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June 1, 2008

TIMOTHY & REGINA DAYTON
524 Spinnaker Drive
Marco Island, Florida 34145

**Re: Initial - Inspection of property located at
254 Spinnaker Dr.
Marco Island, Florida 34145**

At your request, on April 21, 2008, I traveled to Naples, Florida to meet with you at 10:00 a.m. on April 22, 2008 to discuss performance of a non-invasive/non-destructive inspection of the premises located at 254 Spinnaker Drive, Marco Island, Florida for possible building code violations. After meeting with you to discuss your concerns and performing a cursory plan review of the set of plans you provided, below is my report. I will address each of the owner's initial concerns individually then provide any other thoughts and observations.

Then again on May 1, 2008, I again traveled to Naples, Florida to meet with you and inspect your home for possible code violations and work not performed in compliance with the Florida Building Code and Florida Statutes. My report follows.

I. OWNERS' CONCERNS (from initial meeting on 04/22/2008):

Owner:

1) *The air-conditioning condensing units were installed and built on a platform below the base flood elevation. They were actually installed approximately 5' above grade when they should have been installed on the second-floor level of the home.*

Inspector:

The approved set of plans confirm the location and shows this platform as a concrete slab as well as a wood-constructed platform. **The plans reveal that this slab/platform is located at the second-floor level when in actually it is constructed on the first-floor level, 3-4 feet above the finished ground elevation.**

Owner:

2) *The showers in the main and master bath rooms were constructed without the benefit of a non-porous shower pan.*

Inspector:

I have been informed that this shower issue has since been corrected. With regard to plumbing issues in general, the entire certified permit package provided by the building department did not contain a plumbing riser diagram or any detail describing the plumbing throughout the house. Florida Building Code 2004 Edition Section 106.3.5 Minimum Plan Review provides for minimum criteria as it refers to minimum plumbing facilities, fixture requirements, water supply piping, sanitary drainage, water heaters, etc. This creates some concern as to the plumbing throughout the house, i.e., without the required plumbing riser diagram or any detail, **by what means was the plumbing inspected as indicated on the City inspection notes.**

NOTE: Florida Building Code 2004 Edition Section 109 inspections require the Building Official to, in short, inspect all new construction for code compliance.

Owner:

3) *The third-floor ceiling was determined to have missing insulation and*

missing an attic access panel.

Inspector:

This should have been identified at the insulation inspection. There is a possibility that another trade contractor could have displaced this insulation to accommodate his/her trade equipment. Without a required attic access on this side of the third-floor ceiling, no one would have been able to identify this issue.

Florida Building Code 2004 Edition Section 109.3 and Section 106.3.5 provides for minimum plan review criteria and minimum inspections where insulation is required and that an appropriate inspection be performed. There are two issues of concern with the insulation:

a) there are no energy calculations in the certified permit package from the City; **this is what the inspector would need to determine the required insulation;** and,

b) the approved insulation inspection and **the approved final inspection should have revealed the missing insulation.**

Owner:

4) *The third-floor deck did not appear to have appropriate flashing at the area where the deck meets the wall, which could have contributed to leakage to the lower level.*

Inspector:

While it is difficult to completely confirm this, when one places his fingers up into this area, there doesn't appear to be any flashing and leaks have been previously reported in this area. **This should have been noted at a wall sheathing or deck sheathing inspection and records indicate there were in fact inspections but they are not specific as to where the inspections were performed.**

Owner:

5) *The third-floor deck has an aluminum screen track installed at the outside end of the deck causing water to puddle.*

Inspector:

The screen track had weep holes drilled to allow water run-off to the gutter, however, it wasn't drilled all the way through causing the water to accumulate under the screen track and not allow it to flow into the adjacent gutter, thus accumulating on the deck. Deck draining or aluminum track placement **was not** addressed on the plan. **This should have been found/addressed at the time of the final inspection.**

Owner:

6) One of the *second-floor sliding glass doors* was reported to have been replaced by a door as there was a gap when the doors were closed and the replacement door was of a lesser rating.

Inspector:

Upon inspection of this complete door assembly located in the living room on the second floor, this inspector could not locate any water mark on any of the doors indicating these were rated, impact, or tempered glass as required by code. . . **Florida Building Code - Residential, 2004 Edition Section R613.3.1, R613.4 addresses this issue.**

II. ADDITIONAL THOUGHTS AND CONCERNS
BY INSPECTOR

After meeting at the residence and performing two separate non-invasive/non-destructive inspections, intense review of the approved set of plans obtained from the City building department, as well as review of various other information and materials provided by the Daytons and their attorney, Bill Reeves, the undersigned discovered various other infractions in the home in violation of the Florida Building Code and Florida Statutes. Below are my thoughts and concerns: _

FIRST FLOOR:

A) The undersigned observed in the pool foundation located in the pool room adjacent to the garage on the first floor there has been blocking

installed between the pool foundation and the breakaway walls which does not appear to be pressure treated as required by Florida Building Code-Residential 2004 Edition, Section R319.

