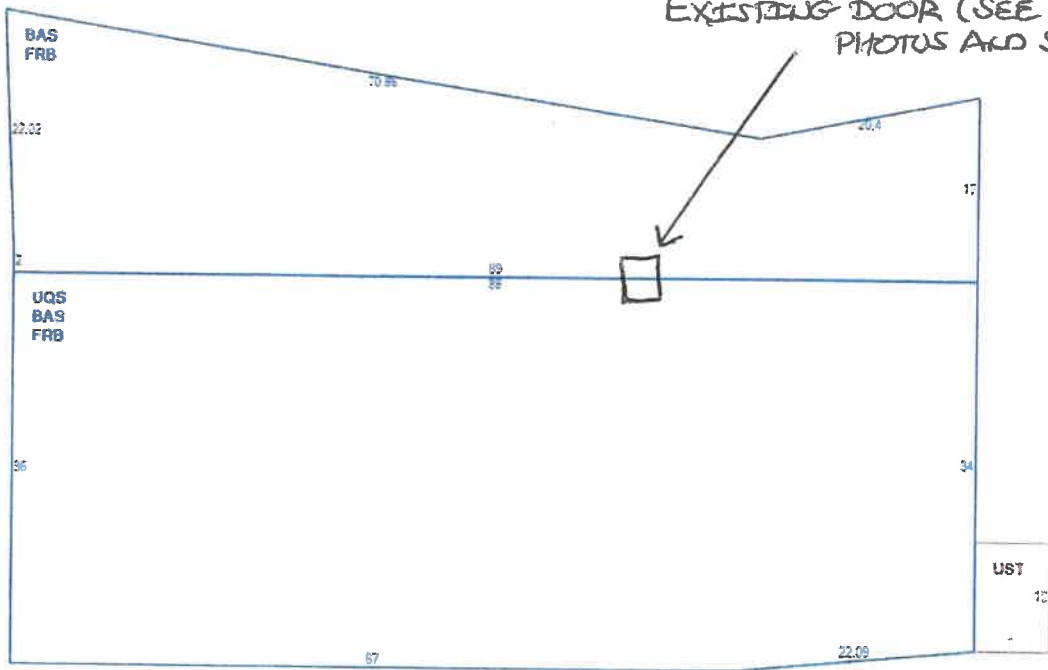




WINDOW REPLACES  
EXISTING DOOR (SEE ATTACHED  
PHOTOS AND SPECS)



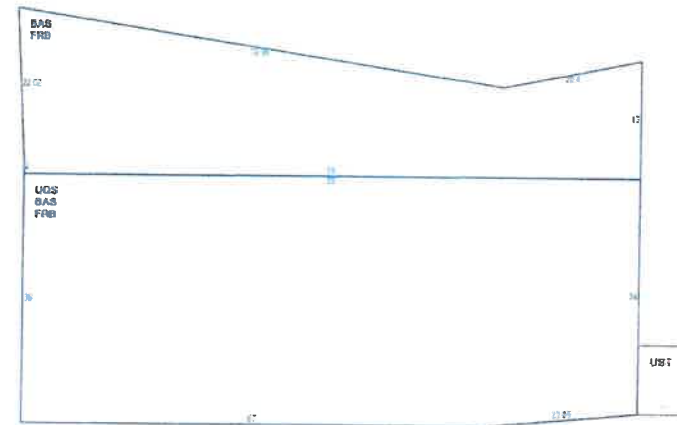
Occupancy	1.00
Residential Units	
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Drywall/Sheet
Interior Wall 2	Minim/Masonry
Interior Floor 1	Hardwood
Interior Floor 2	Ceram Clay Til
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	REST/CLUBS
Total Rooms	
Total Bedrms	
Total Baths	
Kitchen Grd	
Heat/AC	HEAT/AC PKGS
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	9.00
% Conn Wall	

### Building Photo



(<https://images.vgsi.com/photos2/PortsmouthNHPhotos/A00\02\15\66.jpg>)

### Building Layout



(ParcelSketch.ashx?pid=37496&bid=37496)

**Building Sub-Areas (sq ft)**

**Legend**



27 June 2023

**RE: 172 HANOVER STREET WINDOW REPLACEMENT FOR DOOR**



View of building from Hanover Street

Arrow points to location of rear dormer of building where proposed window will replace existing door



Close up view of end of building and metal fire escape to be removed



View of roof dormer. Arrow points to door to be replaced by new window to match adjacent original windows.

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27 June 2023

**RE: 172 HANOVER STREET WINDOW REPLACEMENT FOR DOOR, page 2**



View of continuation of dormer looking east



View of adjacent building wall opposite the dormer on south side



Interior view of door to be replaced with new window of identical size and layout of original windows

# 400 SERIES PRODUCT PERFORMANCE



## PERFORMANCE STANDARDS

The Window and Door Manufacturers Association (WDMA), the American Architectural Manufacturers Association (AAMA) and the Canadian Standards Association (CSA) jointly release the North American Fenestration Standard/Specification for Windows, Doors and Skylights (NAFS-11) where “-11” refers to the most recent publication year of 2011. NAFS is also referred to as AAMA/WDMA/CSA 101/1.S.2/A440, which is how the International Code Council (ICC) lists this standard in the 2012, 2015 and 2018 International Residential Code (IRC) and International Building Code (IBC) as the means to indicate the window, door or skylights design pressure rating used to determine compliance to the jobsite design pressure requirements.

A product only achieves a “Performance Grade” or “PG” rating when it complies with all of the NAFS performance requirements such as ease of operation, air infiltration resistance, resistance to water penetration and resistance to forced entry, etc. A “Design Pressure Rating” or “DP” rating only depicts the design and structural load performance.

### Performance Classes

The NAFS Standard/Specification defines requirements for four performance classes. Performance classes are designated R, LC, CW and AW. This classification system provides for several levels of performance. Product selection is always based on the performance and building code requirements of the particular project.

