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August 6, 2020

President Norman Yee
% Angela Calvillo, Clerk of the Board
San Francisco Board of Supervisors
1 Dr. Carlton B. Goodlett Place
City Hall, Room 244
San Francisco, CA 94102

RE: Appeal of CEQA Revised Final Mitigated Negative Declaration

Planning Case No. 2013.1383ENV

BOS Motion No. M17-152

Building Permit Application Nos. 2013.12.16.4318 and 2013.12.16.4322
3516 and 3526 Folsom Street

President Yee:

I have been retained on behalf of the Appellant, Ms. Kathy Angus, Bernal Heights South Slope Organization, to provide some key concerns with the Revised Final Mitigated Negative Declaration Appeal (RFMNDA) response from Planning dated August 3, 2020. While others have concerns about a variety of key statements, my concerns are the potential negative impacts to the L109 PG&E 26 inch gas transmission pipeline, associated with evaluation of the location and elevation information and vibration associated with the specific construction equipment that will be used to construct the required improvements. These items are interrelated, but will be presented separately. All of the documents referenced were obtained from the administrative file and will not be attached to this document.

Concern 1: Evaluation of Gas Transmission Pipeline Location and Elevation Information

The location of the pipeline has been provided in relation to the property boundaries of 3516 and 3526 Folsom St. as depicted in the Westover Surveying drawing dated 12/19/17. The gas transmission pipeline was potholed and exposed in two locations, and this drawing provides a schematic representation of the pipeline with relation to the assumed location on the drawing depicting the eastern property boundary line for 3516 &

3526 Folsom St. The gas transmission pipeline was reported to be 9.5 feet east of the property line.

Drawing C1.0 dated August 2016, contained in the October 4, 2016 Discretionary Review prepared by the San Francisco Planning department depicts cross sections through various locations on Folsom St., but notably at 3516 and 3526 Folsom St, the location of the proposed buildings. Neither of the two cross-sections at the proposed building sites shows the location of the gas transmission pipeline. Moreover, without accurately established locations of the depth and location of the gas transmission pipeline on C1.0 subsequent construction approaches and their environmental impacts cannot be determined to be safe.

Drawing C1.0 has contains a centerline profile of Folsom St., including the gas transmission pipeline. Based on the drawing, it appears to depict the gas transmission pipeline in the center of the 39.5 foot wide easement for the roadway. However, in reality, the main does not run down the center line of Folsom St., rather it appears to be offset to the west of the centerline approximately 10 feet. As the road way slopes, the amount of soil cover over the gas transmission pipeline to accommodate the aggregate base, concrete roadway and asphalt concrete wearing surface will be temporarily reduced during construction. This will have the short term effect of reducing the distance between the gas transmission pipeline and the mechanical sources of construction vibrations. Moreover, the amount of base and pavement for Folsom Street, is on the order of 20 inches and thus during construction, the vibration source will be 20 inches closer than calculated.

The above concerns and issues require an in-depth evaluation of the gas transmission pipeline's location based on real location data to insure the location issues are adequately assessed to address safety concerns. In order to meet safety concerns, it would be necessary to establish the gas transmission pipeline's accurate location and depth prior to construction of Folsom St. improvements before the project is approved.

Concern 2: Evaluation of Vibration Equipment Analyzed

In the October 17, 2019 ICF report titled "*Review of Vibration Management Plan prepared for 3516-3526 Folsom Residential Construction"*, developed by Mr. David M. Buehler. Mr. Buehler reviewed the …"document entitled 3516 and 3526 Folsom Street and Folsom Street Extension Construction Vibration Management Plan prepared by Illingworth & Rodkin for technical accuracy."

The Illingworth document evaluated 4 major sources of construction vibration, they consist of:

- excavation equipment (for utility trenches)
- drilling equipment (for piers)
- hand operated jack hammer (for foundation work)
- grading equipment (for removal of topsoil)

Mr. Buehler believed the …" the assessment of the potential vibration impact to the PG&E pipeline to be technically accurate and consistent with common practice." His belief was based primarily on the authors (Illingwood & Rodkin) using conservative assumptions. However, Mr. Buehler did not perform an independent review to establish if the equipment selected was proper and appropriate for the work being performed. While the list of potential sources of vibration provided above are accurate, they are an incomplete list as there are other significant vibration that provide more vibration, such as those associated with excavation and compaction for Folsom St and the associated concrete flatwork.

The City of San Francisco has developed specifications for the street and concrete flatwork that would apply to this work which are contained in Part 2- *STREETS AND HIGHWAYS, SECTION 200 PREPARATION AND COMPACTION OF SUBGRADE* standard specifications. Some of the relevant work elements and equipment are presented below applicable to both street and flatwork construction:

1. Placement of 6 inches of aggregate base after excavation and compaction using a 3-wheeled steel tire roller weighing at least 12 tons that apply at least 325 lbs. per linear inch of rear tire width.
2. Subsequent passes to produce compaction would require oscillating equipment similar to the above that is at least 4 feet wide.
3. The next course would consist of placement of at least 6 inches of concrete base using a mechanically vibrating screed.
4. Additional asphalt layers up to 8 inches total will be required and compacted with equipment similar to that described in item 1 above.

The equipment associated with street compaction and construction was not included or analyzed in the initial Illingwood & Rodkin document or the subsequent ICF review and represents a serious source of vibration that was ignored in the analyses. Moreover, the amount of base and pavement for Folsom Street, is on the order of 20 inches thick, requires at least 20 inches of excavation, which adds further risk of impacting the gas transmission pipeline and decreases the distance between the pipeline and the construction equipment but increases the vibration because vibration intensity increases the closer the equipment gets. Given the concerns about the location of the gas transmission pipeline and proximity to Folsom Street construction, the vibration issue was not properly evaluated and poses a serious safety risk.

Conclusion

It is my considered engineering opinion, based on 43 years of experience, some of which was in San Francisco working on the Clean Water Program, that serious equipment vibration concerns were not properly addressed in this Negative Declaration process. These issues should be identified, located and carefully evaluated in a follow up process prior to approval of the permit.

If you need further information, please call me at 916-952-8503.

Sincerely,

Steven P. Viani P.E.
Civil Engineer C30965 exp. 3/31/22