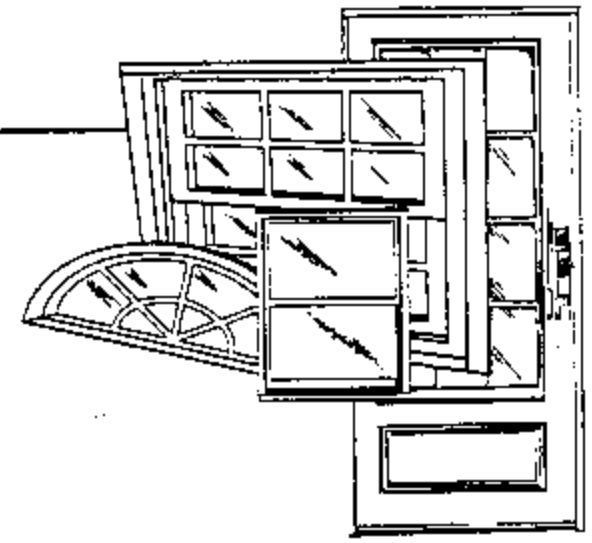


CERTIFIED TESTING LABORATORIES

Architectural Division • 7252 Narcoossee Rd. • Orlando, FL 32822
(407)-384-7744 • Fax (407)-384-7751
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Report No.: CTLA 554W

DC Not. No. 00008

Date: June 6, 2000

CTL Certification # 99-0105.02

Test Dates: May 25 & 26, 2000

Test Requested By - STANLEY DOOR SYSTEMS
7300 Reames Road
Charlotte, NC 28216
Phone 704.921.3470

Facsimile 704.921.3462

Tests Conducted: PA 202 (with no deviations)

| | | | | |
|---------------------------|-----------------------------|-----------|-------------|-------------|
| Design Pressures - | Specimen 1 (PA 202) | Out-swing | + 50.0 psf. | - 44.0 psf. |
| | Specimens 2, 3 & 4 (PA 202) | Out-swing | + 50.0 psf. | - 50.0 psf. |

(1) DESCRIPTION OF SERIES:

Model Designation - Sta-Tru Out-swing Glazed Wood Edge Steel Door With Sidelites

Overall Size -

Specimens 1, 2, 3 & 4 (O/S Bump Threshold) 141.625" wide x 97.625" high x 4.5625" deep

Configuration - Specimens 1, 2, 3 & 4 OXXO

No. & Size of Doors - Specimens 1, 2, 3 & 4 (glazed door panels w/glazed sidelites)

| | |
|------------------------|--------------------------|
| (1) active | 35.75" wide x 96.0" high |
| (1) active w/ astragal | 36.25" wide x 96.0" high |
| (2) sidelite | 31.75" wide x 96.0" high |

(2) MATERIAL CHARACTERISTICS:

Frame and Door Material - Finger jointed pine jambs and steel panels.

Ramesh Patel, P. E., Florida Reg. # 20224 June 6, 2000

Frame Construction:

Wood Jamb - The head jambs and side jambs are finger jointed ponderosa pine (stated by mfg.) measuring 4.5625" x 1.25" (drawing no. 39638 sheet 7 of 7). The head jamb and side jambs are mortised, butted and joined using (3) 7/8" x 2" wire staples. The threshold tested on all specimens is an Aluminum Out-swing Bump measuring 4.625" x 1.25" (Stanley part and drawing no. 00258).

Panel Construction:

Steel Door Panel - The panel is constructed from 0.021" thick galvanized steel skins. The interior cavity of each door is filled with polyurethane foam manufactured by BASF. The steel face sheets are crimped to fit hinge and lock stiles, terminating with a 90° bend. The latch stile is 4.0" x 1.71" LVL material (drawing no. EXP2911-A). The hinge stile is 1.219" x 1.664" ponderosa pine (drawing no. 18493). The top rail is pine measuring 1.68" x 1.22" and the bottom rail is pine measuring 1.68" x 1.0". The bottom rail is reinforced with a steel stiffener (drawing no. 39638 sheet 7 of 7).