### Elements of Performance Grade (PG) Designations

In order to qualify for a given performance grade (PG), test specimens need to pass all required performance tests for the following, in addition to all required auxiliary (durability) and applicable material/component tests (not shown here) for the applicable product type and desired performance class:

- (a) **Operating force (if applicable):** Maximum operating force varies by product type and performance class.
- (b) **Air leakage resistance:** Tested in accordance with ASTM E283 at a test pressure of 1.57 psf. Allowable air infiltration for R, LC and CW class designations is 0.3 cubic feet per minute per square foot of frame (cfm/ft<sup>2</sup>).
- (c) **Water penetration resistance:** Tested in accordance with ASTM E547 with the specified test pressure applied per NAFS-11. Test consists of four cycles. Each cycle consists of five minutes with pressure applied and one minute with the pressure released, during which the water spray is continuously applied. Water spray shall be uniformly applied at a constant rate of 5 U.S. gal/ft<sup>2</sup> · hr.
- (d) **Uniform load deflection test:** Tested in accordance with ASTM E330 for both positive and negative pressure (pressure defined by NAFS-11) with the load maintained for a period of 10 seconds. The test specimen shall be evaluated for deflection during each load for permanent damage after each load and for any effects on the normal operation of the specimen. *Starting with the 2008 version of NAFS, design pressure (DP) will only represent the “uniform load deflection test.”*
- (e) **Uniform load structural test:** Tested in accordance with ASTM E330 for both positive and negative pressure (pressure defined by NAFS-11) with the load maintained for a period of 10 seconds. After loads are removed, there shall be no permanent deformation in excess of 0.4% of its span and no damage to the unit, which would make it inoperable.
- (f) **Forced-entry resistance (if applicable):** Tested in accordance with ASTM F588 (windows), F476 (swinging doors) and F842 (sliding doors) at a performance level 10 rating.

### Performance Grades (PG) and Corresponding Test Pressures (psf)

Performance Class/ Performance Grade	Air Infiltration Test Pressure	Maximum Allowable Air Infiltration/Exfiltration Rate		Water Penetration Resistance Test Pressure		Design Pressure		Structural Test Pressure		
		Pa	psf	Pa	psf	Pa	psf	Pa	psf	
15	75	1.57	1.5	0.30	140	2.92	720	15.04	1080	22.66
20	75	1.57	1.5	0.30	150	3.13	960	20.05	1440	30.08
25	75	1.57	1.5	0.30	180	3.78	1200	25.08	1800	37.59
30	75	1.57	1.5	0.30	220	4.59	1440	30.08	2160	45.11
35	75	1.57	1.5	0.30	260	5.43	1680	35.09	2520	52.63
40	75	1.57	1.5	0.30	290	6.08	1920	40.10	2880	60.15
45	75	1.57	1.5	0.30	330	6.88	2160	45.11	3240	67.67
50	75	1.57	1.5	0.30	360	7.52	2400	50.13	3600	75.19
55	75	1.57	1.5	0.30	400	8.35	2640	55.14	3960	82.71
60	75	1.57	1.5	0.30	440	9.19	2880	60.15	4320	90.23
65	75	1.57	1.5	0.30	470	9.82	3120	65.16	4680	97.74
70	75	1.57	1.5	0.30	510	10.65	3360	70.18	5040	105.26
75	75	1.57	1.5	0.30	540	11.28	3600	75.19	5400	112.78
80	75	1.57	1.5	0.30	580	12.11	3840	80.20	5760	120.30
85	75	1.57	1.5	0.30	580	12.11	4080	85.21	6120	127.82
90	75	1.57	1.5	0.30	580	12.11	4320	90.23	6480	135.34
95	75	1.57	1.5	0.30	580	12.11	4560	95.24	6840	142.86
100	75	1.57	1.5	0.30	580	12.11	4800	100.25	7200	150.38

## HALLMARK CERTIFICATION

The Window and Door Manufacturers Association (WDMA)-sponsored Hallmark Certification Program provides manufacturers with certification to the AAMA/WDMA/CSA 101/1.S.2/A440-11 Standard and is designed to provide builders, architects, specifiers and consumers with an easily recognizable means of identifying products that have been manufactured and tested in accordance with NAFS (AAMA/WDMA/CSA 101/1.S.2/A440) industry standards and other applicable performance standards. Conformance is determined by periodic in-plant inspections by a third-party administrator. Inspections include auditing licensee quality control procedures and processes, and a review to confirm products are manufactured in accordance with the appropriate performance standards. Periodic testing of representative product constructions and components by an independent testing laboratory is also required. When all of the program requirements are met, the licensee is authorized to use the WDMA Hallmark registered logo on their certification label as a means of identifying products and their performance ratings.

Products successfully obtaining Hallmark Certification will be labeled with a three-part code, which includes performance class, performance grade and size tested. In addition to this mandatory requirement, you are allowed to list the design pressure on a separate line.

	<b>Andersen Corporation</b> <b>400 SERIES CASEMENT WINDOW</b> Manufacturer stipulates certification as indicated below.					
	<table border="1"> <thead> <tr> <th>STANDARD</th> <th>RATING</th> </tr> </thead> <tbody> <tr> <td>AAMA/WDMA/CSA 101/1.S.2/A440-11</td> <td>Class LC<sup>(1)</sup> - PG50<sup>(2)</sup> - Size Tested 56 x 71.8 in.<sup>(3)</sup> DP+50/-50<sup>(4)</sup></td> </tr> <tr> <td>AAMA/WDMA/CSA 101/1.S.2/A440-08</td> <td>Class LC<sup>(1)</sup> - PG50<sup>(2)</sup> - Size Tested 56 x 71.8 in.<sup>(3)</sup> DP+50/-50<sup>(4)</sup></td> </tr> </tbody> </table>	STANDARD	RATING	AAMA/WDMA/CSA 101/1.S.2/A440-11	Class LC <sup>(1)</sup> - PG50 <sup>(2)</sup> - Size Tested 56 x 71.8 in. <sup>(3)</sup> DP+50/-50 <sup>(4)</sup>	AAMA/WDMA/CSA 101/1.S.2/A440-08
STANDARD	RATING					
AAMA/WDMA/CSA 101/1.S.2/A440-11	Class LC <sup>(1)</sup> - PG50 <sup>(2)</sup> - Size Tested 56 x 71.8 in. <sup>(3)</sup> DP+50/-50 <sup>(4)</sup>					
AAMA/WDMA/CSA 101/1.S.2/A440-08	Class LC <sup>(1)</sup> - PG50 <sup>(2)</sup> - Size Tested 56 x 71.8 in. <sup>(3)</sup> DP+50/-50 <sup>(4)</sup>					

- (1) - Performance Class
- (2) - Performance Grade
- (3) - Size Tested
- (4) - Design Pressure

In the example above, the performance class is LC, the performance grade (PG) is 50 pounds per square foot (psf) and the size tested is 56" x 71.8". What this means to the specifier is, based on the performance grade chart, the laboratory-tested air infiltration was less than 0.3 cfm/ft<sup>2</sup> (test pressure is always 1.57 psf and the allowable airflow is 0.3 cfm/ft<sup>2</sup>), the product tested successfully resisted a laboratory water penetration test at a test pressure of 7.5 psf, the product tested successfully withstood a laboratory positive test pressure of 75 psf and a laboratory negative test pressure of 75 psf, and the product tested passed the laboratory requirements for operational force and forced-entry resistance. Based on this test, all products of the same design that are smaller than the tested size can be labeled with this product performance rating.

