COLUMBIA COUNTY BUILDING DEPARTMENT Staffs

RESIDENTIAL MINIMUM PLAN REQUIREMENTS AND CHECKLIST FOR FLORIDA BUILDING CODE 2001
ONE (1) AND TWO (2) FAMILY DWELLINGS

ALL REQUIREMENTS ARE SUBJECT TO CHANGE
EFFECTIVE MARCH 1, 2002

ALL BUILDING PLANS MUST INDICATE THE FOLLOWING ITEMS AND INDICATE COMPLIANCE WITH CHAPTER 1606 OF THE FLORIDA BUILDING CODE 2001 BY PROVIDING CALCULATIONS AND DETAILS THAT HAVE THE SEAL AND SIGNATURE OF A CERTIFIED ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF FLORIDA, OR ALTERNATE METHODOLOGIES, APPROVED BY THE STATE OF FLORIDA BUILDING COMMISSION FOR ONE-AND-TWO FAMILY DWELLINGS. FOR DESIGN PURPOSES THE FOLLOWING BASIC WIND SPEED AS PER FIGURE 1606 SHALL BE USED.

WIND SPEED LINE SHALL BE DEFINED AS FOLLOWS: THE CENTERLINE OF INTERSTATE 75.

1. ALL BUILDINGS CONSTRUCTED EAST OF SAID LINE SHALL BE -------- 100 MPH
2. ALL BUILDINGS CONSTRUCTED WEST OF SAID LINE SHALL BE --------110 MPH
3. NO AREA IN COLUMBIA COUNTY IS IN A WIND BORNE DEBRIS REGION

APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL

GENERAL REQUIREMENTS: Two (2) complete sets of plans containing the following:

Applicant	Plans Examiner	
☑	☐	All drawings must be clear, concise and drawn to scale ("Optional " details that are not used shall be marked void or crossed off). Square footage of different areas shall be shown on plans.
☑	☑	Designers name and signature on document (FBC 104.2.1). If licensed architect or engineer, official seal shall be affixed.
☐	☑	**Site Plan including:** a) Dimensions of lot b) Dimensions of building set backs c) Location of all other buildings on lot, well and septic tank if applicable, and all utility easements. d) Provide a full legal description of property.
☑	☐	**Wind-load Engineering Summary, calculations and any details required** a) Plans or specifications must state compliance with FBC Section 1606 b) The following information must be shown as per section 1606.1.7 FBC a. Basic wind speed (MPH) b. Wind importance factor (I) and building category c. Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated d. The applicable internal pressure coefficient e. Components and Cladding. The design wind pressure in terms of psf (kN/m²), to be used for the design of exterior component and cladding materials not specifally designed by the registered design professional
☑	☑	**Elevations including:**
☑	☑	a) All sides
☑	☑	b) Roof pitch
☑	☐	c) Overhang dimensions and detail with attic ventilation
☑	☑	d) Location, size and height above roof of chimneys
☐ N/A	☐ N/A	e) Location and size of skylights
☑	☐	f) Building height
☑ (1)	☑	e) Number of stories

Floor Plan including:

- a) Rooms labeled and dimensioned
- b) Shear walls
- c) Windows and doors (including garage doors) showing size, mfg., approval listing and attachment specs. (FBC 1707) and safety glazing where needed (egress windows in bedrooms to be shown)
- d) Fireplaces (gas appliance) (vented or non-vented) or wood burning with hearth
- e) Stairs with dimensions (width, tread and riser) and details of guardrails and handrails
- f) Must show and identify accessibility requirements (accessible bathroom)

Foundation Plan including:

- a) Location of all load-bearing wall with required footings indicated as standard Or monolithic and dimensions and reinforcing
- b) All posts and/or column footing including size and reinforcing
- c) Any special support required by soil analysis such as piling
- d) Location of any vertical steel

Roof System:

a) Truss package including:

1. Truss layout and truss details signed and sealed by Fl. Pro. Eng.
2. Roof assembly (FBC 104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)

b) Conventional Framing Layout including:

1. Rafter size, species and spacing
2. Attachment to wall and uplift
3. Ridge beam sized and valley framing and support details
4. Roof assembly (FBC 104.2.1 Roofing systems, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)

Wall Sections including:

a) Masonry wall

1. All materials making up wall
2. Block size and mortar type with size and spacing of reinforcement
3. Lintel, tie-beam sizes and reinforcement
4. Gable ends with rake beams showing reinforcement or gable truss and wall bracing details
5. All required connectors with uplift rating and required number and size of fasteners for continuous tie from roof to foundation
6. Roof assembly shown here or on roof system detail (FBC 104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with resistance rating)
7. Fire resistant construction (if required)
8. Fireproofing requirements
9. Shoe type of termite treatment (termiticide or alternative method)
10. Slab on grade
    a. Vapor retarder (6mil. Polyethylene with joints lapped 6 inches and sealed)
    b. Must show control joints, synthetic fiber reinforcement or Welded fire fabric reinforcement and supports
11. Indicate where pressure treated wood will be placed
12. Provide insulation R value for the following:
    a. Attic space
    b. Exterior wall cavity
    c. Crawl space (if applicable)

☐ ☑ b) Wood frame wall

1. All materials making up wall
2. Size and species of studs
3. Sheathing size, type and nailing schedule
4. Headers sized
5. Gable end showing balloon framing detail or gable truss and wall hinge bracing detail
6. All required fasteners for continuous tie from roof to foundation (truss anchors, straps, anchor bolts and washers)
7. Roof assembly shown here or on roof system detail (FBC104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
8. Fire resistant construction (if applicable)
9. Fireproofing requirements
10. Show type of termite treatment (termiticide or alternative method)
11. Slab on grade
    a. Vapor retarder (6Mil. Polyethylene with joints lapped 6 inches and sealed
    b. Must show control joints, synthetic fiber reinforcement or welded wire fabric reinforcement and supports
12. Indicate where pressure treated wood will be placed
13. Provide insulation R value for the following:
    a. Attic space
    b. Exterior wall cavity
    c. Crawl space (if applicable)

