

Property Inspection Report

OPEN FRAME

Sammy Slumber
4830 Franklin Way Court
Iowa Colony, TX 77583
Meridiana

Sunday, March 8, 2020

Phase Inspection:

- Phase I: Foundation Pre-pour**
- Phase II: Open Frame**
- Phase III: Final Inspection**

Date

Thursday, February 6, 2020

Sunday, March 8, 2020

Click or tap to enter a date.



Clay M. Collins

Professional Inspector, TREC License #7147

Grace Home Inspection Services, LLC

ICC Certified Combination Residential Inspector # 8061161

ICC Certified Commercial Inspector # 8061161

ICC Certified Energy Conservation Inspector/Plans Examiner #8061161

Certified Level 1 Unbonded Post-Tensioning Inspector #912090009

American Tile Institute Certified Tile Installer

Cell/Text 713 503-1820 Web page: www.gracehis.com e-mail: clay@gracehis.com

Inspection Date: 3/8/2020

Builder: Builder Bob's Homes

Plan: Lindsay

Square Feet: 2,733

Options: Extended garage

Floors: 1 **Bedrooms:** 4 **Bathrooms:** 4 **Garage:** 3-bay

SCOPE

1. The Client has contracted with this inspector to observe and evaluate the existing visible portions of the framing and the rough-in of electrical lines, water and gas piping, HVAC ducting and mechanical exhaust duct including clothes dryer duct. Destructive inspection was outside the scope of this inspection and framing members, nails, tapes and flashings were not removed or damaged. As a result, some defects may have been overlooked.
2. *Information:* Effective August 1, 2017 the State of Texas has adopted the 2015 I-Codes ([42 TexReg 676](#)). The purpose of this code is to establish minimum requirements to safeguard the public safety, health and general welfare through affordability, structural strength, means of egress facilities, stability, sanitation, light and ventilation, energy conservation and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations. [IRC R101.3](#)
3. Local Authorities may adopt other codes.
4. *Standards* referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference including the AF&PA Wood Frame Construction Manual (WFCM). [IRC R102.4](#) and [IRC R301.1.1\(1\)](#)
5. This was not a Windstorm Certification inspection. Such an inspection, required in this Inland I or Inland II area, will be performed by the certifying Licensed Design Professional (LDP) based on his engineered design, construction drawings and specifications.
6. Architectural plans, construction drawings, specifications, etc., *were not* made available during this inspection.
7. Workmen were on-site during this inspection.
8. Some items may not be complete, or started, and do not necessarily mean an oversight of construction.
9. **The default recommendation must be that any defect shall be corrected, or the Licensed Design Professional (LDP) of record should document for Client's purposes, his acceptance of the as-constructed method.** Note that a general approval of construction does not reflect the LDP's recognition of the specific defect and should not be considered acceptable for this purpose.

OBSERVATIONS

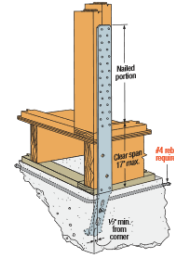
Foundation

In lieu of the architectural plans this foundation was inspected based on the Post-Tensioning Institute's Construction and Maintenance Procedures Manual for Post-Tensioned Slab-on-Ground Construction 2nd Edition. The Post-Tension Cable foundation had been tensioned and covered.

Foundation Anchorage

One or more hold downs which were not nailed into **2 full-height studs**. In some cases, "California" corners were used which had less than 2 studs for nailing. In some cases, blocking was added for nailing, but these did not appear to have any structural value. *Wood Frame Construction Manual 4.3 Hold Downs*

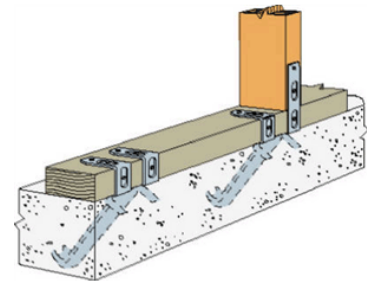
STHD type holddowns must be nailed to at least 2 full height studs. Additional studs attached to the shearwall studs or post may be required by the Designer for wall sheathing nailing.



