing.*

3. **What are the reasons for the Proposed Changes?:** *Along with the adjacent work underway at 215 North Fifth, the Owners wish to do what is possible to revitalize this city block with single-family residential occupancies by imbuing its under-utilized and/or neglected structures with new energy. And, to prepare the structure for habitation by an adult child recovering from an auto-immune disease, extensive work will be undertaken to eliminate the presence of mold, asbestos, and radon.*

4. **Attach any additional information that will further explain or clarify the proposal, and indicate these attachments here:** *NA.*

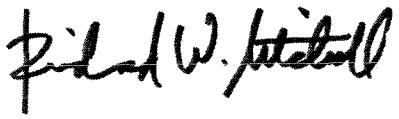
5. **Attach photographs of the existing Property, including at least one general photo and detailed photos of the proposed work area:** *See attached photos.*

Thank you for your consideration. Following are supporting photographs and other related literature.

Since we propose several stand-alone items (inter-related, but not dependant on one another), we request that they be considered separately so that, should the Commission find one objectionable, its rejection does not effectively table the others.

Sincerely,

Mitchell and Mouat Architects, Inc.



Richard W. Mitchell, President
113 South Fourth Avenue Ann Arbor, Michigan 48104
734-662-6070 FAX 734-662-3802 MaMA@MitchellandMouat.com

Mikalonis, Saulius

Exhibit B

From: Frost, Christopher [CFrost@a2gov.org]
Sent: Friday, August 23, 2013 4:59 PM
To: Mikalonis, Saulius
Subject: Historic District application 217 N. Fifth

Mr. Mikalonis,

This is in response to your inquiry about submitting a new application to the Ann Arbor Historic District Commission regarding replacement of windows at 217 N. Fifth Ave. The Commission's bylaws require that "a subsequent application for work that is substantially similar to work already considered by the Commission will not be accepted unless the applicant presents evidence showing a substantial change in facts, circumstances, or the nature of the work, or the applicant is requesting a different approval from the Commission."

After reviewing the previous application submitted for 217 N. Fifth Ave., it appears that your client requested replacement of some, but not all of the windows on the property. It looks like all of the requested replacements were granted except for 4 windows that were denied a certificate of appropriateness. So, for those 4 windows, your client would have to present some evidence showing a substantial change, as described above. For the rest of the windows that were not addressed by the Commission, your client can simply submit an application in the normal course of business and the Commission will address those windows on their merits.

Let me know if you have further questions.

Sincerely,
Christopher M. Frost | Assistant City Attorney
City of Ann Arbor |301 E. Huron St., PO Box 8647 | Ann Arbor, Michigan 48107
734.794.6186 Direct | 734.794.6170 Office | 734.994.4954 Fax | cfrost@a2gov.org

Exhibit C

AFFIDAVIT OF DINESH KHANNA, MD, MSC

STATE OF MICHIGAN)
)§
COUNTY OF OAKLAND)

I, Dr. Dinesh Khanna, being of sound mind and body and being duly sworn, deposes and states that the following is based upon my personal knowledge and, if called as a witness, can testify to the following matters:

1. I received my medical degree from the University College of Medical Sciences in New Delhi, India.

2. I completed postdoctoral training as an intern and resident in internal medicine at Wright State University School of Medicine in Dayton, Ohio, and a clinical and research fellowship in rheumatology and a master's in clinical research at the University of California at Los Angeles (UCLA) School of Medicine. I was also an Assistant Professor of Medicine at the David Geffen School of Medicine at UCLA and the Clinical Director of UCLA's Scleroderma Clinic.

3. I am currently an Associate Professor of Medicine and Director, University of Michigan Scleroderma Program.

4. I am the Marvin & Betty Danto Research Professor of Connective Tissue Research and Associate Professor of Internal Medicine in the Division of Rheumatology at the University of Michigan.

5. I am a fellow of the American College of Rheumatology.

6. In was elected to the 2011-2012 Best Doctors in America, which recognizes the area's top clinicians.

7. I have published over 150 peer-reviewed articles and book chapters

8. I am a Principal Investigator on National Institutes of Health and industry-sponsored clinical studies.

9. I have served as a reviewer for several professional journals, society committees and training programs, and grant applications.

10. My current research focuses on developing, validating, and refining outcome measures in rheumatic diseases and designing controlled trials, including scleroderma and gout.

11. I am leading the development of patient reported outcome measures in rheumatic diseases and developing composite response index for clinical trials in scleroderma; both projects are funded by the National Institutes of Health

12. I am the Co-Principal Investigator on the American College of Rheumatology commissioned guidelines for the management of gout and part of the Steering Committee to reclassify systemic sclerosis

13. I received the 2011 "Doctor of the Year" award from the Scleroderma Foundation.

14. Scleroderma, or systemic sclerosis, is a chronic connective tissue disease generally classified as one of the autoimmune rheumatic diseases. The word "scleroderma" comes from two Greek words: "sclero" meaning hard, and "derma" meaning skin. Hardening of the skin is one of the most visible manifestations of the disease and it can also involve internal organs.

15. I have seen, diagnosed and treated Calvin Rye, son of Jonathon and Lisa Rye, who has generalized morphea, a form of localized scleroderma.

16. I have seen and diagnosed Lisa Rye, who has fibromyalgia and interstitial cystitis (considered an autoimmune disease; Torpy J. *JAMA*. 2012;307(20):2211).

17. It is my understanding that both Calvin Rye and Lisa Rye could spend a significant amount of time at their home located at 217 North Fifth Street, Ann Arbor, Michigan, which is in the process of being renovated.

18. It is my understanding that in the process of renovating existing windows in the residence at 217 North Fifth Street, the renovation company may use epoxy containing organic solvents to restore deteriorated and damaged wood.

19. Organic solvents have been implicated in autoimmune diseases and are used in manufacturing of Epoxy resin (Silman. Ann Rheum Dis Annals of the Rheumatic Diseases 1991; 50: 846-853). Epoxy resin has been associated with many health conditions such as contact dermatitis but also implicated in scleroderma (both localized and systemic) (Silman. Ann Rheum Dis Annals of the Rheumatic Diseases 1991; 50: 846-853; Inachi et al J Dermatol. 1996 May;23(5):344-6; Yamakage A et al. Occupational scleroderma-like disorders occurring in men engaged in the polymerization Dermatologica. 1980;161(1):33-44).

20. Mrs. Rye and her son have been diagnosed with autoimmune conditions, where immune system is dysregulated. In a large meta-analysis of published studies, organic solvents are an independent risk of autoimmunity (Barragán-Martínez C PLoS One. 2012;7(12):e51506) and may very well exacerbate it.

FURTHER AFFIANT SAYETH NAUGHT.

DINESH KHANNA, MD, MSC

Subscribed and sworn to before me this
18th day of SEPTEMBER, 2013.

Peggy Lee Messinger
_____, Notary Public
WAYNE County, Michigan
~~Acting in Oakland County, Michigan~~
My Commission Expires: 01-15-15

PEGGY LEE MESSINGER
Notary Public, State of Michigan
County of Wayne
My Commission Expires Jan. 15, 2015
Acting in the County of WASHTENAW

Open.19701.11602.13269817-1

Olde Window Restorers

Exhibit D

Restoration and Repair of Vintage and Historic windows and doors

Restoration & Repair

People live in their vintage or antique home for many years and never know what it's like for the windows to work properly. You don't have to put up with drafty, rattling, and just not working windows.

Many original windows have been replaced because owners felt there was no alternative to replacement. I am pleased to say you can have your windows restored to better than original working condition and preserve the aesthetic look of your vintage or antique home and improve energy efficiency

In addition to basic mechanical refurbishment, OWR provides complete structural and cosmetic restoration. We use antique wavy glass where appropriate to preserve the historic quality of the windows. Your windows have lasted for decades and with proper maintenance they can last for many more.

Restoration includes: Removal of window sash, stripping of old paint and putty, repair of any damage by replacment parts or wood grade epoxy, prime, reglaze, and final paint Window frame is stripped of old paint, parting beads replaced as needed, sills repaired and painted.. . Restoration examples

Repair of rotted window sash and sill are accomplished with state of the art wood reconstruction epoxy. Severely damaged sections can be replaced with new wood. Only the most severely deteriorated windows are candidates for replacement.

To improve energy efficiciency OWR uses contemporary weather stripping solutions that provide a weather seal around the perimeter of the window.. Once applied the window will be draft and rattle free.

Some older windows have no balance system or way to hold the window open (1700's - mid 1800s). The only way to keep these open is to place an object such as a stick under the sash. *Sound familiar?* We can convert these windows to an *invisible balance* system mounted in the edge of the sash. Your window that will work smoothly and hold the window in place without danger of falling.

For rope and pulley style windows, a constant force spring balance can be installed. It mounts similar to the traditional rope pulley but uses a steel tape attached to a precision spring mechanism matched to the sash weight. To enhance energy efficiency, the weight pockets are filled with insulation.

Window restore consists of 3 general categories:

- Mechanical Restoration
- Structural Restoration
- Cosmetic Restoration

OWR strives to restore each window as close to original as possible. So if you are looking for a window fix then search no further.

Once your windows are restored to their proper operation and condition, minor routine maintenance will keep them working and looking great for many more years.

Page updated 03/18/2013

Exhibit E

BlackBerry
Window and Door Systems
www.blackberrysystems.com
Corporate Office: 6477 West KL Avenue • Kalamazoo, MI 49009 • 269.353.8844 • 800.732.9400 • fax.269.353.8843

9/16/13

Mitchell and Mouat Architects
Attn: Kevin Stansbury
113 South Fourth Ave
Ann Arbor, MI 48104
Phone: 724-662-6070
Fax: 734-662-3802

Job Name: 217 North Fifth Ave
Job Location: Ann Arbor, MI

Historic Window Review:

The following information is based on a site review of the historic windows for the existing residence at 217 North Fifth Ave. in Ann Arbor, MI. Per your request we have been to the site and inspected the windows and doors for potential restoration or replication.

