



June 13, 2017

Mr. Tyler Norwood
Principal / Operator
Pinthouse Pizza, LLC
4729 Burnet Rd
Austin, TX 78756

Re: Structural Engineering Assessment of Existing Buildings
4705 & 4703 Burnet Rd, Austin, Texas
AG&E Project No. 17-107

Dear Mr. Tyler Norwood:

On June 2, AG&E Structural Engenuity (AG&E) performed a visual observation of the structural framing for two existing buildings at 4705 & 4703 Burnet Rd to identify areas where the structural components have degraded or been damaged. After observing existing structures, AG&E has categorized the structural deficiencies and assessed the severity of each issue. This letter report documents our observations and recommendations. It is supplemented by a set of the photos taken while on site.

EXISTING STRUCTURE

The assessed project site consists of two buildings built side by side and separated by a drive aisle. The first building, which will be referred to as building 4705 in this report, is primarily constructed of wood with stone veneer and steel canopy posts. The canopy in the back of building 4705 is constructed completely of wood with a gable roof. The second building, which will be referred to as building 4703 in this report, is primarily constructed of stone bearing walls and a wood framing interior. Roofing and canopy material was steel deck with wood posts supporting the canopy.

EXISTING DOCUMENTATION

There was no documentation of the existing buildings. Everything in this report was observed in the field, with any recommendations and issues being determined based on structural engineering knowledge.

4705 Burnet Rd.

The construction of this building appears to be inconsistent with structures that were constructed under a jurisdiction or building code. While we cannot make conclusive assertions due to the inability to examine large portions of the structure, the original structure appears to lack a floor. The addition on the north side of the structure does not appear to have a perimeter foundation, which if true may mean that the building is vulnerable to wind uplift or shifting. The open structure

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at the rear of the building does not have a discernable lateral system for structural stability or resisting lateral loads. What keeps the structure stable currently is likely the embedment of bare wood posts into isolated concrete foundations, which is an unacceptable method of construction under current building codes.

Observations:

1. Wood post cast in concrete

At the canopy behind building 4705, there is a wooden column cast into the concrete foundation (Exhibit 1). Wood cast in concrete creates an environment likely to cause the wood to rot and give way without warning. It appears this base condition is the only thing providing stability to this portion of the structure. This method of construction is not permitted under current codes.

2. Incorrect hanger clip at rafter to ridge connection

The roof rafters behind building 4705 are using what appears to be a Simpson H2.5A clip at the connection of the roof joists to the ridge beam (Exhibit 2). These clips are not good at transferring lateral loads in shear. With a gable roof, gravity and lateral loads contribute to a shear load at the bearing points. This condition could be addressed by the addition of blocking between the roof joists and additional connector clips.

3. Wood structural member decay

Wood rotting was found at various places around the structure (Exhibit 3). As the building ages and wood continues to rot without being replaced, structural integrity is reduced and can lead to failure.

4. Floor highly uneven and irregular

The floor of the original structure appears to be plywood sheathing fastened directly to an uneven bearing surface beneath. It is not clear whether the uneven surface is concrete, asphalt, or even bare earth. The floor varies substantially in elevation and would not pass a Texas Accessibility Standards review. Furthermore, the load bearing capacity of the floor is in question until such time as the substrate can be observed and evaluated.

5. Bent column at canopy support

The steel post supporting the canopy in front of building 4705 is damaged and has permanent deformation at the base. The capacity of the member is compromised and may well be inadequate to support code required forces.

6. Steel posts top connection is structurally inadequate

The connection of the steel posts supporting the canopy in front of building 4705 are not adequate for lateral forces and column stability (Exhibit 5). The posts simply rest below the wood framing member. The connection needs to be

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reinforced to provide resistance to wind uplift loads and to resist the horizontal forces required to provide lateral stability to the beam and the column.

7. Stone veneer/bearing wall may not be properly supported

On the face of building 4705, the stone veneer may not have ties back to structure. It was possible to see into the cavity behind the stone in places, but no ties were visible. If the stone is not tied to a structural support, it is vulnerable to being pulled off the face of the building under wind load, an obvious life safety concern.

8. Noticeable canopy displacement

Significant canopy displacement can be observed at the front of building 4705 (Exhibit 15).

9. Inadequate bearing condition for canopy beams

The wooden beams in front of building 4705 are bearing on the stone veneer may not be designed as a bearing wall (Exhibit 16).

4703 Burnet Rd.

The structure of the building at 4703 appears to be a load bearing exterior stone wall with some sort of wood roof spanning between. The exterior stone wall was observed to be a two-wythe wall with a cavity between wythes. None of the foundation elements or roof structure was exposed to view. There are two small additions at the back of the building.