## IMPORTANT

Building codes prescribe design pressure based on a variety of criteria (i.e., windspeed zone, building height, building type, jobsite exposure, etc.). Design pressures derived from Performance Grade (PG) test requirements should be used to determine compliance to building code required design pressures. **Structural test pressures, which are tested at 1.5 times the design pressure, should not be used for determining design pressure code compliance.** In the example above, a PG 50 performance grade rating, which passes a 50 psf design pressure, should be used for determining code compliance, not the structural test pressure of 75 psf.

If you need further details about how Andersen® products perform to this standard, contact your Andersen supplier.

If you need further information about the AAMA/WDMA/CSA 101/1.S.2/A440-11 standard or the Hallmark Certification Program, please contact: WDMA, 330 N. Wabash Avenue, Suite 2000, Chicago, IL 60611. Phone: 312-321-6802 Website: [wdma.com](http://wdma.com)

Where designated, Andersen products are tested, certified and labeled to the requirements of the Hallmark Certification Program. Actual performance may vary based on variations in manufacturing, shipping, installation, environmental conditions and conditions of use.

# 400 SERIES PRODUCT PERFORMANCE



## Performance Grade and Air Infiltration Ratings — 400 Series Windows

For current performance information, please visit [andersenwindows.com](http://andersenwindows.com).

Andersen® Product	AAMA/WDMA/CSA 101/LS.2/A440 Performance Grade (PG)	+/- Corresponding Design Pressure (DP)	Air Infiltration CFM/FT²
<b>Casement Windows</b>			
Single Stationary (CXW16)	Class LC-PG50 Size Tested 35" x 71"	50/50	< 0.2
Single Venting (CXW16-155, CX16-155)	Class LC-PG40 Size Tested 35" x 71"	40/40	< 0.2
Single Venting (CXW15)	Class LC-PG45 Size Tested 71" x 60"	45/45	< 0.2
Single Venting (CW16 and smaller)	Class LC-PG50 Size Tested 60" x 71"	50/50	< 0.2
Single Venting (CXW145 and smaller)	Class LC-PG50 Size Tested 71" x 52"	50/50	< 0.2
Single Venting (CX15 and smaller)	Class LC-PG50 Size Tested 62" x 59"	50/50	< 0.2
Twin Stationary (CXW245, CX25, CW26 and smaller)	Class LC-PG50 Size Tested 56" x 71"	50/50	< 0.2
Twin Venting (CXW25)	Class LC-PG45 Size Tested 71" x 60"	45/45	< 0.2
Twin Venting (CXW245 and smaller)	Class LC-PG50 Size Tested 71" x 52"	50/50	< 0.2
Twin Venting (CX25 and smaller)	Class LC-PG50 Size Tested 62" x 59"	50/50	< 0.2
Twin Venting (CW26 and smaller)	Class LC-PG50 Size Tested 60" x 71"	50/50	< 0.2
Triple Venting (CW35 and smaller)	Class LC-PG40 Size Tested 84" x 80"	40/40	< 0.2
Triple Venting (C35 and smaller)	Class LC-PG50 Size Tested 71" x 60"	50/50	< 0.2
Casement/Awning Picture Windows (P5060 and smaller)	Class LC-PG70 Size Tested 59" x 71"	70/70	< 0.2
Casement/Awning Transom Windows (CTR32410 and smaller)	Class LC-PG70 Size Tested 84" x 12"	70/70	< 0.2
<b>Casement Windows, PG Upgrade</b>			
Single Stationary (tempered glass, CXW16)	Class LC-PG70 Size Tested 35" x 71"	70/70	< 0.2
Single Venting (CXW145 and smaller)	Class LC-PG70 Size Tested 35" x 52"	70/70	< 0.2
Single Venting (CX16 and smaller)	Class LC-PG70 Size Tested 31" x 71"	70/70	< 0.2
Twin Venting (CW26 and smaller)	Class LC-PG70 Size Tested 56" x 71"	70/70	< 0.2
Triple Venting (C35 and smaller)	Class LC-PG70 Size Tested 71" x 59"	70/70	< 0.2
<b>Complementary Casement Windows</b>			
Casement Venting	Class LC-PG50 Size Tested 35" x 84"	50/50	< 0.2
Casement Stationary	Class LC-PG60 Size Tested 120" x 78"	60/60	< 0.2
French Casement Venting	Class LC-PG30 Size Tested 56" x 72"	30/30	< 0.2
<b>Awning Windows</b>			
Single Stationary (AXW61)	Class LC-PG50 Size Tested 35" x 71"	50/50	< 0.2
Single Venting (AXW51 and smaller)	Class LC-PG35 Size Tested 59" x 35"	35/35	< 0.2
Single Venting (AX61 and smaller)	Class LC-PG35 Size Tested 72" x 31"	35/35	< 0.2
Twin Venting (AXW231 and smaller)	Class LC-PG35 Size Tested 71" x 36"	35/35	< 0.2
Triple Venting (AX3251 and smaller)	Class LC-PG35 Size Tested 84" x 31"	35/35	< 0.2
Triple Venting (A313 and smaller)	Class LC-PG35 Size Tested 35" x 71"	35/35	< 0.2
Picture Venting (PA4060 and smaller)	Class LC-PG35 Size Tested 48" x 71"	35/35	< 0.2
<b>Awning Windows, PG Upgrade</b>			
Single Stationary (tempered glass, AXW61)	Class LC-PG70 Size Tested 35" x 71"	70/70	< 0.2
Single, Twin and Triple Venting (AX3251 and smaller)	Class LC-PG60 Size Tested 84" x 31"	60/60	< 0.2
Triple Venting (A313 and smaller)	Class LC-PG60 Size Tested 35" x 71"	60/60	< 0.2

\*Performance Grade (PG) ratings may vary from tested performance rating for larger or smaller units of a particular type. continued on next page  
 \*This data is accurate as of May 2021. Due to ongoing product changes, updated test results or new industry standards, this data may change over time.  
 \*Where designated, Andersen products are certified and labeled to the requirements of the Hallmark Certification Program. Actual performance may vary based on variations in manufacturing, shipping, installation, environmental conditions and conditions of use.  
 \*Contact your Andersen supplier for more information.  
 \*Window size tested is an integral twin or triple window, and qualifies the window listed under the same test.



# 400 SERIES PRODUCT PERFORMANCE



## Performance Grade and Air Infiltration Ratings – 400 Series Windows *(continued)*

For current performance information, please visit [andersenwindows.com](http://andersenwindows.com).

