

MEMORANDUM

March 17, 2023

Project #: 28036

To: Michael Okuma, Costco Wholesale

From: Amy Lopez, Mingmin Liu

RE: West Roseville Costco Warehouse Retail Site (Sierra Vista) – Trip Generation Comparison

Kittelison & Associates, Inc. (Kittelison) has prepared this summary of the trip characteristics expected for the construction of a new Costco warehouse retail center to be located along Baseline Road west of Fiddymont Road in Roseville, CA (project) within the Sierra Vista Specific Plan area. This memorandum forecasts the anticipated trip generation for the project and provides a comparison to the commercial land use trip generation documented in the Sierra Vista Specific Plan Environmental Impact Report (EIR). As presented in this memo, the project is expected to generate fewer daily trips than the full commercial land use development of the Sierra Vista Specific Plan area. Moreover, the project's trip generation is consistent with the relative share of trips a large anchor retail use, like Costco, was projected to generate in the EIR's analysis. Therefore, the project would not result in new or more severe transportation impacts than the EIR analyzed.

PROJECT BACKGROUND

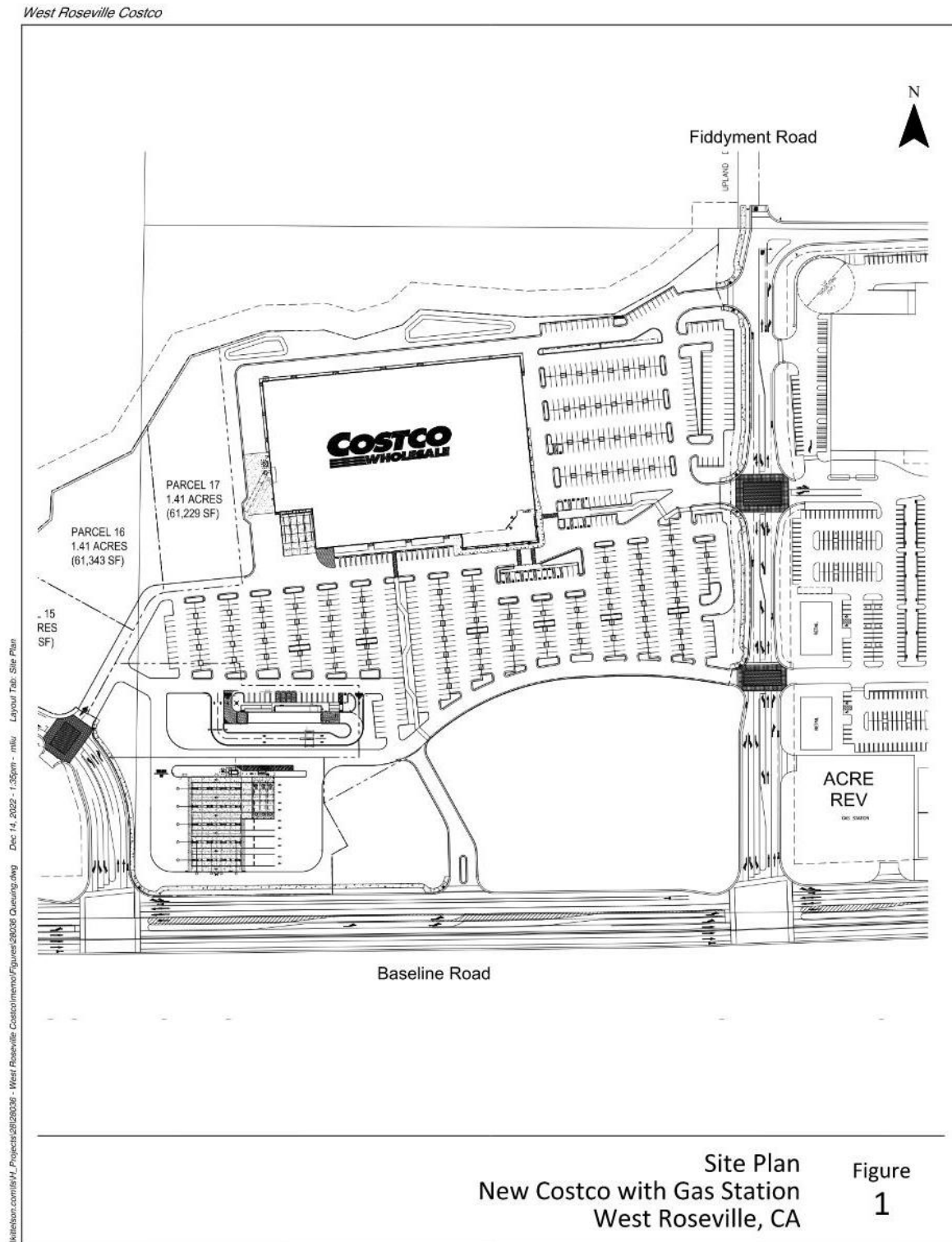
Costco Wholesale is proposing to construct an approximately 160,529-square-foot Costco warehouse retail center on the property located at the northwest corner of Baseline Road and Fiddymont Road in the City of Roseville. Figure 1 presents the project site plan. The project is consistent with the permitted uses and intensity of development established within the Sierra Vista Specific Plan. The project will facilitate development of a Costco warehouse retail center while remaining in conformance with and advancing the intent of the existing Sierra Vista Specific Plan.

