FLORIDA BUILDING COMMISSION

HURRICANE RESEARCH ADVISORY COMMITTEE

REPORT TO THE FLORIDA BUILDING COMMISSION

FEBRUARY 6, 2006

Orlando, Florida

Meeting Design & Facilitation By

Florida Conflict Resolution Consortium

Report By Jeff A. Blair
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This document is available in alternate formats upon request to Dept. of Community Affairs, Codes & Standards, 2555 Shumard Oak Blvd., Tallahassee, FL 32399, (850) 487-1824.
OVERVIEW

At the January 26, 2005 Commission meeting, Chairman Rodriguez appointed a small coordinating group consisting of Commissioners and other stakeholder representatives, charged with identifying what research is being conducted related to building failure issues resulting from the 2004 hurricanes, identifying any research gaps on key issues identified but not being researched, and finally, to ensure that the Commission is provided with all relevant research findings on each of the major issues, prior to the Commission considering code enhancements resulting from lessons learned.

Following is the chronology of events and subsequent Commission actions resulting from the 2004 hurricanes.

- Commission met in Miami on August 29 – 31, 2004 and staff presented early observations from the storm.
- Hurricane Francis hit on September 6, 2004 over Southern Hutchinson Island, Florida.
- Hurricane Ivan hit on September 16, 2004 between Gulf Shores, Alabama and Pensacola, Florida.
- Hurricane Jeanne hit on September 26, 2004 near Stuart, Florida.
- The Commission met on October 18 – 19, 2004, following three additional hurricanes and presented preliminary data collected from the four storms.
- The Commission met on December 6 – 8, 2004 and a hurricane researchers workshop co-sponsored by the Commission and the Institute for Business and Home Safety, was held on December 6, 2004.
- On January 12, 2005 the Florida Homebuilders Association released an assessment report concerning water intrusion during the 2004 hurricanes.
- At the Commission’s January 2005 Commission meeting the Chair convened a workgroup to assist the Commission by ensuring they have all relevant research on each of the key issues identified during the hurricane assessments to assist the Commission with any needed code enhancements.
- At the Commission’s January 2005 meeting, the Florida Home Builders Association presented findings and recommendations regarding water intrusion.
- On March 16, 2005 the Commission held a joint session with the Hurricane Research Advisory Committee and heard presentations and recommendations on studies related to water intrusion, building code performance, roof tiles, and the design of aluminum structures.
- At the May 10, 2005 meeting of the Hurricane Research Advisory Council the committee heard additional presentations and recommendations on water intrusion, and a window
assessment failure study. In addition, at the May 10, 2005 meeting of the Hurricane Research Advisory Council, the committee was asked to make the following preliminary determinations relative to the various recommendations: First, based on the studies and related recommendations, do members support the recommendation, and second should the recommendation be recommended for early implementation (as a part of the legislative authorization for expedited code amendment implementation for hurricane related provisions) or should it be reviewed and considered through the regular Commission code amendment process. The HRAC evaluated each of the options and identified a preliminary list of options recommended for expedited code adoption as well as options that were recommended for adoption through the normal code amendment process.

- At the June 28, 2005 meeting of the Hurricane Research Advisory Council the committee was asked to further consider those options that received a consensus for the recommendations and a 50% or greater level of support for expedited code adoption. The HRAC evaluated these as well as additional options identified by members. At the conclusion of the June meeting, the HRAC reached consensus on a package of recommendations for submittal to the Commission. The recommendations were for amendments recommend for expedited code adoption.

- Hurricane Dennis hit on July 10, 2005 in the Western Florida Panhandle region of the State, between Pensacola Beach and Navarre Beach Florida.

- At the August 23, 2005 meeting the HRAC evaluated the issues for consideration during the 2006 annual code amendment process, and identified issues that needed additional information or development prior to developing recommendations and that should be deferred for future code changes.

- The Commission adopted a draft package of code amendments following public comment received during the rule development workshop conducted at the August 2005 meeting.