All windows are wood with painted exterior and painted or stained/varnished interiors. All windows are glazed with clear monolithic glass and exterior putty glazing compound. The majority of the windows are true double hung with exterior brick mould, slope sills, blind stop, parting bead, and 1 ½" thick sash. All but window "AA" are rope and pulley operation, this unit uses a spring stay or stop through the sash into the jamb. The basement grade windows are inswing hopper, and there is one inswing casement window on the second floor.

The overall general window condition is "Fair" to "Poor". The following windows have sash that have failed joinery "S, R, O, I, G, K, W, Y, AA, E, and Z". Our experience would recommend these sash should be replicated rather than restored for a long term durable solution. The following windows require epoxy consolidation and patching "AA, Z, W, V, Y, U, L, C, B, and A". These sills are severely fissured, split, or damaged and require repair. The following windows require full replacement because of the sill condition, missing components, or broken sub-frames, "M, N, F, and T"

I would comment that all windows to be restored will require the use of some epoxy consolidation and patch, many have split blind stop, frames, or sash stops. The sash that are 1 ½" thick have a tendency to warp over time versus a typical 1 ¾" sash often found is this era of construction. I would expect all painted surfaces contain lead paint, and the glazing compound asbestos, which is also common for windows of this era; but I would encourage you to have testing done to evaluate and verify if this is the case. All rope will require replacement as well as much of the hardware that is either missing or failing.

I would recommend replication over restoration since so much of the material will require replication. We can provide either option, as has been provided in our proposal, but for long term use, energy efficiency, continued maintenance, the cost of replication will be less; and you will have a far better end result and a new historic product that will last for years to come. I would also check with the historic district if they will allow you to replicate, if so, allow you to use ¾" insulated glass versus the monolithic glass since it will be more energy efficient and then a storm window is not necessary. All glass would be set from the interior with a wood glazing stop; the exterior sash would have a bevel wood edge at the glass matching the profile of a putty glazing without the future failure. BlackBerry has had many projects approved by SHPO and NPS with this design.

Please let me know if you have additional questions.

Sincerely,

_____MKS_____ 9/16/13_____

Michael K. Shields
President
BlackBerry Systems, Inc.

Date

MATERIAL SAFETY DATA SHEET
West System Inc.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ..... WEST SYSTEM® 105 Epoxy Resin
PRODUCT CODE: 105
CHEMICAL FAMILY: ..... Epoxy Resin.
CHEMICAL NAME: ..... Bisphenol A based epoxy resin.
FORMULA: ..... Not applicable.

MANUFACTURER:
West System Inc.
102 Patterson Ave.
Bay City, MI 48706, U.S.A.
Phone: 866-937-8797 or 989-684-7286
www.westsystem.com

EMERGENCY TELEPHONE NUMBERS:
Transportation
CHEMTREC: ..... 800-424-9300 (U.S.)
703-527-3887 (International)
Non-transportation
Poison Hotline: 800-222-1222

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING May cause skin irritation. May cause eye irritation. May cause allergic reaction. Clear, viscous liquid with mild odor.

PRIMARY ROUTE(S) OF ENTRY: ..... Skin contact.

POTENTIAL HEALTH EFFECTS:

ACUTE INHALATION: ..... If product is heated, vapors generated can cause headache, nausea, dizziness and possible respiratory irritation if inhaled in high concentrations.

CHRONIC INHALATION: ..... Repeated exposure to high vapor concentrations may cause irritation of pre-existing lung allergies and increase the chance of developing allergy symptoms to this product.

ACUTE SKIN CONTACT: ..... May cause allergic skin response in certain individuals. May cause moderate irritation to the skin such as redness and itching.

CHRONIC SKIN CONTACT: ..... May cause sensitization in susceptible individuals. May cause moderate irritation to the skin.

EYE CONTACT: ..... May cause irritation.

INGESTION: ..... Low acute oral toxicity.

SYMPTOMS OF OVEREXPOSURE: ..... Possible sensitization and subsequent allergic reactions usually seen as redness and rashes.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: ..... Pre-existing skin and respiratory disorders may be aggravated by exposure to this product. Pre-existing lung and skin allergies may increase the chance of developing allergic symptoms to this product.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS #	CONCENTRATION (%)
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	60-100
Benzyl alcohol	100-51-6	10-30
Phenol-formaldehyde polymer glycidyl ether	28064-14-4	1-10

4. FIRST AID MEASURES

FIRST AID FOR EYES ..... Flush immediately with water for at least 15 minutes. Consult a physician.

FIRST AID FOR SKIN ..... Remove contaminated clothing. Wipe excess from skin. Apply waterless skin cleaner and then wash with soap and water. Consult a physician if effects occur.

FIRST AID FOR INHALATION ..... Remove to fresh air if effects occur.

FIRST AID FOR INGESTION ..... No acute adverse health effects expected from amounts ingested under normal conditions of use. Seek medical attention if a significant amount is ingested.

5. FIRE FIGHTING MEASURES

FLASH POINT: ..... >200°F (Tag Closed Cup)

EXTINGUISHING MEDIA: ..... Foam, carbon dioxide (CO_2), dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: ..... Wear a self-contained breathing apparatus and complete full-body personal protective equipment. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat.

FIRE AND EXPLOSION HAZARDS: ..... During a fire, smoke may contain the original materials in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include, but are not limited to: phenolics, carbon monoxide, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: ..... Stop leak without additional risk. Dike and absorb with inert material (*e.g.*, sand) and collect in a suitable, closed container. Warm, soapy water or non-flammable, safe solvent may be used to clean residual.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE (min./max.): ..... 40°F (4°C) / 120°F (49°C)

STORAGE: ..... Store in cool, dry place. Store in tightly sealed containers to prevent moisture absorption and loss of volatiles. Excessive heat over long periods of time will degrade the resin.

HANDLING PRECAUTIONS: ..... Avoid prolonged or repeated skin contact. Wash thoroughly after handling. Launder contaminated clothing before reuse. Avoid inhalation of vapors from heated product. Precautionary steps should be taken when curing product in large quantities. When mixed with epoxy curing agents this product causes an exothermic, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION GUIDELINES: ..... Safety glasses with side shields or chemical splash goggles.

SKIN PROTECTION GUIDELINES: ..... Wear liquid-proof, chemical resistant gloves (nitrile-butyl rubber, neoprene, butyl rubber or natural rubber) and full body-covering clothing.

RESPIRATORY/VENTILATION GUIDELINES: ..... Good room ventilation is usually adequate for most operations. Wear a NIOSH/MSHA approved respirator with an organic vapor cartridge whenever exposure to vapor in concentrations above applicable limits is likely.

Note: West System, Inc. has conducted an air sampling study using this product or similarly formulated products. The results indicate that the components sampled for (epichlorohydrin, benzyl alcohol) were either so low that they were not detected at all or they were significantly below OSHA's permissible exposure levels.

ADDITIONAL PROTECTIVE MEASURES: ..... Practice good caution and personal cleanliness to avoid skin and eye contact. Avoid skin contact when removing gloves and other protective equipment. Wash thoroughly after handling. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

OCCUPATIONAL EXPOSURE LIMITS: ..... Not established for product as whole. Refer to OSHA's Permissible Exposure Level (PEL) or the ACGIH Guidelines for information on specific ingredients.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: ..... Liquid.
COLOR: ..... Clear.
ODOR: ..... Mild.
BOILING POINT: ..... > 400°F
MELTING POINT/FREEZE POINT: ..... No data.
VISCOSITY: ..... 1000 (cP)
pH: ..... No data.
SOLUBILITY IN WATER: ..... Slight.
SPECIFIC GRAVITY: 1.15
BULK DENSITY: ..... 9.6 (pounds/gallon)
VAPOR PRESSURE: ..... < 1 mmHg @ 20°C.
VAPOR DENSITY: ..... Heavier than air.
% VOLATILE BY WEIGHT: ..... ASTM D 2369-07 was used to determine the Volatile Content of mixed epoxy resin and hardener. Refer to the hardener's MSDS for information about the total volatile content of the resin/hardener system.

10. STABILITY AND REACTIVITY

STABILITY: ..... Stable.

HAZARDOUS POLYMERIZATION: ..... Will not occur by itself, but a mass of more than one pound of product plus an aliphatic amine will cause irreversible polymerization with significant heat buildup.

INCOMPATIBILITIES: ..... Strong acids, bases, amines and mercaptans can cause polymerization.

DECOMPOSITION PRODUCTS: ..... Carbon monoxide, carbon dioxide and phenolics may be produced during uncontrolled exothermic reactions or when otherwise heated to decomposition.

11. TOXICOLOGICAL INFORMATION

No specific oral, inhalation or dermal toxicology data is known for this product. Specific toxicology information for a bisphenol-A based epoxy resin present in this product is indicated below:

Oral: ..... LD_{50} >5000 mg/kg (rats)
Inhalation: ..... No Data.
Dermal: ..... LD_{50} = 20,000 mg/kg (skin absorption in rabbits)

TERATOLOGY: .....Diglycidyl ether bisphenol-A (DGEBPA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

REPRODUCTIVE EFFECTS: .....DGEBPA, in animal studies, has been shown not to interfere with reproduction.

MUTAGENICITY: .....DGEBPA in animal mutagenicity studies were negative. In vitro mutagenicity tests were negative in some cases and positive in others.

CARCINOGENICITY:
NTP ..... Product not listed.
IARC ..... Product not listed.
OSHA ..... Product not listed.

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol-A. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBPA is carcinogenic. Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBPA is not classified as a carcinogen.

Epichlorohydrin, an impurity in this product (<5 ppm) has been reported to produce cancer in laboratory animals and to produce mutagenic changes in bacteria and cultured human cells. It has been established by the International Agency for Research on Cancer (IARC) as a probable human carcinogen (Group 2A) based on the following conclusions: human evidence – inadequate; animal evidence – sufficient. It has been classified as an anticipated human carcinogen by the National Toxicology Program (NTP). Note: It is unlikely that normal use of this product would result in measurable exposure concentrations to this substance.

