

May 26, 2010

*Via E mail: thead@gwmgmt.com
and regular mail*

Mr. Troy Head
GW & Associates, Inc.
1585 Old Norcross Road
Suite 101
Lawrenceville, Georgia 30046

**RE: SHADOWBROOK TOWNHOMES • SUWANEE, GEORGIA
DECK BEAM REVIEW**

Dear Mr. Head:

At your request, Kelvin D. Garmon of Ray Engineering, Inc. performed a limited structural review of the deck beam above the garage door entry on Tuesday, May 11, 2010. The purpose of the review was to evaluate the structural integrity of the support beams for the decks and determine the cause of the deterioration being observed at numerous units and to provide recommendations for restoration.

This report is prepared for the exclusive use of GW & Associates and the Shadowbrook at Towncenter Homeowners Association Board of Directors, for the specific application to the above-referenced property. The conclusions and recommendations herein are rendered using generally accepted standards for structural and construction engineering in the State of Georgia. These conclusions are based upon information provided by the results of a visual inspection of the referenced property, and our past experience. No intrusive testing was performed, nor were any building materials removed or excavations made for further inspection.

No other warranty, expressed or implied, is made, nor is any guarantee given other than that professional care and standards were applied.

DESCRIPTION

The Shadowbrook Townhomes consist of three story townhome units with two car garages located at the ground floor. Directly above the garage entry is a wood deck supported by a wood support beam that spans over the concrete driveway allowing access to the garage. It is our understanding that some concerns have been raised regarding some cracking and damage observed at the beams

supporting the decks. Ray Engineering, Inc. has been retained to review the conditions and to provide recommendations for restoration.

EVALUATION

Upon review of a typical support beam, we observed that the beams consist of laminated veneer lumber (LVL) beams consisting of a double 1-3/4"x14" beams supported by 6x6 pressure treated columns. The beams are finished with fiber cement panel board at the sides and then 1x4 trim along the top and bottom edges. A piece of copper flashing has been installed over the top of the beams and terminated at the upper edges of the LVL behind the fiber cement siding. The LVL beam is not a pressure treated wood product and must be protected from the weather with flashing and or waterproofing.

Based on our review, the termination of the copper flashing at the upper edges of the LVL beam has allowed water infiltration behind the fiber cement siding and directly in contact with the LVL beam. This water infiltration has resulted in swelling of the LVL beams and deterioration of the beams has started to occur in some locations. Based on our review, it does not appear that any of the beams have been structurally impacted to date, but without remediation the deterioration of the beams will continue to occur.

It is our opinion that this condition does not constitute a building code violation, but we would consider the condition a construction defect. The flashing detail over the top of the beams, in our opinion, does not meet industry standards or good engineering practices.

RECOMMENDATIONS

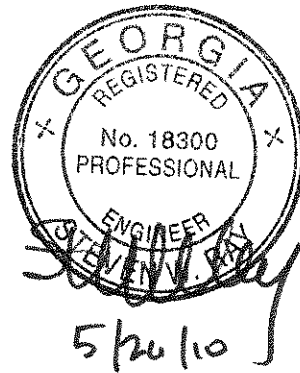
We would recommend that the support beams for the decks be exposed by removing the trim and fiber cement siding at the beams. A waterproofing membrane should be installed (peel and stick) along the sides of the beams and under the edges of the copper flashing installed along the top of the beams. The waterproofing should terminate along the bottom edge of the beams, but should not completely seal the beam. The bottom of the beams should not be waterproofed to allow any accumulated condensation or moisture to escape along the bottom of the beams. New fiber cement siding should be installed, as well as new trim, and the beams should be repainted.

CONCLUSION

Based on our review and past experience, it is our opinion that the improper flashing/waterproofing of the beams resulted in the premature deterioration that is being observed at some of the LVL deck support beams. This condition is not a building code violation but, in our opinion, should be considered a construction defect. Currently, we did not observe any of the beams that are structurally damaged to a point where replacement of the beam is necessary, but if the condition is not remediated, the deterioration of the beams could reach a point where replacement of the beams is required. We have provided the above-referenced recommendations as a guide and they are not intended as a complete scope of work for the restoration required.



Kelvin D. Garmon
Project Manager



Steven W. Ray, P.E.
Georgia Registration #18300