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INITIAL STRUCTURAL CONDITION ASSESSMENT

PESKIN BUILDING
21 EAST ATHENS STREET
WINDER, GEORGIA

CLIENT:

CITY OF WINDER
ATTENTION: MR. BARRY EDGAR, PLANNING DIRECTOR
23 N. JACKSON STREET
WINDER, GEORGIA 30680

DATE: SEPTEMBER 10, 2015

SHEATS STRUCTURAL CONSULTING, INC. (SSCI)

At the request of the client (City of Winder), Sheats Structural Consulting, Inc. (SSCI) has performed an initial structural condition assessment of the Peskin Building located at 21 East Athens Street in Winder, Georgia. The total floor space of the building that was assessed is approximately 13,000 square feet, which includes the 1st, 2nd, and 3rd floors (approximately 4,350 square feet, per floor) but not the basement or mezzanine. All dimensions and directions as referenced herein are approximate and assume that East Athens Street is located to the north of the Peskin Building.

The Peskin Building was observed to be a three story structure above a basement with plan dimensions of approximately 100 feet (north-south) by 36 feet to 49 feet (east-west). The building is trapezoidal in shape with an overall width at the front (north) wall of approximately 36 feet and an overall width at the rear (south) wall of approximately 49 feet. The building generally appeared to be constructed with masonry (brick) exterior walls, wood floor framing (joists and beams), wood roof/ceiling framing (rafters and ceiling joists), and wood roof trusses (with vertical steel web members). Limited steel framing was observed in a few locations including an exposed first floor column, the lintel at the north wall above the sidewalk, the beams below the front wall of the building viewed from the basement, and at the truss bottom chord connection/joint at the east wall. According to the Barrow County Tax Assessor's website, the subject building was constructed circa 1940. The building is currently unoccupied and does not appear to have been maintained for at least the past several years.

Scope of Services

Sheats Structural Consulting, Inc. performed the following scope of services for the initial structural condition assessment of the subject building:

- An SSCI representative (Reed Sheats, P.E.) performed one site visit (on August 21, 2015) to visually assess the readily apparent condition of portions of the existing building structure in limited locations where direct observations were feasible. These observations were limited to "spot checks" of certain, accessible structural components and did not include full documentation of the entire building structure. These observations occurred from the exterior of the building (at ground level), the basement, the first floor, the 2nd floor, and the 3rd floor. The purposes of these observations was to attempt to: a) note readily-apparent "symptoms" of significant distress or damage to structural components and b) document certain, typical characteristics of the existing building structure for the purpose of providing initial opinions regarding possible future interior demolition and/or renovations.

- SSCI has developed a summary report (this document) that describes the site visit observations regarding the condition of the existing building structure. This report also includes descriptions of potential areas of structural concern (such as significant distress or damage) that were identified. This report presents SSCI's initial opinions and commentary regarding possible future interior demolition and/or renovations. Figures attached to this report illustrate one concept for possible interior demolition and perimeter wall stabilization. The development of detailed structural repair, demolition, or renovation recommendations (or more detailed/exhaustive evaluations of the existing structure) was outside of SSCI's

scope of services for this phase of the project – and can be performed in subsequent phases if requested by the client and depending on the client's decisions regarding the future plans for the building.

Structural Observations

Exterior

The exterior walls of the building generally appeared to consist of solid brick masonry load-bearing walls with the exterior surface typically exposed at the north and south walls and painted at the east and west walls (above the adjacent buildings). The east wall of the Peskin Building extends above the one-story building to the east, and the west wall of the Peskin Building extends above the two-story building to the west.

A concrete sidewalk is located to the north of the building. and the north building wall is generally open, with a recessed entry area. The outer edges of an apparent structural steel lintel were visible above the sidewalk at the open/recessed entry area. This lintel appeared to extend to masonry piers/pilasters at each corner. Wood framing appeared to have been placed below the steel lintel and exhibited significant damage. The elevation of the first floor of the Peskin Building approximately matches the elevation of the sidewalk.

The adjacent building to the west was briefly accessed with permission from the contractor working on site. This building appeared to be located above a basement of similar height to the basement below the Peskin Building.

Below the third floor of the Peskin Building, an apparent expansion/control joint was visible in the brick front wall where the Peskin Building abuts the buildings to the east and west. However, above the 3rd floor, the front wall of the Peskin Building appeared to overlap the front wall of the building to the west. At the rear, the Peskin Building extends approximately 10 feet beyond the corner of the adjacent building to the west. It appeared possible that the Peskin Building and the building to the west 'share' the demising wall.