12. ECOLOGICAL INFORMATION

In the non-cured liquid form this product may cause long-term harm if released to the environment. Prevent entry into sewers and natural waters.

Movement and Partitioning:
Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Kow between 3 and 5).

Degradation and Transformation:
Theoretical oxygen demand is calculated to be 2.35 p/p. 20-day biochemical oxygen demand is <2.5%.

Ecotoxicology:
Material is moderately toxic to aquatic organisms on an acute basis. LC50/EC50 between 1 and 10 mg/L in most sensitive species.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: ..... Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods.

Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

DOT Non-Bulk
SHIPPING NAME: ..... Not regulated.
TECHNICAL SHIPPING NAME: ..... Not applicable.

HAZARD CLASS:..... Not applicable.
U.N./N.A. NUMBER:..... Not applicable.
PACKING GROUP:..... Not applicable.

IMDG
SHIPPING NAME:..... Environmentally hazardous substance, liquid, n.o.s.
TECHNICAL SHIPPING NAME:..... Epoxy Resin.
HAZARD CLASS:..... Class 9.
U.N. NUMBER:..... UN3082.
PACKING GROUP:..... PG III.
EmS Number:..... F-A, S-F
MARINE POLLUTANT..... Yes

ICAO/IATA
SHIPPING NAME:..... Environmentally hazardous substance, liquid, n.o.s.
TECHNICAL SHIPPING NAME:..... Epoxy Resin.
HAZARD CLASS:..... Class 9.
U.N. NUMBER:..... UN3082.
PACKING GROUP:..... PG III.
MARINE POLLUTANT:..... Yes

15. REGULATORY INFORMATION

OSHA STATUS:..... Irritant.
TSCA STATUS:..... All components are listed on TSCA inventory or otherwise comply with TSCA requirements.

Canada WHMIS Classification:..... D2B - Toxic material causing other toxic effects.
CEPA Chemical Inventory Status:..... All components are listed or are otherwise compliant with CEPA requirements.

SARA TITLE III:
SECTION 313 TOXIC CHEMICALS..... None (deminimus).

STATE REGULATORY INFORMATION:
The following chemicals are specifically listed or otherwise regulated by individual states. For details on your regulatory requirements you should contact the appropriate agency in your state.

COMPONENT NAME /CAS NUMBER	**CONCENTRATION**	**STATE CODE**
Epichlorohydrin 106-89-8	< 5ppm	[1]CA
Benzyl alcohol 100-51-6		MA, PA, NJ

[1] These substances are known to the state of California to cause cancer or reproductive harm, or both.

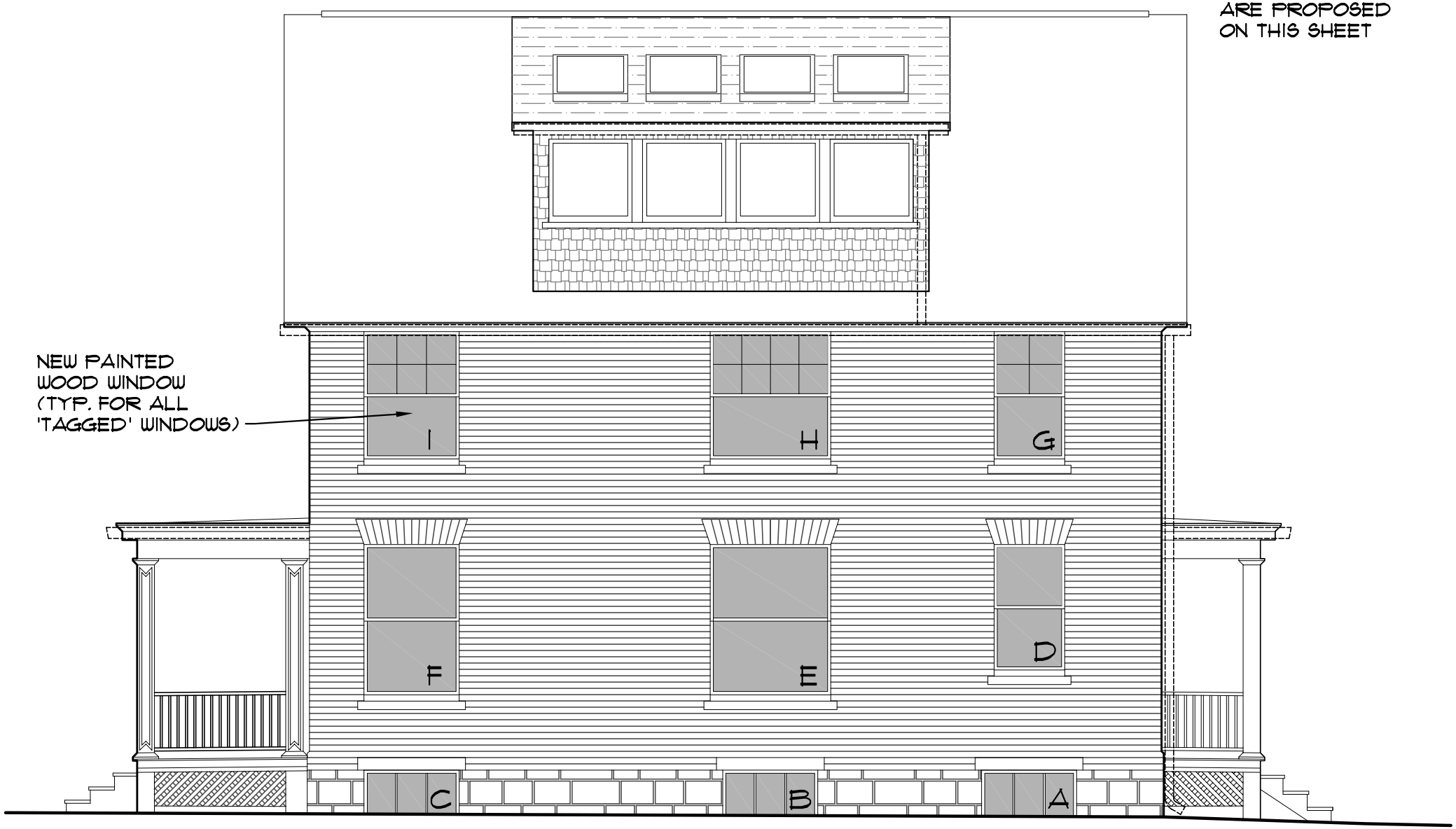
16. OTHER INFORMATION

REASON FOR ISSUE:..... Changes made in Section 14 and 15.
PREPARED BY:..... G. M. House
APPROVED BY:..... G. M. House
TITLE:..... Health, Safety & Environmental Manager
APPROVAL DATE:..... April 26, 2013
SUPERSEDES DATE:..... March 9, 2012
MSDS NUMBER:..... 105-13a

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of West System Inc. The data on this sheet is related only to the specific material designated herein. West System Inc. assumes no legal responsibility for use or reliance upon these data.

(9) NEW WINDOWS ARE PROPOSED ON THIS SHEET

NEW PAINTED WOOD WINDOW (TYP. FOR ALL 'TAGGED' WINDOWS)



Mitchell and Mouat architects
113 South Fourth Avenue · Ann Arbor, Michigan 48104
734-662-8070 FAX 734-662-3802 MailMA@MitchellandMouat.com

Date:	Issued For:
07.26.13	HDC Approval
09.20.13	HDC Approval

217 North Fifth Avenue
Ann Arbor, Michigan

Project No.1126

Proposed North Elev.
Scale: 3/16" = 1'-0"

A1.0

(4) NEW WINDOWS ARE PROPOSED ON THIS SHEET

NEW PAINTED WOOD WINDOW (TYP. FOR ALL 'TAGGED' WINDOWS)

Mitchell and Mouat architects
113 South Fourth Avenue, Ann Arbor, Michigan 48104
734-662-6070 FAX 734-662-3602 MailMA@MitchellandMouat.com

Date:	Issued For:
07.26.13	HDC Approval
09.20.13	HDC Approval

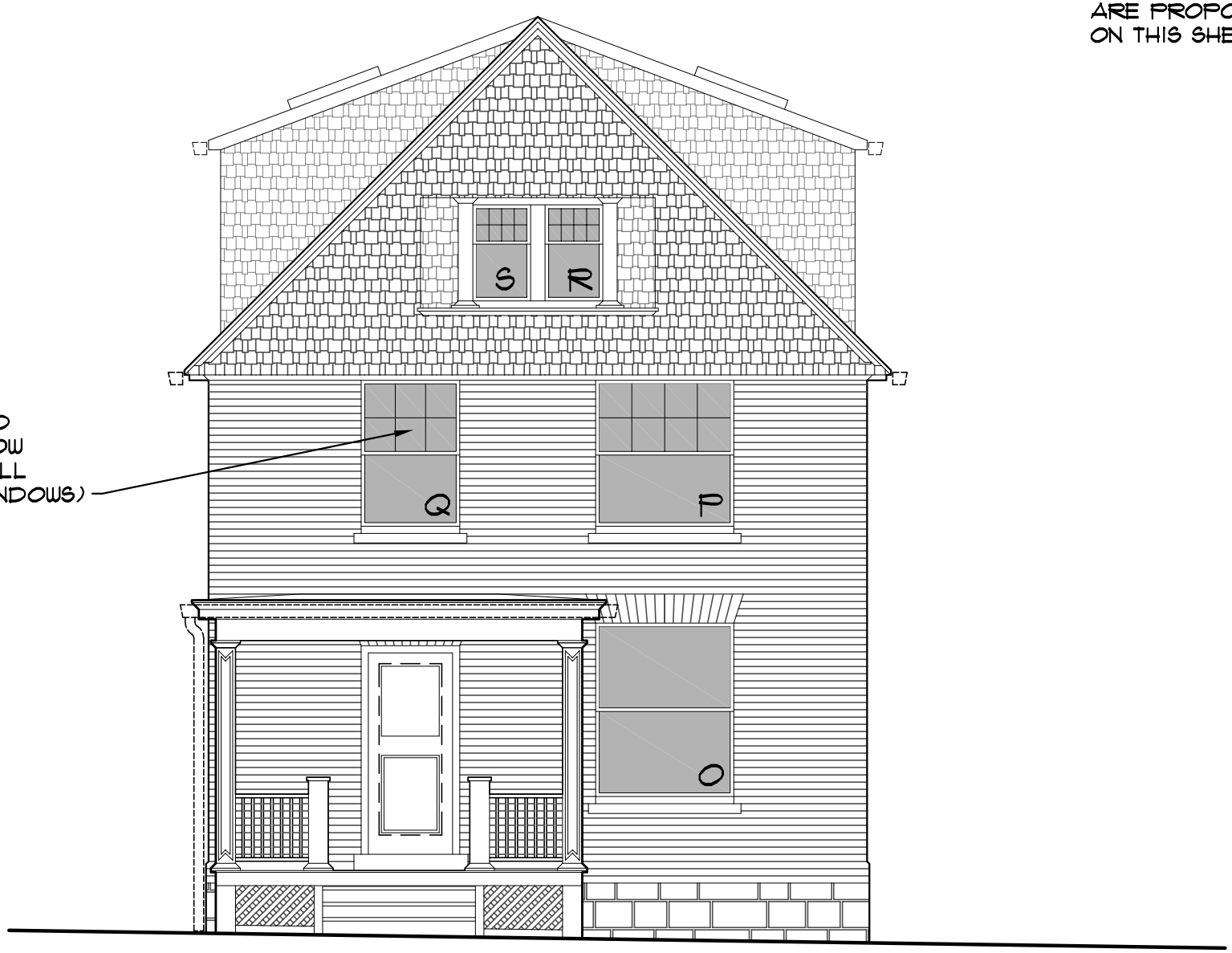
217 North Fifth Avenue
Ann Arbor, Michigan

