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TOPOUT QUALITY INSPECTION REPORT

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1235 Myword Dr.
Houston, Texas
May 24, 2017

I. INTRODUCTION

A. Property Description

The property inspected is a house, which has wood framing, fiber cement and stucco siding, a concrete tile roof, and a post-tensioned cable reinforced concrete slab on grade foundation.

B. Purpose

The purpose of this inspection was to make visual on-site observations of the workmanship evident in the construction techniques up to the point of completion at the time of this inspection. A list of observed irregularities and suspected defects will be provided in the body of the report. The more significant irregularities will be pointed out in a separate paragraph for your consideration. These observations are made to provide a basis for the opinions which will be stated in the body of this report. Most of the observed irregularities will be in need of repair or correction to some extent, but it is suggested that the extent and need for repair be discussed with the general contractor responsible for the construction of the property. This list of anomalies is not claimed to be the complete list of irregularities that exist, but a representative list used to form an opinion as to the quality of workmanship apparent in the building fabrication.

C. Scope

On-site visual observations of evidences of workmanship utilized in fabrication of the building included, but were not necessarily limited to, the following: the building structure, evidences and consequences of differential movement in the building foundation, the roof, site work, mechanical and electrical equipment installation, and other aspects of the building fabrication process which have a bearing on the over-all quality of the building fabrication. Mechanical and electrical equipment were not operated since they were either not installed or were not functional at the time of the inspection. The plumbing rough-in was checked where visible. This information is provided for the use of the person to whom this report is addressed and is in no way intended to be used by a third party, who may have different requirements.

Inspection for hazardous gases or materials, such as radon or asbestos, or for latent defects in the roof, foundation, or structure, is considered beyond the scope of this inspection. This inspector has not been trained to detect such materials, and no tests were performed to discover any latent defects in the foundation, structure, roof, or maintenance of the building that may become evident after the owner takes possession of the building.

The photographs included in the photo attachment to this report and referenced by some items in the report are only intended to provide a general representation of the condition discussed in the referencing paragraph. The referenced photographs do not necessarily represent all locations where described conditions exist and such should not be assumed. Photographs are taken at the discretion of the inspector and are not provided for all irregularities observed during the inspection or included in this report.

II. OPINION

A. Quality of Workmanship

The framing stage of construction was not fully completed as of the time of this inspection; however, the quality of workmanship evident in the fabrication of the building at the current stage of construction was considered to marginally be equal to the workmanship found in most buildings of comparable size and price in this area. The number of irregularities observed, including incomplete or irregular construction, is considered more than normal but can be corrected as part of completion of this stage of construction. The irregularities contained in the observations portion of this report are the basis for the stated opinion.

B. Significant Exceptions

The following exceptions are some of the more significant of the anomalies noted that have a bearing on my opinion of the quality of workmanship indicated in the building:

1. The stairs between the second and third floor had been supported along their outer edge relying on a temporary support, apparently because of excessive flexing of the stairs. There was a detectable slope at the stair treads, and there is a need for permanent stiffening of the structure.
2. Nails were missing from the shear nail locations at hanger straps that reinforce joints between beams at locations, including: at the downstairs bedroom at the southeast corner, at the beam supporting the ceiling at the living room adjacent to the stairs, and at the third floor stairs at the top of the stairs. Shear nails significantly increase the load capacity of the hangers. There is a need for installation of the nails or evaluation to determine if they are unnecessary based on known load values.
3. Wrinkles could be observed in the ceiling tape used at the decking joints of the living room balcony. These open wrinkles create a concern that water penetration may occur through these joints. Repair of the joints is recommended prior to placement of final finishes.
4. The moisture barrier was improperly installed where stucco was to be installed. This included a lack of adequate flashing at penetrations, damage to the moisture barrier, and a lack of proper flashing at the windows. Improper installation of the moisture barrier will result in water penetration into the building, and it appears repair of the moisture barrier may require that the windows be removed and reinstalled as part of replacing the moisture barrier to ensure a proper flashing detail.

III. OBSERVATIONS

The following observations are not claimed to be all the irregularities that existed during the inspection, but a representative list of observations made that form a basis for the quality of workmanship opinion:

A. FOUNDATION

The foundation has had very little time to demonstrate its performance, but any indications of differential movement will be pointed out below. The method of construction for the foundation cannot be determined through a visual inspection of the type performed.