- Hurricane Katrina landed on August 25, 2005 near the Miami-Dade Broward County Line in Florida, and on August 29, 2005 hit Plaquemines Parish Louisiana just south of Buras La, and again at the Gulf Coast border of Louisiana and Mississippi.

- At the October 10, 2005 meeting members reviewed the results of Commission action regarding expedited code amendments, and reviewed assignments and project status.

- The Commission conducted a rule adoption hearing at the October 11, 2005 meeting, and adopted a final package of expedited Code amendments

- Hurricane Wilma landed on October 24, 2005 near Cape Romano Florida and crossed the Florida Peninsula just north of Palm Beach.

- At the December 6, 2005 meeting, members heard presentations on observations from Hurricane Wilma damage to South Florida.

- At the February 6, 2006 meeting, members reviewed the status of Committee proposed code amendments, heard an update on the Panhandle Windborne Debris Study, and voted to recommend DCA seek funding authority to support completion of a wind and water infiltration testing facility, and for conducting testing specific to building code development.
The Chair appointed the following members to the group and charged them with representing their respective interest groups during the course of their meetings:

**MEMBERS AND REPRESENTATION**

Raul Rodriguez, AIA, Chair
Chris Schulte
Do Kim, P.E.
Nick D’Andrea, CBO
George Wiggins, CBO
Craig Parrino, P.E.
Tim Reinhold, PhD, P.E.
Joe Crum, CBO (President, BOAF)
Jack Glenn, CBO
Dave Olmstead
John Ingargiola

Architects
Roofing contractors
Insurance industry
Building officials
Local government
Product manufacturers (concrete products)
Insurance industry/Researchers
Building officials
Home builders
Product manufacturers (windows)
Federal government (FEMA)

**REPORT OF THE FEBRUARY 6, 2006 MEETING**

The Committee over several months developed a consensus package of recommendations for proposed code amendments. The amendments were recommended for expedited adoption, glitch cycle adoption, or future adoption based on the need for additional research and development.

At the August 2005 meeting, the Commission voted on the Committee’s package of recommended expedited code amendments. At the October HRAC meeting, the Committee reviewed the status of their package of recommendations, including Commission actions related to approved expedited code amendments, amendments deferred to the glitch cycle, and proposed amendments that were not approved or deferred. The Committee also heard an overview from the Panhandle Windborne Debris Region Workshop, and an update on the plan for considering the Exposure C definition issue. In addition, the Committee was asked to review assignments and to identify any additional issues and research and development needs.

At the December 6, 2005 meeting the Committee heard an update on discussions regarding the Exposure C definition, and a status report on the Panhandle Windborne Debris Study. In addition, there were presentations from DCA staff, Miami-Dad County Code Compliance, and the Palm Beach County Building Department on observations regarding the impacts and damage to South Florida from Hurricane Wilma.

The Committee will meet again at the FEBRUARY Commission meeting to receive an update on related projects and status report on Committee issues, and to review member assignments.

**Opening and Meeting Attendance**
The meeting started at 1:00 PM, and the following Council members were present: Joe Crum, Nick D’Andrea, Jack Glen, Dave Olmstead, Craig Parrino, and Chris Schulte.
DCA Staff Present
Rick Dixon, Ila Jones, Mo Madani, Jim Richmond, and Betty Stevens.

Meeting Facilitation
The meeting was facilitated by Jeff Blair from the Florida Conflict Resolution Consortium at Florida State University. Information at: http://consensus.fsu.edu/

Project Webpage
Information on the project, including agenda packets, meeting reports, and related documents may be found in downloadable formats at the project webpage below: http://consensus.fsu.edu/FBC/hrac.html

Meeting Objectives
- To Review Committee Process Plan
- To Review Status of Committee Recommended Code Amendments Deferred by Commission to Glitch Cycle
- To Receive an Update on the Panhandle Windborne Debris Study
- To Receive a Report on Exposure C Definition Discussions
- To Discuss Research Initiatives for Fiscal Year 2006-2007
- To Consider Public Comment
- To Review next steps and assignments for next meeting

Approval of December 6, 2005 Facilitator’s Report
The Committee voted unanimously, 6 - 0 in favor, to approve the December 6, 2005 Facilitator’s Report as presented.

