

TECHNICAL MEMORANDUM

To: Tiffany Barnick, Kautz Properties #2, LLC
From: Lisa Valdez, Senior Transportation Planner
Jeanney Keo, Transportation Planner
Subject: Trip Generation and VMT Analysis for the Betteravia Chevron
Date: February 2023
cc: Adam Poll, Project Manager, Dudek
Attachments: Figure 1 – Project Location
Figure 2 – Site Plan

The following technical memorandum provides a focused trip generation and vehicle miles traveled (VMT) analysis for the proposed Betteravia Chevron project (project), located in the City of Santa Maria (City). This analysis has been prepared consistent with the trip generation methodology from the Institute of Transportation Engineers (ITE), the City's Environmental Procedures and Guidelines (Santa Maria 2020), and the Governor's Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018).

1 Project Description

The project includes the construction of a mixed-use gas station and convenience store to be located at the northeast corner of Betteravia Road and Walker Avenue in Santa Maria. The convenience store is 6,100 square feet (SF), has an attached drive-through fast food restaurant, and features 20 vehicle fueling positions and 8 electric vehicle charging stations. Figure 1 illustrates the project's location and Figure 2 presents the project's site plan.

2 Project Trip Generation

Table 1 provides a summary of the trip generation estimates for the project based on trip rates from the ITE Trip Generation, 11th Edition (ITE 2021). The trips are based on rates for a Gasoline and Service Station with Convenience Market (ITE Code 945), an Automated Car Wash (ITE Code 948), and a Fast-Food Restaurant with Drive-Through, and No-Indoor Seating (ITE Code 935). Trip rates and trip generation for the electric vehicle charging component were developed based on assumptions regarding type of vehicle chargers, average charging times, vehicle turn-over rates and average time spent at the site.

Table 1. Project Trip Generation

Land Use	ITE Code	Size/ Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates¹									
Gasoline/Service Station w Convenience Market	945	Per VFP	345.75	31.6	31.6	63.20	26.9	26.9	53.8
Car Wash (Automated) ²	948	Per Tunnel	775	19.38	19.38	38.75	38.75	38.75	77.5
Fast Food Restaurant with Drive-through, No Indoor Seating	935	Per Drive-through lane	179	20.21	22.79	43	30.35	29.16	59.5
Trip Generation									
Gas Station with Convenience Market	945	20 VFP	6,915	632	632	1,264	538	538	1,076
Pass-by Reduction ³			-5,255	-480	-480	-961	-404	-404	-807
Car Wash (Automated)	948	2 tunnels	1,550	39	39	78	78	78	155
Quick-serve Restaurant with Drive-through	935	1 lane	179	20	23	43	30	29	60
Pass-by Reduction ⁴			-55	-6	-7	-13	-9	-9	-18
LD Level 2 (19.2) EV Charging ⁵	N/A	8 VFP	144	4	4	7	8	8	15
Pass-by Reduction ⁶			-86	-2	-2	-5	-4	-4	-8
Subtotal without Pass-by Reduction			8,788	695	697	1,392	654	653	1,306
Subtotal with Pass-by Reduction			3,391	206	208	413	237	236	472
Internal Capture ⁷			-879	-69	-70	-139	-65	-65	-131
Total Trip Generation (with Internal Capture)			7,909	625	628	1,253	588	587	1,175
Total Trip Generation (with Pass-by Reduction and Internal Capture)			2,512	137	138	274	171	171	341

Notes: VFP = vehicle fueling position; Rounding errors may occur.