The crawlspace of the adjacent building to the east was briefly accessed. The soil elevation in the crawlspace appeared to approximately match the elevation of the adjacent, exterior grade. The adjacent, exterior grade elevation to the rear of the Peskin Building appeared to be approximately 5 feet below the first floor elevation. To accommodate this grade elevation, a door well was observed at the rear exit from the basement of the subject building. An apparent joint was visible in the brick rear wall where the Peskin Building abuts the building to the east. Empty 'pockets' in the exterior face of the east brick masonry wall were observed above the roof of the building to the east and may indicate that a taller, prior building was once present to the east of the Peskin Building.

Significant cracks were visible from ground level in the exterior brick walls above the corner of the 3rd story window opening in the west half of the front wall and at the 3rd floor of the east wall near the northern chimney.

The roof of the building was not accessed during the SSCI site visit.

Basement

The basement below the first floor was accessed through the interior stair located at the northwest corner of the building. The basement appeared to be mostly finished although the finishes appeared severely damaged throughout most of the space. The basement floor-to-first floor height was measured to be approximately 10 feet. First floor framing was visible at the areas where the ceiling had collapsed or been removed. First floor framing typically appeared to consist of 2x12 wood joists spaced at approximately 12 inches on center and spanning east-west. These joists appeared to be supported at the east and west brick walls (at joist pockets) as well as by a central wood beam and wood columns. These columns appeared to be spaced at roughly 14 feet on center and to align with the 1st and 2nd floor columns above. Additional wood beams and supporting steel pipe columns were observed in the northeast quadrant of the basement.

The basement was wet throughout, and water puddles were noted. Significant deterioration and damage to the first floor joists was visible overhead at locations where the ceiling is no longer in place. The main, first floor central wood beam appeared to have previously failed (due to wood-damaging pests and/or moisture degradation) at the front end of the span where it is supported at the front building wall/brick masonry pier. Wood shoring beams and posts appeared to have been added to either side of the central beam in an effort to avoid a more extensive collapse in this area.

At the front wall, steel beams were visible that appeared to support the sidewalk and front wall above. Surface corrosion was visible over the entire length of these beams, and possible, more severe corrosion was noted near the ends where the beams are supported on brick piers.

The basement floor apparently consists of a concrete slab-on-grade. Observations of the condition of the slab surface were limited by the water, debris, and general staining.

1st Floor

The 1st floor area was mostly open, with few interior walls, except for the front and rear areas of the building. A mezzanine was observed at the rear of the space with low head clearance above and below it. The first floor appeared to be mostly finished although the finishes appeared severely damaged in some areas – particularly in the southwest corner, northeast corner and in the center of the building. The underlying framing generally appeared to be substantially damaged at locations corresponding to the damaged areas of the finishes. The first floor-to-second floor height was measured to be approximately 15 feet.

The 2nd floor framing above was visible at the areas where the ceiling had collapsed. The 2nd floor framing typically appeared to consist of 2x12 wood joists spaced at approximately 12 inches on center and spanning east-west. These joists appeared to be supported at the east and west brick walls (at joist pockets) as well as by a central wood beam and columns. These columns appeared to be spaced at roughly 14 feet on center and to align with the 2nd floor columns above and basement columns below. The center beam and columns were typically

hidden by the finish elements surrounding them. However, in one location adjacent to the mezzanine, one of the center columns was exposed and appeared to consist of a steel pipe with an approximate nominal diameter of 6 inches.

2nd Floor

The 2nd floor is accessed from an interior stair from the above-referenced mezzanine (near the southwest corner of the building). The 2nd floor area is primarily open, with most of the interior walls located adjacent to the west wall of the building. The second floor appeared to be mostly finished although the finishes appeared severely damaged in some areas – particularly in the southwest corner, northeast corner and in the center of the building. The underlying framing generally appeared to be substantially damaged at locations corresponding to the damaged areas of the finishes. The 2nd floor-to-3rd floor height was measured to be approximately 13 feet.

The 3rd floor framing above was visible at the areas where the ceiling had collapsed. The 3rd floor framing typically appeared to consist of 2x12 wood joists spaced at approximately 12 inches on center and spanning east-west. These joists appeared to be supported at the east and west brick walls (at joist pockets) as well as by a central wood beam and columns. These columns appeared to be spaced at roughly 14 feet on center and to align with the 1st floor columns below. The center beam and columns were typically hidden by the finish elements surrounding them. However, in one location where the ceiling had collapsed, the top of the beam was partially accessible. Based on observations at this location, the center beam appeared to consist of a wood member with dimensions of approximately 14 inches by 14 inches.

