# **EXHIBIT H**



# Brevard County, FL Bird Watching Tower 2 Structural Assessment



September 26, 2022



# **MEMO**

TO: Brevard County Facilities Department

ATTN: Michael Dunlap – Facilities Construction Coordinator

FROM: Nikos Moschovakis E.I.

DATE: September 26, 2022

RE: Structural Inspection

<u>Bird Watching Tower 2 – North East Tower</u> Viera Wetlands, West of 10001 N Wickham Rd,

Melbourne, FL 32940

On August 22, 2022, I performed an inspection of the bird watch tower at the above-mentioned address to provide an assessment of its structural condition.

Based on the visual inspection of exposed structural members, the birdwatch tower NEEDS STRUCTURAL REPAIRS. There was no destructive testing done at this building and none of the covered structural members could be visually inspected. As a routine matter, and to avoid misunderstandings, nothing in this report should be construed directly or indirectly as a guarantee for any portion of the structure. To the best of my knowledge and ability, this report represents an accurate appraisal of the present condition of the structures based on careful evaluation of observed conditions to the extent reasonably possible.

#### **Inspection subject:**

The subject of the birdwatch tower inspection was to perform a structural visual condition assessment of the current condition of the tower.

#### **Structural System:**

The 2 story birdwatch tower is a wood structure that consists of round wood foundation piles under the water table, wood beams, and floor planks. Also, wood stairs and wood railing on the stairs and the perimeter of the structure. Members are connected with Simpson connections, nails, and bolts.



#### **Inspection Map**



Northeast bird watch tower

#### **Required Structural Repairs:**

- 1. The structure should be prohibited to the public in any case, as coordinated previously. The current conditions can cause human injury or death. Operation of the structure can continue after all the required repairs are performed or replacement of the structure. Keep away from the structure in the case of an extreme event.
- 2. Repair/replace all the wood railing in the structure along with the bolted connections.
- 3. Replace all wood floor planks, on both levels.
- 4. Repair/replace stair girder and all primary wood beams.
- 5. Replace all rusted nails and bolts.
- 6. Replace all rusted and damaged Simpson connections (Hurricane ties and beam bucket connections). Connections might fail in the case of an extreme event.
- 7. Additional special inspection and analysis are required for the wood piers and columns. Visual inspection cannot guarantee the adequacy of the members.
- 8. Repair/replace wood stairs and stair stringers.



#### **Pictures**



<u>Picture 1</u>
Damaged wood planks from weather and moisture.



Picture 2

Multiple damaged railing posts. Shear cracks show at bolted connections.





Picture 3

Missing railing bolt on the top deck railing.



# Picture 4

Damaged wood planks from weather and moisture. An excessive deflection was noticed while walking on the deck.





<u>Picture 5</u>
Several hurricane ties and bolts appeared rusted.



Picture 6

Rusted Simpson hurricane ties in multiple locations.





Picture 7

Timber foundation pile surface damage. Excessive moisture on primary wood beam.



## Picture 8

Damaged stair stringers and an excessive deflection was noticed while walking on the stairs.





## Picture 9

Stairs and deck railing and floor deck planks are in bad condition due to excessive moisture and weather.



#### Conclusion



The structure must remain closed to the public in any case until further structural repair or replacement takes place. At this time the structure can cause a human injury or death. The structure might collapse in excessive vertical loads or in case of an extreme event.

The wood railing appeared unstable all around the building on both stories and on the wood stairs. Wood floor planks appeared damaged and in bad condition due to excessive moisture and weather. Multiple steel connections appeared rusted and inadequate in tensional forces. Some floor beams appeared damaged from moisture in addition to excessive visual deflection. Surface damage on the timber foundation piles and possible core cracks. Excessive deflection was recorded during the inspection, mainly on the stairs and second deck. Structural repairs or tower replacement is required in order to continue the operation of the birdwatch tower. Replace the superstructure with a new superstructure is recommended. Some members and connections appeared in better condition. These members might have been replaced recently.

Should you have any questions or concerns, please do not hesitate to contact us.

Respectfully submitted

Master Consulting Engineers, Inc.

Nikos Moschovakis E.I.