1. Trip rates from the Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021
2. ITE Trip Generation Handbook does not provide AM or weekday daily rates for the Automated Car Wash (ITE 948); AM peak hour rate assumed to be 50% of the PM peak hour rate; daily rate assumed to be 10 times the PM peak hour rate.
3. Pass-by trip rates derived from the average of pass-by trip percentages provided for all Gasoline/Service Station with Convenience Market (945), from the ITE Trip Generation Manual, 11th Edition - for Sites with between 9 and 20 VFP: Pass-by and Non-Pass-By Weekday, AM Peak Period (76%) and Pass-By and Non-Pass-By Trips Weekday, PM Peak Period (75%) Trips (Weekday, PM Peak Hour), ITE 945 - Gasoline/Service Station with Convenience Market.
4. Pass-by trip rates derived from the average of pass-by trip percentages provided for all Fast-Food Restaurants with Drive-through, and No-Indoor Seating (935), from the ITE Trip Generation Manual, 11th Edition, Pass-by and Non-Pass-By Weekday, AM Peak Period (31%) and Pass-By and Non-Pass-By Trips Weekday, PM Peak Period (31%) Trips (Weekday, PM Peak Hour), ITE 935 - Fast Food Restaurants with Drive-through, and No-Indoor Seating.
5. Level 2 (19.2 kW) EV chargers can fully charge one vehicle in approximately 5 hours. Based on the location and type of amenities located at this facility, it is assumed that many vehicles would not spend the entire 5 hours charging. Instead, an average 2.5-hour charging rate is assumed for each stall. It is further assumed that all charging stalls might be used between the hours of 7am - 10pm (daytime); however, only 50% of stalls would likely be occupied between the hours of 10pm - 7am (nighttime). It is estimated that 48 vehicles would use the chargers during the daytime hours and 24 vehicles during the nighttime hours, for a total of 72 daily vehicles (144 daily vehicle trips).
6. Pass-by reduction rate was calculated based on the rate for sites with 2-8 vehicle fueling positions, and adjusted for the number of spaces available for electric vehicle charging. No pass-by rates are provided by ITE or the City of Santa Maria.
7. 10% Internal Capture assumed for the site.

Trip reductions for pass-by trips pursuant to the ITE Trip Generation Manual, 11th Edition were applied to both the gas station and fast-food restaurant uses. Some of the trips generated by retail and restaurant uses within the proposed project would be pass-by trips, or trips whose primary destination are not those uses. These would include trips such as a home-to-work or work-to-home trip that stop at the gas station or car wash on the way. These trips would not be new trips generated by the project; rather, they are trips that are already on the roadway network that would make a stop at the project site.

In addition, a 10 percent trip reduction for internal trip capture was applied to the proposed land uses. Internal trip capture is the potential for trips to take place among the various complementary uses (gas station, convenience store, restaurant and car wash) proposed on the site. These would be trips generated by the project land uses that do not result in additional traffic.

As shown in Table 1, with the internal trip capture, the proposed project would generate 7,909 net daily trips, 1,253 net AM peak hour trips (625 inbound and 628 outbound), and 1,175 net PM peak hour trips (588 inbound and 587 outbound). With trip reductions for pass-by trips and internal trip capture, the proposed project would generate 2,512 net daily trips, 274 net AM peak hour trips (137 inbound and 138 outbound), and 341 net PM peak hour trips (171 inbound and 171 outbound).

3 VMT Analysis

Per Senate Bill 743 (SB 743), OPR was directed to amend the California Environmental Quality Act (CEQA) Guidelines to provide an alternative to level of service (LOS) for evaluating transportation impacts. Under the new CEQA guidelines (Section 15064.3[b]), VMT has been adopted as the most appropriate measure of transportation impacts, thereby replacing LOS. CEQA Guidelines Section 15064.3 define VMT as “the amount and distance of automobile travel attributable to a project.” (OPR 2018)

3.1 VMT Screening Criteria

The City’s Environmental Procedures and Guidelines (Santa Maria 2020) provide details on screening criteria that can be used to identify when a proposed land use project is anticipated to result in a less than significant VMT impact without conducting a more detailed analysis. Based on the Guidelines, the following discretionary development projects are not subject to VMT analysis:

1. A discretionary retail development project that is 50,000 square feet or less. Does not apply to regional shopping centers that predominately serve customers that live outside of the City limits.
2. Affordable housing projects where a minimum of 20 percent of the units are deed restricted for low or very low-income residents.
3. Small discretionary development projects that would generate or attract fewer than 110 daily trips (per CEQA). Examples include a project with 11 or fewer single family residential units, 20 or fewer multi-family units, or an office of 6,800 square feet or less.
4. Residential and non-residential land uses located in the green Transportation Analysis Zone (TAZ) areas of the Countywide Average Home-Based VMT per Capita and per Employee Maps (Appendix A and B) are expected to generate VMT at 85 percent or less of the baseline average rate and are presumed to have less than significant VMT impacts.