Andersen® Product	AAMA/WDMA/CSA 101/1.S.2/M440 Performance Grade (PG)	+/- Corresponding Design Pressure (DP)	Air Infiltration CFM/FT <sup>2</sup>
<b>Woodwright® Full-Frame Windows</b>			
Double-Hung (3862 and smaller)	Class LC-PG30 Size Tested 45" x 76"	30/30	< 0.2
Double-Hung (cottage sash, 3862 and smaller)	Class R-20 Size Tested 45" x 76"	20/20	< 0.2
Arch Double-Hung (3862 and smaller)	Class LC-PG30 Size Tested 45" x 76"	30/30	< 0.2
Springline® Single-Hung (3872 and smaller)	Class LC-PG30 Size Tested 45" x 86"	30/30	< 0.2
Picture (5862 and smaller)	Class LC-PG65 Size Tested 67" x 78"	65/65	< 0.2
Transom (6231 and smaller)	Class LC-PG70 Size Tested 75" x 39"	70/70	< 0.2
<b>Woodwright Full-Frame Windows, PG Upgrade</b>			
Double-Hung (3052 and smaller)	Class LC-PG50 Size Tested 37" x 64"	50/50	< 0.2
Arch Double-Hung (3054)	Class LC-PG50 Size Tested 37" x 64"	50/50	< 0.2
Springline Single-Hung (3057)	Class LC-PG50 Size Tested 37" x 87"	50/50	< 0.2
<b>Woodwright Inset Windows</b>			
Double-Hung (3862 and smaller)	Class R-PG25 Size Tested 45" x 77"	25/25	< 0.2
Double-Hung (cottage sash, 3862 and smaller)	Class R-PG20 Size Tested 45" x 68"	20/20	< 0.2
Picture (5862 and smaller)	Class LC-PG30 Size Tested 68" x 78"	30/30	< 0.2
Transom (6878 and smaller)	Class LC-PG30 Size Tested 68" x 78"	30/35	< 0.2
<b>Tilt-Wash Full-Frame Windows</b>			
Double-Hung (3862 and smaller)	Class LC-PG40 Size Tested 45" x 76"	40/40	< 0.2
Double-Hung (cottage sash, 3856 and smaller)	Class LC-PG40 Size Tested 45" x 68"	40/40	< 0.2
Double-Hung** (3876 and smaller)	Class LC-PG30 Size Tested 45" x 82"	30/35	< 0.2
Picture (5862 and smaller)	Class LC-PG50 Size Tested 67" x 78"	50/65	< 0.2
Transom (6231 and smaller)	Class LC-PG50 Size Tested 75" x 39"	50/50	< 0.2
<b>Tilt-Wash Windows, PG Upgrade</b>			
Double-Hung	Class LC-PG50 Size Tested 45" x 76"	50/50	< 0.2
<b>Tilt-Wash Inset Windows</b>			
Double-Hung (double lock)	Class R-PG20 Size Tested 45" x 92"	20/20	< 0.2
Double-Hung (single lock)	Class R-PG20 Size Tested 35" x 92"	20/20	< 0.2
Double-Hung	Class LC-PG30 Size Tested 45" x 76"	30/30	< 0.2
Sliding Windows (G65 and smaller)	Class LC-PG30 Size Tested 71" x 59"	30/30	< 0.2
<b>Specialty Windows</b>			
Arch (AFFW6080 and smaller)	Class LC-PG50 Size Tested 71" x 105"	50/50	< 0.2
Flexframe® (12050 and smaller)	Class LC-PG50 Size Tested 144" x 60"	50/50	< 0.2
Springline (SP802 and smaller)	Class LC-PG50 Size Tested 96" x 72"	50/50	< 0.2
<b>Specialty Windows, PG Upgrade</b>			
Arch (tempered glass, AFFW6080 and smaller)	Class LC-PG70 Size Tested 71" x 105"	70/70	< 0.2
Flexframe (tempered glass, 12050 and smaller)	Class LC-PG70 Size Tested 144" x 60"	70/70	< 0.2
Springline (tempered glass, SP802 and smaller)	Class LC-PG70 Size Tested 96" x 72"	70/70	< 0.2
Complimentary Specialty Windows (direct-set, fixed)	Class LC-PG50 Size Tested 125" x 84"	50/50	< 0.2

\*Performance Grade (PG) ratings may vary from tested performance rating for larger or smaller units of a particular type.  
 \*\*This data is accurate as of May 2021. Due to ongoing product changes, updated test results or new industry standards, this data may change over time.  
 \*Where designated, Andersen products are certified and labeled to the requirements of the Hallmark Certification Program. Actual performance may vary based on variations in manufacturing, shipping, installation, environmental conditions and conditions of use.  
 \*Contact your Andersen supplier for more information.  
 \*\*Window heights equal to or greater than 7'-4 1/4" (2250) and 7'-8 1/4" (2359) have interior and exterior brackets. Interior brackets, located on each side of the meeting rail, must be flipped up for proper product performance.



# 400 SERIES PRODUCT PERFORMANCE



## Performance Grade and Air Infiltration Ratings – 400 Series Patio Doors

For current performance information, please visit [andersenwindows.com](http://andersenwindows.com).

Anderson® Product	AAMA/WDMA/CSA 101/1.3.2/A440 Performance Grade (PG)	+/- Corresponding Design Pressure (DP)	Air Infiltration CFM/FT <sup>2</sup>
<b>Frenchwood® Gliding Patio Doors</b>			
Single Stationary	Class LC-PG40 Size Tested 60" x 95"	40/40	< 0.2
Two-Panel	Class LC-PG40 Size Tested 96" x 95"	40/40	< 0.2
Four-Panel (8')	Class LC-PG35 Size Tested 188" x 95"	35/35	< 0.2
Four-Panel (6'-11", 6'-8")	Class LC-PG25 Size Tested 189" x 82"	25/25	< 0.2
<b>Frenchwood Hinged Inswing Patio Doors</b>			
Single Active	Class LC-PG40 Size Tested 107" x 95"	40/40	< 0.2
Two-Panel	Class LC-PG40 Size Tested 71" x 95"	40/40	< 0.2
Three-Panel	Class LC-PG40 Size Tested 107" x 95"	40/40	< 0.2
Frenchwood Patio Door Sidelights	Class LC-PG40 Size Tested 18" x 95"	40/40	< 0.2
Frenchwood Patio Door Transoms	Class LC-PG40 Size Tested 71" x 21"	40/40	< 0.2
<b>Complementary Springline™ and Arch Hinged Inswing Patio Doors</b>			
Single Stationary	Class LC-PG45 Size Tested 37" x 95"	45/45	< 0.2
Single Active†	Class LC-PG45 Size Tested 37" x 95"	45/45	< 0.2
Two-Panel Stationary	Class LC-PG45 Size Tested 75" x 95"	45/45	< 0.2
Two-Panel Active†	Class LC-PG45 Size Tested 75" x 95"	45/45	< 0.2
<b>Complementary Springline and Arch Hinged Outswing Patio Doors</b>			
Single Stationary	Class LC-PG45 Size Tested 37" x 95"	45/45	< 0.2
Single Active†	Class LC-PG45 Size Tested 37" x 95"	45/45	< 0.2
Two-Panel Stationary	Class LC-PG45 Size Tested 75" x 95"	45/45	< 0.2
Two-Panel Active†	Class LC-PG45 Size Tested 75" x 95"	45/45	< 0.2

\*Performance Grade (PG)† ratings may vary from tested performance rating for larger or smaller units of a particular type.