Report on Status of Code Amendments Deferred to Glitch Cycle
Rick Dixon reported on the status of Committee recommended Glitch Cycle code amendments, and answered Committee member’s questions. The status of all Committee proposed code amendments may be found in the matrix located at the end of this report.

Update on the Panhandle Windborne Debris Study
Rick Dixon provided the Committee with an update on the status of the Panhandle Windborne Debris Region study, and answered Committee member’s questions.

Overview
The 2005 Florida Legislature debated whether to revise the definition of the windborne debris region along the panhandle coast from Franklin County to the Alabama border and determined further study was warranted. It directed the Florida Building Commission to review the effects of Hurricane Ivan on damage caused by windborne debris and other data, and in conjunction with building officials from the impacted areas, to develop a recommendation for consideration by the 2006 Legislature.

On September 13, 2005 the Commission conducted the first workshop which was held at the Okaloosa County Airport, for the purpose of soliciting input from local building officials and other stakeholders in the Panhandle region of the State. At the conclusion of the workshop, there was consensus for the strategy of conducting a study on the treed environment effects and
historical wind data effects, in order to provide additional data for consideration in developing recommendations to the Legislature.

It should be noted that although the building officials from the Florida Panhandle expressed support for the study, all but one agreed that changes were not warranted at this time to the definition of the windborne debris region of the Florida Panhandle region. The local building officials’ comments ranged from most damage was related to surge and not windborne debris, to the Panhandle is a unique environment that ASCE 7 does not adequately reflect, to extra windborne debris protection should be voluntary and not mandatory, to mandatory protection will increase the cost of already unaffordable housing in the region.

Subsequent to the Panhandle workshop, at the October 2005 meeting, the Commission voted unanimously to request budgetary authority to contract with a consultant to conduct an engineering based risk assessment of hurricane windborne debris protection options for the Panhandle in order to analyze the risks, costs, and benefits of windborne debris protection for the region. The research will focus on factors unique to the Panhandle region including treed areas inland of the coast, and consider historical wind data effects. The requested funding authorization was approved, and the consultant scheduled to update the Commission at their February 2006 meeting.

At the February 2006 Commission meeting, the consultant reported that the goal of the study is to perform wind tunnel tests for houses located in treed environments characteristic of the Florida Panhandle, and to develop computer models for analysis of wind borne debris protection effects for representative Panhandle houses. The consultant is currently updating the wind-borne debris model in preparation for the wind tunnel tests designed to perform hurricane simulations of the representative houses located at various positions in the Panhandle, designed to evaluate building damage and loss with and without windborne debris protection. To date, wind tunnel tests have been conducted, hurricane data has been analyzed, and computer models modified.

At the conclusion of the Panhandle Study update, the Commission voted unanimously to recommend that the Legislature remove the Panhandle Windborne Debris Region definition from law, thereby authorizing the Commission to adopt a new definition within the Code by rule. The Commission is committed to working with stakeholders to develop consensus on a new definition to be developed and adopted by rule into the Code. To this end, the Commission has scheduled a second Panhandle region workshop for February 16, 2006, and will continue to work with stakeholders in a consensus based process once the Study is complete.

It should be noted that the Commission’s decision to proceed with this strategy, is consistent with State policy of recognizing that Florida is a diverse State geographically and climatically, and risks are not uniform throughout the State. On this basis, the Florida Building Code and National Engineering Standards consider requirements specific to different regions of the State, when and where appropriate, such as, the High Velocity Hurricane Zone (HVHZ) provisions of the Code specific to Miami-Dade and Broward counties in Southeast Florida, and variations of design wind speeds relative to proximity to Florida’s coasts. In addition, the Commission has always advised that Code should be developed by the Commission in a consensus process and not written into law.
Update on Exposure C Definition Discussions
Rick Dixon provided the Committee with an update on the status of discussion regarding the Exposure Category C definition, and answered Committee member’s questions.

