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TECHNICAL MEMORANDUM

September 12, 2024

Project# 30777

To: Michaela Zuckova,
Ebb Carbon
111 S Maple Ave,
South San Francisco, CA 94080

From: Kittelison & Associates, Inc. – Amanda Leahy, AICP, Sravya Kamalapuram

RE: 111 S Maple Ave (Ebb Carbon) Transportation Study

Introduction

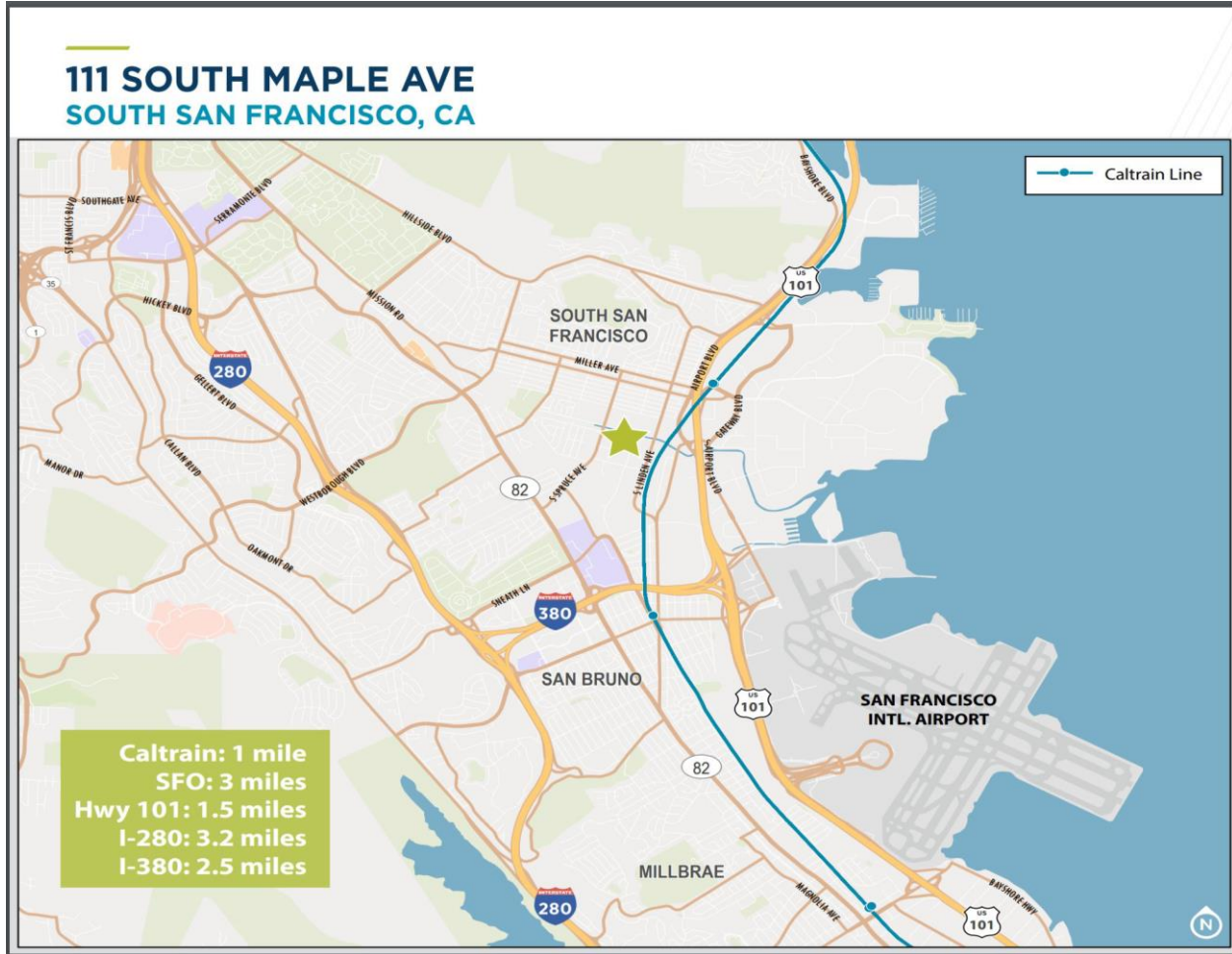
This document presents the review of project travel demand and site access and circulation assessment for the proposed project at 111 S Maple Avenue, South San Francisco, California (proposed project). This memorandum is structured as follows:

- Project Description
- Project Travel Demand
- Site Access and Circulation Assessment
- Conclusion

Project Description

According to information provided by the project sponsor, the proposed project would provide 5,000 square feet of office space and 18,900 square feet of Research and Development (R&D) space. Figure 1 shows the project site plan.