ICC-ES Evaluation Report [ESR-2920](#)

Information: While, there were no anchor bolts installed in the sill plates of the exterior walls, we did observe Simpson Strong-Tie® Mudsill anchors that meet or exceed the anchorage requirements. *Refer to design specifications.*

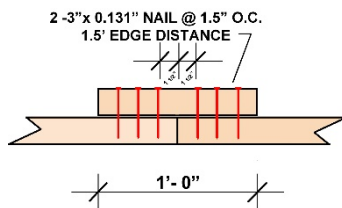
- Testing shows that these mudsill anchors can be used in lieu of code-required anchor bolts and square washer in high seismic zones.
- Minimum MASA end distance is 4" and minimum center-to-center spacing is 8" for full load



Simpson Strong-Tie page [MASA/MASAP](#)

Note: The construction drawings were not available to evaluate spacing of anchor in this Inland II area. Wood sole plates at all exterior walls on monolithic slabs, wood sole plates of braced wall panels at building interiors on monolithic slabs and all wood sill plates shall be anchored to the foundation with anchor bolts spaced a maximum of 6 feet (1829 mm) on center. [2015 R403.1.6](#). It should be expected to be more severe (i.e. closer spacing) than code, as these were.

Anchorage was missing where splices in the sole plates occurred during framing. There shall be a minimum of two bolts per plate section with one bolt located not more than 12 inches (305 mm) or less than seven bolt diameters from each end of the plate section. While blocking across the splice may be acceptable to the licensed design professional, these did not appear effective. See comments below.



Less than 1" bearing on the left-hand plate and all nails were in the splice. Recommend anchors where marked "A".



Not enough nails were used on either side of the splice. Recommend additional nails be placed.



Marked by builder to be blocked across the splice but there will not be enough bearing for effective blocking. Recommend anchor be added



Not marked by builder. There will not be enough bearing for effective blocking. Recommend anchor be added



Where drilled anchor bolts were placed, washers were undersized (7 or more locations). In this Inland II area, the washer should be a 2" x 2" plate washer. Recommend correction or a written letter from the design engineer showing acceptance as installed. [Wood Frame Construction Manual](#)

Bearing plates give greater bearing surface than standard-cut washers and help distribute the load at these critical connections. The BP1/2-3 and BP5/8-3 are 3" x 3" bearing plates that meet the latest requirements of the IRC and IBC. These plate washers are available uncoated or with a hot-dip galvanized (HDG) coating.



Simpson Strong-Tie page [Bearing Plates](#)

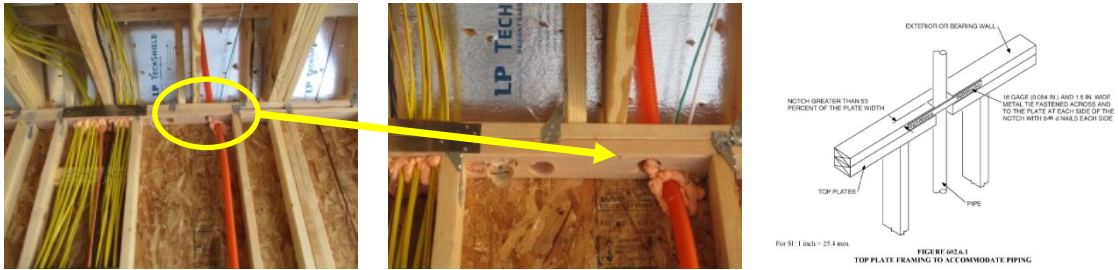
Framing

Top plates had been bored, or notched, more than 50% at electric non-metallic tubing (ENT), did not have proper strapping across the bored hole. "When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (1.37 mm) (16 ga) and 1 1/2 inches (38 mm) wide shall be fastened across and to the plate at each

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side of the opening with not less than eight 10d (0.148 inch diameter) having a minimum length of 1 1/2 inches (38 mm) at each side or equivalent. The metal tie must extend a minimum of 6 inches past the opening. See Figure R602.6.1." Note that there were partially bored holes to the left. The licensed design professional should determine whether those should also be strapped.



