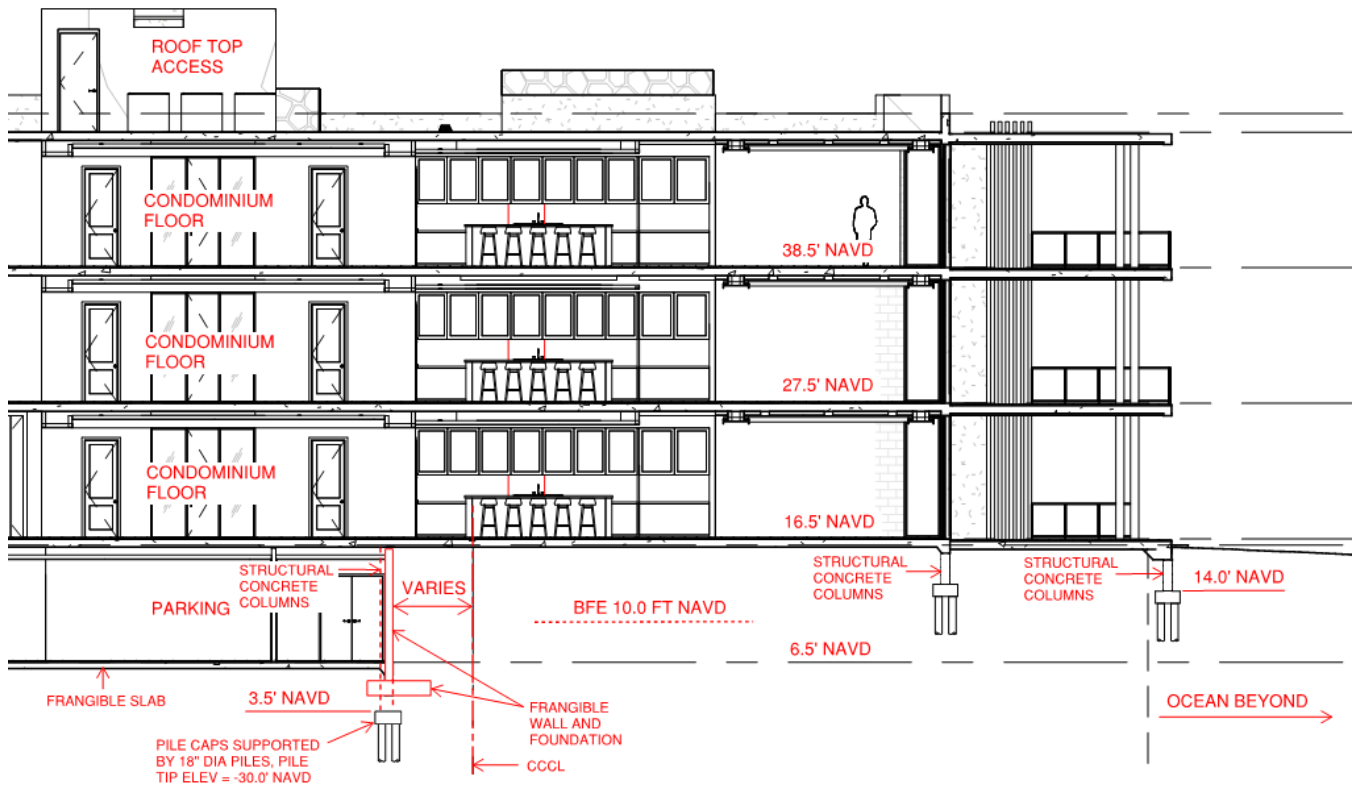


January 10, 2019

Ocean Delray
1901 S. Ocean Blvd
Delray Beach, FL
Structural Design Statement for V-Zone Design

Ocean Delray is a new condo structure to be located at the above noted address. The structure is located along the coastline and is in a FEMA V Zone and has a portion of the structure seaward of the CCCL. The base flood elevation for the structure is 10.0 feet (NAVD). The structure is design with consideration of the FBC 6th Edition (2017), ASCE 7-10, ASCE 24-14, and FEMA guidelines.

The structure consists of (1) level of parking below the condominium units and 3 levels of condominium units above. The structure above the parking level consists of a two way slab at EL = 16.5 feet that is supported by concrete columns and concrete load-bearing walls around the elevator and stair shafts. The two way slab at EL = 16.5 feet supports the load-bearing CMU walls above that support one-way slabs at EL = 27.5 feet, 38.5 feet, and the roof level. The load-bearing walls around the stair and elevator shafts are also the lateral resisting system.



The structure is supported on 18 inch diameter concrete piles with pile caps, the piles extend to a tip elevation of -30 feet NAVD. The depth of scour anticipated at the single piles is 3 feet and the depth of scour below pile caps is anticipated to be 5 feet.

Breaking wave loads and hydrodynamic loads have been provided to TLC Engineering for Architecture by Isiminger & Stubbs Engineering, Inc. based on DEP published 100-year storm conditions as reference in FBC Section 3109. The breaking wave loads are applied to the columns and piles at the still water elevation of 10.1 feet NAVD. The hydrodynamic loads are applied to the columns and piles at the still water mid-depth elevation of 6.8 feet NAVD. Pilings/column rows that are parallel to the shore are subject to the breaking wave load and the remaining pilings/columns are subject to the hydrodynamic load.

Frangible walls and foundations surround the parking area and a frangible slab is detailed below the parking area at EL = 6.5 feet. The parking area does not extend under the portion of the condominium structure that is seaward of the CCCL. The frangible walls consist of concrete walls and foundations that are independent of the primary condominium structure, joints with compressible filler are utilized at the interface with the condominium structure. These frangible concrete walls and foundations have joints every 4'-0" OC to allow the sections to roll over if the foundations are undermined by flood waters. The frangible slab consists of a 4 inch thick slab with saw cut joints at 4'-0" OC, the slab is un-reinforced.

Sincerely,

TLC Engineering for Architecture



Cathy G Tiedge, PE
Senior Structural Engineer