Project No.1126

Proposed West Elev.
Scale: 3/16" = 1'-0"

A2.0

(5) NEW WINDOWS ARE PROPOSED ON THIS SHEET



NEW PAINTED WOOD WINDOW (TYP. FOR ALL 'TAGGED' WINDOWS)

Mitchell and Mouat architects
113 South Fourth Avenue, Ann Arbor, Michigan 48104
734-662-6070 FAX 734-662-3602 MailMA@MitchellandMouat.com

Date:	Issued For:
07.26.13	HDC Approval
09.20.13	HDC Approval

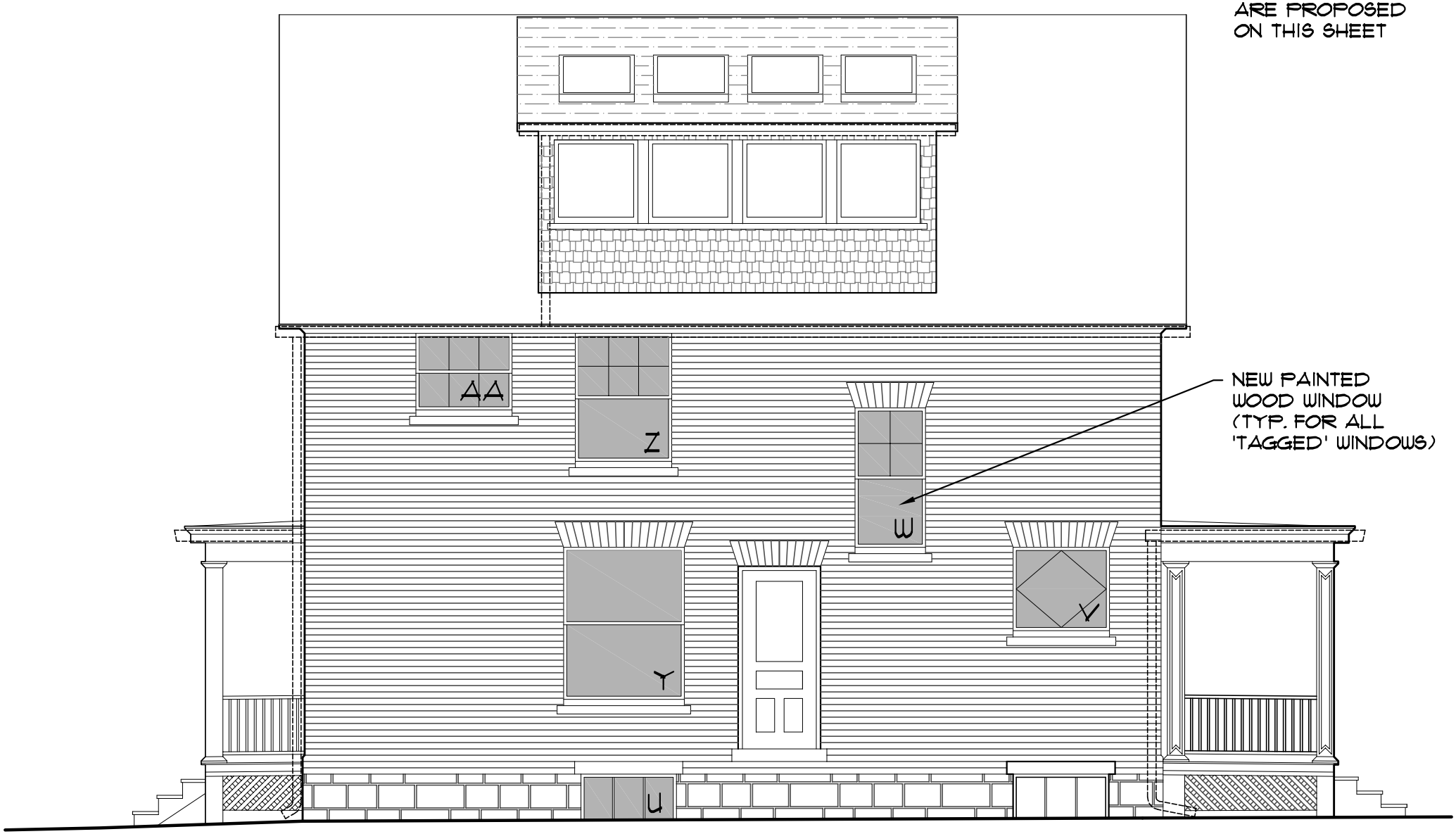
217 North Fifth Avenue
Ann Arbor, Michigan

Project No.1126

Proposed East Elev.
Scale: 3/16" = 1'-0"

A3.0

(6) NEW WINDOWS ARE PROPOSED ON THIS SHEET



NEW PAINTED WOOD WINDOW (TYP. FOR ALL 'TAGGED' WINDOWS)

Mitchell and Mouat architects
113 South Fourth Avenue, Ann Arbor, Michigan 48104
734-662-6070 FAX 734-662-3602 MailMA@MitchellandMouat.com

Date:	Issued For:
07.26.13	HDC Approval
09.20.13	HDC Approval

217 North Fifth Avenue
Ann Arbor, Michigan

Project No.1126

Proposed South Elev.
Scale: 3/16" = 1'-0"

A4.0

TAG	NOM. SIZE	FUNCTION	ACCESSORIES	MUNTINS	FINISH	TYPE
'A'	3'-8" X 2'-2"	WOOD HOPPER	SCREEN	3/0	PAINTED	NEW
'B'	3'-8" X 2'-2"	WOOD HOPPER	SCREEN	3/0	PAINTED	NEW
'C'	3'-8" X 2'-2"	WOOD HOPPER	SCREEN	3/0	PAINTED	NEW
'D'	2'-10" X 5'-2"	WOOD DBL-HUNG	SCREEN	1/1	PAINTED	NEW
'E'	4'-10" X 6'-2"	WOOD DBL-HUNG	SCREEN	1/1	PAINTED	NEW
'F'	3'-10" X 6'-2"	WOOD DBL-HUNG	SCREEN	1/1	PAINTED	NEW
'G'	2'-10" X 5'-2"	WOOD DBL-HUNG	SCREEN	4/1	PAINTED	NEW
'H'	4'-10" X 5'-2"	WOOD DBL-HUNG	SCREEN	8/1	PAINTED	NEW
'I'	3'-10" X 5'-2"	WOOD DBL-HUNG	SCREEN	6/1	PAINTED	NEW
'K'	2'-10" X 5'-2"	WOOD DBL-HUNG	SCREEN	1/1	PAINTED	NEW
'L'	2'-10" X 2-10"	WOOD CASEMENT	SCREEN	2/2	PAINTED	NEW
'M'	2'-10" X 5'-2"	WOOD DBL-HUNG	SCREEN	4/1	PAINTED	NEW
'N'	2'-2" X 4'-2"	WOOD DBL-HUNG	SCREEN	1/1	PAINTED	NEW
'O'	4'-10" X 6'-2"	WOOD DBL-HUNG	SCREEN	1/1	PAINTED	NEW
'P'	4'-10" X 5'-2"	WOOD DBL-HUNG	SCREEN	8/1	PAINTED	NEW
'Q'	3'-6" X 5'-2"	WOOD DBL-HUNG	SCREEN	6/1	PAINTED	NEW
'R'	2'-0" X 3'-4"	WOOD DBL-HUNG	SCREEN	8/1	PAINTED	NEW
'S'	2'-0" X 3'-4"	WOOD DBL-HUNG	SCREEN	8/1	PAINTED	NEW
'U'	3'-8" X 2'-2"	WOOD HOPPER	SCREEN	3/0	PAINTED	NEW
'V'	3'-10" X 3'-6"	WOOD FIXED	SCREEN	DIAMOND	PAINTED	NEW
'W'	2'-10" X 5'-8"	WOOD DBL-HUNG	SCREEN	4/1	PAINTED	NEW
'Y'	4'-10" X 6'-2"	WOOD DBL-HUNG	SCREEN	1/1	PAINTED	NEW
'Z'	3'-10" X 5'-2"	WOOD DBL-HUNG	SCREEN	6/1	PAINTED	NEW
'AA'	3'-10" X 3'-0"	WOOD DBL-HUNG	SCREEN	3/3	PAINTED	NEW

Mitchell and Mouat architects
113 South Fourth Avenue, Ann Arbor, Michigan 48104
734-662-6070 FAX 734-662-3602 MaMA@MitchellandMouat.com

Date:	Issued For:
01.25.13	HDC Approval
09.20.13	HDC Approval

217 North Fifth Avenue
Ann Arbor, Michigan

Project No.1126

Window Schedule
Scale: No Scale

A5.0

Existing North Elevation

Existing West Elevation

Existing East Elevation

Existing South Elevation

Double Hungs and Fixed

Window Specifications

Refer to the criteria below for proper measurements. For cases of necessary replacement, the Historic District Commission requires that a new window meet *all* of the following criteria:

The viewable profile dimensions of the exterior rails and stiles are within 1/4" of the original.

