



## Glass replacement calculations

| #  | Opening location | Size of glass/ panel |                 | # of panels | Total glass per opening | To be replaced |             |
|--|------------------|----------------------|-----------------|-------------|-------------------------|----------------|-------------|
|  |                  | Width<br>Inchs       | Height<br>Inchs |             |                         | Yes<br>sq in   | No<br>sq in |
| sample   | Bedroom #1       | 36"                  | 48"             | 2           | 3456                    | 3456           |             |
| 1  |                  |                      |                 |             |                         |                |             |
| 2  |                  |                      |                 |             |                         |                |             |
| 3  |                  |                      |                 |             |                         |                |             |
| 4  |                  |                      |                 |             |                         |                |             |
| 5  |                  |                      |                 |             |                         |                |             |
| 6  |                  |                      |                 |             |                         |                |             |
| 7  |                  |                      |                 |             |                         |                |             |
| 8  |                  |                      |                 |             |                         |                |             |
| 9  |                  |                      |                 |             |                         |                |             |
| 10   |                  |                      |                 |             |                         |                |             |
| 11   |                  |                      |                 |             |                         |                |             |
| 12   |                  |                      |                 |             |                         |                |             |
| 13   |                  |                      |                 |             |                         |                |             |
| 14   |                  |                      |                 |             |                         |                |             |
| 15   |                  |                      |                 |             |                         |                |             |
| 16   |                  |                      |                 |             |                         |                |             |
| 17   |                  |                      |                 |             |                         |                |             |
| 18   |                  |                      |                 |             |                         |                |             |
| <b>TOTAL of existing Glass in square inches</b>                              |                  |                      |                 |             |                         | sq in          |             |
| <b>Total Glass to be replaced in square inches</b>                           |                  |                      |                 |             |                         | sq in          |             |
| <b>Percentage to be replaced = Total existing / total to be replaced = %</b> |                  |                      |                 |             |                         | sq in          | %           |

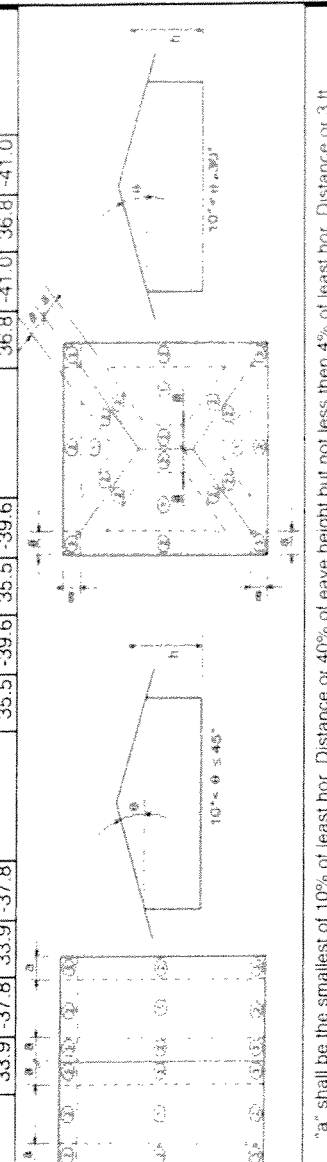
**Table 6-3 ASCE 7-05 Broward County FBC 2007**