1. There was no evidence or consequence of differential settlement observed during inspection of the building. It is pointed out that there has been little time for the building to exhibit indications of differential settlement. Since the performance of the foundation depends on support from the soil on which it rests, maintenance of the foundation should be in accordance with the guidelines contained in the enclosed Foundation Care information sheet, as this may keep the rate of differential settlement to a minimum.
2. Differential settlement of building foundations is a common problem in the greater Houston area because of soil and weather conditions. As a building ages, no matter how well it was constructed or what its present condition is, the foundation will probably continue to experience differential movement. Constant care should be taken to help maintain that movement to a minimum. If the building is to be left unoccupied for an extended period of time, provision should be made to have the yard watered frequently during dry periods. See attached Foundation Care Information sheet for suggestions.
3. Grading of the soil to obtain acceptable drainage at the perimeter of the foundation has not been implemented. It is recommended that the yard grading be accomplished in accordance with the recommendations contained in the attached Foundation Care Information sheet. The soil should be graded to slope away from the edge of the foundation with a slope of at least 1 inch per foot for approximately 4 feet, and there should be at least 4 inches between the surface of the soil and the top of the floor or concrete deck in the building.
4. The interior surface of the foundation was covered with stored materials or construction debris. It is possible for cracks to exist that may not have been readily apparent based on visual inspection, but could become apparent with cleaning of the floors.

B. STRUCTURE

1. The indicated quality of visible structural framing, attention to detail, and the fit of construction joints are good indications that the framing of the structure is better than average and should continue to perform satisfactorily during future years.

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2. It appears as though vertical bracing at the attic has been installed between the roof and the open area of a ceiling at the master bathroom. Vertical bracing should only be applied between the roof and the load-bearing walls or between the roof and specially designed beams. Reference Photograph 1
3. A beam installed across the ceiling of the master bedroom was blocked to the top plate of the wall along the side of a rafter rather than allowing the beam to straddle the rafter, creating a stronger tie-in. The details should be evaluated since they were not available at the time of this inspection since a beam of this type is often installed to create a ceiling tie to help restrain the end thrust of the rafters at the room location, and it could not be verified that the detail was correctly installed. Reference Photograph 2
4. A hanger strap carrying the beam across the stairwell opening at the first floor foyer was installed with short nails at the shear nail locations, reducing the strength of the hanger straps. This is indicated by the embossed heads of the nails and should be investigated and repaired. Reference Photograph 3
5. Anchor bolts used to secure the lower wall plate to the foundation were missing, where they were not installed within 12 inches of joints around the perimeter of the building at its exterior wall. Reference Photograph 4
6. Ceiling joists carrying the coffered ceiling at the master bedroom were single joists. Double joists or larger are often used for this configuration to ensure deflections in the ceiling do not result in cracks or irregularities in the corners of the coffer finishes. It appeared some roof load will be transferred to the ceiling at this location since roof rafters cross the ceiling joists. Plans were unavailable for comparison as to the intended method of construction at the time of this inspection. Reference Photograph 5
7. Floors at the upstairs portion of the building popped and creaked, which may indicate loose decking. This can occur if the decking is not adequately fastened to the structural framing with fasteners and adhesive. Spacing of fasteners appears to be wider than normal at some locations; however, it was indicated by the builder that final fastening with screws had not yet been completed and that the manufacturer's specification for fastener spacing would be achieved through installation of screws.
8. Hanger straps were bent or distorted at some locations in the building, including in the ceiling at the living room where they attach to the beam over the stairs. This can allow movement of the truss as the floors are loaded, possibly damaging sheetrock finishes in the future. Reference Photograph 6
9. Hanger straps were loosely fit at some of the trusses, including: trusses over the living room stairs, trusses at the living room ceiling, trusses at the front porch, and trusses below the balcony at the east side of the first floor bedroom. Loose fitting hanger straps that do not extend up the

sides of the joists or trusses to touch the top cord have a greater potential to allow flexing of the trusses, which can result in noisy conditions. Reference Photograph 7