†This data is accurate as of

May 2021. Due to ongoing product changes, updated test results or new industry standards, this data may change over time.

\*Where designated, Andersen products are certified and labeled to the requirements of the Hallmark Certification Program. Actual performance may vary based on variations in manufacturing, shipping, installation, environmental conditions and conditions of use.

\*Contact your Andersen supplier for more information.

†Tested with standard multi-point hardware.

# 400 SERIES PRODUCT PERFORMANCE



## Sound Transmission Ratings for 400 Series Windows and Patio Doors

For current performance information, please visit [andersenwindows.com](http://andersenwindows.com).

Andersen® Product	Test Size	Sound Transmission Class (STC)	Outdoor/Indoor Transmission Class (OITC)
<b>Casement Windows</b>	36" x 72"	26	22
<b>Awning Windows</b>	30" x 60"	26	21
<b>Casement/Awning Picture Windows</b>	60" x 72"	29	25
<b>Woodwright® Double-Hung Windows</b>			
Double-Hung Full-Frame	46" x 77"	28	23
Picture Full-Frame	48" x 48"	28	23
Transom Full-Frame	40" x 46"	28	22
Double-Hung Insert	20" x 60"	26	21
Picture Insert	53" x 78"	30	26
Transom Insert	53" x 78"	30	26
<b>Tilt-Wash Double-Hung Windows</b>			
Double-Hung Full-Frame	46" x 78"	29	24
Picture Full-Frame	66" x 77"	30	25
Transom Full-Frame	-	-	-
Double-Hung Insert	32" x 76"	27	24
Picture Insert	-	-	-
Transom Insert	-	-	-
<b>Gliding Windows</b>	72" x 60"	26	22
<b>Specialty Windows</b>	72" x 60"	30	25
<b>Complementary Specialty Windows</b>	72" x 60"	30	25
<b>Frenchwood® Sliding Patio Doors</b>			
Single Stationary	50" x 80"	31	26
Two-Panel	72" x 80"	31	26
Four-Panel	-	-	-
<b>Frenchwood Hinged Inswing Patio Doors</b>			
Single Active	36" x 60"	30	26
Two-Panel	72" x 80"	30	26
Three-Panel	-	-	-
<b>Frenchwood Patio Door Sidelights &amp; Transoms</b>			
Sidelight	18" x 82"	32	26
Transom	72" x 22"	29	25
<b>Complementary Springline® &amp; Arch Hinged Inswing Patio Doors</b>			
Single Active	38" x 90"	30	25
Two-Panel	75" x 90"	30	25
<b>Complementary Springline &amp; Arch Hinged Outswing Patio Doors</b>			
Single-Panel	38" x 90"	31	25
Two-Panel	75" x 90"	31	25

\*Sound Transmission Class (STC) and "Outdoor/Indoor Transmission Class (OITC)" ratings are for individual units based on independent tests and represent entire unit.

\*This data is accurate as of May 2021. Due to ongoing product changes, updated test results or new industry standards, this data may change over time.

\*Contact your Andersen supplier for more information.

# 400 SERIES TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS



**Table of Tilt-Wash Double-Hung Window Sizes**  
Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-9 5/8"	2'-1 5/8"	2'-5 5/8"	2'-7 5/8"	2'-9 5/8"	2'-11 5/8"	3'-1 5/8"	3'-5 5/8"	3'-9 5/8"
<b>Minimum Rough Opening</b>	1'-10 1/8" (562)	2'-2 1/8" (664)	2'-6 1/8" (765)	2'-8 1/8" (816)	2'-10 1/8" (867)	3'-0 1/8" (917)	3'-2 1/8" (968)	3'-6 1/8" (1070)	3'-10 1/8" (1172)
<b>Unobstructed Glass (lower sash only)</b>	15" (381)	19" (483)	23" (584)	25" (635)	27" (686)	29" (737)	31" (787)	35" (889)	39" (991)

CUSTOM WIDTHS – 21 5/8" to 45 5/8"									
Window Dimension	1'-9 5/8"	2'-1 5/8"	2'-5 5/8"	2'-7 5/8"	2'-9 5/8"	2'-11 5/8"	3'-1 5/8"	3'-5 5/8"	3'-9 5/8"
3'-0 7/8" (937)	TW18210	TW20210	TW24210	TW26210	TW28210	TW210210	TW30210	TW34210	TW38210
3'-4 7/8" (1038)	TW1832	TW2032	TW2432	TW2632	TW2832	TW21032	TW3032	TW3432	TW3832
3'-8 7/8" (1140)	TW1836	TW2036	TW2436	TW2636	TW2836	TW21036	TW3036	TW3436	TW3836
4'-0 7/8" (1241)	TW18310	TW20310	TW24310	TW26310	TW28310	TW210310	TW30310	TW34310	TW38310
4'-4 7/8" (1343)	TW1842	TW2042	TW2442	TW2642	TW2842	TW21042	TW3042	TW3442	TW3842
4'-8 7/8" (1445)	TW1846	TW2046	TW2446	TW2646	TW2846	TW21046	TW3046 <sup>o</sup>	TW3446 <sup>o</sup>	TW3846 <sup>o</sup>
5'-0 7/8" (1546)	TW18410	TW20410	TW24410	TW26410	TW28410	TW210410 <sup>o</sup>	TW30410 <sup>o</sup>	TW34410 <sup>o</sup>	TW38410 <sup>o</sup>
5'-4 7/8" (1648)	TW1852	TW2052	TW2452	TW2652	TW2852 <sup>o</sup>	TW21052 <sup>o</sup>	TW3052 <sup>o</sup>	TW3452 <sup>o</sup>	TW3852 <sup>o</sup>
5'-8 7/8" (1749)	TW1856	TW2056	TW2456	TW2656 <sup>o</sup>	TW2856 <sup>o</sup>	TW21056 <sup>o</sup>	TW3056 <sup>o</sup>	TW3456 <sup>o</sup>	TW3856 <sup>o</sup>
6'-0 7/8" (1851)	TW18510	TW20510	TW24510 <sup>o</sup>	TW26510 <sup>o</sup>	TW28510 <sup>o</sup>	TW210510 <sup>o</sup>	TW30510 <sup>o</sup>	TW34510 <sup>o</sup>	TW38510 <sup>o</sup>
6'-4 7/8" (1953)	TW1862	TW2062	TW2462 <sup>o</sup>	TW2662 <sup>o</sup>	TW2862 <sup>o</sup>	TW21062 <sup>o</sup>	TW3062 <sup>o</sup>	TW3462 <sup>o</sup>	TW3862 <sup>o</sup>

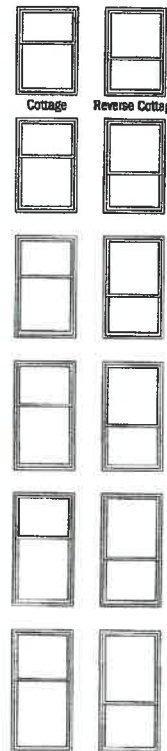


Custom-size windows are available in 1/8" (3) increments.