B) The electrical conduit feeding electric to the pool light niche did not have appropriate anchorage causing a hazardous condition for protection as referenced in the National Electric Code, Wiring Methods.

C) There are electrical lights in the same pool room which are not shown on the electrical plan. This is a requirement of Florida Building Code, 2004 Edition, Section 106.

D) The HAMBRO bar joist floor trusses for the second floor had signs of an excessive rusting condition throughout, causing concern for their structural integrity for any length of time. There were reports of the second floor leaking which may have contributed to this condition. **It is my recommendation that a structural engineer be retained to evaluate this condition.**

E) With regard to moisture/water being retained in the pool housing, the pool engineer recommended that a “Brady Point System” be installed to prevent this from occurring in the future and causing a potential for water intrusion or the potential for build up of mold on the first floor. I concur with the opinion and recommendation of the pool engineer.

F) Observations were made which indicate a potential footing failure on the southwest corner of the pool and screen-enclosed area. My concerns arise as there were cracks observed in the stucco that indicate signs of being re-stuccoed and it is unknown and, most likely impossible to determine, as to how many times. Looking from the south to north direction in this area, the way the deck pitches does not indicate the proper direction for deck drainage. I have been advised from the owner that the deco drain was an afterthought installed to satisfy the lack of drainage at one point. *It may be appropriate to have a Geotechnical Engineering company perform tests to confirm that there are no structural issues in this area. This concern is motivated as there is no documented proof of inspections being made to the footings, piles or pile caps. This recommendation was discussed with the homeowner.*

G) The floor in the pool room on the first floor had a two-foot-long

crack at the corner of the concrete block pool wall enclosure to the outside wall causing concern that there may be the potential of a structural failure in the southwest corner of the pool deck addition to the structure. This wall supports the second floor pool deck and spa area where deck leakage had been previously discovered. Review of the plans show a footing but no pile or pile cap to support this area. Inspection reports do not reveal that inspections were performed or approved in this area. To raise further concern, there is a diagonal crack from this corner of concern which the owner advised had to be repaired twice. **It would be my recommendation to secure the services of an engineering testing laboratory to x-ray or evaluate the structural integrity of this area of the structure. (Recommended to the owner at the time of my visit)**

H) There were water stains observed on the garage door header revealing a leakage from above or water intrusion in that area. Concerns stem from deterioration of the wood-header plate to failure of the garage door attachment during heavy winds. This is recognized as a structural member of the building envelope with regard to wind load design. Florida Building Code, Residential, 2004 Edition, Chapter 3.

I) The plan makes reference to placing the pool equipment in a protected area on the patio which is on the opposite side of the house from where it is now located. (Florida Building Code 2004 Edition Section 106.1.1, 106.3.5.) This represents a violation of the code as the pool equipment was not placed in the area indicated by the approved set of plans by the City and, further, was not pointed out by the inspector who performed the final inspection on the pool and the house. Further observations revealed that the pool heater was not fastened/secured as per the required code, as it is located within the boundaries of the High Velocity Wind Zone.

J) While not a structural issue, the irrigation system originally did not meet the requirement for sprinkler heads in the swale according to the homeowner. There also may be a concern regarding the pressure for proper operation of the system. This item would be a violation of Florida Building Code 2004, Section 109 which addresses required inspections. **One would assume this should have been recognized at the final inspection.**

K) There was excessive evidence of water stains around the pool niche in the pool room which could have contributed to the leaking and flooding of the pool room.

SECOND FLOOR:

A) The deck on the second floor has a “deco drain” to remove water accumulation. This issue was referenced on the first floor and is the direct result of the pitch, or lack there-of, of the second-floor deck, water run-off or the potential of a structural failure on the first floor. This improper drainage lends itself to a potential concern in that it is drained down to the first floor and terminates along side of the foundation which would eventually provide for erosion of the foundation. It is required to be drained away from the structure. **(Florida Building Code-Residential 2004 Edition, Section R401.3)**

B) There were several cracks in the second-floor deck in a pattern approximately four feet apart. The cracks appeared to be in common to where the floor bar joists from the HAMBRO Floor Joist System were located. There was a finish coating applied to the deck floor which the owner has made arrangements to have removed to further identify the cracks and the potential of structural defects which may exist. The concerns are brought about by the location of the cracks in conjunction with the placement of the bar joists. As this was a non-invasive/non-destructive investigation, this writer was only able to come to this conclusion from observations on the first and second floor. My recommendation to the owner at the time of my inspection was to secure the services of an engineering testing laboratory to either bore or x-ray the slab to determine the content as required by the plans and HAMBRO engineering. This would identify the PSI of the concrete, the welded wire mesh and any other membrane required by the engineering. In an effort to determine after-the-fact how this system should be installed there is not enough exposed to make a determination as to the system being installed in accordance with the approved set of plans. My recourse at this point regarding the concern of cracks appearing at four foot centers +/- in the second floor deck is to rely upon the inspection performed by the City inspector. In review of the City Certified Inspection Report, I was not able to determine that the Hambro Floor Joist System was ever inspected as there was not an entry which specifically made reference to this.