10. Hanger straps were missing at locations, including at the ceiling at the living room, the stairs at the living room, and the master bedroom ceiling. Hanger straps are installed to reinforce beam and joist connections. Reference Photograph 8
11. Holes were cut too close to the surface of the studs at some locations in the building, including at the downstairs east bedroom. This can reduce the strength of the studs. Holes should never be less than 5/8-inch from the edge of the stud face. Reference Photograph 9
12. Interior shear walls were not observed at the interior of the building. The wind load plans should be consulted to determine if shear walls were to be installed. It is understood that final framing was not considered complete, and the shear walls may not yet have been installed.
13. It appears there is a need for a compression block at the end of a truss at the edge of the floor decking and supporting a column at the top of the stairs between the first and second floor. Failure to install a compression block at this location may allow compression of the joist, causing it to distort. There was also a hanger strap missing at this joist to the supporting beam. Reference Photograph 10
14. It was not determined how the column at the front porch was anchored at the foundation. Reference Photograph 11
15. Nails were missing from stud shoes installed at the south wall of the garage. For them to have their greatest effectiveness, all nails should be installed.
16. Nails were missing from the shear nail locations at hanger straps that reinforce joints between beams at locations, including: at the downstairs bedroom at the southeast corner, at the beam supporting the ceiling at the living room adjacent to the stairs, and at the third floor stairs at the top of the stairs. Shear nails significantly increase the load capacity of the hangers. There is a need for installation of the nails or evaluation to determine if they are unnecessary based on known load values. Reference Photograph 12
17. Stud shoes had been improperly installed over pipe penetrations through the structural stud wall at the third floor utility room. This effectively results in notching of the stud. The stud shoes were installed over the furring strips and are not likely to provide effective reinforcement in this configuration. Reference Photograph 13
18. Studs were warped in the walls at some locations, including at the downstairs west bedroom windows. The warping was more than normally observed and may affect the implementation of finish work. Warped

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studs can often be adjusted prior to installation of the sheathing, and excessively warped studs may affect their load-carrying capacity. Reference Photograph 14

19. The column at the front porch rested directly on the surface of the foundation concrete. There is concern this may eventually result in deterioration at the base of the column. Typically, columns of this type are secured to a curb that holds them out of the moisture.
20. The header supporting doubled floor joists at the north side of the garage at the exit door from the garage to the yard was carried by single crippled studs. Plans for construction should be consulted to ensure that additional studs are not required. Reference Photograph 15
21. The nuts used to secure the lower wall structure to the foundation were loose or missing at some locations at the first floor of the building.
22. The stairs between the second and third floor had been supported along their outer edge relying on a temporary support, apparently because of excessive flexing of the stairs. There was a detectable slope at the stair treads, and there is a need for permanent stiffening of the structure. Reference Photograph 16
23. There appears to be a stud pack missing below a beam at the southeast corner of the first floor east bedroom and at the end of the beam over the second floor stairs to the third floor, where it is understood a column had been removed. These areas should be evaluated to determine if stud packs are required at these locations to ensure adequate support for the supported beams.
24. There was a stud pack installed at the south wall of the garage that was installed at an angle rather than reducing the spacing between studs. Studs are intended to be installed vertically for their best load-carrying capacity. Reference Photograph 17
25. There was a stud shoe missing at a stud at the south wall of the garage. Installation of a stud shoe is recommended at this location as the stud was excessively bored. Reference Photograph 18
26. There was a stud that was excessively notched through at the downstairs east bedroom, where the stud supports floor joists over the front porch. There is a need for repair of the stud or reconfiguration of the supported structure to ensure adequate support for the joists. Reference Photograph 19

C. ROOF

1. Hip ridge tiles were missing at the roof at the time of this inspection, visible from the ground.

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2. The tile roof was not readily visible from the ground and was not directly accessible due to its height above grade. Because of the buildings adjacent to this building, most of the roof could not be viewed from the ground. Based on limited observations, it did not appear that the installation of roof components was complete at the time of this inspection. Even if accessible, the quality of workmanship in installation of the tile roof underlayment could not be viewed. The underlayment is typically considered the primary method of preventing water entry since water penetration often occurs through concrete tile during blowing rains. An opinion as to its quality of workmanship in installation could not be provided.

