

December 6, 2021

City of Miami Beach

The City of Miami Beach Building Department
1700 Convention Center Drive
Miami Beach, Florida 33139

Subject: Existing Single-Family Residence located at 7801 Atlantic Way Coastal Code Compliance Review, City of Miami Beach, Miami Dade County, FL

To whom it may concern,

On behalf of our Client, Ms. Susan Assaad Wahba, this is to provide a summary of Moffatt & Nichol's (M&N) findings relative to the coastal code compliance of the existing single-family residence located at 7801 Atlantic Way. Built in 1935, the existing structure is a two-story single-family residence with a first finished floor elevation of 13 feet NGVD. This first finished floor includes habitable uses seaward of the Coastal Construction Control Line (CCCL), which includes kitchen, dining, family living room, etc. At the rear of the property there is a patio area and concrete retaining wall at an elevation of ~12 feet NGVD. In addition, there is a garage at the northwest corner of the existing structure at an elevation of ~10.66 feet NGVD.

Habitable structures located wholly or partially seaward of the CCCL are required to comply with Florida Building Code (FBC) §3109 - Structures Seaward of the CCCL. FBC §3109.3.3, states that *Habitable structures* shall be elevated and supported on piles or columns" in compliance with ASCE 24. Additionally, it states that stem walls and shallow foundations are not permitted. Based on forensic evaluation by the project structural engineer, Mr. Youssef Hachem, P.E., with Youssef Hachem Consulting Engineering, the existing residence does not comply with this standard.

Furthermore, FBC §3109.3.3 states that "the bottom of the *lowest horizontal structural member* of the *lowest floor* shall be at or above the 100-year storm elevation determined by the Florida Department of Environmental Protection (FDEP) in the report titled "One-Hundred-Year Storm Elevation Requirements for Habitable Structures Located Seaward of a Coastal Construction Control Line" (1999)." Per the FDEP report, 100-year storm elevation for structures sited between FDEP Reference Monuments R-001 and R-050 within Miami-Dade County is 18.2 feet NGVD (the existing structure is locating near Reference Monument DA-R-039). The lowest horizontal member of the first habitable floor for the existing residence should be located above 18.2 feet NGVD. As previously noted, the first habitable floor elevation of the existing structure is 13 feet

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NGVD. This indicates noncompliance with FBC §3109.3.3 and the FDEP one-hundred-year storm elevation requirements for habitable structures located seaward of the CCCL.

In addition, FBC §3109.3.4 requires walls below the 100-year storm elevation and located seaward of the CCCL to “comply with the breakaway wall requirements of ASCE 24 §4.6 using the lesser of the flood loads specified by §3109.3.1.”. ASCE 24 §4.6 requires that “breakaway walls and other similar nonload bearing elements...shall be designed and constructed to fail under base flood or lesser conditions, without imparting additional flood loads to the foundation or superstructure and without producing debris damage to the structure or adjacent structures.” Pursuant to Mr. Hachem’s structural evaluation, the walls below the FDEP published wave crest elevation are not designed to break away under the associated 100-year storm forces.

Given the above-noted conditions, the existing residence is not compliant with special design criteria for habitable structures located seaward of the CCCL, found within FBC §3109. This puts inhabitants in a less safe situation than a code-compliant structure. The residence is also not compliant with ASCE 24 §4.6, potentially creating unsafe conditions during a storm event including increased potential for life/safety, property and environmental impacts associated with debris, scour, and/or erosion.

Thank you for your assistance. Should have any questions or require additional information, please do not hesitate to contact me at (786) 725-4183 or lshepherd@moffattnichol.com.

Sincerely,

MOFFATT & NICHOL

Laura Shepherd
Senior Environmental Project Manager

LMS:CJB