

APPENDIX H

**TRIP GENERATION AND PARKING DEMAND
ANALYSIS AND PEER REVIEW**

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MEMORANDUM

To: Catherine Barber
From: Brian Canepa
Date: September 8, 2015
Subject: 988 Howard Trip Generation Analysis

The proposed location is appropriate spot for office and retail, with easy access to the Burlingame Caltrain station. The project is located in Downtown Burlingame and is within walking distance to a number of restaurants and other amenities for office and retail workers. The location, density and mixed-use factors will have the largest impact on trip generation.

Nelson\Nygaard has used URBEMIS to calculate the trip reduction effects of the project's location. The URBEMIS mitigation component is a simple yet powerful tool; it employs standard traffic engineering methodologies, but provides the opportunity to adjust ITE average rates to quantify the impact of a development's location, physical characteristics and any demand management programs. In this way, it provides an opportunity to fairly evaluate developments that minimize their transportation impact, for example, through locating close to transit or providing high densities and a mix of uses.

Figure 1 shows the inputs that have been used to complete the URBEMIS mitigation component, along with data sources. The number of trips generated by a development depends not only on the characteristics of the project itself, but also on the surrounding area. A project in an urban area, for example, will generate fewer trips than the same project located close to a freeway interchange and surrounded by low-density subdivisions or office parks. For this reason, URBEMIS requires data for the area within approximately a half-mile radius from the center of the project, or for the entire project area, whichever is larger. In effect, the smaller the development, the more important the development's context.

Figure 1 URBEMIS Data Input

Factor	Input Value	Source
Office space	22,225 sq. ft.	Project plan
Retail space	1,420 sq. ft.	Project plan
Number of housing units within ½ mile radius	4,562	American Community Survey 2006 - 2010
Number of jobs located within ½ mile radius	3,573	American Community Survey 2006 - 2010
Local serving retail within ½ mile radius	Yes	Site observation
Transit service	38 daily buses stop within ¼ mile (existing)	Caltrain/Samtrans

988 Howard Trip Generation Analysis

	58 daily trains stop within ½ mile (existing)	maps/schedules
Intersection density (1) within ½ mile radius	328 valences	Street plan
Sidewalk completeness within ½ mile radius	100% have sidewalk on both sides	Site observation
Bike lane completeness within ½ mile radius	25% direct parallel routes exist	Site observation

Notes: (1) Calculated from existing street network, based on the number line segment terminations, or each “valence”. Intersections have a valence of 3 or higher - a valence of 3 is a “T” intersection, 4 is a four-way intersection, and so on.

Taking all of the factors identified above into consideration, the URBEMIS model results in a trip reduction of up to 16.2% when compared to standard ITE trip generation (Figure 2). There is currently a good mix of uses around the development and the site is close to retail services resulting in a 7.2% trip reduction compared to standard ITE trip generation rates. The Burlingame Caltrain station and Samtrans Route 292 yield another 2.2% trip reduction and pedestrian and bicycle friendliness will further reduce trip generation by 6.8%. As result of all of these inputs the total daily vehicle trips generated by the site will be 256 as compared to standard ITE trip generation rates, which result in 306 daily vehicle trips. This number of trips is significantly less than those currently generated by the site’s gas station (674 daily vehicle trips).

Figure 2 Mitigated Trip Generation with URBEMIS

Mitigation Step:	% Reduction in Daily Vehicle Trips	Number of Daily Trips Generated	Number of AM Peak Trips Generated	Number of PM Peak Trips Generated
0. Assuming Standard ITE Trip Generation ¹	0%	306	26	38
1. Project Density, Mix of Uses, Locally Serving Retail	7.2%	284	24	36
2. Transit Service, including Step 1	9.4% (7.2%+2.2%)	277	24	35
3. Pedestrian/Bicycle Friendliness, including Steps 1 and 2	16.2% (7.2% + 2.2% +6.8%)	256	22	32
4. Current Gas Station ²	-	674	49	55
5. Net New Trip Generation	-	(418)	(27)	(23)

¹ ITE Land Use General Office Building (710) and Shopping Center (820)

² ITE Land Use Gasoline/Service Station (944)

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MEMORANDUM

To: Andrew Wong, Engineering Program Manager
From: Catherine Barber, Senior Planner
Subject: 988 Howard Avenue- New Commercial Building
Date: October 23, 2015

Andrew,

The applicant is proposing to construct a new three-story, 22,225 square foot office building at 988 Howard Avenue (APN 029-214-220). The subject property is located in the Myrtle Mixed-Use District and falls within the Downtown Specific Plan area. Currently, the site contains a gas station and an automobile repair business with an approximately 5,000 SF commercial building. Attached you will find the proposed floor plans.

The Project requires the following approvals from the City of Burlingame:

1. Commercial Design Review for a proposed three-story building with retail and parking on the ground floor, two stories of office on the upper floors with a roof deck above and one level of parking underground.
2. Conditional Use Permit for building height.
3. Rear Setback variance.
4. Parking Variance for reduction in required on-site parking.

Based on the proposed uses 79 parking spaces are required, where 61 on-spaces are proposed. This is based on code section 25.70.040 which requires 1 parking space per 400 SF of retail space and 1 space per 300 SF of office. Therefore, a Parking Variance is required for 18 additional required parking spaces that will not be accommodated on-site. An application for Parking Variance has been submitted.