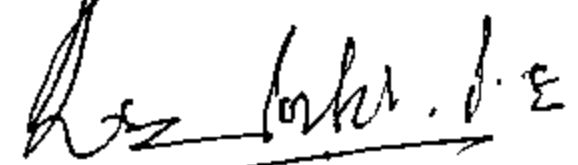
Sidelite Panel Construction: The panel is 1-3/8" thick and is constructed from (0.021") thick galvanized steel skins. The interior cavity of each sidelite panel is filled with polyurethane foam manufactured by BASF. The steel face sheets are crimped to fit the vertical stiles and horizontal rails. The vertical stiles and top rail measures 1.71" x 1.22". The bottom rail measures 1.68" x 1.0". The rails and stiles are pine.

Glazing:

Glazing Material -

- Specimen 1 - Door lite sash 1" nominal tempered ins. Glass by ODL (drawing EXP2911)
1.0" Actual - (0.125" temp - 0.75" air - 0.125" temp)
Sidelite sash 1" nominal tempered ins. Glass by ODL (drawing EXP2911)
1.0" Actual - (0.125" temp - 0.75" air - 0.125" temp)
- Specimen 2 - Door lite sash 1/2" nominal tempered ins. Glass by ODL (drawing EXP2911)
0.49" Actual - (0.125" temp - 0.24" air - 0.125" temp)
Sidelite sash 1/2" nominal tempered ins. Glass by ODL (drawing EXP2911)
0.49" Actual - (0.125" temp - 0.24" air - 0.125" temp)
- Specimen 3 - Door lite sash 1/2" nominal tempered ins. Glass by Trinity (part no. 460)
0.5" Actual - (0.125" temp - 0.25" air - 0.125" temp)
Sidelite sash 1/2" nominal tempered ins. Glass by Trinity (part no. 460)
0.5" Actual - (0.125" temp - 0.25" air - 0.125" temp)
- Specimen 4 - Door lite sash 1/2" nominal tempered ins. Glass by Western Reserve (part no. 461)
0.5" Actual - (0.125" temp - 0.25" air - 0.125" temp)
Sidelite sash 1/2" nominal tempered ins. Glass by Western Reserve (part no. 461)
0.5" Actual - (0.125" temp - 0.25" air - 0.125" temp)

Glazing Method - The glass was interior and exterior wet glazed with GE silicone. The lite frame was then mounted into a routed opening in the respective panels and secured with (18) #8 x 1.25" tech screws. The lite frame material is polypropylene by each individual manufacturer (see drawing no 39638 sheet 2 of 7 for anchor locations).



Daylight Opening - All Specimens - Door lite Panel – 21.125” wide x 79.125” high
Sidelite Panel – 21.125” wide x 79.125” high

Weather-stripping –

Specimens 1 & 2 Schlegel Q-Lon, QDS 650 Compression (1) row header, (1) row sill, (1) row length of each leg jamb and (1) row length of astragal
Specimens 3 & 4 Schlegel Q-Lon, QDS 650 Compression (1) length of each leg jamb, Schlegel TPE magnetic (1) row header, (1) row sill, and (1) row length of astragal (drawing no. 250465 and 250469).
All Specimens Schlegel Q-Lon foam pad (1) @ each corner of jamb @ threshold. ¼” x ¼” foam tape applied at a 45° angle above corner pad on jamb to form watershed.

Hardware - All Specimens (1) Kwikset 200 Latchbolt @ 38.75” from bottom of panel.
(1) Kwikset 660 Deadbolt @ 47.75” from bottom of panel.
(6) Three 4” butt type hinges @ 9.0”, 35.0” and 87.0” from bottom of door panel (drawing no. 07728).
Specimen 1 (1) Imperial Aluminum Astragal (drawing no. 2911E 1 and 2)
Specimens 2, 3 & 4 (1) *Windjamber II* Aluminum Astragal (drawing no. 39638 sheet 7 of 7)

Weepholes - None

Muntins - None

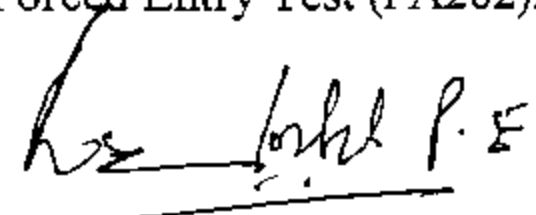
Reinforcement - None

Sealant - Latex caulking as needed to seal unit into rough opening.

Additional Description -

All specimens were installed in a wood test buck.

Specimen 1 - tested for Air Infiltration, Water Infiltration, Static Air and Forced Entry Test (PA202).
Specimen 2 - tested for Air Infiltration, Water Infiltration, Static Air and Forced Entry Test (PA202).
Specimen 3 - tested for Air Infiltration, Water Infiltration, Static Air and Forced Entry Test (PA202).
Specimen 4 - tested for Air Infiltration, Water Infiltration, Static Air and Forced Entry Test (PA202).



