

Response to Staff Analysis of DCA20-DEC-209 by Michael Murray

For consideration:

Question 1: The Staff answer has not answered the question asked. Staff attention is directed to the highlighted section of attached memorandum dated 7/23/2010. Further, the conclusion that 1613.1(9) applies to all storm shutter products regardless of materials or physical properties is contrary to the “promotion of innovation and new technologies” per FL Statue 553.842(a).

Question 2: The Staff answer has not answered the question asked. Further, testing and evaluation per the product approval process has shown that deflection does not cause fatigue failure in fabric storm panels and therefore this class of products should not be subject to 1613.1(9)'s deflection limitation.

Question 4: Staff answer may require modification based on answers to questions 1 and 2.

Question 5: Staff answer may require modification based on answers to questions 1 and 2.

Question 6: Staff answer may require modification based on answers to questions 1 and 2.

MEMORANDUM

TO: CHAIRMAN ED CARSON AND MEMBERS PROGRAM OVERSIGHT
COMMITTEE PRODUCT APPROVAL

FROM: THEODORE BERMAN P.E.,
PRODUCT APPROVAL SYSTEM ADMINISTRATOR

SUBJECT: AGENDA ITEM 3, D SHUTTERS USED WITHIN HVHZ THAT
HAVE DEFLECTION LARGER THAN ALLOWED BY SECT
1613.1.9.

DATE: 7/23/2010

BACKGROUND

Florida Building Code Section 1613.1.9 (HVHZ only) indicates

“Storm shutters and fold-down awnings, which in the closed position shall provide a minimum clear separation from the glass of 1 inch (25 mm) but not to exceed 2 inches (51 mm) when the shutter or awning is at its maximum point of permissible deflection $L/30$ ”

To evaluate the deflection of shutters it is required to test the assembly and in most cases perform comparative analysis to interpolate design pressures, spans and deflections.

ANALYSIS

Due to the need to provide different spans and heights of assemblies, it is typical that applications are based on testing and a comparative analysis be performed by a Florida P.E. to provide the needed configurations that are needed for the extensive use of the product. Therefore, the application method has been the “Evaluation by Professional Engineer”. These applications have also been validated by Florida P.E.s.

During the April 2010 POC cycle there were public comments about applications not complying with the 2” and/or $L/30$ deflection limit imposed by Sect. 1613.1.9. The applicants did not offer rebuttal of the comment and the applications were conditionally approved with the condition of “Indicate “No” for use within HVHZ”. These applications were FL13299-R1 that could not be revised because they had

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applied for an “Editorial Change” (FL13299 remains as an approved application) and FL13536 that did not comply with the condition and therefore denied.

During the June 2010 cycle there were public comments on FL812-R4 and FL13682. Both these applicants are in the process of complying or have complied with the limitation of not to be used within HVHZ.

At the POC hearing, these applicants indicated the number of applications that have been approved without the limitation. The POC directed us to look into corrective action.

NEEDED ACTION

The database of approved products has been reviewed for probable deficient application for not complying with Sect. 1613.1.9. Because the evaluation documents are not available for review, a deflection/span analysis was conducted for a probable determination. Applicants were contacted by email and most have indicated that they are willing to provide revised applications that would have the HVHZ limitation. Some are contesting our probable finding and we need POC guidance on how to proceed on these applications.

There are several applications on the present cycle that are not recommended for approval because the deflection deficiency has been noted. These applications have been placed on today’s agenda as discussion items.

It shall be noted that in all occasions, the applications indicate a glazing separation that under the tested/analyzed deflection would not rupture the glazing.

When Section 1613.1.9 language was introduced into the South Florida Building Code, the shutters used at that time were made with metals. The limits of deflection were preventive of the material acting outside their elastic range. With the introduction of textiles and plastics as protection of openings, perhaps a new look shall be given to the requirements of Section 1613.1.9