Figure 2 Project Location



Project Travel Demand

The travel demand for the proposed project was estimated using the vehicle trip generation rates from the most recent Institute of Transportation Engineers' (ITE) Trip Generation Manual (11th Edition, 2021)¹. These vehicle trip generation estimates were adjusted to account for the travel patterns of Ebb Carbon employees, based on travel survey data provided by the project sponsor.

VEHICLE TRIP GENERATION ESTIMATES

Based on the employee commute survey, Ebb Carbon has a total of 28 employees. Of these 28 employees, 23 employees work on-site, and five employees work remotely. Of the 23 on-site employees:

- **14 employees drive to work** including 4 employees who use an electric vehicle (EV),
- 7 employees use public transportation,

¹Institute of Transportation Engineers. 2021. Trip Generation Manual, 11th Edition.

- **1 employee alternates between public transportation and driving.** For the purposes of this analysis, this employee is considered to be driving to work and
- 1 employee uses a motorcycle.

Although only 15 of the 23 employees currently drive to work (as noted in **bold** above), future mode choice patterns may vary based on factors such as home location, weather, or other life changes. Therefore, this analysis adopts a more conservative approach by assuming that all 23 employees drive to work.

The average daily vehicle trips were calculated for ITE Land Use codes 710 – General Office Building and 760 – Research and Development Center using average daily trip rate per employee. The trip generation estimates for both office and Research & Development land uses are shown in Table 1.

Table 1 Trip Generation Estimates

Land Use	ITE Land Use Code	Unit	Average Daily Trip Rate	Number of employees	Average Daily Vehicle Trips	% Entering / % Exiting
Office	710	per employee	3.33	23	77	50% entering / 50% exiting
Research & Development Center	760	per employee	3.37	23	78	50% entering / 50% exiting

Source: Institute of Transportation Engineers. 2021. Trip Generation Manual, 11th Edition.

For this analysis, the most conservative trip generation estimate is used, based on the average daily trip rate of 3.37 trips per employee from ITE Land Use Code 760 – Research & Development Center (as noted in **bold** in Table 1). According to this estimate, the proposed project is expected to generate 78 average daily vehicle trips, consisting of 39 inbound trips and 39 outbound trips from the project site.

TRANSPORTATION ANALYSIS SCREENING

The Transportation Analysis for the proposed project is based on the City of South San Francisco’s Transportation Analysis Guidelines². As shown in the section above, the proposed project generates less than 100 net new daily vehicle trips and falls under Tier 0 of the project tiers in the City’s Transportation Analysis Guidelines. Tier 0 projects are thought to have minimal effect on the transportation network and do not require a Transportation Demand Management (TDM) plan but require site plan review to depict the project’s circulation patterns and connections to off-site transportation facilities. The following section presents the project’s site access and circulation assessment.

²<https://southsanfranciscoca.prelive.opencities.com/files/assets/public/v/1/economic-amp-community-development/documents/transportation-analysis-gu.pdf>

Site Access and Circulation Assessment

The existing roadway conditions and proposed site plan were assessed to determine if on-site safety or operational improvements were necessary due to traffic from the project.

- **Vehicle Parking.** The proposed project includes 34 vehicle parking spaces including 3 spaces for Clean Air Vehicle/Van pool and 2 ADA parking spaces. The proposed parking supply is sufficient to accommodate the 23 on-site employees and visitors to the site.
- **Sight Distance.** Sight distance from the drive-through entrance and exit was assessed, and no issues were found. The site plan confirms that there would not be any landscaping or other installations obstructing sightlines. Visibility from where vehicles exit allows for adequate monitoring of approaching pedestrians, bicyclists or vehicles on South Maple Avenue.
- **Adequacy of Pedestrian Facilities.** Pedestrian access to the site includes sidewalks on either side of South Maple Avenue. Canal Street and Victory Avenue connecting South Maple Avenue on the north and the south, respectively, also include sidewalks at least on one side of the street. ADA access is provided on both sides of the project site, facilitating access to ADA parking spaces and building entrances.
- **Bicycle Access.** The project site plan includes provisions for parking up to eight bicycles. There are no existing bicycle facilities on South Maple Avenue. However, Canal Street connecting to South Maple Avenue on the north connects to a bike trail along South San Francisco's Colma Creek.
- **Access from Adjacent Transit Stops.** The nearest bus stop is approximately 0.4 miles southwest of the project site and serves Route 141 of SamTrans (San Mateo County Transit District). The bus stop is connected to the project site through sidewalks along Victory Avenue and South Maple Avenue.

Conclusion

The proposed project is expected to generate less than 100 daily vehicle trips and thus does not require a Transportation Demand Management Plan based on the City's guidelines. The project location and site plan were reviewed for site access and circulation patterns and no potential barriers to pedestrian, bicyclist or vehicular access were identified.