APPENDIX D
Trip Generation/VMT Memo

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MEMORANDUM

DATE: December 20, 2021

TO: John Lee, SM Wash, LLC

FROM: Dean Arizabal, LSA

SUBJECT: Trip Generation Analysis for the Proposed Car Wash Project at 1911 E. Pacific Coast Highway, Long Beach, California

LSA has prepared this trip generation analysis for the proposed car wash project (Project) at 1911 E. Pacific Coast Highway in Long Beach, California. The proposed Project is on the northeast corner of Gardenia Avenue and Pacific Coast Highway. The site is currently occupied by the 3,296-square-foot (sf) Los Potros Restaurant that would be demolished with the proposed Project. Vehicle access will be provided via an entry-only driveway on Gardenia Avenue, an exit-only driveway on Pacific Coast Highway, and an exit-only driveway on the alleyway (E. 19th Street) parallel to Gardenia Avenue. The proposed car wash would be open from 7:00 a.m. to 8:00 p.m. everyday.

The purpose of this analysis is to identify the proposed Project trip generation and determine whether the Project would require a Traffic Impact Analysis (TIA) and/or a vehicle miles traveled (VMT) analysis according to the City of Long Beach (City's) *Traffic Impact Analysis Guidelines*, dated June 23, 2020. Projects that do not exceed the City's daily and peak-hour trip thresholds of the City's *Traffic Impact Analysis Guidelines* are screened out from a TIA and a VMT analysis and are presumed to have a less-than-significant transportation impact.

Trip Generation

The daily and peak-hour trips of the proposed Project and the existing occupied restaurant were calculated using trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition (2021). The ITE *Trip Generation Manual* is a nationally recognized and industry standard source of trip rates for various land use types and variables, including a car wash (based on number of tunnels for the automated washing of vehicles) and a restaurant (based on its gross square footage).

The ITE trips rates for Automated Car Wash (Land Use Code 230) and High-Turnover (Sit-Down) Restaurant (Land Use Code 932) were applied to the proposed single-tunnel car wash and the existing 3,296 sf Los Potros Restaurant, respectively.

Table A presents the trip generation summary for the proposed Project and the existing restaurant.

Table A: Project Trip Generation

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
Automated Car Wash[2]		Tunnel	775.00	19.38	19.37	38.75	38.75	38.75	77.50
Sit-Down Restaurant		TSF	107.20	5.26	4.31	9.57	5.52	3.53	9.05
Project Trip Generation									
Automated Car Wash	1	Tunnel	775	20	19	39	39	39	78
Existing Trip Generation									
Sit-Down Restaurant[3]	3.296	TSF	322	0	0	0	18	12	30
Net Trip Generation									
Project - Existing			453	20	19	39	21	27	48

[1] Trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 11th Edition (2021).
Land Use Code 948 – Automated Car Wash
Land Use Code 932 – High-Turnover (Sit-Down) Restaurant

[2] ITE does not have an ADT rate or AM Peak Hour trip rate for Land Use Code 948.
10 times the PM Peak Hour trip rate has been assumed for the ADT rate.
50 percent of the PM Peak Hour trip rate has been assumed for the AM Peak Hour trip rate.
These assumptions are consistent with the Automatic Car Wash trip rates from the San Diego Association of Governments (SANDAG) *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (April 2002), which assume that the AM Peak Hour and PM Peak Hour trip rates are 4 percent and 9 percent of the ADT rate, respectively.

[3] The existing Los Potros Restaurant opens at 11:00 a.m. everyday. As such, it does not generate AM Peak Hour trips. In addition, because the AM Peak Hour rate is 8.93 percent of the ADT rate (9.57/107.20), the existing restaurant ADT has been reduced accordingly. Lastly, the existing restaurant is also a nightclub that generates trips at night (until 2:00 a.m.). In order to present a conservative estimate for the net trip generation for the proposed Project, the existing ADT was not adjusted for the nightclub use.

ADT = average daily trips
TSF = thousand square feet

As shown on Table A, the proposed car wash would generate approximately 775 daily trips, including 39 trips (20 inbound and 19 outbound) in the a.m. peak hour and 78 trips (39 inbound and 39 outbound) in the p.m. peak hour.