Overview
This legislative assignment requires the Florida Building Commission to evaluate the definition of “exposure category C” as currently defined in section 553.71(10), Florida Statutes, and make recommendations for a new definition that more accurately depicts Florida-specific conditions prior to the 2006 Regular Session.

The Commission assigned this task to its Hurricane Research Advisory Committee in order to utilize the Committee’s expertise in this subject area. The Commission is considering the recommendation from stakeholders, that in contrast to current ASCE-7 methodology, the default exposure category for Florida should be exposure category B, and clear definitions and criteria will be developed by the Commission in consultation with stakeholders, to define what constitutes Exposure C. These criteria and conditions will include distance factors, the starting point for where to begin measurements, a clear definition of open terrain, and size and density considerations for large development exemptions.

After reviewing the proposed strategy for defining Exposure Category C, the Commission has reached a conceptual agreement with stakeholders on how to revise the definition, and voted unanimously at their February 2006 meeting, to recommend that the Legislature remove the exposure Category C definition from law, thereby authorizing the Commission to adopt a new definition within the Code by rule. The Commission is committed to working with stakeholders to develop consensus on a new definition to be developed and adopted by rule into the Code.

Discussion of Research and Development Needs
Committee members were asked to consider the type of data gaps and research needs that should be addressed in order to develop additional hurricane provision code enhancements. In general, research on building products and systems would benefit from testing under hurricane conditions including high wind and driven water, in order to test products’ resistance to wind and water intrusion. Dr. Forest Masters from FIU in Miami, is currently developing a facility called the “Wall of Wind” that will be able to use actual hurricane data compiled from studies of the 2004 and 2005 Florida Hurricanes, and recreate hurricane events and model the effects on buildings, building systems and components (i.e., soffit systems). The lab will consist of a water injection system used with a matrix of high wind fans to replicate actual storm events, again based on hurricane storm data. It should be noted, that Dr. Masters is currently working with a smaller portable prototype of the “Wall of Wind” system to conduct testing.

The goal is to house the “Wall of Wind” facility in a Homestead Airforce Base Hanger provided by Miami-Dade County. The facility needs extensive renovations and Dr. Masters is seeking funding support to complete the facility and begin testing using the upgraded wind and water infiltration testing system. Dr. Masters stated that he could provide data on Commission identified research needs on a quick turn around basis (between Commission meetings).
Proposal to Provide Funding for the “Wall of Wind” facility.
The Hurricane Research Advisory Committee moved to recommend that the Florida Building Commission provide funding to assist with the project with the understanding that hurricane condition testing would be conducted on behalf of the Commission on projects recommended by the Committee. Moved by Jack Glen and seconded by Nick D’Andrea.

Committee Action

Motion—The Committee voted unanimously, 6 - 0 in favor, to recommend that the Commission request that DCA seek additional legislative spending authority to provide financing for the wall of wind facility at FIU, and conducting testing specific to building code development. The proposed funding amount is $500,000.00 (300K for the facility and 200K for testing). The Commission will review specific budget and contract requirements once spending authority is granted, and has no obligation to spend the money.

Public Comments
The “Wall of Wind” facility should work with existing private entities.
Don’t compete with private entities.
AAMA window groups appreciate the project and believe it will help.

Next Steps
Soffit information report.
Identification of research needs by Committee.
Workplan and data needs identification.
Prioritization exercise of research needs.
**HURRICANE RESEARCH ADVISORY COMMITTEE RECOMMENDATIONS FOR CODE CHANGES—GLITCH CYCLE TAC RECOMMENDATIONS**