☐ NA ☐ N/A c) Metal frame wall and roof (designed, signed and sealed by Florida Prof. Engineer or Architect)

Floor Framing System:

☐ ☐ a) Floor truss package including layout and details, signed and sealed by Florida Registered Professional Engineer

☐ ☐ N/A b) Floor joist size and spacing

☐ ☐ c) Girder size and spacing

☐ ☐ d) Attachment of joist to girder

☐ ☐ e) Wind load requirements where applicable

☐ ☑ **Plumbing Fixture layout**

Electrical layout including:

☐ ☐ a) Switches, outlets/receptacles, lighting and all required GFCI outlets identified

☐ NA ☐ b) Ceiling fans

☐ ☐ c) Smoke detectors

☐ ☐ ? d) Service panel and sub-panel size and location(s)

☐ ☐ ? e) Meter location with type of service entrance (overhead or underground)

☐ ☐ f) Appliances and HVAC equipment

☐ ☐ g) Arc Fault Circuits (AFCI) in bedrooms

HVAC information

☐ ☐ a) Manual J sizing equipment or equivalent computation

☐ ☐ b) Exhaust fans in bathroom

☐ ☐ **Energy Calculations** (dimensions shall match plans)

☐ NA ☐ N/A **Gas System** Type (LP or Natural) Location and BTU demand of equipment

N/A **Disclosure Statement for Owner Builders**

Notice Of Commencement

Private Potable Water

a) Size of pump motor

b) Size of pressure tank

c) Cycle stop valve if used

THE FOLLOWING ITEMS MUST BE SUBMITTED WITH BUILDING PLANS

1. **Building Permit Application:** A current Building Permit Application form is to be completed and submitted for all residential projects.

2. **Parcel Number:** The parcel number (Tax ID number) from the Property Appraiser (386) 758-1084 is required. A copy of property deed is also requested.

3. **Environmental Health Permit or Sewer Tap Approval:** A copy of the Environmental Health permit, existing septic approval or sewer tap approval is required before a building permit can be issued. (386) 758-1058

4. **City Approval:** If the project is to be located within the city limits of the Town of Fort White, prior approval is required. The Town of Fort White approval letter is required to br submitted by the owner or contractor to this office when applying for a Building Permit.

5. **Flood Information:** All projects within the Floodway of the Suwannee or Santa Fe Rivers shall require permitting through the Suwannee River Water Management District, before submitting application to this office. Any project located within a flood zone where the base flood elevation (100 year flood) has been established shall meet the requirements of Section 8.8 of the Columbia County Land Development Regulations. Any project located within a flood zone where the base flood elevation has not been established (Zone A) shall meet the requirements of Section 8.7 of the Columbia County Land Development Regulations. **CERTIFIED FINISHED FLOOR ELEVATIONS WILL BE REQUIRED ON ANY PROJECT WHERE THE BASE FLOOD ELEVATION (100 YEAR FLOOD) HAS BEEN ESTABLISHED.**
   A development permit will also be required. Development permit cost is **$10.00**

6. **Driveway Connection:** If the property does not have an existing access to a public road, then an application for a culvert permit (**$5.00**) must be made. If the applicant feels that a culvert is not needed, they may apply for a culvert waiver (**$25.00**). All culvert waivers are sent to the Columbia County Public Works Department for approval or denial.

7. **911 Address:** If the project is located in an area where the 911 address has been issued, then the proper paperwork from the 911 Addressing Department must be submitted. (386) 758-8787

ALL REQUIRED INFORMATION IS TO BE SUBMITTED FOR REVIEW. YOU WILL BE NOTIFIED WHEN YOUR APPLICATION AND PLANS ARE APPROVED AND READY TO PERMIT. PLEASE DO NOT EXPECT OR REQUEST THAT PERMIT APPLICATIONS BE REVIEWED OR APPROVED WHILE YOU ARE HERE – TIME WILL NOT ALLOW THIS –PLEASE DO NOT ASK

FORM 600A-2001

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: , , **FL,**	PERMIT #:

6A-21 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	606.1.ABC.1.1	Maximum:.3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	
Exterior & Adjacent Walls	606.1.ABC.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall; foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls and floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	
Floors	606.1.ABC.1.2.2	Penetrations/openings >1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	
Ceilings	606.1.ABC.1.2.3	Between walls & ceilings; penetrations of ceiling plane of top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	
Recessed Lighting Fixtures	606.1.ABC.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC rated with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	606.1.ABC.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	606.1.ABC.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

6A-22 OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	612.1	Comply with efficiency requirements in Table 6-12. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	
Swimming Pools & Spas	612.1	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%.	
Shower heads	612.1	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	610.1	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated, and installed in accordance with the criteria of Section 610. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	604.1, 602.1	Ceilings-Min. R-19. Common walls-Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 83.4

The higher the score, the more efficient the home.