(3) INSTALLATION:

Screws and Method of Attachment -

Specimens 1, 2, 3 & 4

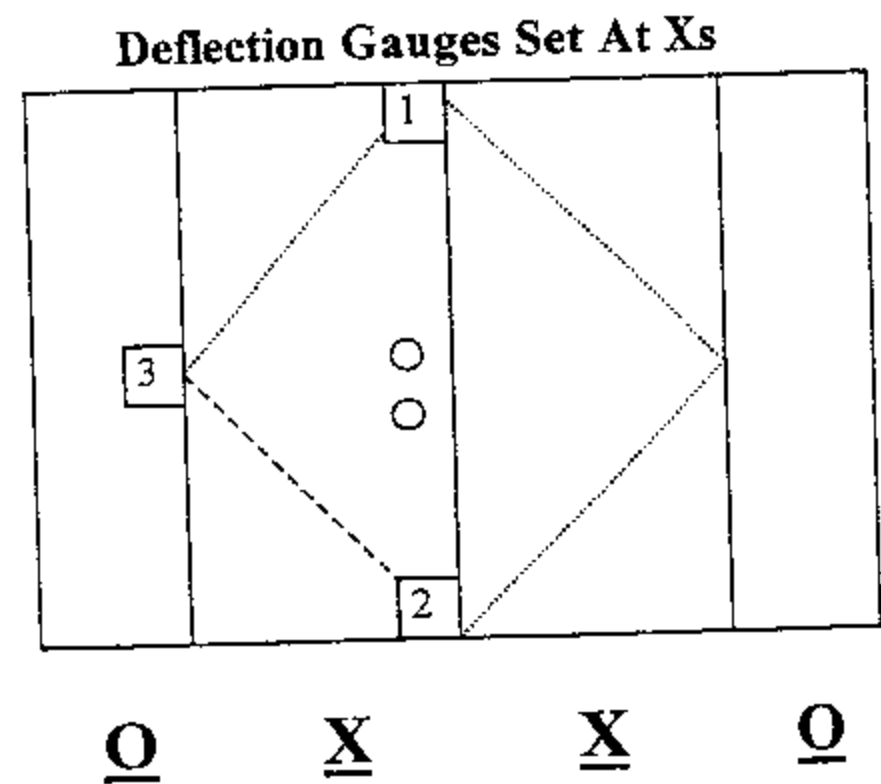
- 28 - # 8 x 2.5" F H Phillips wood screws, used to fasten frame to the wood buck at head and side jambs.
- 8 - # 10 x 2.5" F H Phillips wood screws, used to fasten sidelite sill to the wood buck.
- 8 - # 10 x 2.25" F H Phillips wood screws, used to fasten threshold to the wood buck.
(see drawing no. 39638, sheet 5 of 7 for anchor locations)

(4) SEQUENCE OF TESTS PERFORMED:

Test Results:

Test Sequence: PA 202

1. Air Infiltration
2. 1/2 Test Pressure Positive
3. 1/2 Test Pressure Negative
4. Design Pressure Positive
5. Design Pressure Negative
6. Water Infiltration Positive Direction
7. Full Test pressure Positive
8. Full Test Pressure Negative
9. Forced Entry



Deflection was measured with three (3) CDI 5" dial indicators: location #1-SN 971649614, location #2-SN 982539158 and location #3-SN 980369793.
Note: Specimen 6 was tested without sidelites.

AIR INFILTRATION

Air Infiltration Tests were conducted in accordance with DCBCCD PA 202-94

| Air at 1.57 psf | | Actual | Allowable |
|-----------------|-----------|----------------|----------------|
| Specimen 1 | Out-swing | 0.00 CFM/SQ FT | 0.34 CFM/SQ FT |
| Specimen 2 | Out-swing | 0.00 CFM/SQ FT | 0.34 CFM/SQ FT |
| Specimen 3 | Out-swing | 0.00 CFM/SQ FT | 0.34 CFM/SQ FT |
| Specimen 4 | Out-swing | 0.00 CFM/SQ FT | 0.34 CFM/SQ FT |

Handwritten signature: [Signature] P.E.