5. Infrastructure projects listed in Appendix C of the City's Guidelines.

Consistent with OPR's Technical Advisory, a retail development that is 50,000 SF or less is considered a local serving use. Conversely, a retail project is generally considered to be a regional serving project when it is larger than 50,000 SF (OPR 2018). OPR states that "by adding retail opportunities into the urban fabric, and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT". The proposed project is a local serving gas station with retail use (less than 50,000 SF) and therefore would be screened using the local retail criterion. This is based on the rationale presented below.

3.2 VMT Screening Analysis

While the City's screening criteria do not identify specific retail uses, gas stations are considered a local serving use by their nature. Gas stations serve local residents, as well as vehicles passing through that are already on the road network. While some of the trips are newly generated trips, most of the project traffic would be from the surrounding land uses. Local serving services generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel instead of increasing or inducing vehicular travel. These services are non-destination in nature and will attract trips from adjacent areas that would have otherwise been made to more distant retail locations.

Gas stations are frequently screened out as a local serving use by local agencies which have defined land uses identified. For example, the following agencies identify gas stations as having the presumption of a less than significant impact because their use is local service in nature:

- City of Alhambra (City of Alhambra Transportation Study Guidelines, October 2020)
- City of Anaheim (City of Anaheim Transportation Impact Analysis Guidelines, June 2020)
- City of Costa Mesa (City of Costa Mesa Transportation Impact Analysis Guidelines, October 2020)
- City of Dublin (City of Dublin Transportation Impact Analysis Guidelines, July 2021)
- City of Murrieta (City of Murrieta Traffic Impact Analysis Guidelines, March 2021)
- City of San Jacinto (Vehicles Miles Travel Policy, June 2020)
- San Bernardino County (San Bernardino County (Transportation Impact Study Guidelines, July 2019)
- Western Riverside Council of Governments (WRCOG) (Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment, January 2020)

Further, the proposed project is consistent with the current and proposed General Commercial (C-2) zoning designations. The project is located in the General Commercial District as cited by the Zoning Ordinance of the city. The General Commercial District is "designed and intended to provide for the general business and commercial needs of the City. The zone shall be used by a wide range of retail and service establishments..."(Santa Maria Municipal Code Title 12 Section 12.13.02).

Therefore, based on the above, the proposed project can be presumed to have a less than significant VMT impact and a detailed project-specific VMT analysis would not be warranted.

4 References

The following references have been used in this analysis.