D. PLUMBING

1. The main sewer drain cleanout was observed to be located at the west side of the building. This cleanout is usually required when the main sewer line to the building becomes clogged.
2. The main sewer drain cleanout was excessively high above the finish grade of the soil. The cleanout should be cut off so that the top is approximately even with the soil surface.
3. Some of the water supply pipes in the attic are not insulated and are subject to freezing during cold weather. The exposed pipe should be insulated.
4. The capacity of the water heating equipment was indicated to have a storage capacity of 48 gallons with a recovery rate of 40 gallons per hour. The size of the water heating equipment appears to be marginal.
5. There was no elbow on the end of the water heater temperature/pressure relief valve. The elbow is used to turn high pressure hot water or steam to the ground so that persons near the vent cannot be burned.
6. Blocking was missing for the valve assembly at the master bathroom shower.
7. PEX tubing had been used for water distribution pipe in the building. Water distribution was controlled by a central manifold located at the third floor. When properly installed, PEX tubing is considered an acceptable quality water distribution pipe.
8. The floor at the utility room did not appear to be graded toward the drain. This will make the drain ineffective and require the installation of a catch pan for the washing machine. Since the floor does not appear to be graded to the drain, consideration should be given to installing the drain below the area of a washing machine so that a catch pan with a tail piece can be installed.
9. The temperature/pressure relief valve for the water heater exceeded 30 feet in length. Increasing the size of the temperature/pressure relief valve

may be necessary to ensure a sufficient flow rate for the valve to perform satisfactorily in an emergency. This should be discussed with the plumber.

10. The trap for the master bath tub was over 6 feet to the vent. Six feet is the maximum allowable run for the drain between the drain trap and the vent, which may increase the potential for it to siphon empty with normal use.
11. The water supply line was located at the west exterior of the garage at the northwest corner of the building. Reference Photograph 20
12. There was insufficient clearance between the water heater and the underside of the roof. The water heater requires a minimum 12 inches of clearance to prevent a fire hazard. Reference Photograph 21

E. AIR CONDITIONING

1. The air conditioning is an electrically powered system that will provide cooling controlled by a thermostat located in the house
2. Heating for the building is provided by a gas-fired furnace that also provides air flow for the air conditioning system.
3. The house is heated by 1 warm air furnace/s, having a total capacity of 88,000 BTU/hr. This is sufficient for heating a house of 1,955 sq. ft. in the Houston area under the most severe weather conditions normally incurred. When some builders use insulation with high R values (values over 30), some installers calculate the maximum heat leak from the house and size the equipment to match the heat loss. If the heating capacity is less than 45 BTU per square foot for the house, the installer should be asked to provide the calculations made to size the equipment.
4. Air conditioning for the building was provided by a single unit; however, there is evidence that it is intended to be installed as a multi-zone system, possibly with a zone at each floor. This should be further clarified by the builder, as it is desirable for a zone to exist at each floor for the best comfort control.
5. Ductwork sagged in the attic space in some areas. Unnecessary turns or sags reduce energy efficiency. Reference Photograph 22
6. Ductwork was compressed together in the attic space over the master bedroom and master bathroom. Compressed ductwork has a greater potential to sweat and reduces energy efficiency. Reference Photograph 23
7. The liquid line connection at the evaporator coil was left open and facing upward. This creates a greater potential for contamination to enter the liquid line and could cause damage to the thermal expansion device inside the coil. Reference Photograph 24

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8. The method of controlling air balancing at each zone was not determined. Typically, balancing dampers are installed near the air handling equipment for the best performance.

F. ELECTRICAL

1. Electrical wiring in the building had not yet been installed, and the quality of workmanship in installing the wiring could not be evaluated. Caution is advised that damage may occur to installed components during installation of the wiring.

G. FINISH WORK

1. A window was missing at the south exterior of the building at the downstairs hall adjacent to the stairwell, where siding was already installed. It will be necessary to remove the siding to allow a window to be installed in the opening properly interfacing the moisture barrier in order to prevent water penetration into the building. Reference Photograph 25
2. Flashing details above some windows were improper, where water running down the moisture barrier can run behind the tape flashing details and reach the interior of the building. Reference Photograph 26
3. Flashings were missing over the exterior fiber cement siding trim. Flashings are required continuously above projecting trim. Reference Photograph 27
4. Flashings were not evident around pipe penetrations through the fiber cement siding. This creates a potential for water penetration to the sheathing. Reference Photograph 28
5. It appeared that the foam gasket may be missing at the wall between the garage and interior of the building. This is intended to improve energy efficiency by preventing air infiltration at the bottom of the wall. Reference Photograph 29
6. It was indicated that the curb along the north end of the living room balcony was to be removed, requiring modification of the balcony dry pan. Reference Photograph 30
7. Nails used to secure fiber cement siding to the structure of the building had been improperly driven at angles and were underdriven at numerous locations. The fasteners should be repaired in accordance with the manufacturer's specifications. Reference Photograph 31
8. Not all joints in the Tyvek moisture barrier were taped. Taping of the joints reduces air infiltration.
9. Penetrations through the moisture barrier were not flashed at vent and pipe penetrations. This increases the potential for water penetration,

especially where stucco siding is to be installed, and a method of flashing should be implemented. Reference Photograph 32