Richard & Rena Scaff, , , FL,

1.	New construction or existing	New	12.	Cooling systems	
2.	Single family or multi-family	Single family	a.	Central Unit	Cap: 35.0 kBtu/hr
3.	Number of units, if multi-family	1			SEER: 10.00
4.	Number of Bedrooms	3	b.	N/A	
5.	Is this a worst case?	Yes			
6.	Conditioned floor area (ft²)	2386 ft²	c.	N/A	
7.	Glass area & type				
a.	Clear - single pane	0.0 ft²	13.	Heating systems	
b.	Clear - double pane	261.0 ft²	a.	Electric Heat Pump	Cap: 40.0 kBtu/hr
c.	Tint/other SHGC - single pane	0.0 ft²			HSPF: 6.80
d.	Tint/other SHGC - double pane	0.0 ft²	b.	N/A	
8.	Floor types				
a.	Slab-On-Grade Edge Insulation	R=0.0, 284.0(p) ft	c.	N/A	
b.	N/A				
c.	N/A		14.	Hot water systems	
9.	Wall types		a.	Electric Resistance	Cap: 40.0 gallons
a.	Frame, Wood, Exterior	R=11.0, 1590.0 ft²			EF: 0.89
b.	Frame, Wood, Adjacent	R=11.0, 344.2 ft²	b.	N/A	
c.	N/A				
d.	N/A		c.	Conservation credits	
e.	N/A			(HR-Heat recovery, Solar	
10.	Ceiling types			DHP-Dedicated heat pump)	
a.	Under Attic	R=30.0, 2478.0 ft²	15.	HVAC credits	
b.	N/A			(CF-Ceiling fan, CV-Cross ventilation,	
c.	N/A			HF-Whole house fan,	
11.	Ducts			PT-Programmable Thermostat,	
a.	Sup: Unc. Ret: Unc. AH: Garage	Sup. R=6.0, 220.0 ft		MZ-C-Multizone cooling,	
b.	N/A			MZ-H-Multizone heating)	

I certify that this home has complied with the Florida Energy Efficiency Code For Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: _____ City/FL Zip: _____

**NOTE: The home's estimated energy performance score is only available through the FLA/RES computer program. This is not a Building Energy Rating. If your score is 80 or greater (or 86 for a US EPA/DOE EnergyStar™ designation), your home may qualify for energy efficiency mortgage (EEM) incentives if you obtain a Florida Energy Gauge Rating. Contact the Energy Gauge Hotline at 321/638-1492 or see the Energy Gauge web site at www.fsec.ucf.edu for information and a list of certified Raters. For information about Florida's Energy Efficiency Code For Building Construction, contact the Department of Community Affairs at 850/487-1824.*

EnergyGauge® (Version: FLR1PB v3.22)

Residential System Sizing Calculation

Summary

Richard & Rena Scaff

, FL

Project Title:
302132ScaffRes.

Class 3 Rating
Registration No. 0
Climate: North

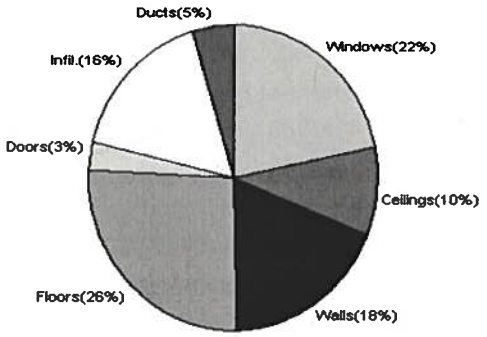
3/28/2003

Location for weather data: Gainesville - Defaults: Latitude(29) Temp Range(M)					
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(51gr.)					
Winter design temperature	31	F	Summer design temperature	93	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	39	F	Summer temperature difference	18	F
Total heating load calculation	**33872**	**Btuh**	**Total cooling load calculation**	**29516**	**Btuh**
Submitted heating capacity	40000	Btuh	Submitted cooling capacity	35000	Btuh
Submitted as % of calculated	118.1	%	Submitted as % of calculated	118.6	%

WINTER CALCULATIONS

Winter Heating Load (for 2386 sqft)

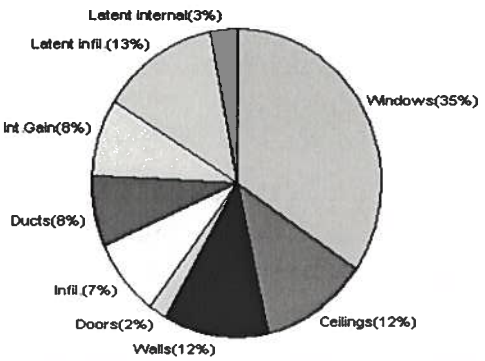
Load component			Load	
Window total	261	sqft	7387	Btuh
Wall total	1934	sqft	6185	Btuh
Door total	65	sqft	1022	Btuh
Ceiling total	2478	sqft	3221	Btuh
Floor total	284	ft	8974	Btuh
Infiltration	128	cfm	5470	Btuh
Subtotal			**32259**	**Btuh**
Duct loss			1613	Btuh
TOTAL HEAT LOSS			**33872**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 2386 sqft)

Load component			Load	
Window total	261	sqft	10211	Btuh
Wall total	1934	sqft	3477	Btuh
Door total	65	sqft	663	Btuh
Ceiling total	2478	sqft	3519	Btuh
Floor total			0	Btuh
Infiltration	112	cfm	2209	Btuh
Internal gain			2400	Btuh
Subtotal(sensible)			**22479**	**Btuh**
Duct gain			2248	Btuh
Total sensible gain			**24727**	**Btuh**
Latent gain(infiltration)			3869	Btuh
Latent gain(internal)			920	Btuh
Total latent gain			**4789**	**Btuh**
TOTAL HEAT GAIN			**29516**	**Btuh**



EnergyGauge® System Sizing based on ACCA Manual J.
PREPARED BY: Evan Beamsley
DATE: 28 May 03

System Sizing Calculations - Winter

Residential Load - Component Details

Richard & Rena Scaff
, FL

Project Title:
302132ScaffRes.