It should be noted that the center beam (as referenced in the 'basement', 1st floor, and 2nd floor sections above) is not located in the exact center of the building. Rather, the center beam is located roughly 25 feet from the inside face of the east wall, with its distance from the west wall varying from roughly 9 feet (at the front of the building) to 22 feet (at the rear of the building) due to the trapezoidal shape of the building.

At a window opening in the front (north) wall of the building at the 2nd floor, the total thickness of the brick masonry was measured to be roughly 17 inches. However, the outer wythe (approximately 4 inches wide) of brick appeared similar to a veneer wythe and may not be integral with the remainder (approximately 13 inches) of the wall thickness.

3rd Floor

The 3rd floor is accessed from an interior stair from the 2nd floor located along the west wall near the south end of the building. The 3rd floor area is primarily open, with the exception of the interior walls located adjacent to the west wall of the building and in the rear of the space. The third floor appeared to be mostly finished although the finishes appeared severely damaged in some areas – particularly in the southwest corner, northeast corner and in the center of the building. The underlying 3rd floor framing generally appeared to be substantially damaged at locations corresponding to the damaged areas of the finishes. The 3rd floor-to-ceiling height was measured to be approximately 13 feet – 6 inches, with the roof located several feet above the ceiling.

The roof and ceiling framing above was visible at the areas where the ceiling had collapsed. The ceiling framing typically appeared to consist of 2x6 wood joists spaced at approximately 24 inches on center and spanning north-south. The rafters also appeared to consist of 2x6 wood members spaced at approximately 24 inches on center and spanning north-south. The ceiling joists and rafters appeared to be supported at the north and south brick walls (at joist pockets) as well as by a series of trusses spanning between the east and west exterior walls. These trusses appeared to be comprised of wood top and bottom chords, wood diagonal web members, and steel rod vertical web members. A steel plate was observed at the intersection/joint of the truss bottom chord/diagonal web with the east exterior wall. Brick pilasters were observed at the east exterior wall at truss bearing locations. The trusses appeared to be spaced at roughly 14 feet on center. The trusses were typically hidden by the finish elements surrounding them.

Cracks were noted at the corners of some of brick window openings in the 3rd floor walls – particularly in the front and rear walls. At an unfilled window opening in the west exterior wall, the brick masonry at the 3rd floor was measured to be approximately 12 inches in width and appeared to decrease by one wythe (to approximately 8 inches wide) above the 3rd floor ceiling.

The flooring at the 3rd floor, at areas where severe damage allowed observations, appeared to consist of one layer of wood flooring above one layer of diagonally-oriented wood decking.

Opinion Regarding Possible Structural Renovation/Re-use

As described above, widespread and severe damage was readily-apparent to the floor and roof framing at all floors and in various areas of the building. Based on the apparent extent and severity of the structural damage that was observed, SSCI anticipates that attempts to renovate the building would require significant structural retrofits and/or replacement to well over 50% of the existing roof, 3rd floor, 2nd floor, and 1st floor framing members and decking.

Even if undamaged, for the given spans and sizes, many of the existing floor joists at each level would be (at best) of marginal adequacy for compliance with current structural building code provisions. Because of this lack of reserve capacity, any level of structural damage or deterioration to most joists would necessitate structural repairs or replacement.

In addition, the Georgia Amendments to the 2012 International Building Code require that existing structures, for which the cost of repair/renovation projects will exceed 50% of the replacement cost (which such a renovation most likely would), be upgraded for compliance with the current building code provisions. This requirement would likely entail supplementing the existing lateral force resisting systems (including the brick masonry exterior walls and floor/roof diaphragms) with new, code-compliant structural components.

In light of the above-described commentary, it is the opinion of SSCI that the structural cost of the repairs that will be needed, if the building is renovated, will be very high (relative to the cost of new construction) and likely not practical.

Opinion Regarding Possible Interior Demolition with Exterior Walls to Remain

Because of the poor condition of the building's floor and roof framing, the client's representative indicated that complete demolition of the building floors and roof, while leaving most of the existing brick masonry exterior walls in place, is the preferred course of action (to create an outdoor amphitheater). This option seems to be structurally feasible, provided that sufficient structural steel (or similar) framing is provided to brace the existing masonry walls to remain. To maintain the 'openness' of the space, the client's representative indicated that such bracing would be confined to the areas adjacent to the perimeter masonry walls. The client's representative provided several photographs of similar spaces, and the two most-applicable photographs are attached for convenience.