TRIP GENERATION

Costco Trip Database

For more than 20 years, Kittelison has maintained a database of trip data and travel characteristics for Costco Wholesale. The database contains transportation information such as trip rates and trip type percentages for Costco locations throughout the United States as well as Canada and Mexico. The database is updated periodically when new Costco traffic counts or other such information become available to Kittelison. To best evaluate the anticipated transportation characteristics of the proposed warehouse in the City of Roseville, Kittelison used the Costco trip database to develop a trip generation estimate as it provides use-specific data that most accurately represents the anticipated transportation characteristics of this unique development type.

Figure 1: Project Site Plan



The warehouse trip rates summarized herein rely on data collection conducted at Costco sites located across the western region of the United States. The trip studies were completed using industry standard engineering practices consistent with guidance within the Institute of Transportation Engineers (ITE) standard reference, *Trip Generation Manual*, 11th Edition. These cordon surveys were conducted between 2015 and 2021 and include 18 surveys of Costco warehouses with fuel stations in California, Arizona, Oregon, Utah, and Washington. The Costco buildings surveyed range in size between 143,916 square feet and 169,617 square feet, with an average size of 156,203 square feet. The existing Costco locations all included fuel stations, ranging from 20 to 32 fueling positions. Table 1 summarizes trip characteristics for the weekday daily trips using Costco's daily trip rate as compared with ITE's daily trip rate.

Table 1: Trip Characteristics for Costco Warehouse and ITE Land Use 857 (Discount Club)

	Costco Weekday Daily Trip Rate (per KSF)	ITE Land Use	ITE Weekday Daily Trip Rate (per KSF)
Costco Warehouse	99.4	ITE Land Use 857 (Discount Club)	42.5
Primary Trips	59%		66%
Pass-by Trips	20%		34%
Diverted Trips	21%		-

Source: Kittelson & Associates, Inc., 2023; ITE *Trip Generation Manual* 11th Edition

Note: PM peak hour pass-by and diverted trip rates were applied for daily rates.

As shown in Table 1, the project is expected to generate 99.4 weekday daily trips per thousand square feet (KSF). This rate is higher than the rate from ITE's *Trip Generation Manual*, 11th Edition, for Land Use 857 (Discount Club) – 42.46 weekday daily per KSF. This comparison confirms that this analysis takes a conservative approach.

The percentage of primary, pass-by, and diverted trips for a Costco warehouse are developed from member surveys taken at existing warehouses. These trip types are described below.