The existing Los Potros Restaurant opens at 11:00 a.m. everyday. As such, the restaurant does not generate trips during the a.m. peak hour. Because the a.m. peak-hour trip rate of 9.57 is 8.93 percent of the daily trip rate of 107.20, the daily trips of the existing restaurant were adjusted (reduced) accordingly to account for the a.m. peak-hour closure. In addition to a restaurant, Los Potros is a nightclub that generates trips at night (until 2:00 a.m.). In order to provide a conservative estimate for the net trip generation of the proposed Project, the daily trips of the existing restaurant were not adjusted (increased) for the secondary nightclub use. Therefore, the existing Los Potros Restaurant is estimated to generate 322 daily trips, including 30 trips (18 inbound and 12 outbound) in the p.m. peak hour.

Because the existing restaurant would be demolished with the proposed Project, the net trip generation of the Project is 453 daily trips, including 39 trips (20 inbound and 19 outbound) in the a.m. peak hour and 48 trips (21 inbound and 27 outbound) in the p.m. peak hour.

Traffic Impact Analysis and Vehicle Miles Traveled Analysis Requirements

The City's *Traffic Impact Analysis Guidelines* state that a TIA and VMT analysis should be prepared for every project that would generate 500 or more net new daily trips. In addition, the City's *Traffic Impact Analysis Guidelines* state that, at a minimum, the area to be studied in the TIA shall generally include streets on which the project would add 50 or more peak-hour trips. Small land development projects that generate fewer than 500 net new daily trips and fewer than 50 net new peak-hour trips are presumed to result in a less-than-significant transportation impact.

The proposed Project would generate 453 net new daily trips, including 39 net new trips in the a.m. peak hour and 48 net new trips in the p.m. peak hour. Because the trip generation of the proposed Project is less than the daily and peak-hour trip thresholds of the City's *Traffic Impact Analysis Guidelines*, the proposed Project is screened out from a TIA and a VMT analysis. As such, the proposed Project is presumed to have a less-than-significant transportation impact.

Other California Environmental Quality Act (CEQA) Significance Criteria

Section 2.4 of the City's *Traffic Impact Analysis Guidelines* includes other CEQA significance criteria for the determination of a project's impacts to the transportation system. This section evaluates the proposed Project's transportation impacts based on these three criteria and provides a justification for the conclusions provided herein.

- Would the proposed Project conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, and bicycle and pedestrian facilities?

    - In October 2013, the City adopted a new Mobility Element for the City of Long Beach General Plan to plan for improving the way people, goods, and resources move from place to place. The Mobility Element addresses all modes of travel, including walking, bicycling, transit, and driving; and includes considerations for land use, parking, and environmental impacts. The Mobility Element serves as a 20-year guide for future decision-making by establishing a vision with goals, strategies, and policies to outline the structure of the City's existing and future multimodal transportation means.

      The proposed Project would result in 39 net new a.m. peak-hour trips and 48 net new p.m. peak-hour trips. According to the City's *Traffic Impact Analysis Guidelines*, preparation of a TIA is not required because the proposed Project would generate fewer than 50 peak-hour trips. As such, the proposed Project is not anticipated to result in any level of service or operational deficiencies to the surrounding circulation system based on its anticipated number of trips.

      The proposed Project would not make any changes to the public right-of way or generate a substantial number of daily or peak-hour vehicle trips to warrant modifications to any transportation facilities (e.g., transit, vehicular, bicycle, or pedestrian) in the Project vicinity. The proposed Project would not preclude alternative modes of transportation or facilities (e.g., transit, bicycle, or pedestrian). Therefore, the proposed Project would not conflict with the Mobility Element. No mitigation is required.

- Would the proposed Project substantially increase hazards due to a geometric design (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

    - Site access is provided via an existing full-access driveway on Pacific Coast Highway that will be converted to exit-only, an existing full-access driveway on E. 19th Street that will be converted to exit-only, and a new entry-only driveway on Gardenia Avenue. Regional access via Pacific Coast Highway would not change as part of the proposed Project, but the converted (exit-only) driveways on Pacific Coast Highway and E. 19th Street and the inbound-only driveway on Gardenia Avenue would serve to minimize potential conflicts between inbound Project vehicles and westbound through vehicles on Pacific Coast Highway. As such, the proposed Project would not substantially increase hazards for vehicles due to a geometric design feature or incompatible uses, and impacts would be less than significant. No mitigation is required.