Cottage or reverse cottage sash ratio available for heights shown below in all widths.

CUSTOM WIDTHS – 21 5/8" to 45 5/8"

CUSTOM HEIGHTS – 48 7/8" to 76 1/4"



Size tables for windows with cottage or reverse cottage sash are available at [andersenwindows.com/sizing](http://andersenwindows.com/sizing).

\*"Window Dimension" always refers to outside frame-to-frame dimension.  
 \*"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items.  
 \*Dimensions in parentheses are in millimeters.  
 o Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m<sup>2</sup>, clear opening width of 20" (508) and clear opening height of 24" (610).

# 400 SERIES TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS



**Table of Tilt-Wash Double-Hung Window Sizes** (continued)  
Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-9 5/8"	2'-1 5/8"	2'-5 5/8"	2'-7 5/8"	2'-9 5/8"	2'-11 5/8"	3'-1 5/8"	3'-5 5/8"	3'-9 5/8"
	(549)	(651)	(752)	(803)	(854)	(905)	(956)	(1057)	(1159)
Minimum Rough Opening	1'-10 1/8"	2'-2 1/8"	2'-6 1/8"	2'-8 1/8"	2'-10 1/8"	3'-0 1/8"	3'-2 1/8"	3'-6 1/8"	3'-10 1/8"
	(562)	(664)	(765)	(816)	(867)	(917)	(968)	(1070)	(1172)
Unobstructed Glass (lower sash only)	15"	19"	23"	25"	27"	29"	31"	35"	39"
	(381)	(483)	(584)	(635)	(686)	(737)	(787)	(889)	(991)

CUSTOM WIDTHS – 21 5/8" to 46 5/8"

Window Dimension	7'-4 1/8"	7'-4 7/8"	7'-8 1/8"	7'-8 7/8"	7'-11 1/8"	7'-11 5/8"	7'-11 7/8"	7'-11 3/4"
	(2257)	(2257)	(2359)	(2359)	(2461)	(2461)	(2461)	(2461)
Minimum Rough Opening	7'-4 7/8"	7'-4 7/8"	7'-8 7/8"	7'-8 7/8"	7'-11 7/8"	7'-11 7/8"	7'-11 7/8"	7'-11 7/8"
	(2257)	(2257)	(2359)	(2359)	(2461)	(2461)	(2461)	(2461)
Unobstructed Glass (lower sash only)	39 15/16"	39 15/16"	41 15/16"	41 15/16"	43 1/8"	43 1/8"	43 1/8"	43 1/8"
	(1014)	(1014)	(1065)	(1065)	(1116)	(1116)	(1116)	(1116)

CUSTOM HEIGHTS – 36 7/8" to 92 7/8"

- \* "Window Dimension" always refers to outside frame-to-frame dimension.
  - \* "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items.
  - \* Dimensions in parentheses are in millimeters.
- ⊕ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m<sup>2</sup>, clear opening width of 20" (508) and clear opening height of 24" (610).



Custom-size windows are available in 1/8" (3) increments.

Windows 7'-4 7/8" (2257) and 7'-8 7/8" (2359) high have interior and exterior brackets. Interior brackets, located on both sides of the meeting rail, must be flipped up for proper product performance. Andersen reinforced joining materials must be used when vertically joining 7'-4 7/8" (2257) and 7'-8 7/8" (2359) height windows.



# 400 SERIES TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS

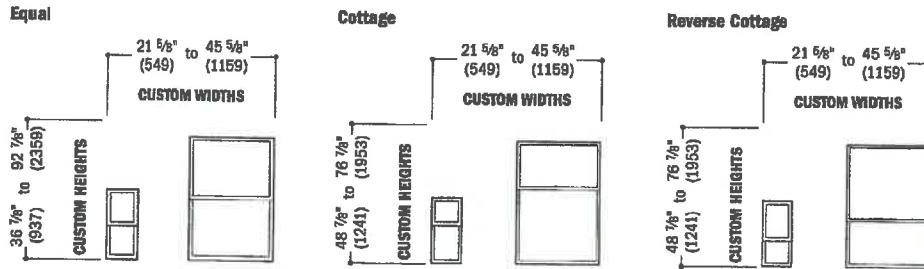


## Custom Sizes and Specification Formulas



Available in 1/8" (3) increments between minimum and maximum widths and heights. Some restrictions apply; contact your Andersen supplier. For minimum rough opening dimensions for joined windows, see specific joining instruction guides. Measurement guide for custom-size windows can be found at [andersewindows.com/measure](http://andersewindows.com/measure).