Sash Face

	Existing	Proposed
Distance	2"	1 5/8"

The distance from sash face to back of casing is within 1/8" of the original dimensions, but not less than 3/8"total.

Profiles

	Existing	Proposed
Distance	1"	5/8"

The casing width and thickness (including drip cap, if applicable) are within 1/8" of the original.

Casing Thickness

	Existing	Proposed
Distance	1"	1"

Casing Width

	Existing	Proposed
Distance	2 1/4"	2 1/4"

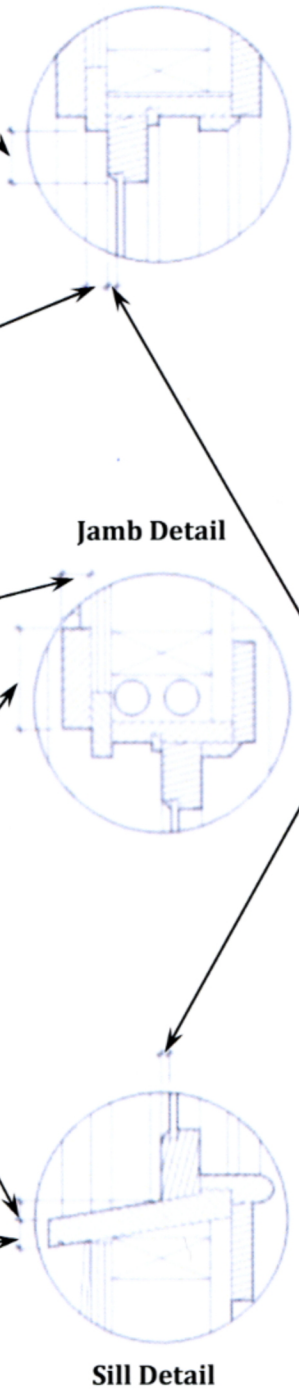
The sill is similar in pitch to the original, extends to the outer edge of casing, and has a thickness within 1/8" of the original.

Sill Pitch

	Existing	Proposed
Distance	1/4"	3/4"

Sill Thickness

	Existing	Proposed
Distance	1 1/2"	1 3/8"



The window unit type matches the original (double-hung, casement, etc.)

Window Type

Do the proposed windows' types match the existing types?

Yes ✓ No _____

The number and location of muntins matches the original.

Muntins

Does the count and arrangement of muntins match the original?

Yes ✓ No _____

The distance from glass surface to exterior surface of muntin, rail and stile is at least 3/8"; AND the exterior surface of the unit's glass insets in the sash is within 1/8" of the original.

Glass Inset

	Existing	Proposed
Distance	7/16"	3/8"

The glass size remains within 90% of the original in both directions.

Glass Size

	Existing	Proposed
Height	Varies	
Width	Varies	

Refer to Window Resource List for those individuals and companies who may be equipped to aid in the window evaluation/repair.

Hoppers

Window Specifications

Refer to the criteria below for proper measurements. For cases of necessary replacement, the Historic District Commission requires that a new window meet *all* of the following criteria:

The viewable profile dimensions of the exterior rails and stiles are within 1/4" of the original.

Sash Face

	Existing	Proposed
Distance	1"	1 7/8"

The distance from sash face to back of casing is within 1/8" of the original dimensions, but not less than 3/8"total.

Profiles

	Existing	Proposed
Distance	±6"	± 4"

The casing width and thickness (including drip cap, if applicable) are within 1/8" of the original.

Casing Thickness

	Existing	Proposed
Distance	1"	1"

Casing Width

	Existing	Proposed
Distance	2 1/4"	2 1/4"

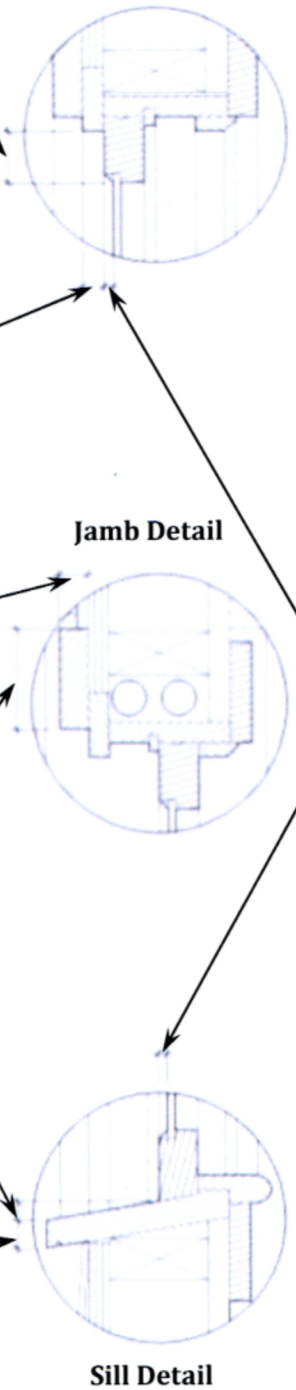
The sill is similar in pitch to the original, extends to the outer edge of casing, and has a thickness within 1/8" of the original.

Sill Pitch

	Existing	Proposed
Distance	1/4"	3/4"

Sill Thickness

	Existing	Proposed
Distance	1 1/2"	± 1 3/8"



The window unit type matches the original (double-hung, casement, etc.)

Window Type

Do the proposed windows' types match the existing types?

Yes ✓ No _____

The number and location of muntins matches the original.

Muntins

Does the count and arrangement of muntins match the original?

Yes ✓ No _____

The distance from glass surface to exterior surface of muntin, rail and stile is at least 3/8"; AND the exterior surface of the unit's glass insets in the sash is within 1/8" of the original.

Glass Inset

	Existing	Proposed
Distance	7/16"	1/2"

The glass size remains within 90% of the original in both directions.

Glass Size

	Existing	Proposed
Height	Varies	
Width	Varies	

Refer to Window Resource List for those individuals and companies who may be equipped to aid in the window evaluation/repair.

Casements

Window Specifications

Refer to the criteria below for proper measurements. For cases of necessary replacement, the Historic District Commission requires that a new window meet *all* of the following criteria:

The viewable profile dimensions of the exterior rails and stiles are within 1/4" of the original.

Sash Face

	Existing	Proposed
Distance	1"	1 7/8"

The distance from sash face to back of casing is within 1/8" of the original dimensions, but not less than 3/8"total.

Profiles

	Existing	Proposed
Distance	5 1/8"	± 3/4"

The casing width and thickness (including drip cap, if applicable) are within 1/8" of the original.

Casing Thickness

	Existing	Proposed
Distance	1"	1"

Casing Width

	Existing	Proposed
Distance	2 1/4"	2 1/4"

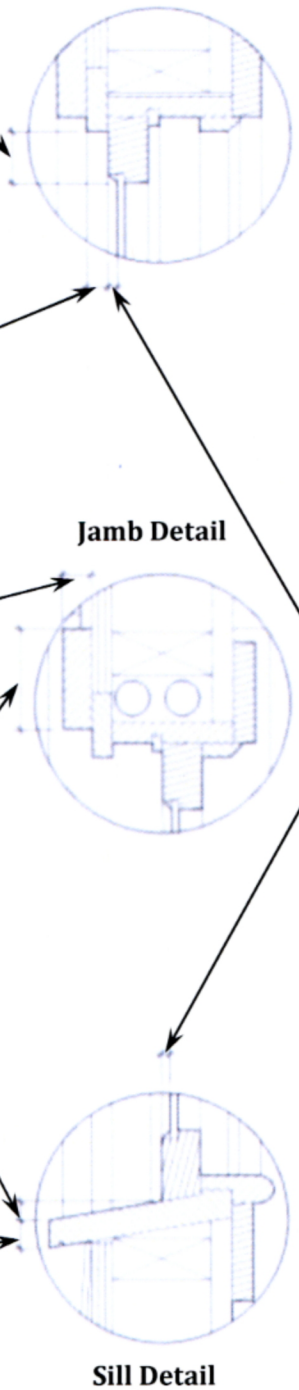
The sill is similar in pitch to the original, extends to the outer edge of casing, and has a thickness within 1/8" of the original.

Sill Pitch

	Existing	Proposed
Distance	1/4"	3/4"

Sill Thickness

	Existing	Proposed
Distance	1 1/2"	± 1 3/8"



The window unit type matches the original (double-hung, casement, etc.)

Window Type

Do the proposed windows' types match the existing types?

Yes ✓ No _____

The number and location of muntins matches the original.

Muntins

Does the count and arrangement of muntins match the original?

Yes ✓ No _____

The distance from glass surface to exterior surface of muntin, rail and stile is at least 3/8"; AND the exterior surface of the unit's glass insets in the sash is within 1/8" of the original.

Glass Inset

	Existing	Proposed
Distance	7/16"	1/2"

The glass size remains within 90% of the original in both directions.

