ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

SECTION 1525
HIGH-VELOCITY HURRICANE ZONES—UNIFORM PERMIT APPLICATION

High-Velocity Hurricane Zone Uniform Permit Application Form

INSTRUCTION PAGE

COMPLETE THE NECESSARY SECTIONS OF THE UNIFORM ROOFING PERMIT APPLICATION FORM AND ATTACH THE REQUIRED DOCUMENTS AS NOTED BELOW:

<table>
<thead>
<tr>
<th>Roof System</th>
<th>Required Sections of the Permit Application Form</th>
<th>Attachments Required See List Below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Slope Application</td>
<td>A,B,C</td>
<td>1,2,3,4,5,6,7</td>
</tr>
<tr>
<td>Prescriptive BUR-RAS 150</td>
<td>A,B,C</td>
<td>4,5,6,7</td>
</tr>
<tr>
<td>Asphalt Shingles</td>
<td>A,B,D</td>
<td>1,2,4,5,6,7</td>
</tr>
<tr>
<td>Concrete or Clay Tile</td>
<td>A,B,D,E</td>
<td>1,2,3,4,5,6,7</td>
</tr>
<tr>
<td>Metal Roofs</td>
<td>A,B,D</td>
<td>1,2,3,4,5,6,7</td>
</tr>
<tr>
<td>Wood Shingles and Shakes</td>
<td>A,B,D</td>
<td>1,2,4,5,6,7</td>
</tr>
<tr>
<td>Other</td>
<td>As Applicable</td>
<td>1,2,3,4,5,6,7</td>
</tr>
</tbody>
</table>

ATTACHMENTS REQUIRED:

1. Fire Directory Listing Page
2. From Product Approval:
   - Front Page
   - Specific System Description
   - Specific System Limitations
   - General Limitations
   - Applicable Detail Drawings
3. Design Calculations per Chapter 16, or if applicable, RAS 127 or RAS 128
4. Other Component of Product Approval
5. Municipal Permit Application
6. Owners Notification for Roofing Considerations (Reroofing Only)
7. Any Required Roof Testing/Calculation Documentation
High-Velocity Hurricane Zone Uniform Permit Application Form

Section A (General Information)

Master Permit No. ____________________________ Process No. ____________________________

Contractor’s Name ________________________________________________________________

Job Address _______________________________________________________________________

ROOF CATEGORY

☐ Low Slope ☐ Mechanically Fastened Tile ☐ Mortar/Adhesive Set Tiles
☐ Asphalt Shingles ☐ Metal Panel/Shingles ☐ Wood Shingles/Shakes
☐ Prescriptive BUR-RAS 150

ROOF TYPE

☐ New roof ☐ Repair ☐ Maintenance ☐ Reroofing ☐ Recovering

ROOF SYSTEM INFORMATION

Low Slope Roof Area (SF) ______ Steep Sloped Roof Area (SF) ______ Total (SF) ______

Section B (Roof Plan)

Sketch Roof Plan: Illustrate all levels and sections, roof drains, scuppers, overflow scuppers and overflow drains. Include dimensions of sections and levels, clearly identify dimensions of elevated pressure zones and location of parapets.
Section C (Low Slope Application)
Fill in specific roof assembly components and identify manufacturer
(If a component is not used, identify as “NA”)
System Manufacturer: ________________________________
Product Approval No.: ________________________________
Design Wind Pressures, From RAS 128 or Calculations:
Zone 1: _____ Zone 2: _____ Zone 3: _____
Max. Design Pressure, from the specific product approval system: __________________
Deck:
Type: ________________________________
Gauge/Thickness: ________________________________
Slope: ________________________________
Anchor/Base Sheet & No. of Ply(s): ________________________________
Anchor/Base Sheet Fastener/Bonding Material:
______________________________
Insulation Base Layer: ________________________________
Base Insulation Size and Thickness: ________________________________
Base Insulation Fastener/Bonding Material:
______________________________
Top Insulation Layer: ________________________________
Top Insulation Size and Thickness: ________________________________
Top Insulation Fastener/Bonding Material:
______________________________
Base Sheet(s) & No. of Ply(s): ________________________________
Base Sheet Fastener/Bonding Material:
______________________________
Ply Sheet(s) & No. of Ply(s): ________________________________
Ply Sheet Fastener/Bonding Material:
______________________________
Top Ply:
Top Ply Fastener/Bonding Material:
______________________________
Surfacing: ________________________________
Fastener Spacing for Anchor/Base Sheet Attachment:
Zone 1: _____ oc @ Lap, # Rows _____ @ _____ oc
Zone 1: _____ oc @ Lap, # Rows _____ @ _____ oc
Zone 2: _____ oc @ Lap, # Rows _____ @ _____ oc
Zone 3: _____ oc @ Lap, # Rows _____ @ _____ oc
Number of Fasteners Per Insulation Board:
Zone 1: _____ Zone 2: _____ Zone 3: _____
Illustrate Components Noted and Details as Applicable:
Woodblocking, Gutter, Edge Termination, Stripping, Flashing, Continuous Cleat, Cant Strip, Base Flashing, Counterflashings, Coping, Etc.
Indicate: Mean Roof Height, Parapet Height, Height of Base Flashing, Component Material, Material Thickness, Fastener Type, Fastener Spacing or Submit Manufacturers Details that Comply with RAS 111 and Chapter 16.
Section D (Steep Sloped Roof System)