There was no separation between hold downs and treated lumber on porches. The chemicals now used to preserve wood is deleterious to metal. The manufacture calls for separation. Recommend repair. [Simpson Strong-tie technical bulletin](#)

Stud-to-stud connections not at braced wall panels did not have enough fasteners (i.e. nails). FASTENING SCHEDULE requires 16d common (3-1/2" x 0.162") face nailed 24" on center, or 10d box nails (3" x 0.128"), face nailed 16" on center. [2015 IRC Table R602.3\(1\) Default Recommendation](#)

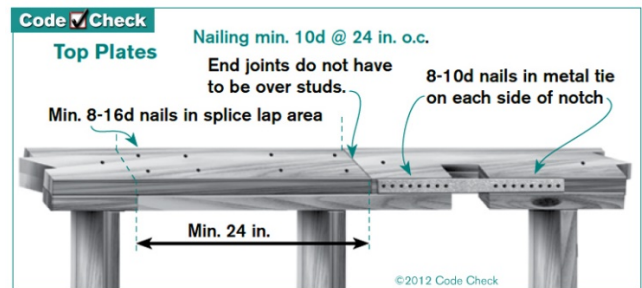
Abutting studs at intersecting wall corners at braced wall panels did not have enough fasteners (i.e. nails). FASTENING SCHEDULE requires 16d box nails (3-1/2" x 0.135") 12" on center, or 16d common nails (3-1/2" x 0.162") 16" on center. [2015 IRC Table R602.3\(1\) Default Recommendation](#)

Stud-to-stud connections at braced wall panels did not have enough fasteners (i.e. nails). FASTENING SCHEDULE requires 16d box nails (3-1/2" x 0.135") 12" on center, or 16d common nails (3-1/2" x 0.162") 16" on center. [2015 IRC Table R602.3\(1\) Default Recommendation](#)

Splices in the upper and lower top plates did not have enough fasteners where sampled. FASTENING SCHEDULE requires eight (8) 16d (3-1/2" x 0.135") nails in lapped area. Since the house has been decked and roofed, these can be driven from below. [2015 IRC Table R602.3\(1\) Default Recommendation](#)

Illustration

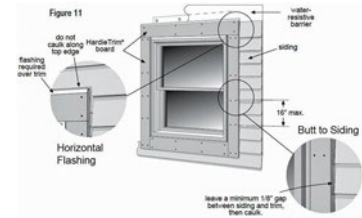
Minimum 8-16d nails in splice lap area (4 each side)



Straps between offset wall studs (brick pocket) and 1st floor studs were not straight. As installed, uplift can occur, and nails can withdraw from the second floor framing members. Straps must be installed straight so that the fasteners are in shear. This may require that the straps be connected to the outside of the first-floor wall. [Default Recommendation](#)

Exterior Walls

Information: The cementitious siding was installed beneath, rather than butting to, the trim. “HardieTrim must be installed such that the HardiePlank or any lapped siding product butts into the trim. DO NOT Install HardieTrim over any lapped siding products.” While this is not the recommended method of installation, the manufacturer accepts this within this zone [Hz10]. No recommendation. [Manufacturer’s Installation Instructions - Technical Bulletin](#)



A drain vent boot, intended to mount on the roof, was used as flashing at the refrigerant lines.

1. R703.1.1 “The exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly...” This friction-fit boot will trap water.
2. R703.4 “The flashing should extend to the surface of the exterior wall finish”. This boot will not extend to the exterior finish of the masonry veneer.

Example of proper refrigerant line flashing...▶



Fenestration

Fasteners were not installed per the Manufacturer’s Installation Instructions (TDOI Windstorm Zones require #6x1-5/8” screws at 8” on center or 8d x 2-3/8” deformed shank nail at 4” on center. Nails used were spaced more than 4” on center. Note that the fasteners were installed in each hole which were 7” on center. Installing fasteners at 4” on center would require nailing through the flange which might void manufacturer’s warranty. Recommend that manufacturer’s representative inspect the windows and verify installation to meet windstorm requirements. [Manufacturers Installation Instructions](#)

2 windows did not have AAMA/WDMA/CSA labels posted on the windows (applies to 3.0x7.0 windows). Exterior windows shall bear a label stating the design wind pressure. Recommend that the manufacturer’s representative install the appropriate label where missing. [IRC R609.3](#)

The back-exterior door did not have an AAMA/WDMA/CSA label posted. Exterior side-hinged doors shall be tested and *labeled* as conforming to AAMA/WDMA/CSA 101/I.S.2/A440 or comply with Section 2012 IRC R612.5. Recommend that the manufacturer’s representative install the appropriate label where missing. [IRC R612.3](#)

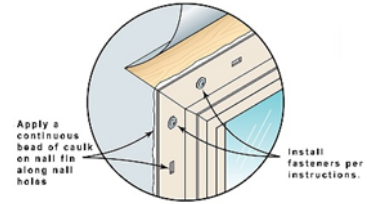
Fasteners in the back-exterior door’s hinge plates did not appear to be as required; all screws were 1” long. The door did not have an AAMA/WDMA/CSA label posted, the manufacturer’s installation instructions were not available on the job site and I could not look up the TDI product evaluation.