Class 3 Rating
Registration No. 0
Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 39.0 F

3/28/2003

Window	Panes/SHGC/Frame/U	Orientation	Area X	HTM=	Load
1	2, Clear, Metal, DEF	N	16.0	28.3	453 Btuh
2	2, Clear, Metal, DEF	E	15.0	28.3	424 Btuh
3	2, Clear, Metal, DEF	E	12.0	28.3	340 Btuh
4	2, Clear, Metal, DEF	S	6.3	28.3	177 Btuh
5	2, Clear, Metal, DEF	S	40.0	28.3	1132 Btuh
6	2, Clear, Metal, DEF	S	28.7	28.3	811 Btuh
7	2, Clear, Metal, DEF	S	21.5	28.3	608 Btuh
8	2, Clear, Metal, DEF	S	12.0	28.3	340 Btuh
9	2, Clear, Metal, DEF	W	60.0	28.3	1698 Btuh
10	2, Clear, Metal, DEF	W	33.6	28.3	951 Btuh
11	2, Clear, Metal, DEF	W	16.0	28.3	453 Btuh
	Window Total		261		7387 Btuh
Walls	Type	R-Value	Area X	HTM=	Load
1	Frame - Exterior	11.0	1590	3.5	5565 Btuh
2	Frame - Adjacent	11.0	344	1.8	620 Btuh
	Wall Total		1934		6185 Btuh
Doors	Type		Area X	HTM=	Load
1	Insulated - Exter		26	18.3	473 Btuh
2	Insulated - Exter		20	18.3	363 Btuh
3	Insulated - Adjac		20	9.4	186 Btuh
	Door Total		65		1022Btuh
Ceilings	Type	R-Value	Area X	HTM=	Load
1	Under Attic	30.0	2478	1.3	3221 Btuh
	Ceiling Total		2478		3221Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab-On-Grade Edge Insul	0	284.0 ft(p)	31.6	8974 Btuh
	Floor Total		284		8974 Btuh
Infiltration	Type	ACH X	Building Volume	CFM=	Load
	Natural	0.40	19088(sqft)	128	5470 Btuh
	Mechanical			0	0 Btuh
	Infiltration Total			128	5470 Btuh

Totals for Heating	**Subtotal**	**32259 Btuh**
	Duct Loss(using duct multiplier of 0.05)	**1613 Btuh**
	Total Btuh Loss	**33872 Btuh**

Manual J Winter Calculations

Residential Load - Component Details (continued)

Richard & Rena Scaff
, FL

Project Title:
302132ScaffRes.

Class 3 Rating
Registration No. 0
Climate: North

3/28/2003

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(Frame types - metal, wood or insulated metal)
(U - Window U-Factor or 'DEF' for default)
(HTM - ManualJ Heat Transfer Multiplier)
Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types)

System Sizing Calculations - Summer

Residential Load - Component Details

Richard & Rena Scaff
, FL

Project Title:
302132ScaffRes.

Class 3 Rating
Registration No. 0
Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 18.0 F 3/28/2003

Window	Type Panes/SHGC/U/InSh/ExSh Ornt		Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load	
1	2, Clear, DEF, N, N	N	1.5	4.5	16.0	0.0	16.0	22	22	352	Btuh
2	2, Clear, DEF, N, N	E	1.5	5.5	15.0	0.0	15.0	22	72	1080	Btuh
3	2, Clear, DEF, N, N	E	1.5	3.5	12.0	4.2	7.8	22	72	655	Btuh
4	2, Clear, DEF, N, N	S	1.5	3.5	6.3	6.3	0.0	22	37	138	Btuh
5	2, Clear, DEF, N, N	S	1.5	11	40.0	30.6	9.4	22	37	1021	Btuh
6	2, Clear, DEF, N, N	S	1.5	7.66	28.7	14.3	14.3	22	37	846	Btuh
7	2, Clear, DEF, N, N	S	1.5	7.66	21.5	21.5	0.0	22	37	473	Btuh
8	2, Clear, DEF, N, N	S	4	7	12.0	12.0	0.0	22	37	264	Btuh
9	2, Clear, DEF, N, N	W	1.5	5.5	60.0	13.6	46.4	22	72	3641	Btuh
10	2, Clear, DEF, N, N	W	11.1	6.5	33.6	33.6	0.0	22	72	739	Btuh
11	2, Clear, DEF, N, N	W	1.5	4.5	16.0	3.0	13.0	22	72	1003	Btuh
	Window Total				261					10211	Btuh

Walls	Type	R-Value	Area	HTM	Load	
1	Frame - Exterior	11.0	1590.0	1.9	3085	Btuh
2	Frame - Adjacent	11.0	344.2	1.1	392	Btuh
	Wall Total		1934.2		3477	Btuh

Doors	Type	Area	HTM	Load	
1	Insulated - Exter	25.8	10.1	262	Btuh
2	Insulated - Exter	19.8	10.1	201	Btuh
3	Insulated - Adjac	19.8	10.1	201	Btuh
	Door Total	65.4		663	Btuh

Ceilings	Type/Color	R-Value	Area	HTM	Load	
1	Under Attic/Dark	30.0	2478.0	1.4	3519	Btuh
	Ceiling Total		2478.0		3519	Btuh

Floors	Type	R-Value	Size	HTM	Load	
1	Slab-On-Grade Edge Insulation	0.0	284.0 ft(p)	0.0	0	Btuh
	Floor Total		284.0		0	Btuh

Infiltration	Type	ACH	Volume	CFM=	Load	
	Natural	0.35	19088	111.6	2209	Btuh
	Mechanical			0	0	Btuh
	Infiltration Total			112	2209	Btuh

Internal gain		Occupants		Btuh/occupant		Appliance	Load	
		4	X	300	+	1200	2400	Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Richard & Rena Scaff
, FL

Project Title:
302132ScaffRes.