Roof System Manufacturer: ________________________________________________________________
Notice of Acceptance Number: ___________________________________________________________
Minimum Design Wind Pressures, If Applicable (From RAS 127 or Calculations):
Zone 1:_____ Zone 2:_____ Zone 3:_____

Deck Type: __________________________
Type Underlayment: __________________
Insulation: _________________________
Fire Barrier: _________________________
Ridge Ventilation? __________________
Fastener Type & Spacing: ___________
Adhesive Type: _____________________
Type Cap Sheet: ____________________
Mean Roof Height: _________________
Roof Covering: ____________________
Type & Size Drip Edge: ______________

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High-Velocity Hurricane Zone Uniform Permit Application Form

Section E (Tile Calculations)
For Moment-based tile systems, choose either Method 1 or 2. Compare the values for M with the values from Mr. If the M values are greater than or equal to the Mr values, for each area of the roof then the tile attachment method is acceptable.

Method 1 “Moment-Based Tile Calculations Per RAS 127”
(Zone 1: \( \lambda \) = \( \lambda \) – \( M_g \) = \( M_r \) Product Approval Mr)
(Zone 2: \( \lambda \) = \( \lambda \) – \( M_g \) = \( M_r \) Product Approval Mr)
(Zone 3: \( \lambda \) = \( \lambda \) – \( M_g \) = \( M_r \) Product Approval Mr)

Method 2 “Simplified Tile Calculations Per Table Below”
Required Moment of Resistance (Mr) From Table Below Product Approval Mr

<table>
<thead>
<tr>
<th>Mean Roof Height</th>
<th>Roof Slope</th>
<th>15°</th>
<th>20°</th>
<th>25°</th>
<th>30°</th>
<th>40°</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:12</td>
<td>-46</td>
<td>-47.6</td>
<td>-49.4</td>
<td>-50.9</td>
<td>-53.3</td>
<td></td>
</tr>
<tr>
<td>3:12</td>
<td>-47.3</td>
<td>-48.9</td>
<td>-50.7</td>
<td>-52.2</td>
<td>-54.6</td>
<td></td>
</tr>
<tr>
<td>4:12</td>
<td>-47.2</td>
<td>-52.0</td>
<td>-53.8</td>
<td>-55.3</td>
<td>-57.9</td>
<td></td>
</tr>
<tr>
<td>5:12</td>
<td>-39.8</td>
<td>-41.5</td>
<td>-42.8</td>
<td>-43.7</td>
<td>-45.7</td>
<td></td>
</tr>
<tr>
<td>6:12</td>
<td>-39.6</td>
<td>-40.6</td>
<td>-41.9</td>
<td>-42.9</td>
<td>-44.8</td>
<td></td>
</tr>
<tr>
<td>7:12</td>
<td>-39.4</td>
<td>-40.3</td>
<td>-41.6</td>
<td>-42.6</td>
<td>-44.6</td>
<td></td>
</tr>
</tbody>
</table>

Method 2 may be utilized within Broward County Exposure C only.

For Uplift-based tile systems use Method 3. Compare the values for F’ with the values for Fr. If the F’ values are greater than or equal to the Fr values for each area of the roof then the tile attachment method is acceptable.

Method 3 “Uplift-Based Tile Calculations Per RAS 127”
(Zone 1: \( \lambda \) = \( \lambda \) – \( W \) = \( W \) \( \times \) \( \cos r \) = \( F_r \) Product Approval F’)
(Zone 2: \( \lambda \) = \( \lambda \) – \( W \) = \( W \) \( \times \) \( \cos r \) = \( F_r \) Product Approval F’)
(Zone 3: \( \lambda \) = \( \lambda \) – \( W \) = \( W \) \( \times \) \( \cos r \) = \( F_r \) Product Approval F’)

Where to Obtain Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Symbol</th>
<th>Where to find</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Pressure</td>
<td>Zones 1, 2, 3</td>
<td>From applicable table in RAS 127 or by an engineering analysis prepared by PE based on ASCE 7</td>
</tr>
<tr>
<td>Mean Roof Height</td>
<td>H</td>
<td>Job Site</td>
</tr>
<tr>
<td>Roof Slope</td>
<td>( \theta )</td>
<td>Job Site</td>
</tr>
<tr>
<td>Aerodynamic Multiplier</td>
<td>( \lambda )</td>
<td>Product Approval</td>
</tr>
<tr>
<td>Restoring Moment due to Gravity</td>
<td>( M_g )</td>
<td>Product Approval</td>
</tr>
<tr>
<td>Attachment Resistance</td>
<td>( M_r )</td>
<td>Product Approval</td>
</tr>
<tr>
<td>Required Moment Resistance</td>
<td>( M_g )</td>
<td>Calculated</td>
</tr>
<tr>
<td>Minimum Attachment Resistance</td>
<td>( F' )</td>
<td>Product Approval</td>
</tr>
<tr>
<td>Required Uplift Resistance</td>
<td>( F_r )</td>
<td>Calculated</td>
</tr>
<tr>
<td>Average Tile Weight</td>
<td>W</td>
<td>Product Approval</td>
</tr>
<tr>
<td>Tile Dimensions</td>
<td>( W = \text{length} ), ( W = \text{width} )</td>
<td>Product Approval</td>
</tr>
</tbody>
</table>

All calculations must be submitted to the building official at the time of permit application.