WATER INFILTRATION TEST

Water Infiltration Test was conducted in accordance with DCBCCD PA 202 – 94

| | | | |
|------------|-----------|-----------------------------|---------------------------------|
| Specimen 1 | Out-swing | Water @ 9.0 psf for 15 min. | No water penetration over sill. |
| Specimen 2 | Out-swing | Water @ 9.0 psf for 15 min. | No water penetration over sill. |
| Specimen 3 | Out-swing | Water @ 9.0 psf for 15 min. | No water penetration over sill. |
| Specimen 4 | Out-swing | Water @ 9.0 psf for 15 min. | No water penetration over sill. |

STATIC AIR PRESSURE TESTS

Static Tests were conducted in accordance with DCBCCD PA 202-94

Design Loads + 48.0 psf, - 44.0 psf. Specimen 1 OXXO (out-swing)

| Range of test | time | actual load | deflection | perm. set |
|----------------|-----------|-------------|--------------------|-----------|
| Positive loads | (seconds) | psf | | |
| 1/2 Test | 30 | 36.0 | | |
| Design | 30 | 48.0 | Mullion (3) 0.310" | 0.001" |
| Test | 30 | 72.0 | Door T (1) 0.678" | 0.109" |
| | | | Door B (2) 0.610" | 0.120" |
| | | | Mullion (3) 0.358" | 0.019" |

| Range of test | time | actual load | deflection | perm. set |
|----------------|-----------|-------------|--------------------|-----------|
| Negative loads | (seconds) | psf | | |
| 1/2 Test | 30 | 33.0 | | |
| Design | 30 | 44.0 | Mullion (3) 0.232" | 0.011" |
| Test | 30 | 66.0 | Door T (1) 2.741" | 0.310" |
| | | | Door B (2) 1.651" | 0.192" |
| | | | Mullion (3) 0.377" | 0.015" |

Design Loads + 50.0 psf, - 50.0 psf. Specimen 2 OXXO (out-swing)

| Range of test | time | actual load | deflection | perm. set |
|----------------|-----------|-------------|--------------------|-----------|
| Positive loads | (seconds) | psf | | |
| 1/2 Test | 30 | 37.5 | | |
| Design | 30 | 50.0 | Mullion (3) 0.235" | 0.006" |
| Test | 30 | 75.0 | Door T (1) 0.530" | 0.135" |
| | | | Door B (2) 0.429" | 0.095" |
| | | | Mullion (3) 0.400" | 0.032" |

| Range of test | time | actual load | deflection | perm. set |
|----------------|-----------|-------------|--------------------|-----------|
| Negative loads | (seconds) | psf | | |
| 1/2 Test | 30 | 37.5 | | |
| Design | 30 | 50.0 | Mullion (3) 0.167" | 0.015" |
| Test | 30 | 75.0 | Door T (1) 4.358" | 0.131" |
| | | | Door B (2) 1.498" | 0.000" |
| | | | Mullion (3) 0.315" | 0.033" |

STATIC AIR PRESSURE TESTS Cont.

Design Loads + 50.0 psf, - 50.0 psf. Specimen 3 OXXO (out-swing)

| Range of test | time | actual load | deflection | perm. set |
|----------------|-----------|-------------|--------------------|-----------|
| Positive loads | (seconds) | psf | | |
| 1/2 Test | 30 | 37.5 | | |
| Design | 30 | 50.0 | Mullion (3) 0.340" | 0.011" |
| Test | 30 | 75.0 | Door T (1) 0.516" | 0.139" |
| | | | Door B (2) 0.399" | 0.087" |
| | | | Mullion (3) 0.369" | 0.032" |

| Range of test | time | actual load | deflection | perm. set |
|----------------|-----------|-------------|--------------------|-----------|
| Negative loads | (seconds) | psf | | |
| 1/2 Test | 30 | 37.5 | | |
| Design | 30 | 50.0 | Mullion (3) 0.150" | 0.015" |
| Test | 30 | 75.0 | Door T (1) 4.217" | 0.106" |
| | | | Door B (2) 1.399" | 0.000" |
| | | | Mullion (3) 0.288" | 0.034" |