Class 3 Rating
Registration No. 0
Climate: North

3/28/2003

Totals for Cooling	**Subtotal**	**22479**	**Btuh**
	Duct gain(using duct multiplier of 0.10)	**2248**	**Btuh**
	Total sensible gain	**24727**	**Btuh**
	Latent infiltration gain (for 51 gr. humidity difference)	**3869**	**Btuh**
	Latent occupant gain (4 people @ 230 Btuh per person)	**920**	**Btuh**
	Latent other gain	**0**	**Btuh**
	TOTAL GAIN	**29516**	**Btuh**

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(U - Window U-Factor or 'DEF' for default)
(InSh - Interior shading device: none(N), Blinds/Daperies(B) or Roller Shades(R))
(ExSh - Exterior shading device: none(N) or numerical value)
(Ornt - compass orientation)

AMTROL INC.

WEL-FLO®
Pre-pressurized Water System Tanks

- Proven Diaphragm Design
- Tough Gloss Finish
- Sizes from 14 to 119 Gallons
- Outstanding Value

NEW Home Const ONly

Pump and Tank Code
Section 613
Well Pumps and Tanks used for private potable water systems
~~July 1, 2001~~ March 1, 2002

613.1 Pumps. Well pumps used for potable water shall comply with sections 613.1.1 and 613.1.2
613.1.1 Pump Installation. Pumps shall be installed for operation without re-priming or breaking suction. Pumps shall be connected to the well head by means of a union, companion flange or compression coupling in such a manner that it is accessible for maintenance, repair and, removal.
613.1.2 Pump Sizing. Minimum pump size shall be determined by table 613.1.

Table 613.1
Minimum Private Potable Water System Pump Size

	Bathrooms in Home				
	1	1 ½	2-2 ½	3-4	5-6
Minimum Pump Size	7gpm	10gpm	14gpm	17gpm	21gpm

Notes:
1. Values given are average and do not include high and low extremes
2. Installations over 6 bathrooms shall be approved by the code official

613.2 Pressure Tanks. Tanks relying on expansion of a flexible membrane within a restricting container, or tanks with direct water- to- air interface to provide pressure in the water system shall be used. All pressure tanks for storing potable water under pressure, including those having an airspace for pressure for expansion shall be identified by seal, label, or plate indicating the manufacturer's name and model number and shall meet the following specifications:

1. Pressure tank drawdown shall be a minimum of 1 gallon for every gallon produced by the pump (Example: 20 gallon per minute pump will require a draw of 20 gallons usable). Exceptions: Pump start applications, constant pressure devices and variable speed pumps.
2. Pressure tanks must be constructed of steel, fiberglass, or comparable materials. Tanks to be buried shall have a minimum wall thickness of ¼ inch and be built by the manufacture specifically for underground use. Fiberglass or other non-metallic tanks to be buried shall have the structural strength to prevent collapse.

613.3 Piping. Piping associated with well pumps and tanks shall comply with Sections 613.3.1 through 613.3.

613.3.1 Drop Pipe. The Drop pipe from the submersible pump to the first fitting past the well seal shall be either galvanized steel, stainless steel, or PVC Schedule 80 threaded/coupled or lock joint pipe. The drop pipe for a single (pipe) jet pump shall be either galvanized steel, or stainless steel. The drop pipe for a double (pipe) jet shall be galvanized steel, stainless steel on the suction side and/or minimum PVC Schedule 40 on the pressure side.

613.3.2 Pump Discharge pipe sizing. For submersible pumps, pipe size shall be equal to the pump discharge. Piping for all other types of pumps shall be sized in accordance to the manufacturers' specifications.

613.3.3 Pressure Tank Pipe Sizing. Piping size for the offset of the pressure tank shall use the piping friction loss charts for the piping material used.

613.4 Electrical wiring. All wiring shall be installed in accordance with chapter 27 of the Florida Building code and NFPA 70.

613.5 Disinfection. The pump installer shall disinfect any potable well and water system in accordance with Section 610.

613.6 Valves. A pressure relief valve shall be installed on any pumping system that can produce pressures of 75 psi or greater. A check valve shall be installed at the well head of submersible pumps.

* Cycle STOP Valve's ARE CONSTANT PRESS DEVICE

* Counties MAY Add Higher Demands

'ROL INC.

essurized Diaphragm Well Tanks

CHAMPION, WEL-FLO, PRO-LINE *See Rat Sheet* A

Model / Part No.	List Price ($)	Diameter (ins)	Dimensions Height (ins)	Total Volume (gals)	Max. Accept. Factor	System Drawdown 20/40 (gals)	30/50 (gals)	40/60 (gals)	Shipping Wt. (Vol.) lbs (cu ft)
CH 4202/WF60/CA4202	213.00	15⅜	31⅛	20.0	0.57	8.0	6.8	5.9	33 (4.9)
CH 6000/WF80/CA6000	225.00	15⅜	38¼	26.0	0.44	10.5	8.8	7.6	36.0
CH 8003/WF100/CA8003	364.00	15¾	46½	32.0	0.35	–	10.9	9.4	43 (7.0)
CH 8205/WF110/CA8205	399.00	22	29⅛	34.0	1.00	13.7	11.6	10.0	61 (9.5)
CH 10050/WF140/CA10050	461.00	22	36	44.0	0.77	17.7	15.0	13.0	69 (11.0)
CH 12051/WF200/CA12051	545.00	22	46¼	62.0	0.55	24.9	21.1	18.3	92 (13.9)
CH 17255/WF255/CA17255	585.00	22	56⅛	81.0	0.41	32.6	27.5	23.9	103
CH 17252/WF252/CA17252	663.00	22	62¼	86.0	0.39	34.6	29.2	25.4	114 (18.1)
CH 17002/WF260/CA17002	647.00	26	47¼	86.0	0.54	34.6	29.2	25.4	123 (18.9)
CH 22050/WF360/CA22050	822.00	26	51⅞	119.0	0.39	47.8	40.5	35.1	166 (24.5)

CH4202, CH6000, CH8003, WF60, WF80, WF100, CA 4202, CA6000, & CA8003 have a 1" NPTF system connection and a 28 psig pre-charge.