10. Sill flashings below the windows had been improperly installed so that they adhered to the OSB sheathing rather than lapping the moisture barrier. This does not appear to be repairable without removal and reinstallation of the windows to allow the sill flashing to be properly installed and, in its current configuration, is likely to allow water penetration to the structure. Sill flashings should lap the moisture barrier at the bottoms of the windows. Reference Photograph 33
11. Tape flashing used around the windows was not well adhered at all locations. Separations increase the potential for water to be directed toward the interior structure of the building.
12. The method of securing the guardrail to the outer edge of the balcony was not determined, but it appears it may require installing fasteners through the surface of the balcony, which create a potential for water penetration in the future. This should be discussed with the builder to determine if there is an alternative mounting method to prevent water penetration. Reference Photograph 34
13. There were tears and holes in the Tyvek moisture barrier at locations where stucco was to be installed. It is recommended that the Tyvek be replaced in these areas to reduce the potential for water penetration into the building.
14. There were uneven edges to the fiber cement siding at some locations, with the most significant area occurring at the north side of the building, creating an irregular appearance.
15. Tyvek installed as a moisture barrier at the outside surface of the building was indicated to be the primary moisture management membrane. Its quality of workmanship in installation was below normal. It was observed that the moisture barrier did not extend past the structural sheathing, which could allow wetting of the sheathing. Reference Photograph 35
16. Windows were improperly installed over the surface of the fiber cement siding at the garage. Proper installation of the windows requires removal of the siding so that they can be flashed into the moisture barrier to prevent water penetration into the building. Reference Photograph 36
17. Windows were not uniformly flashed at the front of the building. The reason for variation was not determined; however, some windows appeared to have a significant potential to allow water penetration after siding is installed if the quality of workmanship in installing the flashing details around the windows is not corrected. Reference Photograph 37
18. Wrinkles could be observed in the ceiling tape used at the decking joints of the living room balcony. These open wrinkles create a concern that

water penetration may occur through these joints. Repair of the joints is recommended prior to placement of final finishes. Reference Photograph 38

IV. SPECIAL NOTICE

Opinions and comments contained in this report are based on observations of evidences of workmanship employed in construction of the building inspected. Quality standards are based on knowledge gained through experience and professional studies of the inspector. Opinions related to compliance with specifications, legal, and/or code requirements are specifically excluded as being a part of our agreement to perform this inspection. There is no guarantee or warranty as to future performance, life, and/or need for repair of any item inspected, nor should same be assumed.

This is a sample document and contains no signatures. If this were an actual engineering report signatures would be provided at this location. This document is only intended to prove a sample of the type of report we issue for a Top-Out Framing Quality of Workmanship Inspection.

Sample Report
Professional Engineering Inspections



1. It appears as though vertical bracing at the attic has been installed between the roof and the open area of a ceiling at the master bathroom. Vertical bracing should only be applied between the roof and the load-bearing walls or between the roof and specially designed beams.

2. A beam installed across the ceiling of the master bedroom was blocked to the top plate of the wall along the side of a rafter rather than allowing the beam to straddle the rafter, creating a stronger tie-in.



3. A hanger strap carrying the beam across the stairwell opening at the first floor foyer was installed with short nails at the shear nail locations, reducing the strength of the hanger straps. This is indicated by the embossed heads of the nails and should be investigated and repaired.



- 4. Anchor bolts used to secure the lower wall plate to the foundation were missing, where they were not installed within 12 inches of joints around the perimeter of the building at its exterior wall.

- 5. Ceiling joists carrying the coffered ceiling at the master bedroom were single joists. Double joists or larger are often used for this configuration to ensure deflections in the ceiling do not result in cracks or irregularities in the corners of the coffer finishes. It appeared some roof load will be transferred to the ceiling at this location since roof rafters cross the ceiling joists.