- Primary Trips: an entirely new trip on the roadway system for the express purpose of driving to and from Costco
- Pass-by Trips: existing trips on roadways adjacent to the site for which drivers turn into the Costco site and then, after shopping, continue to their ultimate destination
- Diverted Trips: existing trips on nearby roadways in which a driver decides to drive out of their way for a distance to shop at Costco and, when their shopping is concluded, continues their trip to the ultimate destination

Project Trip Generation Comparison

Kittelson estimated trip generation for the project for the weekday daily using the Costco trip rates presented in Table 1. Pass-by and diverted rates for the weekday PM peak hour were used to estimate weekday daily pass-by and diverted trips. Kittelson accessed the Sierra Vista Specific Plan EIR and its appendices online¹ to document the trip generation assumed for the specific plan area.

¹ <https://www.roseville.ca.us/workspaces/One.aspx?objectId=8859666&contextId=8859666>

Table 2: Trip Generation Comparison

Costco Warehouse		
Trip Type	Size (KSF.)	Weekday Daily
Total Site Trips	160.53	15,953
Pass-by Trips		(3,139)
Diverted Trips		(4,348)
Primary Trips		8,466
ITE Trip Generation Manual 11th Edition		
Trip Type	Size (KSF.)	Daily Trips
Total Site Trips	160.53	6,815
Pass-by Trips		(2,317)
Primary Trips		4,498
Sierra Vista Specific Plan EIR		
Trip Type	Size	Daily Trips
Single Family Trips	4767 Units	42,903
Multi-Family Trips	1,888 Units	12,272
Commercial Trips	1,718 KSF	60,130
Office Trips	517.3 KSF	9,156
Church Trips	45.7 Acres	425
School Trips	3,600 Students	3,600
Park Trips	89.9 Acres	198
Sierra Vista Specific Plan Daily Trips		128,684

Source: Kittelson & Associates, Inc., 2023; Sierra Vista Specific Plan EIR, 2009; ITE Trip Generation Manual 11th Edition

As shown in Table 2, the project is estimated to generate fewer primary trips, which would be new to the transportation system, than were assumed for commercial land uses in the Sierra Vista Specific Plan EIR. For example, the project would generate 8,466 weekday daily primary trips whereas the Sierra Vista Specific Plan area was estimated to generate 60,130 daily Commercial land use trips.

The project's 160 KSF would generate 8,466 weekday primary trips, accounting for approximately 14 percent of the total daily trips from Commercial land uses designated in the Sierra Vista Specific Plan, which is consistent with the expected share of trips attributable to a large retail anchor such as Costco. The Sierra Vista Specific Plan EIR estimated the number of commercial trips anticipated to be generated by development of 1,718 KSF

of commercial land use using the City of Roseville and Placer County travel demand model. The model accounted for the various uses (e.g., strip mall, big box retail, small scale retail) that can comprise commercial land uses. In other words, the trip estimate in the Sierra Vista Specific Plan EIR assumed and accounted for large anchor retail uses, like Costco, that would generate a higher volume of trips relative to the amount of land developed as well as smaller retail uses, which contribute a relatively smaller share of trips toward the total commercial trip estimate.

The project is consistent with the uses evaluated in the Sierra Vista Specific Plan EIR and is consistent with the uses assumed in the travel demand model. Specifically, the trips from the Commercial land use total that would be attributable to the project is consistent with the amount of trips an anchor retail use within the Specific Plan area would have been projected to generate based on the total number of trips assigned to all commercial development in the area by the EIR.

The remaining portions of Commercial land use in the Specific Plan area that are not proposed for development by the project have been and would be developed as considered in the Sierra Vista Specific Plan EIR. Such developments would be expected to generate trips at a lower rate than the project, because they consist of smaller retail uses. Should future development be proposed for areas within the Specific Plan area that differ from the Sierra Vista Specific Plan EIR's assumptions about the mix of retail uses within the area, those future projects would be subject to subsequent, project-level CEQA consideration.

NEXT STEPS

We trust the information provided to estimate trip generation for the project is sufficient to demonstrate the project is consistent with the Commercial land use assumed in the Sierra Vista Specific Plan EIR with respect to trip generation. Please contact Amy Lopez at alopez@kittelson.com or 510-433-8064 with any questions or to schedule a meeting.