FBA, INC
STRUCTURAL ENGINEERS

1675 Sabre Street
Hayward, CA 94507
510-265-1888

April 16, 2019

Mr. Doug Ross
SC River Front, LLC
P.O. Box 377
Santa Cruz, CA 95061

Re: **418 and 428 Front Street / Riverfront Apartments**
Santa Cruz, CA

Sub: Feasibility of building 175 units apartment structure while retaining the existing structures

Dear Mr. Ross,

Per your request, we have evaluated the feasibility of constructing the proposed five story apartment building over two level of parking while maintaining the two existing buildings (418 and 427 Front Street). As part of our evaluation, we visited the site on February 21, 2019. We also reviewed several documents, including plans prepared by Humphreys & Partners Architects dated April 11, 2019, Page and Turnbull report dated December 23, 2016, Phase I, Environmental site assessment for 504 and 508 Front Street dated April 22, 2016 prepared by Environmental Investigation Services, Inc., and Geotechnical Investigation for the site by TRC dated March 22, 2016.

FBA, Inc. Structural Engineers has over 25 years of extensive experience in the design and construction of structural cast in place concrete podium structures and has designed upward of one thousand such structures in the state of California on various types of soil with various levels of complexity.

As a background, 418 Front Street is a one-story commercial building designed and built in the 1920's. It is situated on the east side of Front Street and is constructed of formed concrete walls and or CMU walls with a light roof structure supported by structural steel trusses. 428 Front Street is a combination of one- and two-story structure, situated on the east side of Front Street, was constructed in the late 1940's and is supported by concrete block walls with a light roof supported by structural steel trusses. Based on our site visit and review of the available documents, there was no visible indications that either of the two buildings has been seismically upgraded since their initial construction.

The proposed Riverfront Apartments is a six-story multiuse structure accommodating 175 residential units, with nearly 13,000 square feet of commercial space for retail, restaurants, and performance space. The multiuse project is supported by a two-level cast in place structural concrete podium structure that extend one full level below grade at the front of the building and approximately 20 feet below grade at the back of the site. The lower basement level is dedicated for residential parking, while the street level provides a combination of parking, and retail/restaurant spaces. For all practical purposes, the footprints of the proposed improvement cover the entire site and will require earth shoring with possible tie backs or internal bracing to accommodate the excavation of the site and the construction of the podium structure.

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For this reason, it is impactable to keep the buildings and meet the goals of the City's Downtown Plan including providing badly needed housing and a community connection to the River

In summary, the new improvement will require the placement of earth shoring, the excavation of the building basement, possible soil rework and the installation of a 36" concrete mat as the foundation for the structure at the same time while providing a temporary de-watering system to allow for working conditions at the site.

The question of the feasibility of building the project podium foundation while at the same time saving the two existing buildings, is something we deeply struggled with as we evaluated the different challenges we are faced with. Based on the above, and our specific expertise in the design of construction of this type of structure, it is our professional opinion and our conclusion that accomplishing such an endeavor while building the proposed improvement is not feasible.

We do hope that the objective opinion expressed in this correspondence does not negatively impact this well needed and exciting project. FBA will work with the development and design team as needed to ensure that this project is brought to fruition.

Limitations

The evaluations and conclusions provided in this correspondence are based on documents supplied, the best information currently available, and our experience on podium projects with similar conditions. If additional data become available or are generated, indicating conditions different than those observed and described by this report, our firm should be notified so that any necessary modifications may be made to our conclusion.

Sincerely,

FBA, Inc.
Structural Engineers

Walid Naja

Walid Naja, SE
Principal