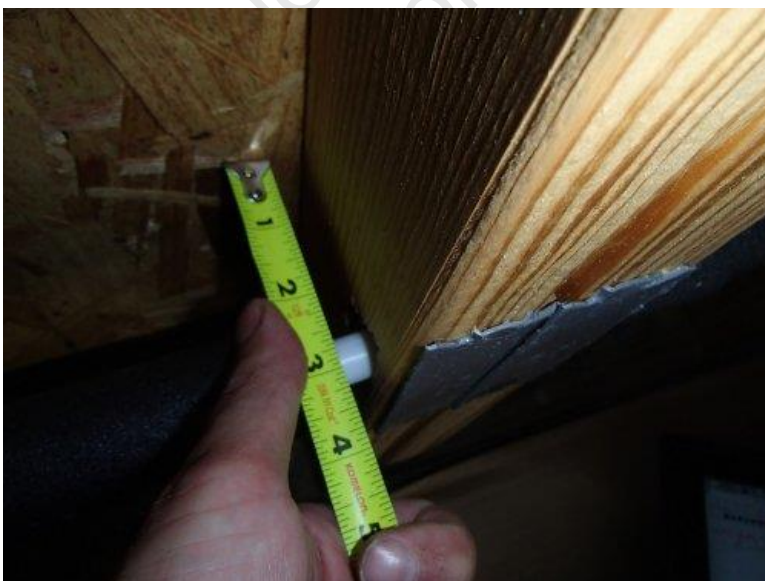


- 6. Hanger straps were bent or distorted at some locations in the building, including in the ceiling at the living room where they attach to the beam over the stairs. This can allow movement of the truss as the floors are loaded, possibly damaging sheetrock finishes in the future.



7. Hanger straps were loosely fit at some of the trusses, including: trusses over the living room stairs, trusses at the living room ceiling, trusses at the front porch, and trusses below the balcony at the east side of the first floor bedroom. Loose fitting hanger straps that do not extend up the sides of the joists or trusses to touch the top cord have a greater potential to allow flexing of the trusses, which can result in noisy conditions.

8. Hanger straps were missing at locations, including at the ceiling at the living room, the stairs at the living room, and the master bedroom ceiling. Hanger straps are installed to reinforce beam and joist connections.



9. Holes were cut too close to the surface of the studs at some locations in the building, including at the downstairs east bedroom. This can reduce the strength of the studs. Holes should never be less than 5/8-inch from the edge of the stud face.



10. It appears there is a need for a compression block at the end of a truss at the edge of the floor decking and supporting a column at the top of the stairs between the first and second floor. Failure to install a compression block at this location may allow compression of the joist, causing it to distort. There was also a hanger strap missing at this joist to the supporting beam.

11. It was not determined how the column at the front porch was anchored at the foundation.



12. Nails were missing from the shear nail locations at hanger straps that reinforce joints between beams at locations, including: at the downstairs bedroom at the southeast corner, at the beam supporting the ceiling at the living room adjacent to the stairs, and at the third floor stairs at the top of the stairs. Shear nails significantly increase the load capacity of the hangers.





- 13. Stud shoes had been improperly installed over pipe penetrations through the structural stud wall at the third floor utility room. This effectively results in notching of the stud. The stud shoes were installed over the furring strips and are not likely to provide effective reinforcement in this configuration.

- 14. Studs were warped in the walls at some locations, including at the downstairs west bedroom windows. The warping was more than normally observed and may affect the implementation of finish work. Warped studs can often be adjusted prior to installation of the sheathing, and excessively warped studs may affect their load-carrying capacity.



- 15. The header supporting doubled floor joists at the north side of the garage at the exit door from the garage to the yard was carried by single crippled studs. Plans for construction should be consulted to ensure that additional studs are not required.



16. The stairs between the second and third floor had been supported along their outer edge relying on a temporary support, apparently because of excessive flexing of the stairs. There was a detectable slope at the stair treads, and there is a need for permanent stiffening of the structure.

17. There was a stud pack installed at the south wall of the garage that was installed at an angle rather than reducing the spacing between studs. Studs are intended to be installed vertically for their best load-carrying capacity.



18. There was a stud shoe missing at a stud at the south wall of the garage. Installation of a stud shoe is recommended at this location as the stud was excessively bored.





- 19. There was a stud that was excessively notched through at the downstairs east bedroom, where the stud supports floor joists over the front porch.

- 20. The water supply line was located at the west exterior of the garage at the northwest corner of the building.



- 21. There was insufficient clearance between the water heater and the underside of the roof. The water heater requires a minimum 12 inches of clearance to prevent a fire hazard.