**AMENDMENT STATUS**

Revised 2/6/06

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Actions</th>
<th>Targeted Code Change</th>
<th>Action Plan and Assignment</th>
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<tr>
<td>A bond break be provided between primary drainage planes and stucco renderings in drained assemblies. In simple terms this will require two layers of building paper or a layer of building paper over a plastic housewrap.</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
</tr>
<tr>
<td>The specification, rating and testing of WRB’s be consistent with their installed exposure – i.e. tested and rated as part of a stucco assembly. Appropriate performance specifications need to be developed for WRB’s used with stucco renderings and the Florida Building Code altered to require them.</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
</tr>
<tr>
<td>The Florida Building Code be altered to come into compliance with the International Residential Code to explicitly allow for the construction of unvented roof assemblies.</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
</tr>
<tr>
<td>Require application of exterior surface coatings to appropriate standard or manufacturer’s specification.</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
</tr>
<tr>
<td>Require wood, metal or other structural support “ridge board” for tile attachment methods 1, 2 and 4A</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
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<td>Require FBC approved pre-bagged mortar to attach hip and ridge tiles attachment methods 3 and 4B (pre-bagged mortar requirement applies to systems where mortar is the attachment component not systems utilizing ridge board and mechanical or adhesive-set)</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
</tr>
<tr>
<td>Require testing of ridge attachment systems according to SSTD 11 to establish wind up-lift resistance.</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
</tr>
<tr>
<td>Utilize an additional tile factor of 2-1 above that specified in SSTD 11 or TAS 101 to determine the “allowable overturning moment” or “attachment resistance expressed as a moment (Mf)”</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
</tr>
<tr>
<td>Prohibit component substitution without proper laboratory testing and FBC Product Approval</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
</tr>
<tr>
<td>Allow hip and ridge attachment systems with demonstrated performance equal or superior to that required by the identified systems</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
</tr>
<tr>
<td>Address requirements for installation instructions via Product Approval Workgroup Recommendations</td>
<td>HRAC recommended Expedited Amendment Commission approved Expedited</td>
<td>Expedited Amendments 11/1/05</td>
<td>Completed</td>
</tr>
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<td>The moisture storage capacity of mass walls be increased by providing a “seat” at the base of these assemblies.</td>
<td>HRAC recommended expedited amendment Commission rejected</td>
<td>None</td>
<td>Referred back to FHBA (recommendation was from FHBA water intrusion report) Proposal by Palm Beach County. No recommendation to approve by TAC.</td>
</tr>
<tr>
<td>Define the terms “weather resistant” and “weather protection”</td>
<td>HRAC recommended expedited amendment Commission rejected</td>
<td>None</td>
<td>Referred back to Central Florida BOAF Chapter to pursue its recommendation No proposal</td>
</tr>
<tr>
<td>Delete the criteria of chapter 14 that deems walls constructed according to the masonry chapter and concrete chapter requirements to be weather resistant.</td>
<td>HRAC recommended expedited amendment Commission rejected</td>
<td>None</td>
<td>Referred back to Central Florida BOAF Chapter to pursue its recommendation IBHS proposal 1874- rqr weather resistant covering for masonry (does not address concrete) TAC recommended approval.</td>
</tr>
<tr>
<td>Require compliance with ANSI/SPRI ES-1 for edge flashings and copings.</td>
<td>HRAC recommended expedited amendment Commission deferred to glitch amendments</td>
<td>Glitch Amendments 10/1/06</td>
<td>Code currently applies SPRI ES-1 to edge flashing. Amendment prepared to apply ES-1 to copings also. Resubmit for glitch amendment. (2004 FBC requires the standard for flashings) Roofing Work Group</td>