Glass Size

	Existing	Proposed
Height	varies	
Width	varies	

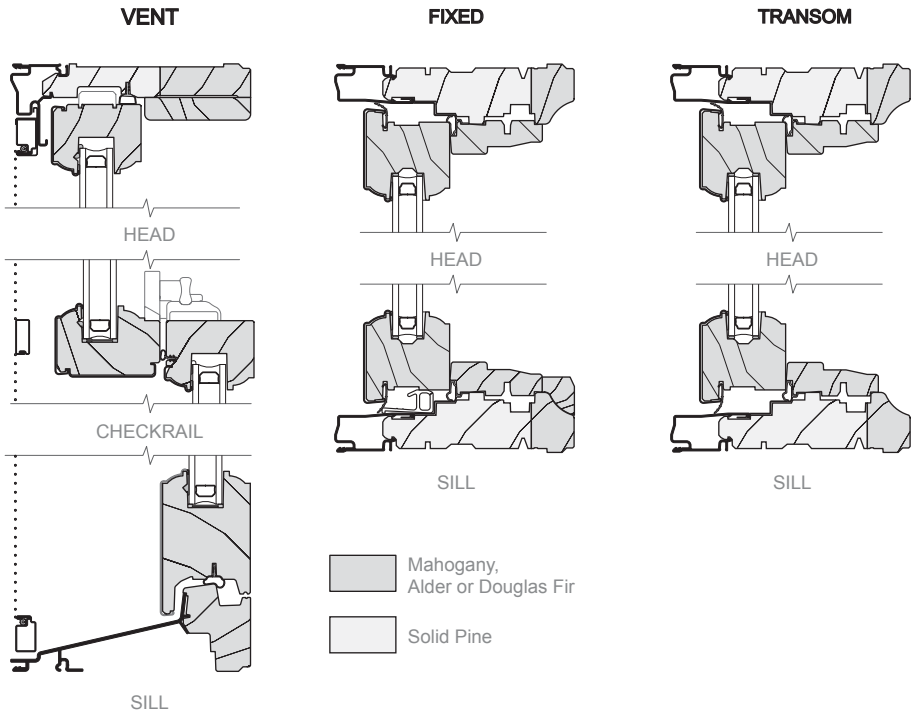
Refer to Window Resource List for those individuals and companies who may be equipped to aid in the window evaluation/repair.

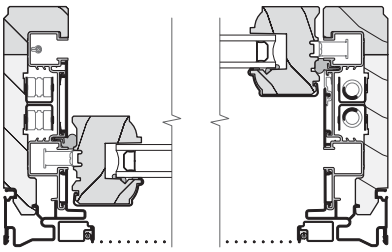
DOUBLE-HUNG

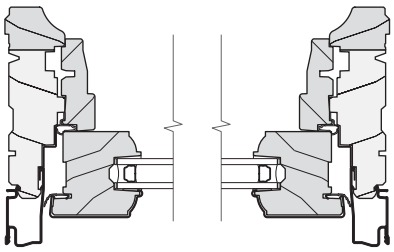
UNIT SECTIONS – WOOD COLLECTION

Aluminum-Clad Wood

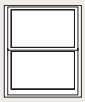
LX Double-Hung







Scale 3" = 1' 0"

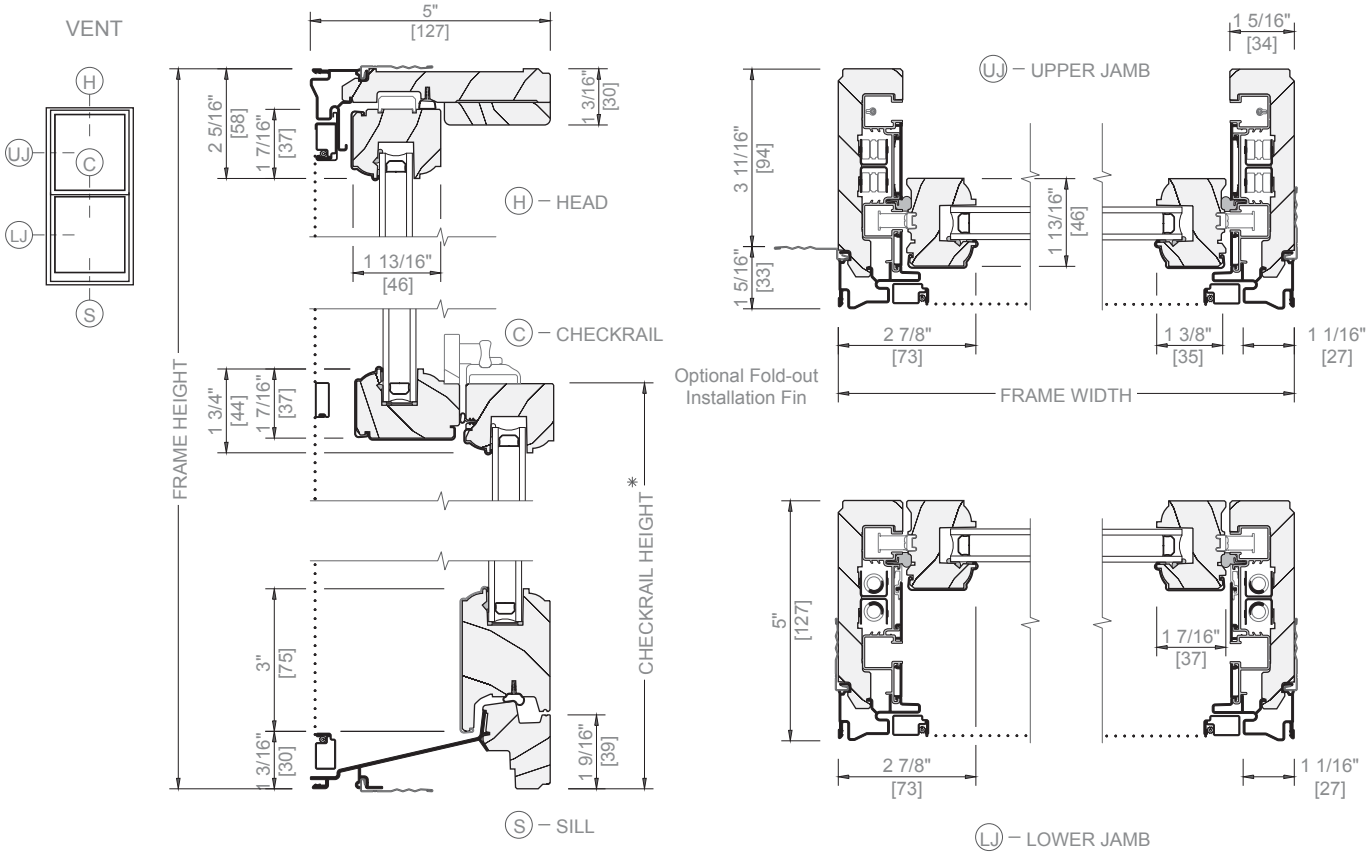


DOUBLE-HUNG

UNIT SECTIONS

Aluminum-Clad Wood

LX Single- and Double-Hung



* Dimension required for ordering units with unequal sash.

Scale 3" = 1' 0"

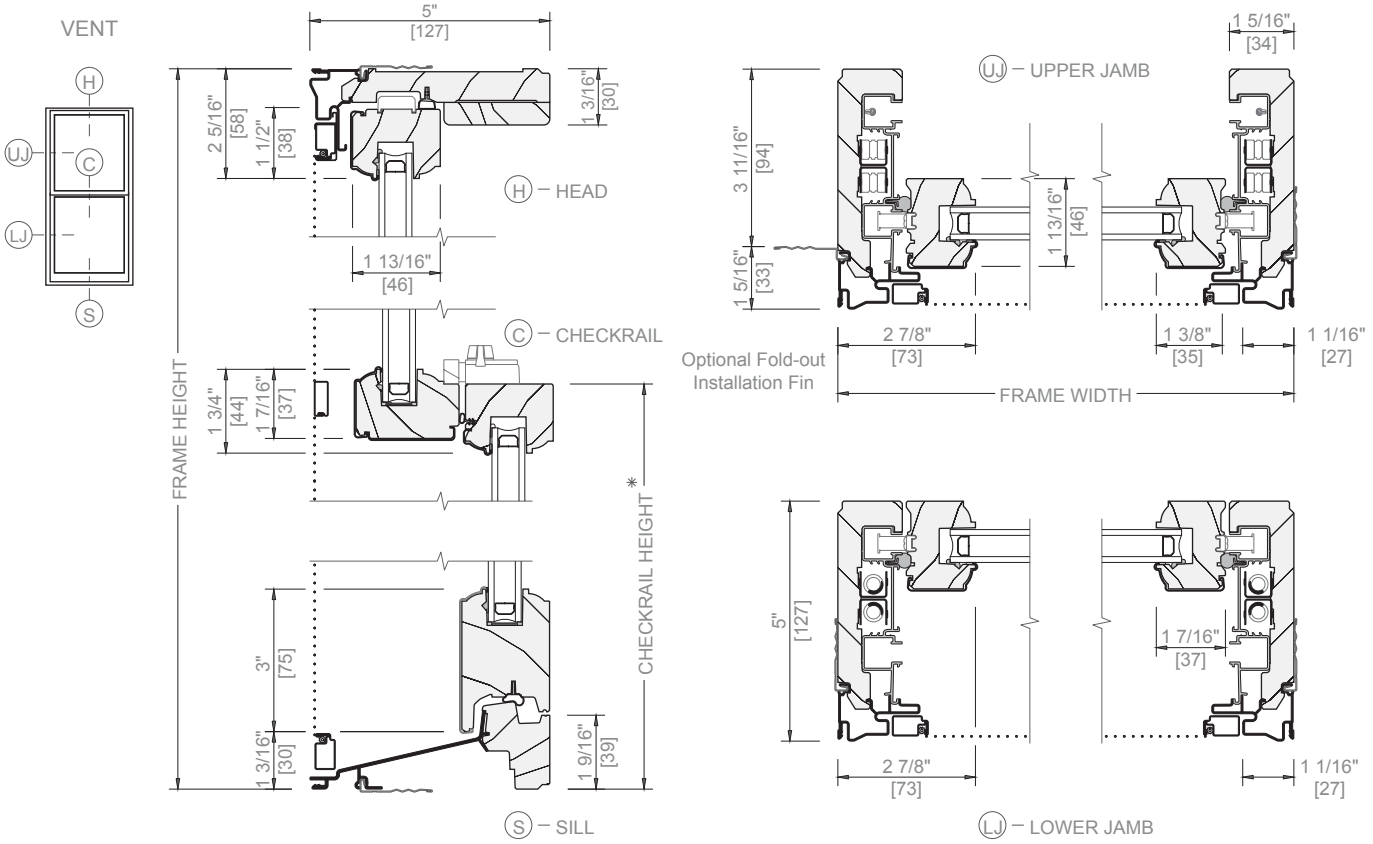
All dimensions are approximate.