22. Ductwork sagged in the attic space in some areas. Unnecessary turns or sags reduce energy efficiency.

23. Ductwork was compressed together in the attic space over the master bedroom and master bathroom. Compressed ductwork has a greater potential to sweat and reduces energy efficiency.



24. The liquid line connection at the evaporator coil was left open and facing upward. This creates a greater potential for contamination to enter the liquid line and could cause damage to the thermal expansion device inside the coil.



- 25. A window was missing at the south exterior of the building at the downstairs hall adjacent to the stairwell, where siding was already installed. It will be necessary to remove the siding to allow a window to be installed in the opening properly interfacing the moisture barrier in order to prevent water penetration into the building.

- 26. Flashing details above some windows were improper, where water running down the moisture barrier can run behind the tape flashing details and reach the interior of the building.



- 27. Flashings were missing over the exterior fiber cement siding trim.





28. Flashings were not evident around pipe penetrations through the fiber cement siding. This creates a potential for water penetration to the sheathing.

29. It appeared that the foam gasket may be missing at the wall between the garage and interior of the building. This is intended to improve energy efficiency by preventing air infiltration at the bottom of the wall.



30. It was indicated that the curb along the north end of the living room balcony was to be removed, requiring modification of the balcony dry pan.



31. Nails used to secure fiber cement siding to the structure of the building had been improperly driven at angles and were underdriven at numerous locations. The fasteners should be repaired in accordance with the manufacturer's specifications.

32. Penetrations through the moisture barrier were not flashed at vent and pipe penetrations. This increases the potential for water penetration, especially where stucco siding is to be installed, and a method of flashing should be implemented.

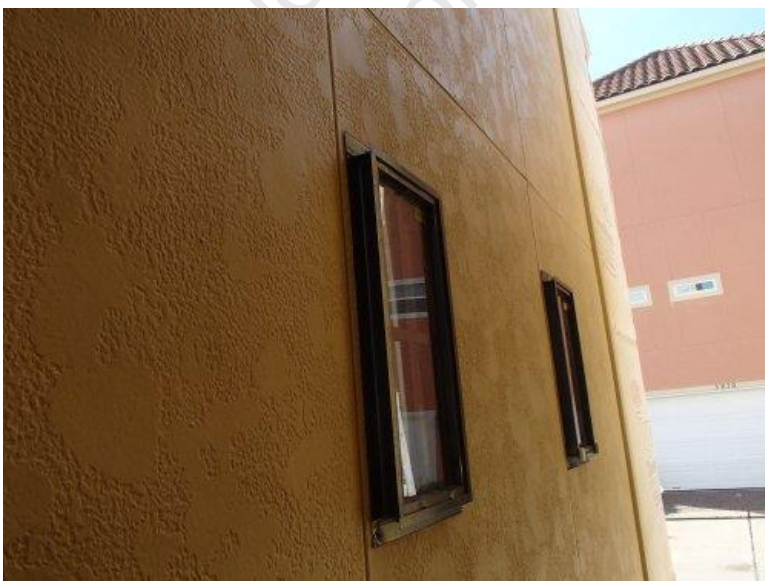


33. Sill flashings below the windows had been improperly installed so that they adhered to the OSB sheathing rather than lapping the moisture barrier. This does not appear to be repairable without removal and reinstallation of the windows to allow the sill flashing to be properly installed and, in its current configuration, is likely to allow water penetration to the structure.



34. The method of securing the guardrail to the outer edge of the balcony was not determined, but it appears it may require installing fasteners through the surface of the balcony, which create a potential for water penetration in the future.

35. Tyvek installed as a moisture barrier at the outside surface of the building was indicated to be the primary moisture management membrane. Its quality of workmanship in installation was below normal. It was observed that the moisture barrier did not extend past the structural sheathing, which could allow wetting of the sheathing.



36. Windows were improperly installed over the surface of the fiber cement siding at the garage. Proper installation of the windows requires removal of the siding so that they can be flashed into the moisture barrier to prevent water penetration into the building.



37. Windows were not uniformly flashed at the front of the building. The reason for variation was not determined; however, some windows appeared to have a significant potential to allow water penetration after siding is installed if the quality of workmanship in installing the flashing details around the windows is not corrected.

38. Wrinkles could be observed in the ceiling tape used at the decking joints of the living room balcony. These open wrinkles create a concern that water penetration may occur through these joints. Repair of the joints is recommended prior to placement of final finishes.