**Component cladding wind loads**

**for enclosed Buildings with a Mean roof height less than or equal to 30 feet**

Wind 140 mph -3 second gust / Exposure "C"  $K_d=0.85/I=1.0$

| Effective wind area (ft <sup>2</sup> ) | Location "Gable" or "Hip" | Mean Roof height of 15 feet |       |            |           |       |        | Mean Roof height of 20 feet |       |       |        |       |        | Mean Roof height of 25 feet |       |       |        |       |        | Mean Roof height of 30 feet |       |       |        |       |        |       |
|--|---------------------------|-----------------------------|-------|------------|-----------|-------|--------|-----------------------------|-------|-------|--------|-------|--------|-----------------------------|-------|-------|--------|-------|--------|-----------------------------|-------|-------|--------|-------|--------|-------|
|  |                           | Zone 2                      |       |            | Zone 3    |       |        | Zone 1                      |       |       | Zone 2 |       |        | Zone 3                      |       |       | Zone 1 |       |        | Zone 2                      |       |       | Zone 3 |       |        |       |
|  |                           | +                           | -     | +          | -         | +     | -      | +                           | -     | +     | -      | +     | -      | +                           | -     | +     | -      | +     | -      | +                           | -     | +     | -      | +     | -      |       |
| 10                                     | Roof >0-7 (0 to 1.5:12)   | 17.3                        | -42.7 | 17.3       | -71.6     | 17.3  | -107.7 | 18.4                        | -45.5 | 18.4  | -76.4  | 18.4  | -114.8 | 19.3                        | -47.7 | 19.3  | -79.9  | 19.3  | -120.2 | 20.0                        | -49.4 | 20.0  | -82.9  | 20.0  | -124.6 |       |
| 20                                     |                           | 16.2                        | -41.6 | 16.2       | -64.0     | 16.2  | -89.3  | 17.3                        | -44.4 | 17.3  | -68.2  | 17.3  | -95.2  | 18.1                        | -46.4 | 18.1  | -71.4  | 18.1  | -99.6  | 18.8                        | -48.2 | 18.8  | -74.1  | 18.8  | -103.3 |       |
| 50                                     |                           | 14.9                        | -40.2 | 14.9       | -53.8     | 14.9  | -64.7  | 15.9                        | -42.8 | 15.9  | -57.4  | 15.9  | -69.0  | 16.6                        | -44.8 | 16.6  | -60.1  | 16.6  | -72.2  | 17.2                        | -46.5 | 17.2  | -62.3  | 17.2  | -74.9  |       |
| 100                                    | 13.8                      | -39.1                       | 13.8  | -46.2      | 13.8      | -46.2 | 14.7   | -41.7                       | 14.7  | -49.3 | 14.7   | -49.3 | 15.4   | -43.6                       | 15.4  | -51.6 | 15.4   | -51.6 | 16.0   | -45.2                       | 16.0  | -53.5 | 16.0   | -53.5 |        |       |
| 10                                     | Roof >7-27 (1.5 to 6:12)  | 24.6                        | -39.1 | 24.6       | -68.0     | 24.6  | -100.6 | 26.2                        | -41.7 | 26.2  | -72.5  | 26.2  | -107.2 | 27.4                        | -43.6 | 27.4  | -75.9  | 27.4  | -112.2 | 28.4                        | -45.2 | 28.4  | -78.7  | 28.4  | -116.3 |       |
| 20                                     |                           | 22.4                        | -38.0 | 22.4       | -62.6     | 22.4  | -94.0  | 23.9                        | -40.5 | 23.9  | -66.7  | 23.9  | -100.2 | 25.0                        | -42.4 | 25.0  | -69.8  | 25.0  | -104.9 | 25.9                        | -44.0 | 25.9  | -72.4  | 25.9  | -108.8 |       |
| 50                                     |                           | 19.5                        | -36.5 | 19.5       | -55.3     | 19.5  | -85.3  | 20.8                        | -39.0 | 20.8  | -59.0  | 20.8  | -90.9  | 21.7                        | -40.8 | 21.7  | -61.7  | 21.7  | -96.2  | 22.5                        | -42.3 | 22.5  | -64.0  | 22.5  | -98.7  |       |
| 100                                    | 17.3                      | -35.5                       | 17.3  | -49.9      | 17.3      | -78.8 | 18.4   | -37.8                       | 18.4  | -53.1 | 18.4   | -84.0 | 19.3   | -39.6                       | 19.3  | -55.6 | 19.3   | -87.9 | 20.0   | -41.0                       | 20.0  | -57.7 | 20.0   | -91.1 |        |       |
| 10                                     | Roof >27-45 (6 to 12:12)  | 39.1                        | -42.7 | 39.1       | -49.9     | 39.1  | -49.9  | 41.7                        | -45.5 | 41.7  | -53.1  | 41.7  | -53.1  | 41.7                        | -53.1 | 43.6  | -47.7  | 43.6  | -55.6  | 43.6                        | -55.6 | 45.2  | -49.4  | 45.2  | -57.7  |       |
| 20                                     |                           | 38.0                        | -40.5 | 38.0       | -47.7     | 38.0  | -47.7  | 40.5                        | -43.2 | 40.5  | -50.8  | 40.5  | -50.8  | 42.4                        | -45.2 | 42.4  | -53.2  | 42.4  | -53.2  | 44.0                        | -46.9 | 44.0  | -55.2  | 44.0  | -55.2  |       |
| 50                                     |                           | 36.5                        | -37.6 | 36.5       | -44.9     | 36.5  | -44.9  | 39.0                        | -40.1 | 39.0  | -47.9  | 39.0  | -47.9  | 40.8                        | -42.0 | 40.8  | -50.1  | 40.8  | -50.1  | 42.3                        | -43.5 | 42.3  | -51.9  | 42.3  | -51.9  |       |
| 100                                    | 35.5                      | -35.5                       | 35.5  | -42.7      | 35.5      | -42.7 | 37.8   | -37.8                       | 37.8  | -45.5 | 37.8   | -45.5 | 37.8   | -45.5                       | 39.6  | -39.6 | 39.6   | -47.7 | 39.6   | -47.7                       | 41.0  | -41.0 | 41.0   | -49.4 | 41.0   | -49.4 |