DOUBLE-HUNG

UNIT SECTIONS

Aluminum-Clad Wood

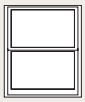
SE Double-Hung



* Dimension required for ordering units with unequal sash.

Scale 3" = 1' 0"

All dimensions are approximate.



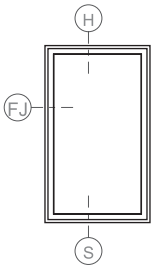
DOUBLE-HUNG

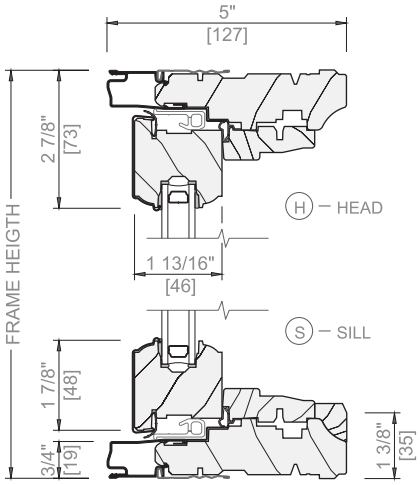
UNIT SECTIONS

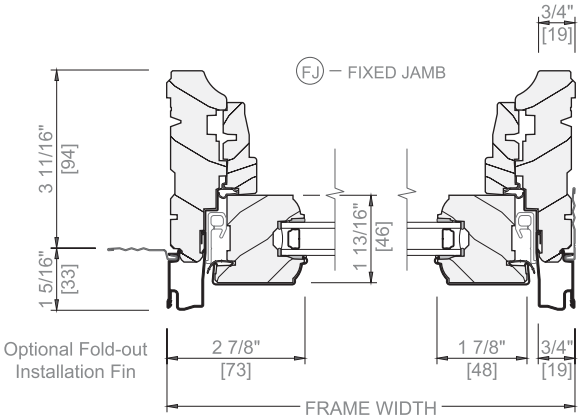
Aluminum-Clad Wood

LX and SE Fixed and Transoms

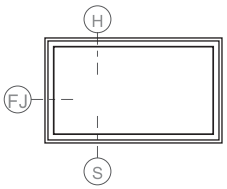
FIXED

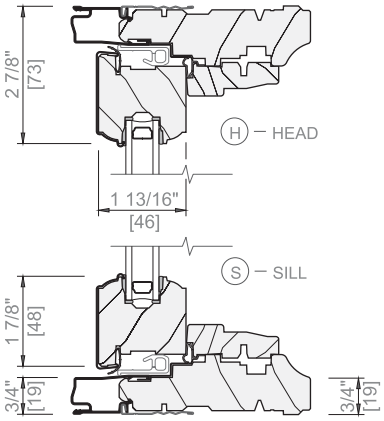


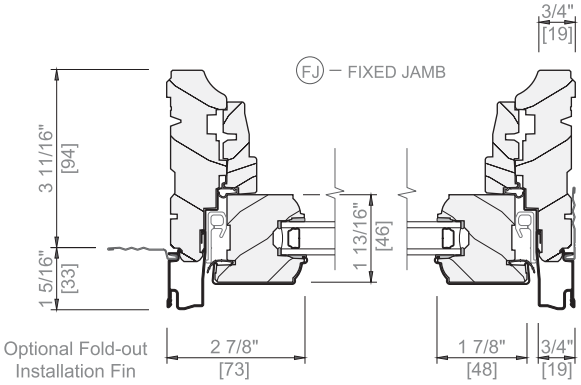




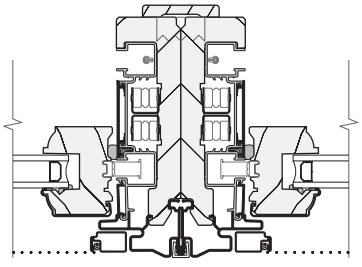
TRANSOMS



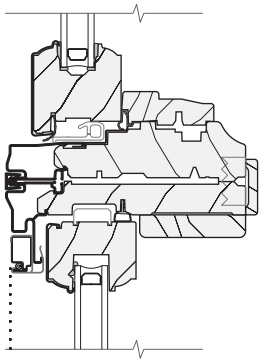




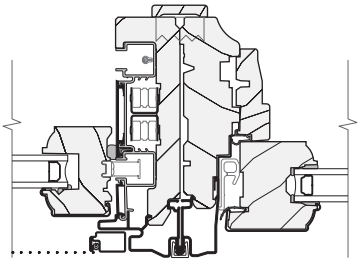
TYPICAL JOINING MULLIONS



VERTICAL JOINING MULLION
LX VENT / LX VENT



HORIZONTAL JOINING MULLION
TRANSOM / VENT

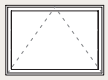


VERTICAL JOINING MULLION
LX VENT / FIXED

Scale 3" = 1' 0"

All dimensions are approximate.

See Installation and Performance at www.PellaADM.com for mullion limitations and reinforcing requirements.