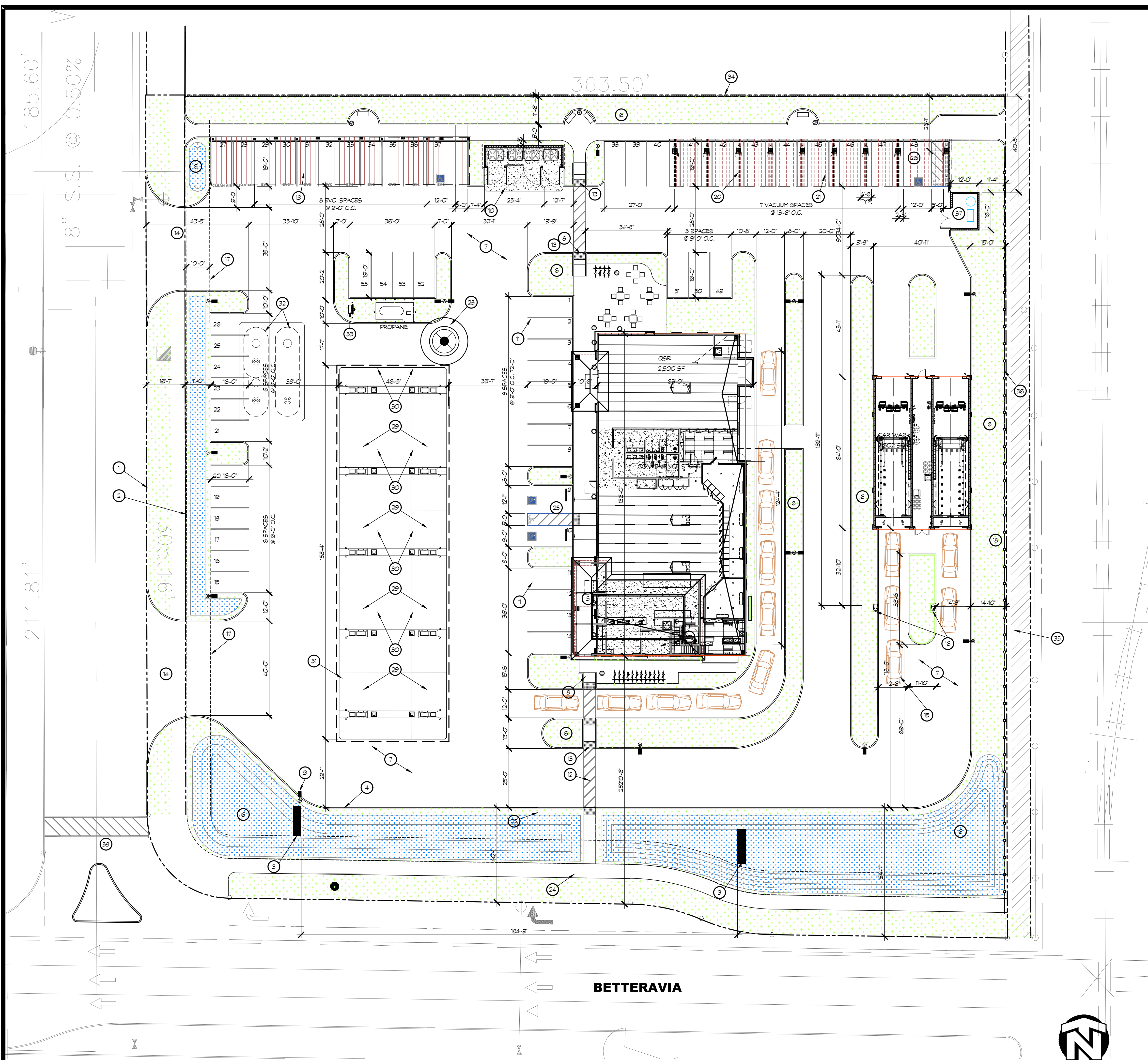
- City of Anaheim. 2020. *Transportation Impact Analysis Guidelines*. June.
- City of Costa Mesa. 2020. *Transportation Impact Analysis Guidelines*. October.
- City of Dublin. 2021. *Transportation Impact Analysis Guidelines*. July.
- City of Murrieta. 2021. *Traffic Impact Analysis Guidelines*. July.
- City of San Jacinto. 2020. *Vehicle Miles Travel Policy*. June.
- City of Santa Maria. 2023. Municipal Code Title 12, Chapter 12, Section 13.02.
- City of Santa Maria. 2020. *Environmental Procedures and Guidelines*. November.
- ITE (Institute of Transportation Engineers). 2021. *Trip Generation Manual*. 11th ed.
- OPR (California Governor's Office of Planning and Research). 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December.