- Would the proposed Project result in inadequate emergency access?

    - As previously described, site access would continue to be provided from Pacific Coast Highway and E. 19th Street (with conversion from full-access to exit-only) with a new entry-only access on Gardenia Avenue. Since the proposed Project would provide improved and additional access to the site, emergency access would not be affected. Therefore, impacts associated with emergency access would be less than significant. No mitigation is required.

Queueing Assessment

Based on information from the applicant, an individual car wash typically takes approximately 2 minutes per vehicle, which would suggest that 30 vehicles could be washed in one hour. However, the proposed design of the car wash tunnel, which is 100 feet long, could accommodate four to five vehicles in the tunnel at the same time. As such, based on typical operations, the proposed Project has a maximum throughput capacity of 120 vehicles per hour.

In addition, the on-site queue distance of 208 feet (measured from the Gardenia Avenue sidewalk to the entrance of the car wash tunnel) could accommodate up to eight vehicles. As noted previously, vehicles would enter the Project site from Gardenia Avenue and exit to Pacific Coast Highway or the adjacent alley. Given this proposed circulation plan, there would be no queuing issues for Pacific Coast Highway or the adjacent alley.

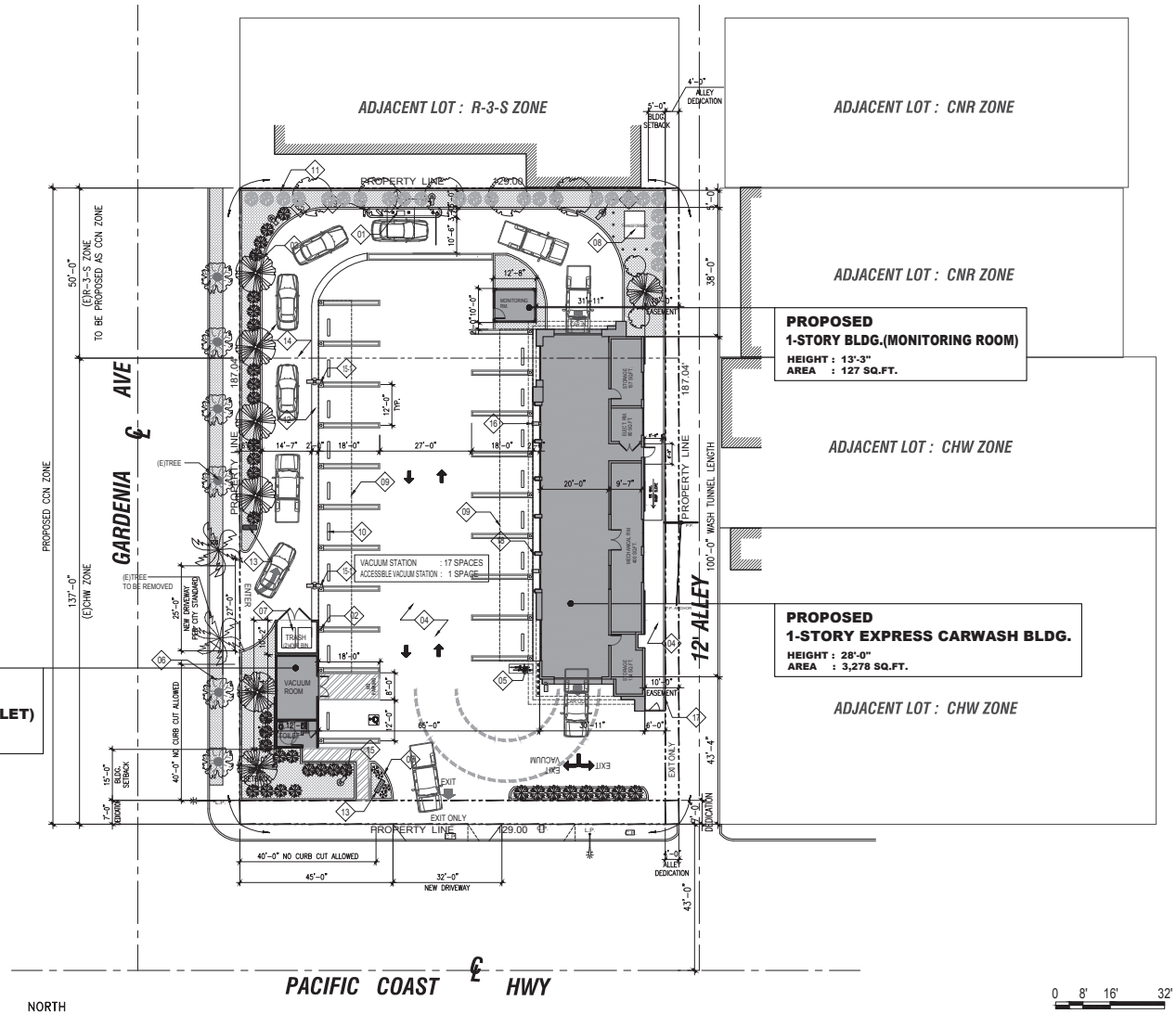
Regarding potential queuing onto Gardenia Avenue, as shown in Table A, the proposed Project would have a peak-hour inbound volume of 21 vehicles. With a proposed on-site queue distance of 208 feet prior to the car wash tunnel, 100 feet of storage length within the car wash tunnel, and a maximum throughput capacity of 120 washed vehicles per hour, the proposed Project is not anticipated to result in car wash queues extending onto any public street (Pacific Coast Highway, Gardenia Avenue, or E. 19th Street). Therefore, the proposed Project would not negatively affect transit, motor vehicle, bicycle, or pedestrian circulation.