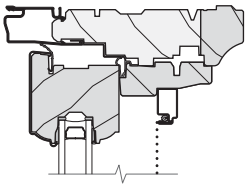


AWNING

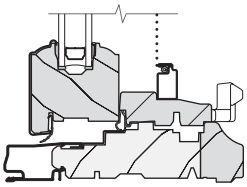
UNIT SECTIONS - WOOD COLLECTION

Aluminum-Clad Wood

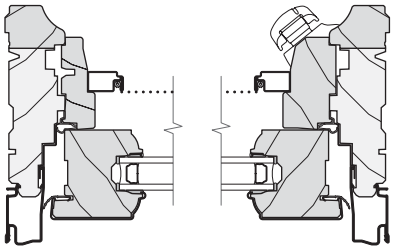
ALDER OR DOUGLAS FIR INTERIOR



HEAD



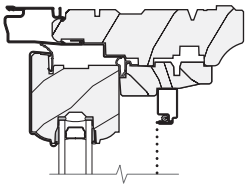
SILL



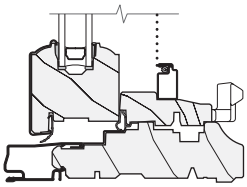
JAMBS

Alder or Douglas Fir
Solid Pine

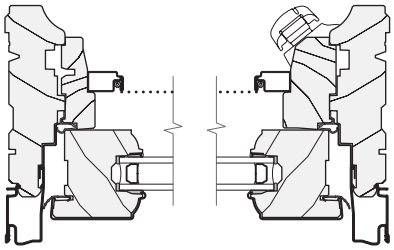
PINE OR MAHOGANY INTERIOR



HEAD



SILL



JAMBS

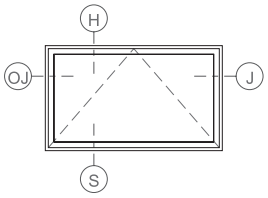
Solid Mahogany or Pine

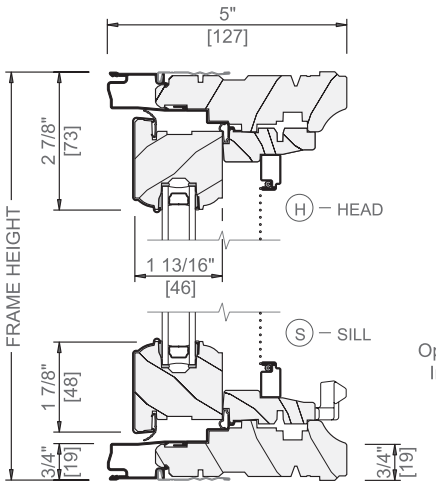
AWNING

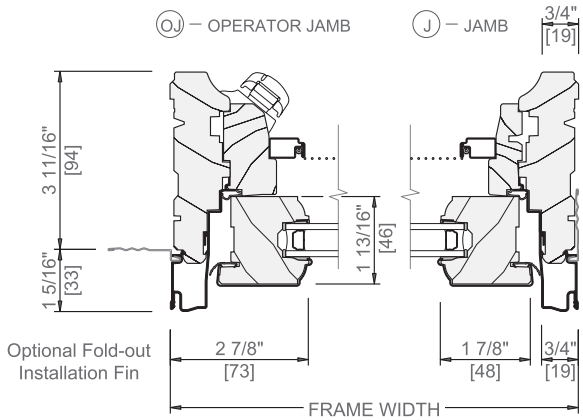
UNIT SECTIONS

Aluminum-Clad Wood

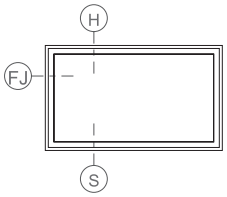
VENT

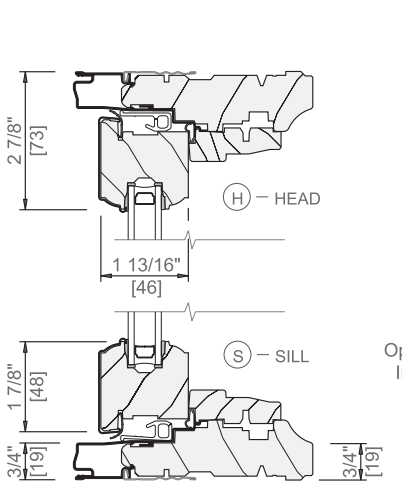


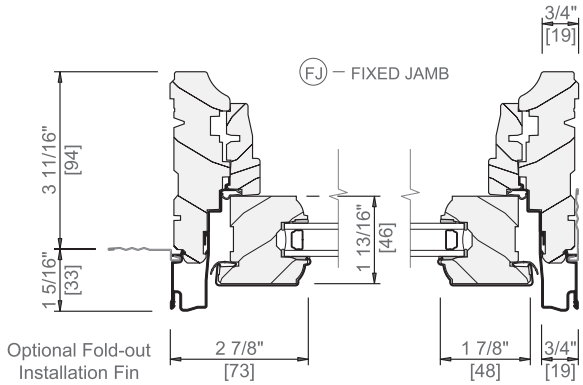




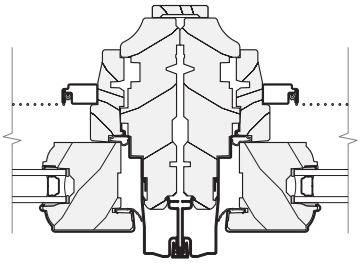
FIXED



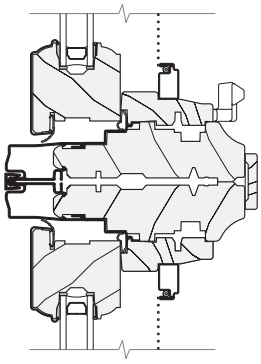




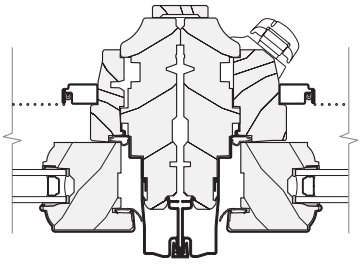
TYPICAL JOINING MULLIONS



VERTICAL JOINING MULLION
VENT / FIXED



HORIZONTAL JOINING MULLION
VENT / VENT



VERTICAL JOINING MULLION
VENT / VENT

Scale 3" = 1' 0"

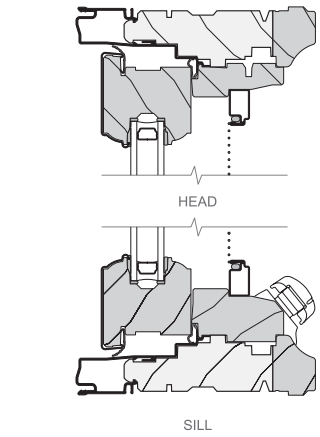
All dimensions are approximate.

CASEMENT

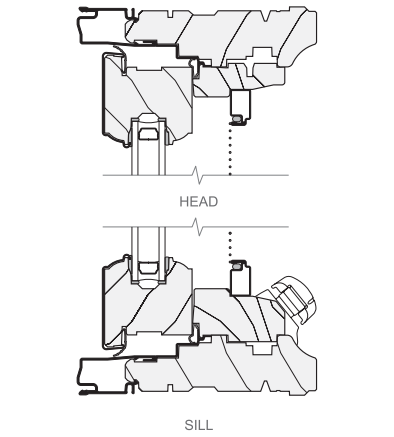
UNIT SECTIONS – WOOD COLLECTION

Aluminum-Clad Wood

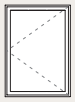
Alder or Douglas Fir Interior



Pine or Mahogany Interior



Not to Scale

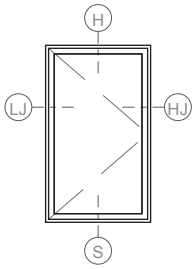


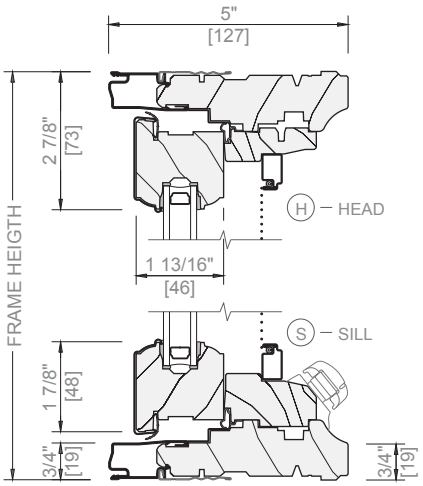
CASEMENT

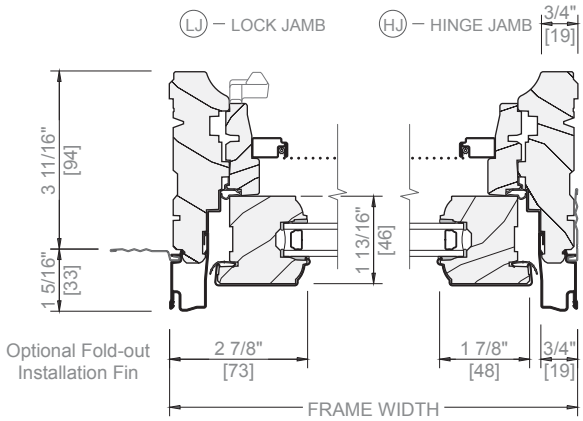
UNIT SECTIONS

Aluminum-Clad Wood

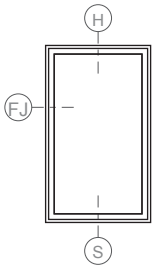
VENT

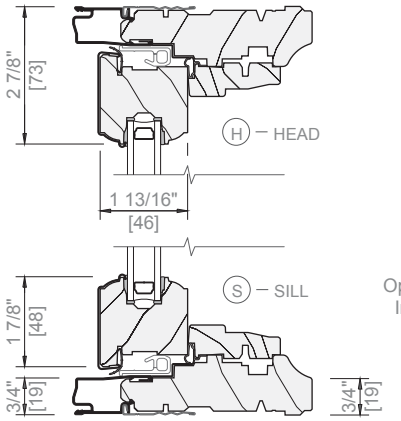


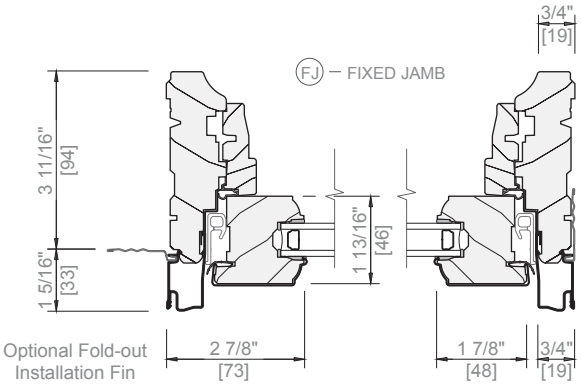




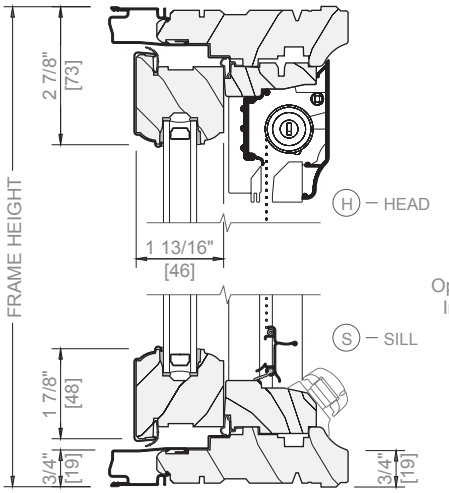
FIXED / TRANSOM

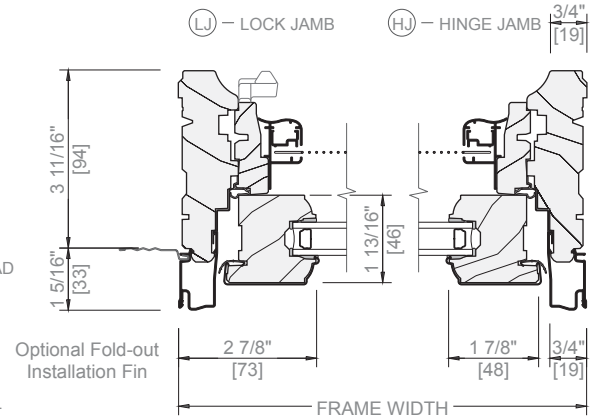






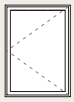
VENT WITH ROLSCREEN ® INSECT SCREEN





Scale 3" = 1' 0"

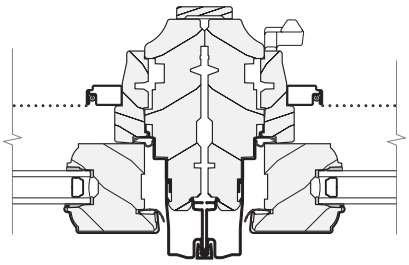
All dimensions are approximate.



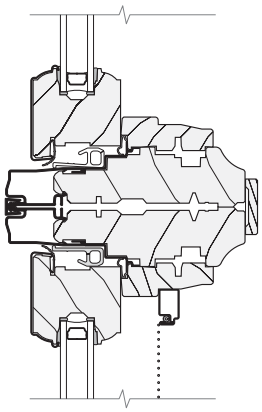
CASEMENT

UNIT SECTIONS

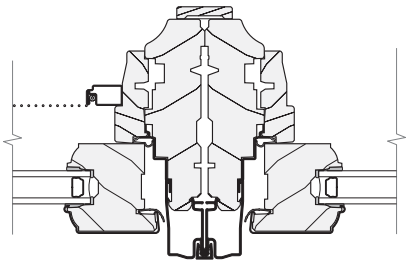
Aluminum-Clad Wood



VERTICAL JOINING MULLION
VENT / VENT



HORIZONTAL JOINING MULLION
TRANSOM / VENT



VERTICAL JOINING MULLION
VENT / FIXED

Scale 3" = 1' 0"

See Installation and Performance at www.PellaADM.com for mullion limitations and reinforcing requirements.