### Tilt-Wash Double-Hung Windows



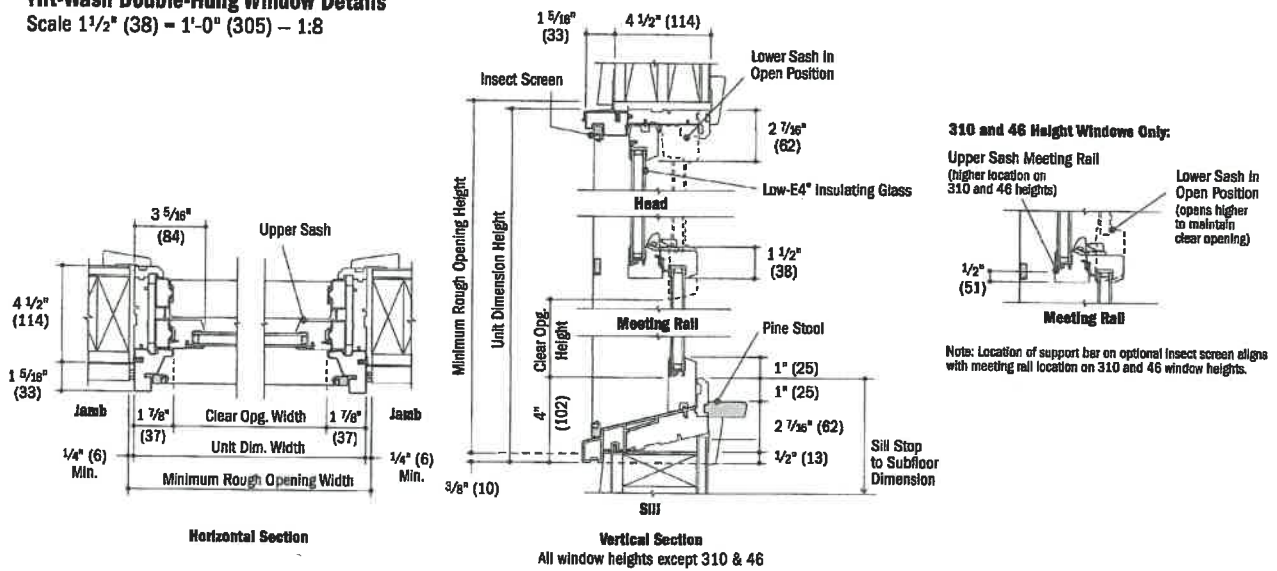
<p><b>Clear Opening</b></p>	<p>Width = window width - 1.852" (47) x 2                  Contact your Andersen supplier for clear opening height.</p>	<p><b>Minimum R.O.</b></p>	<p>Width = window width + 1/2" (51)                  Height = window height + 0"</p>
<p><b>Vent Opening</b></p>	<p>Vent opening formulas are dependent on window size; contact your Andersen supplier.</p>	<p><b>Unobst. Glass</b></p>	<p>Width = window width - 3.376" (86)                  Height:                  Upper Sash = upper sash height - 3.035" (77)                  Lower Sash = lower sash height - 3.831" (97)</p>

\* Dimensions in parentheses are in millimeters.  
 • Clear Opening formulas provide dimensions for determining area available for egress. Vent Opening formulas provide dimensions for determining area available for passage of air. Minimum R.O. (minimum rough opening) formulas provide minimum rough opening width and height dimensions. Unobst. Glass (unobstructed glass) formulas provide dimensions for determining area available for passage of light.

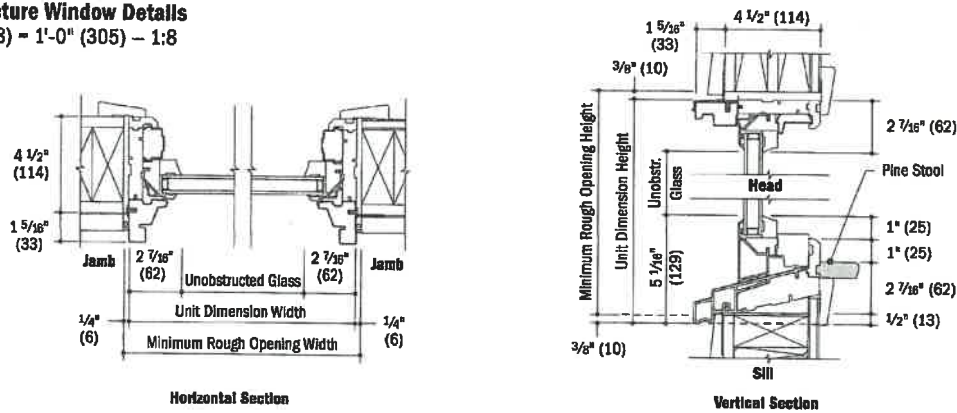
# 400 SERIES TILT-WASH DOUBLE-HUNG FULL-FRAME WINDOWS



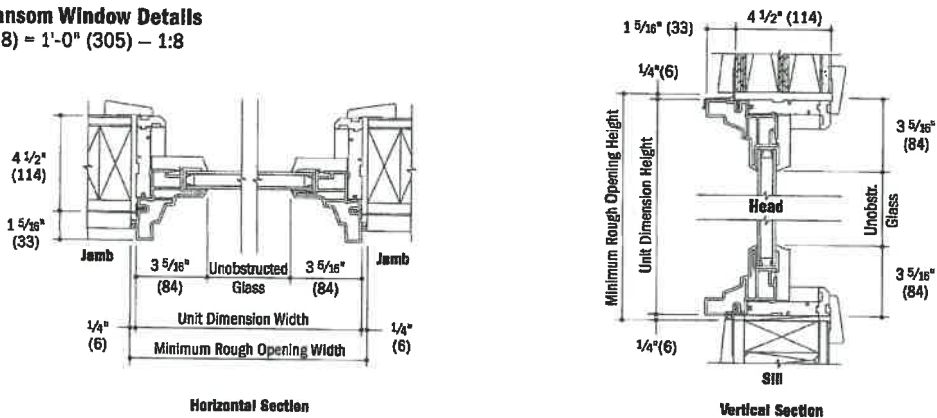
## Tilt-Wash Double-Hung Window Details Scale 1 1/2" (38) = 1'-0" (305) – 1:8



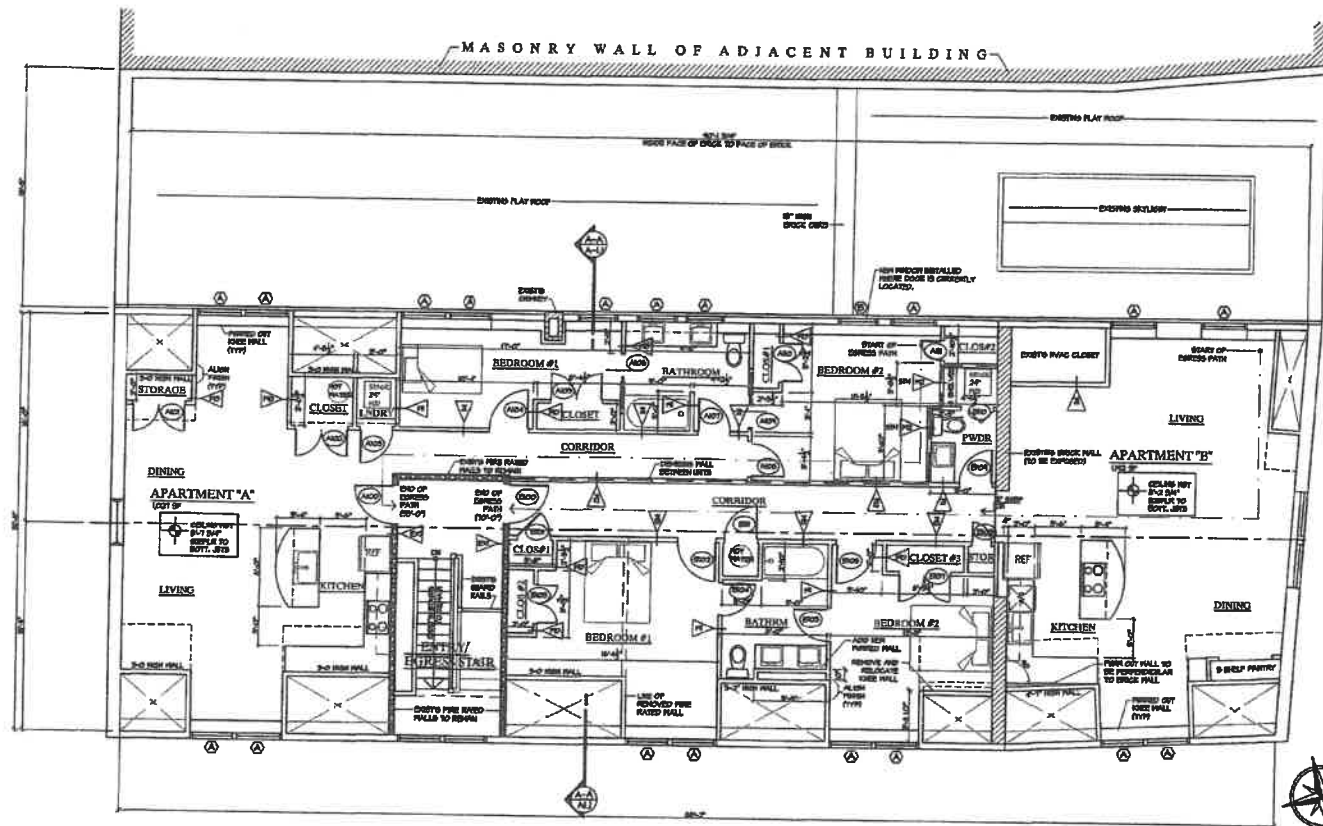
## Tilt-Wash Picture Window Details Scale 1 1/2" (38) = 1'-0" (305) – 1:8