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It is unlikely, however, that only 1" fasteners are acceptable. *It is possible that this is to be corrected at installation of final doors and locksets.*

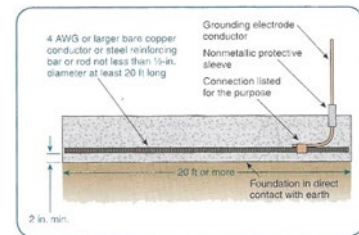
There was no evidence that the window nailing fins had been caulked. Manufacture's Installation Instructions: Apply a continuous 3/8" bead of caulk on the inside perimeter of the nailing fin. *Manufacturers Installation Instructions*



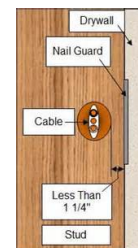
Electrical

Information: The Electrical rough-in was not complete at the time of this inspection.

A concrete encased electrode was installed in the outboard wall of the garage. "Metallic components shall be encased by at least 50 mm (2 inches) of concrete and shall be located horizontally within that portion of a concrete foundation or footing that is in direct contact with the earth or within vertical foundations or structural components *that are in direct contact with the earth.* While the builder left a portion of the outer beam exposed, the NEC states that "Concrete installed with insulation, vapor barriers, films or similar items separating the concrete from the earth is not considered to be in "direct contact" with the earth." Note that Authorities Having Jurisdiction (AHJ) may require that this electrode be installed. Recommend that a second ground rod be installed to meet the NEC requirement for Supplemental Electrode 2017 NEC 250.53 (A) (2)



Bored holes did not all have nail plates installed to protect electrical cables. Non-metallic cables run through bored holes in framing members should not be closer than 1 1/4" from the edge of the framing member or should be protected with a minimum 0.0625-inch steel plate or sleeve, a listed steel plate or other physical protection. *Recommend nail plates be installed where marked.*

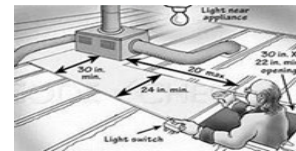


Ducts and Vents

Information: The effective length of the dryer exhaust duct was about 33 feet. If the Authority Having Jurisdiction has adopted the 2009 or 2012 IRC, a label with the equivalent length of the duct shall be posted on a permanent label or tag within 6 feet of the exhaust duct connection. If the 2015 IRC has been adopted, this label is only required if the effective length of the duct is more than 35 feet.

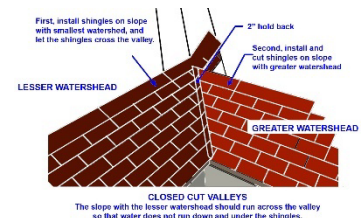
Attic Access

Access between levels of the attic space, up to the HVAC equipment was not safe. Filters required to be maintained by the homeowner were in the upper level space. "Appliances shall be accessible for inspection, service, repair and replacement without removing permanent construction, other appliances, or any other piping or ducts not connected to the appliance being inspected, serviced, repaired or replaced." Recommend safe access be installed including proper steps and railings (48" high change in level). [2015 IRC §M1305.1](#)



Roof

Orientation of cut shingles in the valleys was not correct at the front valleys (3x). Some manufacturers state that the field with the smallest watershed be laid first, allowing the shingles to cross the valley (see illustration). Some manufacturers state that shingles on the lower roof run across the valley. Others state that the shingles on the smaller roof area run across the valley. The installation of shingles across the closed-cut valleys did not appear to meet any of these installation methods. *Recommend that manufacturer's representative inspect the roof cover and verify installation to meet windstorm and warranty requirements.*



OTHER

Note: To meet IECC energy efficiency standards walls, doors, windows and penetrations through top plates are to be sealed. This had not been completed at the time of this inspection.