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RE: Seminole Okalee Village, 3551 & 3681 N SR 7, Hollywood, FL 33021

Scope of work: Local Product Approval, for job listed above.

I calculated the wind resistance of the Endureed Faux Thatch Roof Shingle assembly for Seminole Okalee Village, 3551 & 3681 N SR 7, Hollywood, FL 33021, Animal Care / Storage Building, Administration Building, and Chikee based on roof plans and elevations on Cartaya & Ass. Job 1342 permit set dated 6/6/14.

Worst case Component and Cladding Wind Pressure = -150 psf based on ASEC 07-10, Design Wind Speed, Vasd = 141 mph, Vult = 166 mph, Wind Exposure = C, Risk Category II, Internal Pressure Coefficient, Cpi = N/A (Does not affect shingle.), Mean Roof Ht 36', GCp = -2.6 (Figure 6-11C, Components and Cladding - Method 2, Zone 3, 7 - 45 degrees pitch, gable roof. Velocity Pressure = $q_h = 0.00256 * K_z * K_{zt} * K_d * V^2 = .00256 * 1.05 * 1 * .85 * 170^2 = 66$ psf ULT; Components and Cladding Wind Pressure = $P = q_h * GC_p = q_h * -2.6 = -172$ psf ULT * 0.6 = 103 psf ASD

Endureed Faux Thatch Roof Shingles will be placed over a self adhered waterproofing membrane, over 23/32" plywood, with folded and crimped 23 ga 304 SS interlocking binder strips, occurring 5.5" o.c. Binders will be fastened thru waterproofing membrane into plywood with 1½" 10ga ring shank nails at 12" o.c. Allowable withdrawal wind load for .134" ring shank nail from 23/32" plywood is 87 lb using equivalent s.g. 0.70 per APA TT-039 and TT-109, Table 1A. Allowable wind uplift = 87 lb/nail / 5.5"OC / 12"OC * 144 in²/ft² = 190 psf ASD.

Based upon this report, the self adhered waterproofing membrane covered by the Endureed Faux Thatch Roof Shingles are in compliance with ASCE 7-10 and 2010 FBC requirements for wind resistance.



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Cc Aaron Nickelson, Global Innovation, LLC