In conversation with the architect of record, I determined that there was little to any discussion or collective continuity by the architect of record and the Hambro engineer as to how the Hambro Floor Joist System was going to

effect the structural integrity of the original design of the home.

C) The plan calls for a two-inch slope in the deck which does not appear to have been provided.

D) There are outlets installed in the ceiling of the porch just outside the living room, not GFCI rated and without required weather covers.

E) The plans do not indicate the size of the required egress windows in the sleeping rooms. (**Florida Building Code 2004 Edition, Chapter 106.3.1**)

F) With regard to the aluminum pool and screen enclosures, the undersigned observed several inconsistencies in the fastener attachments which was verified with the approved engineering. Typically these type of enclosures are engineered to follow similar placement of attachments throughout as **required** by **Florida Building Code 2004 Edition, Section 106 & 109**. This structure is located on the ocean and subject to high winds and storms, therefore, particular attention should have been placed on the engineering as to the installation at the time of the inspection. **There is no specific inspection documented on the city inspection report but, if at no other time, should have been recognized at the final inspection. While I do not believe these inconsistencies create an extreme challenge to the structural integrity of the aluminum screen enclosure, the installation does not comply with the approved plans.**

THIRD FLOOR:

In the area of the third-floor deck there was a hole in the soffit which did not lead to anywhere nor could it be identified as to use, therefore this inspector could not form any opinion as to any code violation which may exist other than providing an area open to moisture and/or rodent intrusion.

OTHER ISSUES:

A) Florida Building Code 2004 Edition, Section 106 & 109. There have been several modifications or changes made in the construction of this structure which have not been reviewed or approved by the City building department. This creates a problem for the inspector as he/she is tasked by Statute to inspect by the approved set of plans. If changes are not approved by the building department having jurisdiction and approved

revised plans are not on the site, then it is not possible to make an accurate inspection. Updated and current plans are required to confirm that the structure has been constructed in accordance with the approved set of plans by the Building Official.

B) Additional Issues of Concern:

1. How could the inspector make an appropriate inspection if the construction did not comply with the APPROVED plans?

2. How could the final inspection have been approved without recognizing items did not comply with the APPROVED set of plans?

3. How could the home have a Certificate of Occupancy without an accurately approved final inspection?

4. The inspection report provided by the City shows a footing inspection was called for twice and cancelled both times with no other indication that a footing inspection had ever been approved;

5. Similar to #4, there were three fill-cell inspections called for and no documentation they had ever been approved;

6. The owner and architect makes reference to a revision to the HAMBRO system which I cannot locate in the certified documentation from the city. Further there was no documentation of any inspections made of the HAMBRO System on the city inspection report; and

7. Window sizes were not on the plans showing they meet egress in the bedrooms.

8. Non-weatherproof outlets were installed on 2nd floor porch ceiling ... not shown on approved plans, had no weather cover and were not identified as GFCI protected.

9. Lights installed in pool room and not shown on electrical plan.

10. Foundation plan has after-the-fact hand written notations, structural in nature, without acknowledgement from the Architect/Engineer of record.

11. Foundation Plan... There are six piles and pile caps under the pool, however, there is no structural reference to piles or pile caps on the corner of the wall structure at the corner under the spa. There is slab cracking in the pool room floor indicating that there may be a structural failure beginning as a result of footing or structural failure.

12. There were numerous cancelled inspections which I could not identify were ever re-inspected or approved.

13. In several areas throughout the home where an electrical outlet is required to be a Ground-Fault Circuit Interrupter (GFCI) outlet, there was no GFCI outlet installed.

CONCLUSIONS:

There seems to have been an extreme oversight on part of the contractor as well as the City of Marco Island which may have or possibly will in the future challenge the structure integrity of the Dayton residence.

RECOMMENDATIONS:

See comments and recommendations provided throughout report.

This concludes my report.

Very truly yours,

Dennis E. Franklin
State of Florida Licensed
Inspector BN2311
Plans Examiner PX992
Code Administrator BU812

DEF/vf
Enclosures - Photographs