Attachments



SOURCE: GoogleEarth

FIGURE 1
Project Location



SITE PLAN KEYNOTES

- 1 PROPERTY LINE
- 2 SETBACK
- 3 MONUMENT SIGN, BY OWNER
- 4 6" HIGH CONCRETE CURB
- 5 CONCRETE WALK
- 6 LANDSCAPING, SEE LANDSCAPING DRAWINGS
- 7 A/C PAVING
- 8 ACCESSIBLE CURB RAMP
- 9 SITE YARD LIGHT, WITH CONCRETE BASE SHALL HAVE A DRY SACK FINISH, TYPICAL
- 10 TRASH ENCLOSURE AND CONC. APPROACH APRON
- 11 4" WIDE PAINT STRIPING, WHITE, UNLESS NOTED OTHERWISE
- 12 4" WIDE PAINT STRIPING, WHITE, AT 3'-0" O.C. TYP.
- 13 DETECTABLE WARNING SURFACE
- 14 NEW DRIVEWAY - SEE CIVIL DWGS
- 15 VEHICLE STACKING
- 16 PAY STATION
- 17 10' WIDE LANDSCAPE SETBACK
- 18 CASHIER PAY STATION
- 19 9' EVG, WITH SOLAR CANOPY
- 20 VACUUM STANCHION WITH SOLAR CANOPY
- 21 CAR WASH CANOPY WITH SOLAR
- 22 CAR WASH ENTRY SIGN
- 23 ACCESSIBLE POLE MOUNTED SITE SIGN
- 24 ACCESSIBLE POLE MOUNTED P.O.T. DIRECTIONAL SIGN
- 25 ACCESSIBLE VAN PARKING STALL
- 26 ACCESSIBLE VACUUM PARKING STALL
- 27 CLASS II RACK FOR 12 BICYCLES, INSTALL PER MFR. SPECIFICATIONS
- 28 UNDERGROUND OIL WELL
- 29 MULTI-PRODUCT FUEL DISPENSER
- 30 CANOPY COLUMN
- 31 DASHED LINE OF CANOPY ABOVE
- 32 UNDERGROUND FUEL STORAGE TANKS
- 33 FUEL VENT LINES
- 34 SPLIT FACE CMU WALL - 7'-0" HIGH ALONG THIS PROPERTY LINE
- 35 BIKE PATH
- 36 CHAIN-LINK FENCE
- 37 VACUUM PRODUCER AND COLLECTOR IN A CMU ENCLOSURE WITH METAL ROOF
- 38 NEW CROSSWALK, COORDINATE WITH CIVIL AND SIDEWALK ON OTHER SIDE, MUST MISS THE REQUIRED PORCHOP.

SITE LEGEND

- AC OR CONCRETE PAVING
- NEW LANDSCAPING
- B/O SWALE, DETENTION
- TRASH CAN, SEE
- PLANTER BOX, SEE
- BENCH

ALL WALKWAYS AND SIDEWALKS ALONG ACCESSIBLE ROUTES OF TRAVEL (1) ARE CONTINUOUS, (2) ACCESSIBLE, (3) HAVE A MAXIMUM 1/2" CHANGE IN ELEVATION, (4) ARE MINIMUM 48" IN WIDTH, (5) HAVE A MAXIMUM 2% CROSS SLOPE, AND (6) WHERE NECESSARY TO CHANGE ELEVATION AT A SLOPE EXCEEDING 5% (I.E., 120") SHALL HAVE RAMPS COMPLYING WITH 2016 CBC, SECTION 11B-405 OR 11B-406 AS APPROPRIATE. WHERE A WALK CROSSES OR ADJOINS A VEHICULAR WAY, AND THE WALKING SURFACES ARE NOT SEPARATED BY CURBS, RAILINGS OR OTHER ELEMENTS BETWEEN THE PEDESTRIAN AREAS AND VEHICULAR AREAS SHALL BE DEFINED BY A CONTINUOUS DETECTABLE WARNING WHICH IS 36" WIDE, COMPLYING 2016 CBC, SECTION 11B-705.12.5.

--- PATH OF TRAVEL



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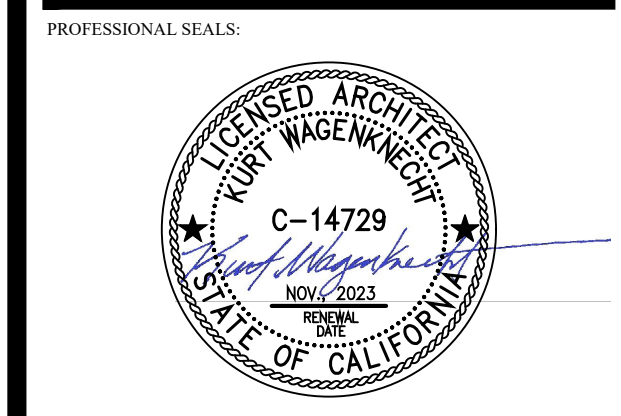
PROJECT:
BETTERAVIA CHEVRON

CONVENIENCE STORE, FUELING CANOPY & CAR WASH

**Betteravia Road,
 Santa Maria, California 93454**

DEVELOPER:
**KAUTZ
 1284 N. GRAND AVE
 GROVER BEACH, CA 93433**

REVISIONS:
 DESIGN REVIEW CHANGES 3-31-22



PROJECT NUMBER: 20-041 PROJECT DATE: 09-17-21

SHEET CONTENTS:

SITE PLAN

SHEET NUMBER:

A101