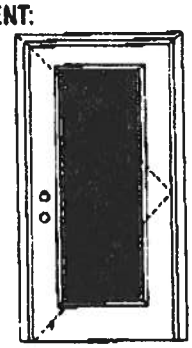
CH8205, CH22050, WF110, WF260, CA8205, CA22050 have a 1¼" NPTF system connection and a 39

X
Glazed Inswing Unit

COP-WL-JH4141-02

WOOD-EDGE STEEL DOORS

APPROVED ARRANGEMENT:



Note:
Units of other sizes are covered by this report as long as the panel used does not exceed 3'0" x 6'8".

Single Door
Maximum unit size = 3'0" x 6'8"

Design Pressure
+40.5/-40.5
Limited water unless special threshold design is used.

Large Missile Impact Resistance
Hurricane protective system (shutters) is REQUIRED.

Actual design pressure and impact resistant requirements for a specific building design and geographic location is determined by ASCE 7 national, state or local building codes specify the edition required

MINIMUM ASSEMBLY DETAIL:

Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0001-02 and MAD-WL-MA0041-02.

MINIMUM INSTALLATION DETAIL:

Compliance requires that minimum installation details have been followed – see MID-WL-MA0001-02.

APPROVED DOOR STYLES:

1/4 GLASS:


100 Series


130, 135 Series


136 Series


680 Series


822 Series

1/2 GLASS:


105 Series*


106, 150 Series*


129 Series*


200 Series*


12 R/L, 23 R/L, 24 R/L Series*


107 Series*


108 Series


304 Series

*This glass lit may also be used in the following door styles: 5-panel, 5-panel with scroll, Eyebrow 5-panel, Eyebrow 5-panel with scroll.

Johnson EntrySystems

March 29, 2002
Our continuing program of product improvement means specifications, design and product details subject to change without notice.

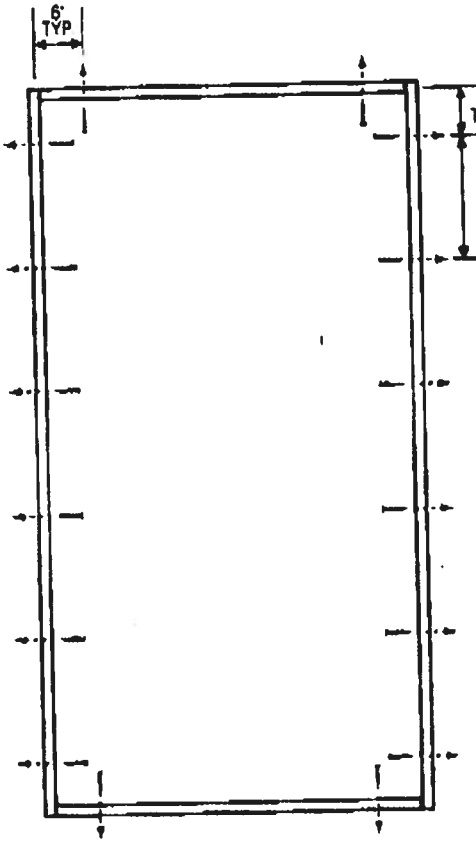
PREMDOOR Collection Premium Quality Doors

Exclusively from Masonite®
Masonite International Corporation

X
Unit

MID-WL-MA0001-02

SINGLE DOOR



Minimum Fastener Count

- 6 per vertical framing member
- 2 per horizontal framing member

Hinge and strike plates require two 2-1/2" long screws per location.

Latching Hardware:

- Compliance requires that GRADE 2 or better (ANSI/BHMA A156.2) cylindrical and deadlock hardware be installed.
- **UNITS COVERED BY COP DOCUMENT 3146, 3161 or 3166**
  Compliance requires that 6" GRADE 1 (ANSI/BHMA A156.16) surface bolts be installed on latch side of active door panel – (1) at top and (1) at bottom.

Notes:

1. Anchor calculations have been carried out with the lowest (least) fastener rating from the different fasteners being considered for use. Fasteners analyzed for this unit include #8 and #10 wood screws or 3/16" Tapcons.
2. The wood screw single shear design values come from Table 11.3A of ANSI/AF & PA NDS for southern pine lumber with a side member thickness of 1-1/4" and achievement of minimum embedment. The 3/16" Tapcon single shear design values come from the ITW and ELCO Dade Country approvals respectively, each with minimum 1-1/4" embedment.
3. Wood bucks by others, must be anchored properly to transfer loads to the structure.

March 29, 2002
Our continuing program of product improvement makes specifications, designs and product detail subject to change without notice.