| Effective wind area (ft <sup>2</sup> ) | Location                  | Mean Roof height of 15 feet |       |            |           |       |        | Mean Roof height of 20 feet |       |       |        |       |        | Mean Roof height of 25 feet |       |       |        |       |        | Mean Roof height of 30 feet |       |       |        |       |        |       |
|  |                           | Zone 4                      |       |            | Zone 5    |       |        | Zone 4                      |       |       | Zone 5 |       |        | Zone 4                      |       |       | Zone 5 |       |        | Zone 4                      |       |       | Zone 5 |       |        |       |
|  |                           | +                           | -     | +          | -         | +     | -      | +                           | -     | +     | -      | +     | -      | +                           | -     | +     | -      | +     | -      | +                           | -     | +     | -      | +     | -      |       |
| 10                                     | Wall                      | 42.7                        | -46.2 | 42.7       | -57.1     | 45.5  | -49.3  | 45.5                        | -60.9 | 47.7  | -51.6  | 47.7  | -63.7  | 49.4                        | -53.5 | 49.4  | -66.1  |       |        |                             |       |       |        |       |        |       |
| 20                                     |                           | 40.8                        | -44.4 | 40.8       | -53.2     | 43.5  | -47.3  | 43.5                        | -56.8 | 45.5  | -49.5  | 45.5  | -59.4  | 47.2                        | -51.4 | 47.2  | -61.6  |       |        |                             |       |       |        |       |        |       |
| 50                                     |                           | 38.2                        | -41.9 | 38.2       | -48.2     | 40.8  | -44.6  | 40.8                        | -51.3 | 42.7  | -46.7  | 42.7  | -53.7  | 44.2                        | -48.4 | 44.2  | -55.7  |       |        |                             |       |       |        |       |        |       |
| 100                                    |                           | 36.3                        | -39.9 | 36.3       | -44.4     | 38.7  | -42.6  | 38.7                        | -47.3 | 40.5  | -44.6  | 40.5  | -49.5  | 42.0                        | -46.2 | 42.0  | -51.4  |       |        |                             |       |       |        |       |        |       |
| 500                                    |                           | 31.8                        | -35.5 | 31.8       | -35.5     | 33.9  | -37.8  | 33.9                        | -37.8 | 35.5  | -39.6  | 35.5  | -39.6  | 36.8                        | -41.0 | 36.8  | -41.0  |       |        |                             |       |       |        |       |        |       |
| Effective Wind Area                    | Roof Angle                | Wind Load                   |       | Roof Angle | Wind Load |       |        |                             |       |       |        |       |        |                             |       |       |        |       |        |                             |       |       |        |       |        |       |
|  |                           | +                           | -     |            | +         | -     |        |                             |       |       |        |       |        |                             |       |       |        |       |        |                             |       |       |        |       |        |       |
|  |                           | Height                      | 8     |            | 10        | 14    | 9      | 7                           |       |       |        |       |        |                             |       |       |        |       |        |                             |       |       |        |       |        |       |
| 8                                      | 39.8                      | -45.1                       | 38.5  | -43.1      | 36.5      | -40.7 | 43.4   | -49.1                       | 41.6  | -46.3 |        |       |        |                             |       |       |        |       |        |                             |       |       |        |       |        |       |
| 10                                     | 38.5                      | -43.1                       | 36.5  | -40.7      | 43.4      | -49.1 | 41.6   | -46.3                       | 41.6  | -46.3 |        |       |        |                             |       |       |        |       |        |                             |       |       |        |       |        |       |
| 14                                     | 36.5                      | -40.7                       | 43.4  | -49.1      | 41.6      | -46.3 | 41.6   | -46.3                       | 41.6  | -46.3 |        |       |        |                             |       |       |        |       |        |                             |       |       |        |       |        |       |
| 9                                      | 43.4                      | -49.1                       | 41.6  | -46.3      | 41.6      | -46.3 | 41.6   | -46.3                       | 41.6  | -46.3 |        |       |        |                             |       |       |        |       |        |                             |       |       |        |       |        |       |
| 16                                     | 41.6                      | -46.3                       | 41.6  | -46.3      | 41.6      | -46.3 | 41.6   | -46.3                       | 41.6  | -46.3 |        |       |        |                             |       |       |        |       |        |                             |       |       |        |       |        |       |



"a" shall be the smallest of 10% of least hor. Distance or 40% of eave height but not less than 4% of least hor. Distance or 3 ft