A Parking Study, dated March 4, 2015, was prepared by Nelson Nygaard and has been submitted as along with the request for a Parking Variance. Please review the attached Parking Study and let me know if you have any comments. We are in the processing of getting bids on the CEQA document for this project, but anticipate a Mitigated Negative Declaration. Please let me know if you would like us to include a peer review as part of the CEQA analysis, or if you think this one that we could peer reviewed in-house.

Thank you,
Catherine

October 14, 2015

Ms. Caitlin Chase
Senior Associate Planner
Circlepoint
1814 Franklin Street, Suite 1000
Oakland, CA 94612

Re: Peer Review of the 988 Howard Project Vehicle Trip Generation and
Parking Demand Analysis

Dear Ms. Chase,

This letter was prepared to summarize my review of the 988 Howard Street project trip generation and parking demand analysis, dated March 4, 2015.¹ Please note that my review also included the subsequent 988 Howard Trip Generation Analysis Memo dated September 8, 2015² and also proposed plans for the 988 Howard project (the Project).

By way of background, I am a licensed professional traffic engineer and I've had my professional engineering license for over 20 years. I have provided traffic analysis for hundreds of projects and have testified as an expert in the field of transportation and safety on many projects.

Summary – Based on a thorough review of the analysis and our review of the project plans we concur with the findings of the trip generation and parking demand analysis. As currently proposed the project would not be expected to result in any traffic capacity or safety problems and should not result in significant impacts to on-street parking conditions in the area.

With respect to trip generation, we did find some minor differences in the trip generation calculations once we accounted for pass-by traffic associated with the existing service station. Once pass-by traffic was accounted for the proposed project was forecast to generate approximately the same amount of peak hour traffic as the existing service station.

With respect to parking our analysis indicated the parking rates used and the resulting estimates for the project were accurate and the average peak parking demand is estimated to be for approximately 59 parking spaces on an average weekday. However, one caveat is that if the office space were to be used for medical office purposes then

¹ *988 Howard Vehicle Trip Generation and Parking Demand Analysis*, Nelson Nygaard Associates, Inc., San Francisco, CA, March 4, 2015.

² *988 Howard Vehicle Trip Generation Analysis*, Nelson Nygaard Associates, Inc., San Francisco, CA, September 8, 2015.

the project's peak demand would be forecast to increase by 16 vehicles resulting in a new peak parking demand of 75 spaces.

Peer Review of the Trip Generation Impact Analysis

Our review of the trip generation indicated the results were accurate and the reductions taken based on the Urbemis model were reasonable. The Urbemis Model resulted in a 16.2% trip reduction which is consistent with ITE trip generation procedures. The ITE Trip Generation Manual (9th Edition) specifies that a 15% reduction can be applied to commercial uses located within 0.25 miles of a rail station or transit center.

It should be noted that the trip generation reported for the current service station on the site represented the existing traffic at the project driveways. Once pass-by traffic from the adjacent roadways are accounted for the net total trips added to the surrounding street system by the existing service station is about 29 vehicle trips during the AM peak hour and about 33 trips during the critical PM peak hour.

The trip generation analysis is correct that the project would generate a slight reduction (about 25 less peak hour trips) at the project driveways themselves. However, once the existing trips are adjusted for pass by traffic the calculations indicate there would be no net reduction in peak hour traffic on any roadways or intersections in the area. On local streets (i.e. beyond the project driveways) it is forecast the proposed project would generate approximately the same amount of peak hour traffic as the existing service station.

Peer Review of the Parking Demand Analysis

Our review of the parking demand analysis indicated the parking rates used and the resulting estimates for the project were accurate and the average peak parking demand is estimated to be for approximately 59 parking spaces on an average weekday. However, one caveat is that if the office space were to be used for medical office purposes then according to Institute of Transportation Engineers (ITE) parking demand data the project's peak demand would be forecast to increase by 16 vehicles resulting in a new peak parking demand of 75 spaces. Please note our analysis indicated the period of peak parking demand for the proposed project during the week would occur on Friday afternoons.

Review of Internal Circulation and Access

We have reviewed the internal circulation and roadway layout and find no significant problems with it. We would recommend that stop signs be required at the project exits to clearly designate the right of way for traffic on the adjacent streets. Please note that it is recommended that any tandem parking or parking lifts be designated specifically for the office space and not for the retail space, which typically has higher turnover (even if it's just for employees).

Motorists exiting the proposed project would have sufficient sight distance at the two proposed driveways but it should be noted that up to three on-street parking spaces may need to be removed as a result of the proposed driveway on East Lane. The existing service station has four driveways with one on East Street. The driveway on East Street is proposed to be moved about 50 feet to the west where there is currently on-street parking.

It is certainly possible that one or more of these spaces could ultimately be relocated slightly to the east once the other existing driveway is closed. However, the City will need to inspect the final design before determining if parking will need to be prohibited between the proposed driveway and the corner at Howard Street. At this stage it is difficult to conclude with any certainty whether or not the City might allow on-street parking in this area with the new driveway configuration.

Please don't hesitate to contact me if you have any questions about these comments.

Sincerely,



Stephen C. Abrams
President

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