Conclusions

LSA analyzed the trip generation of the proposed Project to determine whether it would require a TIA and/or a VMT analysis according to the City's *Traffic Impact Analysis Guidelines*. The proposed Project is anticipated to generate 453 net new ADT, including 39 net new a.m. peak-hour trips and 48 net new p.m. peak-hour trips. Because the proposed Project would not generate 500 or more daily trips or 50 or more peak-hour trips, the proposed Project is screened out from a TIA and VMT analysis. In addition, based on the proposed Project design and queueing assessment, the proposed Project would not negatively affect transit, motor vehicles, pedestrians, or bicyclists. Therefore, the proposed Project is expected to have a less-than-significant transportation impact and no mitigation is required.

If you have any questions, please contact me at (949) 553-0666.

Attachment: Conceptual Site Plan



KEY NOTES :

01 3'-0" X 18'-0" PAY STATION W/ SPEAKER (TYP.)
02 POST FOR VACUUM OUTLETS,TRASH RECEPTACLE WITH COMPRESSED AIR & WATER OUTLET (TYP.)
03 6" CONC. CURB
04 CONCRETE PAVING
05 BICYCLE RACK
06 (N) ROUND CURB CUT DRIVEWAY
07 TRASH ENCLOSURE
08 6'X8' CONC. PAD FOR TRANSFORMER
09 VACUUM CANOPY ABOVE (TYP.)
10 WHEEL STOP (TYP.)
11 6'-6" HIGH. DECORATIVE MASONRY WALL
12 18" HIGH CONC. CURB
13 MONUMENT SIGN. SEE SIGN PLAN FOR MORE DETAILS
14 COLORED CONCRETE
15 20FT. HT. LIGHT POLE. W/ 1-LIGHT HEAD (TYP) SEE MATERIAL KEY NOTE 19 ON A-6.0
15' 20FT. HT. LIGHT POLE. W/ 2-LIGHT HEADS SEE MATERIAL KEY NOTE 19 ON A-6.0
16 PARKING LOT LIGHT AT PARAPET (TYP.) SEE MATERIAL KEY NOTE 20 ON A-6.0
17 5'-0" HIGH METAL FENCE
18 EXTERIOR WALLSCONE (TYP.)
19 STL PIPE BOLLARD

0 8' 16' 32'

SITE PLAN
SCALE: 1/16" = 1'-0"

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A·R·C·H
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EXPRESS CAR WASH DEVELOPMENT FOR

STAR EXPRESS CAR WASH

1911 E. PACIFIC COAST HWY.
LONG BEACH, CA 90806

TITLE
SITE PLAN

NO	DATE

PRINT DATE 7/25/2021
SCALE
DRAWN BY
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SHEET
A-1.1