Based on the initial assessment, SSCI expects that this option will require the following structural work:

- Careful demolition of the existing roof, 3rd floor, 2nd floor, and 1st floor framing throughout the full area of the building.
- Careful demolition of the existing brick masonry exterior walls from the top of the existing walls to approximately 4 feet above the elevation of the 3rd floor. The demolition of the upper part of the existing brick masonry walls, while not mandatory, will result in cost savings for the new steel framing, brick repair/re-pointing, and ongoing brick masonry maintenance that will be necessary. Further, the most severe brick masonry cracks appeared to be located in upper portion of the walls above the 3rd floor, and demolition of these wall areas will avoid the need for structural repairs.
- Construction of new concrete foundations and perimeter concrete walls adjacent to the existing basement walls below the first floor (including concrete pilasters to support the new steel columns described below). The purpose of these walls is to provide an appropriate substrate for waterproofing and to avoid adding lateral soil loads to the existing basement walls from the backfill below the new slab-on-grade (particularly since the adjacent building to the west has a basement of similar height to the basement of the Peskin Building).
- Construction of a new concrete slab-on-grade at approximately the elevation of the existing sidewalk/first floor and with possible slope (and/or steps) down to match the existing grade elevation at the rear of the building. Prior to slab placement, soil backfill will be needed in the existing basement area to provide the desired slab-on-grade elevations.
- Fabrication and erection of new steel framing generally consisting of steel columns adjacent to the existing exterior walls, with a grid of steel beams spanning across the building (and along the exterior walls) above the elevation of the existing 3rd floor.
- Temporary shoring for the existing masonry walls during the course of the project to attempt to maintain wall stability and avoid damage throughout construction from wind, seismic, or other causes.
- Repair and repoint the existing masonry walls as required. This work should be performed by a mason with extensive experience in similar work on structures of similar age. The existing paint on portions of the brick walls appeared to be beyond the end of its service life. Also, the interior faces of the perimeter walls, which are currently protected from weather, will be exposed by this project. To minimize future brick repairs/repointing, the client should consider sealing both faces of each of the brick masonry walls with an appropriate product.

In addition to the attached photographs provided by the client, SSCI has developed two preliminary structural drawings (a framing plan and building section) to illustrate the concept described above. These drawings are provided to attempt to assist the client in deciding the future course of action for this building. These drawings are not intended to be used for bidding, permitting, or construction but may be used to obtain a rough, 'ballpark' cost of the new steel framing. If the client decides to proceed, SSCI recommends that the client contract with a licensed architect or engineer (with experience in similar projects) to develop a bid set of construction drawings, assist with bidding/negotiation/contractor selection, and offer advice throughout the construction project. SSCI anticipates that the construction documents will include demolition plans and specifications, architectural plans – possibly including renderings of the space, lighting/electrical plans and specifications, civil/site plans and specifications, and structural drawings and specifications.

Developing a detailed cost estimate for this project was not included in SSCI's scope of services. However, as requested by the client during the site visit, SSCI has developed an initial opinion of probable cost. For the above-described option of interior demolition, with the existing exterior walls to remain, steel framing added, and slab-on-grade constructed, SSCI has developed an opinion of probable cost of $700,000. This is intended to be an "order of magnitude" estimate and is subject to change substantially as the project is more clearly defined. If a more detailed estimate is needed, SSCI recommends that the client retain a construction cost consultant, general contractor, architect or engineer that is capable of developing an accurate, detailed construction cost estimate.

Exclusions/Limitations

SSCI's services for this project were limited solely to the items that are described above in the Scope of Services section. Destructive testing, non-destructive testing, exploratory demolition, and similar field investigation techniques were outside of SSCI's scope of services for this project. SSCI's scope of services did not include exhaustive observations, structural analysis calculations, detailed structural retrofit recommendations, or structural bid documents. SSCI's limited assessment in no way guarantees the future structural stability of the building.

SSCI's assessment was limited solely to the structural components of the building. The assessments of other systems and components (including, but not limited to, zoning, architectural components, mechanical systems, plumbing components, electrical components, civil/site components, waterproofing/moistureproofing, fire/life safety systems/components, roofing systems/components, ADA compliance, stairs and railings, and any hazardous materials such as asbestos and mold) were not included in SSCI's scope of services for this project. Where such components are mentioned above, it should be understood that they were simply noted incidentally to the structural assessment. It should be noted that SSCI does not provide entomology or pest inspection services and does not know the age of the pest damage or whether termites - or other wood-damaging pests - are currently present.