Design Loads + 50.0 psf, - 50.0 psf. Specimen 4 OXXO (out-swing)

| Range of test | time | actual load | deflection | perm. set |
|----------------|-----------|-------------|--------------------|-----------|
| Positive loads | (seconds) | psf | | |
| 1/2 Test | 30 | 37.5 | | |
| Design | 30 | 50.0 | Mullion (3) 0.320" | 0.015" |
| Test | 30 | 75.0 | Door T (1) 0.392" | 0.010" |
| | | | Door B (2) 0.455" | 0.120" |
| | | | Mullion (3) 0.530" | 0.054" |

| Range of test | time | actual load | deflection | perm. set |
|----------------|-----------|-------------|--------------------|-----------|
| Negative loads | (seconds) | psf | | |
| 1/2 Test | 30 | 37.5 | | |
| Design | 30 | 50.0 | Mullion (3) 0.152" | 0.019" |
| Test | 30 | 75.0 | Door T (1) 3.475" | 0.259" |
| | | | Door B (2) 1.370" | 0.000" |
| | | | Mullion (3) 0.400" | 0.002" |

Note Allowable Deflections & Sets For Specimens No. 1, 2, 3 & 4:

- (3) Mullion - Max. allowable deflection at design load $(L/180) \ 97.625 / 180 = 0.542"$
- (1) Door T - Max. allowable perm. set at test load (0.4% of span) $.004 \times 96.0 = 0.384"$
- (2) Door B - Max. allowable perm. set at test load (0.4% of span) $.004 \times 96.0 = 0.384"$
- (3) Mullion - Max. allowable perm. set at test load (0.4% of span) $.004 \times 97.625 = 0.3905"$

(5) DRAWINGS TO BE SUBMITTED:

1. Drawing no. 39638 sheets 1 through 7
2. Imperial Astragal spec sheet 2911E 1 & 2 of 4
3. Trinity Glass drawing no. 460
4. Western Reserve drawing no. 461
5. ODL drawing no. EXP 2911
6. Stanley drawing no. 18493
7. Stanley drawing no. 00258
8. Stanley drawing no. EXP 2911A
9. Schlegel QDS-650 spec sheets
10. Kwikset latch spec sheet
11. Kwikset deadbolt spec sheet
12. Stanley Hinge drawing no. 07728
13. Stanley drawing no. 250465
14. Stanley drawing no. 250469

Comment: Nominal 2 mil polyethylene film was used to seal against air leakage during structural loads. The film was used in a manner that did not influence the test results.

Remarks: The results obtained and reported apply only to the specimens tested.

Detailed drawings were available for laboratory records and comparison to the test specimen at the time of this report. A copy of this report along with representative sections of the test Specimen will be retained by CTL for a period of ten (10) years. The results obtained apply only to the specimen tested.

This test report does not constitute certification of this product, but only that the above test Results were obtained using the designated test methods and they indicate compliance with the performance requirements (paragraphs as listed) of the above referenced specifications.

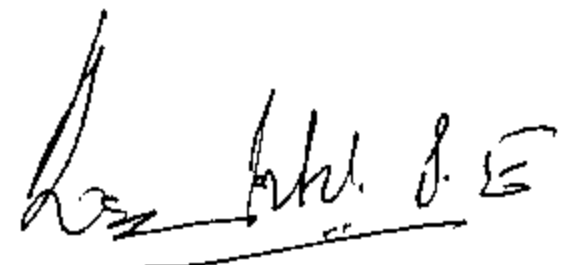
Certified Testing Laboratories assumes that all information provided by the client is accurate and that the physical and chemical properties of the components are as stated by the manufacturer.

Observers:

Rick Wright – Consultant, R.W. Building Consultants, Inc.

Dade County Witness:

Not present



Ramesh Patel, P. E., Florida Reg. # 20224 June 6, 2000

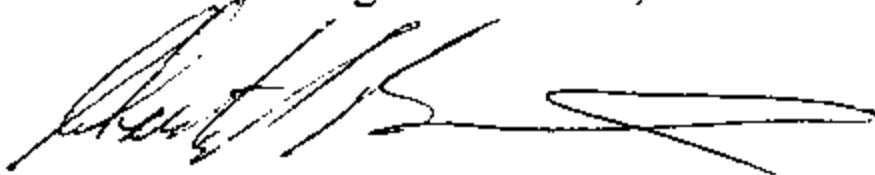
All Tests Witnessed by:

Ramesh Patel P.E.
Chris Bennet CTL
Ted Scanlon CTL



Ramesh Patel, P. E.
Florida Reg # 20224
June 6, 2000

Certified Testing Laboratories, Inc.



Christopher Bennett
Laboratory Manager
Architectural Division

cc: Stanley Door Systems (2)
Rick Wright (2)
Ramesh Patel (1)
File (1)