**Corporate Offices / Laboratories**

297 Buell Road
Rochester, NY 14624
(585) 328-7668
Fax: (585) 328-7777

# ETC Laboratories

*Measuring Up To Your Standards And More*



Report Number: ETC-08-055-20752.0
Test Start Date: 03/06/2008
Test Finish Date: 03/12/2008
Report Date: 04/01/2008

## Fenestration Impact Test Report

## Rendered To:

Atlantic Premium Shutters
29797 Beck Road
Wixom, MI. 48393

**Summary Description**:
The products tested were shutters of varying materials and styles. Each shutter was 30 inches wide x 102 inches high covered with a protective 1/8 inch thick polycarbonate facing, secured to the exterior of the products with #12 x 1 inch long pan head screws. The overall rough opening was 60-1/4 wide x 102-1/4 high framed with 2 x 10 lumber and covered with plywood. The shutters were braced to the exterior face with two L shaped bars 60 inches wide x 2 inches high x 3 inches deep.

**Specification:**
The test specimens were impacted in accordance with ASTM test method E1886-05 and pressure cycling section was not performed.

## Impact Test Results

### Standard Mount Horizontal Storm Bar
### Atlantic Architectural Collection Raised Panel Shutters

| Impact Location Specimens 1-3 | Missile Speed (ft/sec) | Missile Orientation (deg.) | X Measurement (in.) | Y Measurement (in.) |
|---|---|---|---|---|
| Center of right panel | 49.9 | 2.9 | 46 | 52 |
| Upper right corner of right panel | 50.5 | 2.6 | 56 | 6 |
| | | | | |
| Lower left corner of right panel | 49.5 | 2.8 | 37 | 94-1/2 |
| Center of right panel | 49.5 | 2.5 | 44-1/2 | 52-1/2 |
| | | | | |
| Upper right corner of right panel | 49.5 | 2.2 | 54-1/2 | 7-1/2 |
| Center of right panel | 50.5 | 2.6 | 46-1/2 | 53 |
| Mid-span of bottom brace | 50.1 | 2.8 | 31-3/4 | 77 |

## Test Notes for Impact Tests

1. All three specimens were of identical construction.
2. The circles on the diagrams indicate the impact locations for that specimen.
3. The X measurement is from the left edge of the specimen.
4. The Y measurement is from the top edge of the specimen.
5. The large missile used was a piece of #2 southern yellow pine 2 x 4 dimensional lumber 92 inches long and weighing 9.0 lbs.
6. The specimens were conditioned in an environment with a temperature between 65 and 75 degrees F for at least 48 hr prior to testing.
7. Shutter cracked at impact locations, top corner impacts bent hinge.
8. Wind Zone 4 definition per ASTM E1996-05b. Section 6.2.2.4 *Wind Zone 4*-basic wind speed > 140 mph (63 m/s).

## Summary of Results

| | |
|---|---|
| Missile level resisted | D |
| Nominal missile speed resisted | 15.25 m/sec (50ft/sec) |
| Wind zone achieved | 4 |

**NOTE:** The test specimens were only tested to the impact portion of ASTM specification E 1886-05 and pressure cycling section was not performed.