SFA Design Group

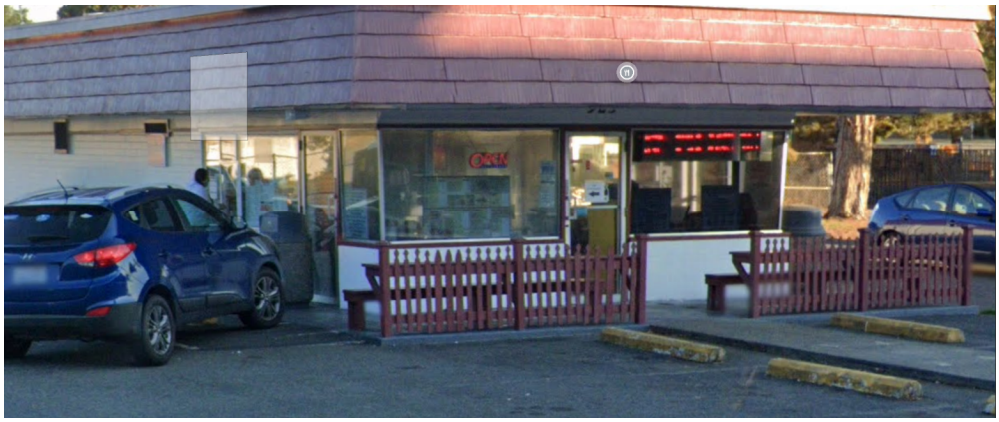
STRUCTURAL ENGINEERING

PRCTI20242007

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

Full-Sized legible color report must be on site and made available by the Permittee for all inspections.

Existing Structural Conditions Report



Don's Drive-In
925 S Meridian
Puyallup, WA 98371

Project No.: 24-007

April 17, 2024

SFA Design Group

STRUCTURAL ENGINEERING

April 17, 2024

Christopher Stevens
Stevens.handyman@gmail.com

Re: Don's Drive-In
925 S Meridian
Puyallup, WA 98371

Chris:

The purpose of this report is to evaluate the extent of structural damage resulting from a car that had collided through a portion of the north-facing, unreinforced masonry wall. A site visit was performed on February 6, 2024 for structural observation of the building's current condition. No other elements were investigated except as noted in this report. Recommendations are based on observations, experience, and professional judgment.

The following comments on the condition of this building reflects opinions, which are based only on the observations made during this site visit and past experiences with similar matters. No physical testing was performed and no calculations have been made to determine the adequacy of the existing structural system or its compliance with current building code requirements.

Building Description

The existing structure is a one-story restaurant. The gravity system consists of 2x10 wood joists and sistered 2x12 wood beams over wood columns and 4x8x16 unreinforced CMU block walls. The foundation system consists of slab on grade and continuous footing is assumed at the perimeter of the structure. The lateral system consists of wood roof diaphragm (in the form of diagonal decking) over unreinforced CMU shearwalls. This was observed from the exposed framing at, and near, the area where the collision occurred, along with patches of exposed framing around the interior, and is assumed to be prevalent throughout the entirety of the structure. Existing hoods and furniture were removed from site at time of observation.

Site Observation

The car collision occurred at the north-facing wall where the order window was located, and broke through a portion of the existing, unreinforced CMU wall. Cracks were noticeable at the remaining portion of wall closest to the area of impact, and based on the exposed, broken CMU blocks remaining, the block walls appear to be hollow and unreinforced, with horizontal mesh every so often along its height.

It was observed, in photos provided following our site visit, that existing beams over the storefront window systems are improperly supported. Simpson hangers will need to be installed to provide for proper load path.

Recommendations

Based on comparison between predamage length of CMU wall along the north and south facing walls (total length of 54'-9"), and length of wall loss (11'-9" long), the building has seen a reduction of 21.5% of lateral capacity. This is less than 33% and therefore is not considered a "substantial structural damage" as defined in the Washington State Existing Building Code (WSEBC). In addition, the damaged wall can be restored to pre-damaged condition as noted in WSEBC section 405.2.1.

The affected existing roof and wall framing will need to be analyzed for the new hood system to verify that it can handle the additional load, along with anchorage calcs for the support connections.

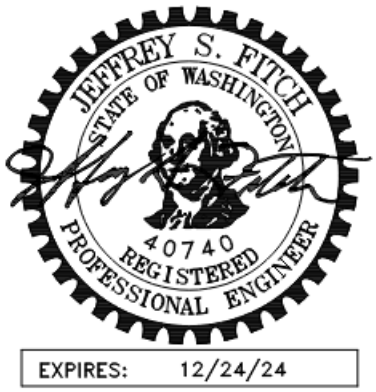
Thank you for this opportunity to provide you with this structural engineering service. Should you have any questions, or require additional assistance, please do not hesitate to call.

Sincerely,

SFA Design Group

Jeff Fitch, PE, P.Eng
Principal

Attachment: Site visit photos



Site Visit Photos

North facing wall where car collision occurred (interior)

Existing roof framing (interior)

Front entry wall (interior – southwest corner)

Front entry wall (interior – northwest corner)