MIAMI-DADE

MIAMI-DADE COUNTY, FLORID
METRO-DADE FLAGLER BUILDIN

BUILDING CODE COMPLIANCE OFFIC
METRO-DADE FLAGLER BUILDIN
140 WEST FLAGLER STREET, SUITE 16(
MIAMI, FLORIDA 33130-15(
(305) 375-2901 FAX (305) 375-29(

CONTRACTOR LICENSING SECTIO
(305) 375-2527 FAX (305) 375-25

CONTRACTOR ENFORCEMENT DIVISIO
(305) 375-2966 FAX (305) 375-290

PRODUCT CONTROL DIVISIO
(305) 375-2902 FAX (305) 372-633

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Premdor Entry Systems
911 E. Jeferson, P.O. Box 76
Pittsburgh ,KS 66762

Your application for Notice of Acceptance (NOA) of:
Series Entergy 6-8 S-W/E Inswing Opaque Residential Insulated Steel Door w/H. M. Frame
under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

ACCEPTANCE NO.: 01-0313.06
EXPIRES: 02/19/2006

Raul Rodriguez
Chief Product Control Division

THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

RECEIVED
APR 27 2001
PITTSBURG, KANSAS

APPROVED: 04/19/2001

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

Premdor Entry Systems

ACCEPTANCE NO.: 01-0313.06

APPROVED : APR 19 2001

EXPIRES : February 19, 200

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. DESCRIPTION OF UNIT

1.1 This renews the Notice of Acceptance No. 97-0910.11 which was issued on February 19, 1998. approves a residential insulated steel door, as described in Section 2 of this Notice of Acceptan designed to comply with the South Florida Building Code (SFBC), 1994 Edition for Miami-D County, for the locations where the pressure requirements, as determined by SFBC Chapter 23, not exceed the Design Pressure Rating values indicated in the approved drawings.

2. PRODUCT DESCRIPTION

2.1 **The Series Entergy 6' 8" S-W/E Inswing Opaque Residential Insulated Steel Door in a Holl Metal Frame-Impact** and its components shall be constructed in strict compliance with following documents: Drawing No 31-1032-EW-I, Sheets 1 through 5 of 5; titled "Prem (Entergy Brand Wood Edge) 3'0" x 6'8" Steel door in a Hollow Metal Frame (Inswing)" da 6/25/97 with revision C. dated 3/20/01, bearing the Miami-Dade County Product Control appro stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Prod Control Division. These documents shall hereinafter be referred to as the approved drawings.

3. LIMITATIONS

3.1 This approval applies to single unit applications of single door only, as shown in approved drawings.

3.2 Unit shall be installed only at locations protected by a canopy or overhang such that the angle between the edge of canopy or overhang to sill is less than 45 degrees. Unless unit is installed in non-habitable areas where the unit and the area are designed to accept water infiltration.

4. INSTALLATION

4.1 The residential insulated steel door and its components shall be installed in strict compliance with the approved drawings.

4.2 Hurricane protection system (shutters): the installation of this unit will not require a hurrican protection system.

5. LABELING

5.1 Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved".

6. BUILDING PERMIT REQUIREMENTS

6.1 Application for building permit shall be accompanied by copies of the following:

6.1.1 This Notice of Acceptance

6.1.2 Duplicate copies of the approved drawings, as identified in Section 2 of this Notice of Acceptance, clearly marked to show the components selected for the proposed installation.

6.1.3 Any other documents required by the Building Official or the South Florida Building Code (SFBC) in order to properly evaluate the installation of this system.

Manuel Perez, P.E. Product Control Examiner
Product Control Division

Architectural Testing

AAMA/NWWDA 101/I.S.2-97
TEST REPORT SUMMARY

Rendered to:

MI HOME PRODUCTS, INC.

SERIES/MODEL: 450
TYPE: Aluminum Single Hung Window
RATING: H-C30 54 x 90; H-C45 52 x 72*

Title of Test	Results	
	Test Specimen #1	Test Specimen #2
Overall Design Pressure	30 psf	47 psf
Operating Force	20 lb max.	N/A
Air Infiltration	0.27 cfm/ft^2	N/A
Water Resistance	5.25 psf	6.0 psf
Structural Test Pressure	±45.0 psf	±70.5 psf
Deglazing	Passed	N/A
Forced Entry Resistance	Grade 10	N/A

Reference should be made to Report No. 01-37589.01 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Adam A. Fodor, Technician

AAF:tjp

130 Derry Court
York, PA 17402-9405
phone: 717.764.7700
fax: 717.764.4129
www.testatl.com

Architectural Testing

AAMA/NWWDA 101/I.S.2-97 TEST REPORT

Rendered to:

MI HOME PRODUCTS, INCORPORATED
650 West Market Street
Gratz, Pennsylvania 17030-0370

Report No: 01-37589.01
Test Date: 06/29/00
Report Date: 09/11/00
Expiration Date: 06/29/04

Project Summary: Architectural Testing, Inc. (ATI) was contracted to witness tests on a Series/Model 450, aluminum single hung window at the MI Home Products in-plant test facility in Elizabethville, Pennsylvania. The samples tested successfully met the performance requirements for the following ratings: Test Specimen #1 H-C30 54 x 90; Test Specimen #2 H-C40 52 x 72*. Test specimen descriptions and results are reported herein.

General Note: *An asterisk (*) next to the performance grade indicates that the size tested for optional performance was smaller than the minimum test size for the product type and class.*

Test Specification: The test specimen was evaluated in accordance with AAMA/NWWDA 101/I.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.*

Test Specimen Description

Series/Model: 450

Type: Aluminum Single Hung Window

Test Specimen #1 H-C30 54 x 90

Overall Size: 4' 6-1/2" wide by 7' 6-1/2" high

Sash Size: 4' 4" wide by 3' 9-3/4" high

Fixed Daylight Opening Size: 4' 1-1/2" wide by 3' 6-1/2" high

Screen Size: 4' 2-1/4" wide by 3' 8-1/2" high

130 Derry Court
York, PA 17402-9405
phone: 717.764.7700
fax: 717.764.4129
www.testati.com

Test Specimen Description: (Continued)

Test Specimen #2: H-C40 52 x 72*

Overall Size: 4' 4-1/4" wide by 6' 0" high

Sash Size: 4' 2" wide by 3' 0-1/2" high

Fixed Daylight Opening Size: 3' 11-1/2" wide by 2' 9-1/2" high

Screen Size: 4' 0" wide by 2' 11" high

The following descriptions apply to all specimens.

