

3. Legislative Assignments

The 2007 Florida Legislature through the passage of a number of bills during the 2007 regular and special sessions, charged the Commission with a range of assignments including Energy Code enhancements, wind protections, and revising specific Building Code provisions.

In response, the Commission worked with stakeholders and affected interests to address each of the legislative assignments through facilitated processes yielding consensus-based recommendations and Commission decisions. The Commission's actions are detailed in the following section of this report. The recommendations are organized into four categories: wind recommendations, code recommendations, energy recommendations, and research and assignments.

2007 Wind Related Assignments

Coastal Code Plus Criteria for Increasing the Hurricane Resistance of Buildings

As required by provisions of 2007 Legislation within Chapter 2007-1 LOF, regarding developing voluntary "Code Plus" guidelines for increasing the hurricane resistance of buildings, the Florida Building Commission voted unanimously to contract with Applied Research Associates (ARA)/University of Florida to fund a new research project to develop insurance qualifying criteria for buildings built within 2500 feet of the coast after January 1, 2009.

In evaluating the coastal code plus criteria the Commission's concept is to keep the recommendation simple, understandable and easily communicated. This is accomplished by recommending only three simple but significant modifications to the Building Code and relying on the Code for all else. The three modifications are:

- Single wind speed per county based on 2007 calculations for 500 year recurrence interval hurricane.
- High Velocity Hurricane Zone wind-borne debris (HVHZ WBD) protection criteria- (per the Florida Building Code).
- Building elevations based on FEMA 500 year recurrence interval hurricane flood elevations.

The Florida Building Code is referenced for all base requirements and further technical clarifications including the wind load design calculations and specifics of the HVHZ WBD protection requirements. The design wind speed enhancements are presented as a single speed for the entire coastal zone of each coastal county. The building elevation requirements are Federal Emergency Management Administration (FEMA) 500 year storm elevations for coasts with adjustment factors for the landward side of bays. (Note: While Citizens does not insure buildings for flood damage, moving water characteristic of what occurs in the 2500 foot coastal zone can weaken buildings thereby reducing their resistance to wind forces and wind driven rain water intrusion.)

Coastal Code Plus Design Wind Speeds

Region	Coastal County	Coastal Code Plus Design Wind Speed mph	Region	Coastal County	Coastal Code Plus Design Wind Speed mph
Panhandle Coast	Escambia	150	SW Gulf Coast	Sarasota	148
	Santa Rosa	148		Charlotte	149
	Okaloosa	139		Lee	154
	Walton	135		Collier	162
	Bay	131		Monroe	173
	Gulf	140			
	Franklin	130	SW Atlantic Coast	Miami-Dade	166
	Wakulla	120		Broward	164
	Jefferson	120		Palm Beach	162
Taylor	120	Martin		159	
		Saint Lucie		159	
			Indian River	155	
NW Gulf Coast	Dixie	120	NW Atlantic Coast	Brevard	150
	Levy	125		Volusia	136
	Citrus	133		Flagler	128
	Hernando	135		Saint Johns	126
	Pasco	136		Duval	120
	Pinellas	144		Nassau	120
	Hillsborough	138			
Manatee	142				

The design wind speeds derived from the 500 year storm are 0 to 24 mph greater than those required by the Code, which is a close correlation with most major storms in the historic record (see the chart below) but not quite as high as experienced in Hurricanes Andrew, Charley and the 1935 Labor Day hurricane. The coastal code plus design wind speeds are increasingly greater, compared to building code requirements, further south along the Atlantic and Gulf coasts and farther west along the Panhandle coast consistent with the historical risk of higher intensity hurricanes. Generally, the recommended criteria would require: design for category 4 hurricanes along Florida’s southeast, southwest and far western Panhandle coasts; design for category 3 hurricanes along its northern Gulf, northern Atlantic and middle Panhandle coasts, and; design for category 2 hurricanes along the Big Bend region of the Gulf and northern-most Atlantic coasts.

The High Velocity Hurricane Zone wind-borne debris (WBD) criteria establish a higher standard of performance consistent with property protection goals. They require impact resistance for the entire exterior surface of the building, both glazed and unglazed, from the ground to building tops, where the Code WBD criteria outside the HVHZ requires protection of only glazed openings up to sixty feet. Glazing protection systems complying with HVHZ WBD criteria are typically more robust also.

The building elevation recommendations derived from the 500 year storm are 1 to 6 feet above current National Flood Insurance Program minimum requirements administered through local flood plain management ordinances. Data from the Commission’s study of Tampa Bay, Biscayne Bay, Pensacola Bay, Apalachee Bay and Charlotte Harbor indicate the FEMA 500 year storm flood elevations are adequate except potentially on the mainland side of some bays. Adjustments to the FEMA flood elevations for this location is being evaluated under contract and will be provided in the study final report.

(Note: The Florida Building Code defers to local ordinances and the Florida Coastal Construction Control Line program for building elevation requirements to prevent damage due to pounding surf.)

Recommended Coastal Code Plus Design Wind Speeds with Comparison to Building Code Requirements and Historic Storms (3 second gust speeds)

Region	Coastal County	Florida Building Code mph	New Model (250 yr) mph	New Model (500 yr) mph	Historic Storm speed (3 sec gust)* mph	Coastal Code Plus Design Wind Speed mph	Saffir-Simpson Category
Panhandle Coast	Escambia	140	140	150	133 (Dennis)	150	4
	Santa Rosa	140	138	148		148	4
	Okaloosa	130	130	139	133 (1917)	139	3
	Walton	130	127	135	133 (Eloise)	135	3
	Bay	130	124	131	127 (1851,1877)	131	3
	Gulf	140	114	122		140***	3
	Franklin	130	108	117		130***	2
	Wakulla	120	101	110		120***	2
	Jefferson	120	101	110		120***	2
Taylor	120	101	111		120***	2	
NW Gulf Coast	Dixie	120	105	115		120***	2
	Levy	120	116	125	139(1896), 127(1871)	125	3
	Citrus	120	124	133		133	3
	Hernando	120	126	135		135	3
	Pasco	127	128	136	133 (Easy 1950)	136	3
	Pinellas	130	135	144	133 (1921)	144	3
	Hillsborough	120	130	138		138	3
	Manatee	140	133	142		142	3
SW Gulf Coast	Sarasota	130	137	148	133 (1944)	148	4
	Charlotte	130	140	149	165 (Charley)	149	4
	Lee	130	142	154	159** (Donna)	154	4
	Collier	139	150	162	159** (Donna)	162	4
	Monroe	150	161	173	158(1919,Donna) 205** (1935)	173	4~5
SE Atlantic Coast	Miami-Dade	146	155	166	184 (Andrew)	166	4
	Broward	140	154	164	158 (1947)	164	4
	Palm Beach	140	151	162	158 (1928)	162	4
	Martin	140	148	159	133 (Jeanne)	159	4
	Saint Lucie	140	148	159	158** (1928)	159	4
	Indian River	140	145	155		155	4
NE Atlantic Coast	Brevard	130	140	150		150	4
	Volusia	120	126	136		136	3
	Flagler	120	118	128		128	3
	Saint Johns	120	116	126		126	3
	Duval	120	111	120		120	2
	Nassau	120	111	120		120	2

* NOAA official one minute wind speeds have been converted to 3 second gust design wind speeds for comparison

** NOAA is conducting a “Re-analysis” for official wind speeds. This year is not completed.

*** Recommended design wind speed is current code minimum where new 500 year speed is less.