## Tilt-Wash Transom Window Details Scale 1 1/2" (38) = 1'-0" (305) – 1:8



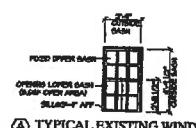
- Light-colored areas are parts included with window. Dark-colored areas are additional Andersen® parts required to complete window assembly as shown.
- Minimum rough openings may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items.
- Details are for illustration only and are not intended to represent product installation methods or materials. Refer to product installation guides at [andersenwindows.com](http://andersenwindows.com).
- Dimensions in parentheses are in millimeters.



TWO APARTMENT FLOOR PLAN  
SCALE 1/4" = 1'-0"



**NEW WINDOW**  
 - WINDOW TYPE: 2'-0" x 4'-0" DOUBLE GLAZED  
 - WINDOW FRAME: 1 1/2" ALUMINUM  
 - WINDOW GLASS: 1/2" CLEAR GLASS  
 - WINDOW OPERATOR: 1 1/2" ALUMINUM  
 - WINDOW FINISH: 1/2" ALUMINUM  
 - WINDOW INSTALLATION: 1/2" ALUMINUM  
 - WINDOW LOCATION: AS SHOWN ON PLAN



**TYPICAL EXISTING WINDOW**  
 - WINDOW TYPE: 2'-0" x 4'-0" DOUBLE GLAZED  
 - WINDOW FRAME: 1 1/2" ALUMINUM  
 - WINDOW GLASS: 1/2" CLEAR GLASS  
 - WINDOW OPERATOR: 1 1/2" ALUMINUM  
 - WINDOW FINISH: 1/2" ALUMINUM  
 - WINDOW INSTALLATION: 1/2" ALUMINUM  
 - WINDOW LOCATION: AS SHOWN ON PLAN

PARTITION SCHEDULE				
MALL TYPE	DETAIL	DESCRIPTION	UL	REMARKS
ED	ED	- EXISTING 2'-0" x 4'-0" DOUBLE GLAZED WINDOW - 1/2" CLEAR GLASS - 1 1/2" ALUMINUM FRAME - 1 1/2" ALUMINUM OPERATOR - 1/2" ALUMINUM FINISH - 1/2" ALUMINUM INSTALLATION	1 HR	EXISTING WALL IS CORNER AND FINISH TO BE REFINISHED AS A FIRE RATED WALL ASSEMBLY
PD	PD	- 2'-0" x 4'-0" RECESSED WOOD STUD - 1/2" GYPSUM BOARD TO INTERIOR OF STUD - NON-FIRE RATED WALL	0 HR	
PI	PI	- 2'-0" x 4'-0" RECESSED WOOD STUD - 1/2" GYPSUM BOARD TO BOTH SIDES OF STUD - 5/8" FIBERGLASS INSULATION - NON-FIRE RATED WALL	1 HR	

PARTITION SCHEDULE				
MALL TYPE	DETAIL	DESCRIPTION	UL	REMARKS
PIA	PIA	- 2'-0" x 4'-0" RECESSED WOOD STUD - 1/2" GYPSUM BOARD TO INTERIOR OF STUD - 5/8" FIBERGLASS INSULATION - NON-FIRE RATED WALL	1 HR	
PC	PC	- EXISTING 2'-0" x 4'-0" DOUBLE GLAZED WINDOW - 1/2" CLEAR GLASS - 1 1/2" ALUMINUM FRAME - 1 1/2" ALUMINUM OPERATOR - 1/2" ALUMINUM FINISH - 1/2" ALUMINUM INSTALLATION	1 HR	EXISTING WALL BETWEEN UNITS WITH 2'-0" x 4'-0" STUD FOR GYPSUM BOARD FINISH TO INTERIOR ASSEMBLY
PD	PD	- EXISTING 2'-0" x 4'-0" RECESSED WOOD STUD - 1/2" GYPSUM BOARD TO BOTH SIDES OF STUD - 5/8" FIBERGLASS INSULATION - NON-FIRE RATED WALL	0 HR	



**COASTAL ARCHITECTS, P.A.**  
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 WWW.COASTALARCHITECTS.COM

REVISION	DATE	DESCRIPTION

**PROJECT:**  
 APARTMENT CONVERSION FOR  
**Northern Tier Real Estate Acquisitions & Developments, LLC**

**PROJECT ADDRESS:**  
 100 HANCOCK STREET  
 JACKSONVILLE, FLORIDA 32202

**OWNER ADDRESS:**  
 100 HANCOCK STREET  
 JACKSONVILLE, FLORIDA 32202

**PROJECT NO.:** 2008  
**DESIGNED BY:** BRUCE ROBERTS  
**APPROVED BY:** JIM LARSEN  
**DATE:** 10 MARCH 2008  
**SCALE:** 1/4" = 1'-0"

**TITLE:** FLOOR PLANS & NOTES  
**DATE:** 10 MARCH 2008  
**SCALE:** 1/4" = 1'-0"

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