10. Improper foundation for shed

The shed behind building 4703 is resting on top of CMU, which is not a proper foundation (Exhibit 7).

11. Notching within structural roof rafter

At the shed behind building 4703, the wood roof rafter framing was notched at various points in the member (Exhibit 8). The capacity of the notched members is greatly reduced and the member is almost certainly structurally deficient.

12. Cracking and deterioration in stone wall

At various locations on the side of building 4703, the stone wall is cracked at mortar joints. Over time, this condition will worsen and could eventually lead to a serious condition. The mortar should be monitored and repaired under the supervision of a structural engineer by tuckpointing or more aggressive means if required.

13. Canopy not fastened back to the main structure

The canopy in front of building 4703 is not properly connected to the building (Exhibit 11).

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14. Steel post to canopy inadequate

The columns supporting the canopy in front of building 4703 have compromised top connections or no top connection at all, which creates a potential instability (Exhibit 12). Loads at this condition should be analyzed by an engineer and the connection retrofitted to provide adequate capacity to resist those forces.

15. Significant splitting and warping of wood columns

The columns at the front of building 4703 supporting the canopy are seeing significant splitting within the member (Exhibit 13) or warping (Exhibit 19). This can compromise the strength of the wood and promote decay of the member.

16. Improper stud wall construction

The walls within the shed behind building 4703 are improperly built, as the studs should have been rotated at a 90-degree angle (Exhibit 17).

17. Roof deck warping

The roof deck on addition to building 4703 is warping (Exhibit 18). This is most likely due to age and exposure to weather. Also, proper connection may not have been made to hold the decking in place.

18. Sign not properly supported

The sign in front of building 4703 is supported by a thin steel member spanning a significant distance. Also, the sign is no longer continuously fastened to the support (Exhibit 20). Even though the sign is a necessary piece of the building structure, it does create a risk if it falls or becomes windborne.

19. Spalling concrete at bathroom wall

Nonbearing unreinforced concrete wall is seeing excessive spalling (Exhibit 21).



Exhibit 1: Improper column connection



Exhibit 2: Improper rafter connection for transfer of lateral loads and stability

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Exhibit 3: Rotting structural members



Exhibit 4: Buckled canopy post

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Exhibit 5: Inadequate connection at top of column



Exhibit 6: Stone façade potentially unsupported by wall

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Exhibit 7: Improper foundation



Exhibit 8: Notched wood rafters



Exhibit 9: Cracking at mortar joints in the rock façade



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Exhibit 10: Cracking and holes in the rock façade

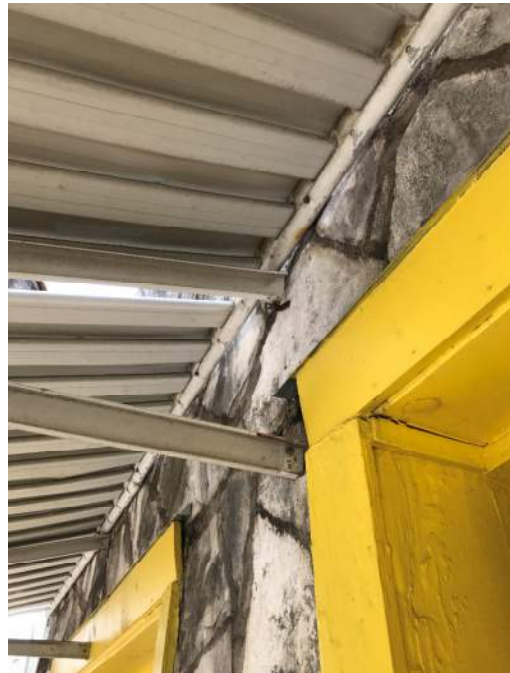


Exhibit 11: Canopy connection failures

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Exhibit 12: Column connection to canopy inadequate



Exhibit 13: Significant checking of wood post

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Exhibit 14: Floor settlement and uneven floors



Exhibit 15: Significant canopy deflections



Exhibit 16: Inadequate bearing condition

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Exhibit 17: Improper stud wall framing



Exhibit 18: Metal roof deck warping



Exhibit 19: Wood column warping, deteriorating at base.

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Exhibit 20: Sign not properly supported; falling/flying debris hazard.



Exhibit 21: Spalled concrete Wall

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If we can be of any further assistance, please do not hesitate to write or call.

Respectfully,

AG&E Structural Engenuity

Texas Firm Number F-8435

A handwritten signature in black ink, appearing to read "Mathew Braden". The signature is fluid and cursive, with the first name "Mathew" being more prominent than the last name "Braden".

Mathew Braden, E.I.T.
Project Engineer

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