

ENGINEERING REPORT

TOPIC: Building Codes/Structural Requirements

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By: John E. Sens

BOCA: Building Officials Code Administrators

UBC: Uniform Building Code

SBCCI: Southern Building Code Congress International

Regardless of what part of the country in which a building is constructed, regulations have to be met pertaining to windload requirements at various heights and locations on the structure. These requirements are set by one of the regulatory bodies listed above.

These regulations can be adopted literally or modified to suit the needs of each state, county, or city.



The purpose of this code is to provide minimum standards to safeguard life or limb, health, property and public welfare. By regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures within its jurisdiction necessary codes can be met.

These windload requirements are generally addressed in the 10200 section of the specification, if not, the louvers will be designed for a 20 PSF windload.

In such regions as south Florida, in coastal areas, the windload design can be as much as 75PSF, (approximately 150 mph wind speed). The structural supports needed to meet these requirements take special consideration and will have structural calculations performed to determine what type and size of support is required.

To meet a specified windload requirement, supports (simply supported at the ends) are designed on Ruskin's "WINDLOAD" software to handle the uniformly distributed load transferred by the blades for a determined tributary width, a deflection of length/180 maximum and a blade length of 60".



The louvers pictured, approximately 4800 square feet of Ruskin's ELF6811DD with baked enamel (modified fluoropolymer), are installed at South Miami Hospital located in Dade county Florida. They were designed to meet the local windload requirements of 150 MPH winds. The louvers were sold through E.M. Corson in Pembroke Park, Fla., Tammy Greenberger (architectural sales contact for E.M. Corson) handled the contract, and were installed by Dixie Metal Products of Fort Lauderdale, Florida. The 20' x 64' 6" louver screen wall is attached to 5" steel channels using stainless steel "tech" screws spaced at 24" on center. The steel channels are spaced at 4' on center and run vertically the full height of the louvers. The vertical channels are supported by a W8 x 35 steel beam running horizontally from wall to wall at each floor level.

While many products that were supplied in the area and not built to local codes had little chance of weathering the wrath of Hurricane Andrew, the louvers built by Ruskin and installed according to local regulations are standing undamaged. This project is proof of the need for adherence to specified regulations. Don't be caught accepting a product with insufficient design, contact your local Ruskin Representative for recommendations of louver construction.