Finish: All aluminum was painted.

Glazing Details: The lites utilized 5/8" thick sealed insulating glass units fabricated from two sheets of 3/32" thick clear annealed glass and an Intercept™ spacer system. The sash was channel glazed with a flexible gasket. The fixed lite was interior glazed onto single-sided adhesive foam tape and secured with extruded PVC glazing beads.

Weatherstripping:

Description	Quantity	Location
0.210" high by 0.270" backed polypile with center fin	Row	Fixed meeting rail
0.250" high by 0.187" backed polypile with center fin	2 Rows	Stiles
0.300" diameter by 0.187" backed foam-filled vinyl bulb gasket	Row	Bottom rail
0.400' high by 1/2" square polypile dust plug	4	One on each sash corner

Frame Construction: The main frame was constructed of thermally-broken extruded aluminum members with coped, butted and sealed corners. The fixed meeting rail was constructed of an extruded aluminum member with coped, butted and sealed ends fastened with two screws each..

Test Specimen Description: (Continued)

Sash Construction: The sash members were constructed of thermally-broken extruded aluminum members with coped, butted and sealed corners fastened with one screw each.

Screen Construction: The screen was constructed of rolled aluminum members with plastic keyed corners. The fiberglass mesh was secured with a flexible spline.

Hardware:

Description	Quantity	Location
Plastic snap latch	1	Midspan of bottom rail
Block and tackle balance system	2	One per jamb
Plastic tilt latch	2	One on each end of sash meeting rail
Metal pivot bar	2	One on each end of bottom rail

Drainage: Sloped sill

Reinforcement: No reinforcement was utilized.

Installation: The test unit was installed into the nominal 2" x 8" Spruce-Pine-Fir #2 wood test buck utilizing the integral nailing fin secured with 1" long galvanized roofing nails, 6" from each corner and every 18" on center. The nailing fin was also bedded in polyurethane. The exterior perimeter was blindstopped with wood members and secured with #8 x 3" screws every 24" on center.

Test Results:

The results are tabulated as follows:

Paragraph	Title of Test - Test Method	Results	Allowed
Test Specimen #1: H-C30 54 x 90			
2.2.1.6.1	Operating Force	20 lbs	45 lbs max.
	Air Infiltration per ASTM E 283 (See Note #1) @ 1.57 psf (25 mph)	0.27 cfm/ft^2	0.3 cfm/ft^2 max.
	Note #1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/NWWDA 101/I.S. 2-97 for air infiltration.		
	Water Resistance per ASTM E 547 (with and without screen) WTP = 4.5 psf	No leakage	No leakage
2.1.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the fixed meeting rail)		
	@ 45.0 psf (exterior)	0.03"	0.22" max.
	@ 45.0 psf (interior)	0.04"	0.22" max.
2.2.1.6.2	Deglazing Test per ASTM E 987 In operating direction at 70 lbs		
	Meeting rail	0.06"/12%	0.50"/100%
	Bottom rail	0.06"/12%	0.50"/100%
	In remaining direction at 50 lbs		
	Left stile	0.06"/12%	0.50"/100%
	Right stile	0.06"/12%	0.50"/100%
	Forced Entry Resistance per ASTM F 588-97		
	Type: A Grade: 10		
	Lock Manipulation Test	No entry	No entry
	Test A1 through A5	No entry	No entry
	Test A7	No entry	No entry
	Lock Manipulation Test	No entry	No entry

Test Results:

Paragraph	Title of Test - Test Method	Results	Allowed
Test Specimen #1: (Continued)			
Optional Performance			
4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 5.25 psf	No leakage	No leakage
Test Specimen #2: H-C40 52 X 72*			
Optional Performance			
4.3	Water Resistance per ASTM E 547 and 331 (with and without screen) WTP – 6.0 psf	No leakage	No leakage
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the fixed meeting rail)		
	(Loads held for 33 seconds)		
	@ 47.0 psf (exterior)	0.04"	N/A
	@ 47.0 psf (interior)	0.03"	N/A
	(Loads held for 10 seconds)		
	@ 70.5 psf (exterior)	0.07"	0.21" max.
	@ 70.5 psf (interior)	0.04"	0.21" max.

Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product which may only be granted by the certification program administrator.

For ARCHITECTURAL TESTING, INC:

Adam A. Fodor
Technician

Bruce W. Croak
Director – Product/Physical Testing

AAF:
01-37589.01

ARCHITECTURAL TESTING INC.

130 Derry Court • York, PA 17402-9405
web www.testati.com • Facsimile 717-764-4129 • Telephone 717-764-7700

STRUCTURAL TEST REPORT SUMMARY

Rendered to:

MI HOME PRODUCTS, INC.

SERIES/MODEL: 650
TYPE: Twin Aluminum Single Hung Window

Title of Test	Results
Overall Design Pressure	35.0 psf
Operating Force	18 lb max.
Air Infiltration	0.29 cfm/ft^2
Water Resistance	5.25 psf
Structural Test Pressure	70.5 psf
Deglazing	Passed
Forced Entry Resistance	Grade 10

Reference should be made to Report No. 01-36060.01 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Scott D. Kramer, Technician

SDK:nlb