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<td>Require compliance with ASTM E-1592 for testing the uplift resistance of metal panel roof systems. (Note: Require ASTM E-1592 for structural metal panel roof systems and UL 580 for non-structural metal panel roof systems)</td>
<td>HRAC recommended expedited amendment Commission deferred to glitch amendments</td>
<td>Glitch Amendments 10/1/06</td>
<td>Amendment prepared. Resubmit for glitch amendment. Roofing Work Group HRAC proposal 1632 No recommendation to approve from TAC.</td>
</tr>
<tr>
<td>Require asphalt shingles to comply with UL 2390.</td>
<td>HRAC recommended expedited amendment Commission deferred to glitch amendments</td>
<td>Glitch Amendments 10/1/06</td>
<td>Prepare revised amendment and resubmit for glitch amendment. Roofing Work Group ARMA proposals 1785/1796 TAC recommended approval. ARMA proposal instead.</td>
</tr>
<tr>
<td>Require removal of existing roof covering down to the deck and replacement of deteriorated sheathing in areas where basic wind speed is 110 mph or greater. If existing sheathing attachment does not comply with loads derived from Chapter 16, require installation of additional fasteners to meet the loads.</td>
<td>HRAC recommended expedited amendment Commission deferred to glitch amendments</td>
<td>Glitch Amendments 10/1/06</td>
<td>Amendment prepared. Review and revise. Roofing Work Group IBHS proposal 1879 and FRSA proposal 1620 No recommend for approval.</td>
</tr>
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<tr>
<td>Make the requirements of 2001 FBC Section 1522 (Rooftop Mounted Equipment) applicable throughout the state for all wind speeds. Include in Mechanical Volume also.</td>
<td>HRAC recommended expedited amendment Commission deferred to glitch amendments</td>
<td>Glitch Amendments 10/1/06</td>
<td>Amendment prepared. Review, revise and resubmit for glitch Mechanical TAC</td>
</tr>
<tr>
<td>Add criteria regarding wind and wind driven rain resistance of ridge vents. Attachment criteria require development but TAS 100A could be referenced for rain resistance.</td>
<td>HRAC recommended adoption in post “expedited” amendment</td>
<td>Glitch Amendments 10/1/06 Address in 2007 update</td>
<td>Prepare amendment and submit. Roofing Work Group No proposal</td>
</tr>
<tr>
<td>Criteria for wind resistance of soffits should be developed and added.</td>
<td>HRAC recommended adoption in post “expedited” amendment</td>
<td>Glitch Amendments 10/1/06</td>
<td>Prepare amendment and submit. Do Kim and Jaime Gascon Kim/Gascon proposal 1588 TAC recommended approval.</td>
</tr>
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</tbody>
</table>
| Criteria for wind-driven rain resistance of soffits should be developed and added. TAS 110 may be a suitable test method, modified as necessary. | HRAC recommended adoption in post “expedited” amndment              | Glitch Amendments 10/1/06  | Prepare amendment and submit.  
Do Kim and Jaime Gascon Kim/Gascon proposal 1588 TAC recommended approval. |
| Water managed window and door installation requirements be developed and the Florida Building Code altered to require them. | HRAC recommended adoption in post “expedited” amndment              | Glitch Amendments 10/1/06 and 2007 FBC Update followup 1/1/07 | Prepare amendment and submit.  
Windows Work Group Northeast Fl BOAF proposal for flashing  
No recommendation to approve. |
| Windows and doors be correctly rated and tested according to ANSI/AAMA 101. Mulled window units, double windows or composite windows be tested and held to the same requirements as single units. | HRAC recommended adoption in post “expedited” amndment              | 2007 FBC Update 1/1/07 | Windows Work Group  
AAMA proposal 1426 for window mullions testing  
Recommended for approval. |
| Water managed window and door installation requirements be developed and the Florida Building Code altered to require them. | HRAC recommended adoption in post “expedited” amndment              | Glitch Amendment initial and 2007 FBC Update followup 1/1/07 | Prepare amendment and submit.  
Windows Work Group Northeast FL BOAF proposal for flashing  
No recommendation to approve. |
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<tr>
