TESTING APPLICATION STANDARD (TAS) No. 111(A)-95

TEST PROCEDURE FOR ROOF EDGE TERMINATION PERFORMANCE

1. Scope:

1.1 This protocol covers determination of the attachment performance of roof edge terminations.

1.2 The test procedures outlined in this protocol determine whether a roof edge termination, consisting of woodblocking, termination metal and the type of membrane being terminated, performs to resist an oblique load of 100 lbf/ft, as required in RAS 111.

1.3 All testing and calculations shall be conducted by an approved testing agency and all test reports, including calculations, shall be signed by a Registered Design Professional per F.S., Section 471 or 481.

2. Referenced Documents:

2.1 *ASTM Standards:*

E 380 Excerpts from the Standard Practice for Use of the International System of Units (SI) (the Modernized Metric System)

2.2 *The Florida Building Code, Building*.

2.3 *Application Standards:*
RAS 111 Standard Requirements for Attachment of Perimeter Woodblocking and Metal Flashings

2.4 *Single Ply Roofing Institute:*
SPRI Edge Design Guide, March 1994

2.5 *Roof Consultants Institute:*
Glossary of Terms

3. Terminology & Units:

3.1 Definitions—For definitions of terms used in this specification, refer to Chapter 2 and Section 1513 of the *Florida Building Code, Building*; and/or the RCI Glossary of Terms. The definitions from the *Florida Building Code, Building* shall take precedence.

3.2 Units—For conversion of U.S. customary units to SI units, refer to ASTM E 380.

4. Significance and Use:

4.1 The method with which the edge of a roofing membrane is terminated (edge metal and woodblocking) is the last anchor point to hold the membrane in place should the membrane happen to separate from the roof deck during high winds. When this occurs, the membrane termination construction incurs a significant load.

4.2 The test procedure outlined herein provides a means for determining whether a particular membrane termination detail performs to resist an oblique load of 100 lbf/ft.

5. Apparatus:

5.1 The test apparatus shall consist of a tensile tester fitted with a suitable holding device for the membrane termination being tested. The load recording device attached to the tensile tester shall be capable of recording loads up to 300 lbf. (See Figures 1 and 2, herein.)

6. Test Limitations and Precautions:

6.1 This protocol may involve hazardous materials, operations and equipment. This protocol does not purport to address all of the safety problems associated with its use. It is the responsibility of the user to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

7. Test Specimen:

7.1 The test specimen shall consist of a 12 inch wide “mock-up” of the termination system as it would be installed in an actual field application. Not less than five test specimens shall be constructed and tested.

8. Procedure

8.1 Mount the 12 inch wide test specimen to the base or holding device of the tensile tester such that the membrane is pulled at a 45-degree angle to the attachment substrate. This angle is chosen to simulate a "billowing" membrane.

8.2 Photograph the test specimen prior to testing.

8.2 Connect the tensile tester jaws to two bars which clamp the membrane edge creating even load distribution across the 12 inch specimen width.

8.3 Apply uniform load at a constant rate to the membrane until failure, as noted below, occurs.

8.3.1 Failure is defined as any event which allows the membrane to come free of the edge termination or the termination to come free from the substrate.

8.4 Photograph the test specimen subsequent to failure.

8.5 Record the failure load for each of five test specimens and calculated an average failure load.

9. Interpretation of Results:

9.1 The membrane termination system shall record an average failure load not less than 100 lbf.

10. Report:

10.1 The final report shall include the following:

10.1.1 A complete description of the membrane termination system, including membrane type and attachment, edge metal type, material, thickness and attachment, and the attachment substrate (i.e., woodblocking, etc.).

10.1.2 Recorded failure loads for each of five test specimens and an average failure load.

10.1.3 Photographs of the test specimens prior and subsequent to failure.

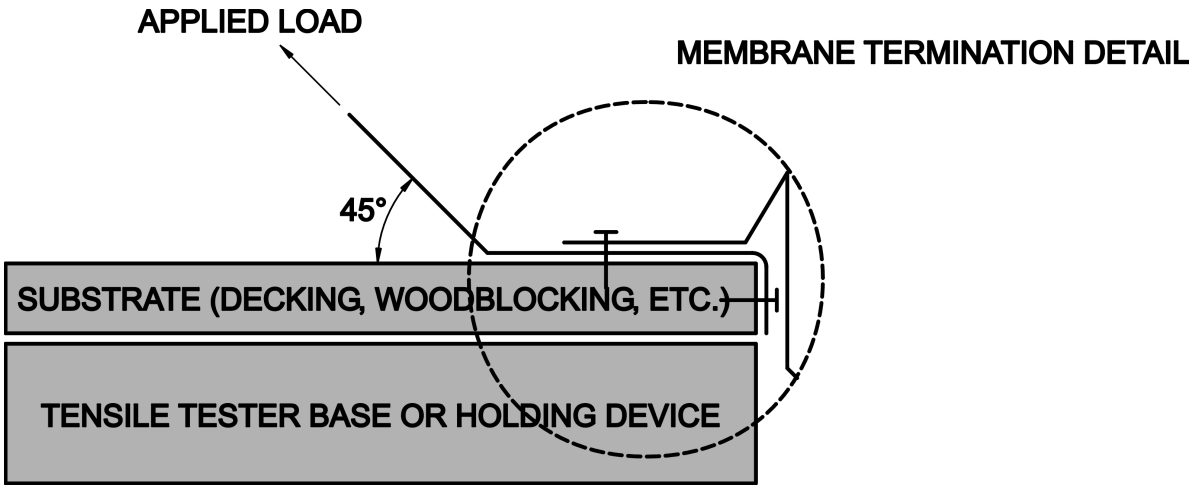

FIGURE 1
MEMBRANE TERMINATION PERFORMANCE TEST CONFIGURATION OPTION

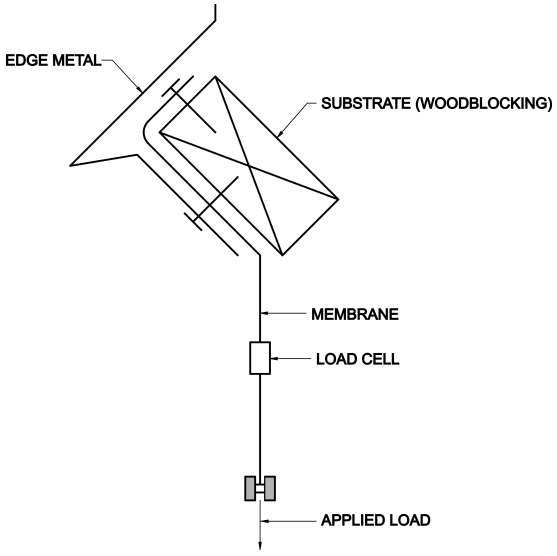

FIGURE 2
MEMBRANE TERMINATION PERFORMANCE TEST CONFIGURATION OPTION