<td>Water managed details for dryer vents, electrical panel boxes, electrical boxes, vent fan hoods be developed and the Florida Building Code Altered to require them.</td>
<td>HRAC recommended adoption in post “expedited” amendment</td>
<td>2007 FBC Update 1/1/07</td>
<td>Prepare amendment and submit. Mechanical and Electrical TAC No proposal</td>
</tr>
<tr>
<td>Remove the partially enclosed design option at the next code cycle.</td>
<td>HRAC recommended adoption in post “expedited” amend.</td>
<td>2007 FBC Update 1/1/07</td>
<td>Automatically enacted by adoption of 2006 IRC as required by SB 442.</td>
</tr>
<tr>
<td>Adopt ASCE 24-05 for elevation requirements and flood resistant materials, equipment.</td>
<td>HRAC recommended adoption in post “expedited” amend.</td>
<td>2007 FBC Update 1/1/07</td>
<td>FEMA and Florida DCA coordination. Enacted by adoption of 2006 IBC and IRC.</td>
</tr>
<tr>
<td>Re-evaluate the hazard identification/mapping approaches in Coastal A/V Zones.</td>
<td>HRAC recommended adoption in post “expedited” amend.</td>
<td>2007 FBC Update 1/1/07</td>
<td>FEMA and Florida DCA coordination. Prepare and submit amendment.</td>
</tr>
<tr>
<td>For hurricane shelters and EHPA, adopt wind speed recommended by Florida DCA in the State Emergency Shelter Program and the ASCE 7-02/2001 FBC wind speed map design wind speed plus 40 mph using Performance Criteria 3.</td>
<td>HRAC recommended adoption in post “expedited” amend.</td>
<td>2007 FBC Update 1/1/07</td>
<td>Florida DCA, DOE and School Board Association negotiation.</td>
</tr>
<tr>
<td>Pressure relieved/baffled soffit assemblies be developed for vented roof assemblies and the Florida Building Code altered to require them.</td>
<td>HRAC recommended adoption in post “expedited” amend.</td>
<td>Long range – post 2007 FBC update.</td>
<td>Conduct R&amp;D to evaluate soffit water intrusion control methods. FY 06-07 project</td>
</tr>
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<tr>
<td>It is unlikely that a practical paint specification can be developed in the short term to address micro-cracking stucco issues as the relationships among water vapor permeability, mil thickness and elasticity are not known. It is recommended that these relationships be explored and that until these relationships are understood the Florida Building Code not be altered to require “elastomeric paints” on stucco renderings.</td>
<td>HRAC recommended adoption in post “expedited” amend.</td>
<td>Long range – post 2007 FBC update.</td>
<td>Conduct R&amp;D on water penetration, absorption and transport through concrete and masonry wall assemblies to establish criteria for coatings or other water control measures. FY 06-07 project.</td>
</tr>
<tr>
<td>Add technically-based criteria regarding blow-off resistance of aggregate on built-up and sprayed polyurethane foam roofs (Roof Coverings for Roofs with Slopes Less than 2:12).</td>
<td>HRAC recommended adoption in post “expedited” amend.</td>
<td>Long range supported by R&amp;D</td>
<td>Conduct R&amp;D to establish criteria. FY 06-07 project.</td>
</tr>
<tr>
<td>Develop window water leakage test and performance criteria specific to hurricane prone regions.</td>
<td>HRAC recommended adoption in post “expedited” amend.</td>
<td>Long range supported by R&amp;D</td>
<td>Conduct R&amp;D in support of AAMA standard development. FY 06-07.Windows Work Group</td>
</tr>
<tr>
<td>Develop criteria that pertain to attaching lightning protection systems. Include in the Electrical Volume also.</td>
<td>HRAC recommended adoption in post “expedited” amend.</td>
<td>Long range supported by R&amp;D</td>
<td>Support industry standard development activity. Tom Smith/FEMA</td>
</tr>
<tr>
<td>Revise the Florida panhandle criteria to match ASCE 7 wind borne debris region.</td>
<td>HRAC recommended adoption in post “expedited” amend.</td>
<td>Legislature must change the law</td>
<td>Conduct Study to evaluate damage risk and cost/benefit for panhandle characteristic terrain for basis of recommendation to Legislature</td>
</tr>
</tbody>
</table>

**Note:**  
Red text indicates recommendations for expedited amendments to FBC  
Black text indicates deferral to glitch amendment proceeding decided 6/28/05  
Blue text indicates deferral to glitch amendment proceeding decided 5/10/05  
Purple text indicates Commission deferral of HRAC recommended expedited amendments, to the glitch amendment proceeding.