

Appendix G

Congestion Management Program Analysis

Memorandum

Date: July 1, 2022
To: Karly Kaufman, Rincon Consultants
From: Sam Tabibnia and Gaby Picado-Aguilar, Fehr & Peers
Subject: Piedmont Housing Element Update EIR – CMP Analysis

OK21-0442.00

The Alameda County Transportation Commission (CTC), as part of the Alameda County Congestion Management Program (CMP) Land Use Analysis Program, requires the assessment of development-driven impacts on the Metropolitan Transportation System (MTS) roadways. Since the proposed Piedmont Housing Element Update would generate more than 100 net new PM peak hour trips over existing conditions, the Alameda CTC requires the use of the Countywide Travel Demand Model to assess the impacts on regional roadways near the Planning Area. Based on the Notice of Preparation (NOP) comment letter by the Alameda CTC dated March 15, 2022, the potential impacts of the proposed project on the following roadways are evaluated:

- I-580
- SR-13
- SR-24
- MacArthur Boulevard
- Broadway Avenue
- College Avenue

Since California State law (California Public Resources Code, § 21099(b)(2)) does not allow the use of automobile delay or similar measures of congestion in identifying project impacts in environmental reports, this CMP analysis is prepared outside of the California Environmental Quality Act (CEQA) process and presented as a separate document to fulfill the requirements of the 2021 CMP.

The Alameda CTC Model used in this study is a regional travel demand model that uses socio-economic data and roadway and transit network assumptions to forecast traffic volumes and transit ridership using a four-step modeling process that includes trip generation, trip distribution, mode split, and trip assignment. This process accounts for changes in travel patterns due to future growth



and balances trip productions and attractions. This analysis uses the Alameda CTC Model version released in May 2019, which incorporates land use data and transportation network improvements consistent with *Plan Bay Area 2040* (i.e., the Sustainable Communities Strategy) for the years 2020 and 2040.

For the purposes of this CMP analysis, the proposed project is assumed to not be included in the Alameda CTC Model to present a more conservative analysis. The segment traffic forecasts for the 2020 and 2040 scenarios were extracted from the Alameda CTC Model for the MTS roadway segments from that Model and used as the “No Project” forecasts. The development expected under the proposed project was then added to the Model land use database. The 2020 and 2040 Models were then executed to develop the “Plus Project” forecasts.

This analysis uses volume-to-capacity (V/C) ratios to assess the impact of vehicle volumes on roadway segments. For freeway segments, a per-lane capacity of 2,000 vehicles per hour (vph) is used, consistent with the latest CMP documents. For surface streets, a per-lane capacity of 800 vph is used. Roadway segments with a V/C ratio greater than 1.00 signify LOS F.

The Alameda CTC has not adopted thresholds of significance for CMP land use analysis purposes. Consistent with other recent environmental documents, this analysis uses the following performance standards to determine if the proposed project would result in a substantial effect¹ on the CMP roadway segments:

- A segment operating at LOS E or better to deteriorate to LOS F, or
- A segment operating at LOS F to continue to operate at LOS F with an increase in the V/C ratio of 0.03 or more.

Tables 1 and 2 presents the PM peak hour segment volumes and the corresponding V/C ratio and level of service (LOS) for the study CMP segments for the “No Project” and “Plus Project” conditions in 2020 and 2040, respectively.

As shown in Tables 1 and 2, the proposed project would not result in a substantial effect on the analyzed CMP roadway segments because it would not result in any of the analyzed CMP segments to deteriorate from LOS E to LOS F or increase the V/C ratio by 0.03 or more on segments that operate at LOS F regardless of the proposed project.

¹ Since this analysis is prepared outside of the CEQA process, “performance standards” is used instead of “significance criteria” and “substantial effect” is used instead of “significant impact.”

**Table 1
Piedmont Housing Element Update
Alameda CTC CMP/MTS System Analysis Summary - 2020 PM Peak Hour**

Link Location	Segment Limits		# Lanes	No Project Volume	Plus Project Volume	V/C Ratio - No Project	V/C Ratio - Plus Project	No Project LOS	Plus Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >=0.03
Freeway Segments											
I-580 Eastbound											
Between	SR24	Oakland Avenue	5	8,151	8,217	0.82	0.82	D	D	No	-
Between	Oakland Avenue	Grand Ave	4	8,916	8,916	1.11	1.12	F	F	-	No
Between	Lakeshore Avenue	Park Boulevard	5	9,505	9,560	0.95	0.96	E	E	No	-
I-580 Westbound											
Between	Park Boulevard	Lakeshore Avenue	4	6,586	6,369	0.82	0.80	D	D	No	-
Between	Grand Ave	Oakland Avenue	4	6,896	6,686	0.86	0.84	D	D	No	-
Between	Oakland Avenue	SR24	5	6,382	6,247	0.64	0.63	C	C	No	-
SR 13 - Northbound											
Between	Moraga Ave	SR24	3	4,085	4,004	0.68	0.67	C	C	No	-
SR 13 - Southbound											
Between	SR24	Moraga Ave	2	3,780	3,870	0.95	0.97	E	E	No	-
SR 24 - Eastbound											
Between	Claremont Avenue	Broadway	4	7,851	7,821	0.98	0.98	E	E	No	-
Between	Broadway	SR13	5	8,382	8,350	0.84	0.84	D	D	No	-
SR 24 - Westbound											
Between	SR13	Broadway	5	4,152	4,282	0.42	0.43	B	B	No	-
Between	Broadway	Claremont Avenue	4	3,879	4,006	0.49	0.50	B	B	No	-
Arterials											
MacArthur Boulevard - Eastbound											
Between	Oakland Avenue	Grand Ave	2	767	820	0.48	0.51	B	B	No	-
Between	Lakeshore Avenue	Park Boulevard	2	409	413	0.26	0.26	A	A	No	-
MacArthur Boulevard - Westbound											
Between	Park Boulevard	Lakeshore Avenue	2	498	508	0.31	0.32	A	A	No	-
Between	Grand Ave	Oakland Avenue	2	1,449	1,492	0.91	0.93	E	E	No	-
Broadway - Northbound											
Between	40th Street	51st Street	2	1,308	1,332	0.82	0.83	D	D	No	-
Broadway - Southbound											
Between	51st Street	40th Street	2	397	396	0.25	0.25	A	A	No	-
College Avenue - Northbound											
Between	Broadway	Chabot Road	1	102	101	0.13	0.13	A	A	No	-
College Avenue - Southbound											
Between	Chabot Road	Broadway	1	213	234	0.27	0.29	A	A	No	-

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**Table 2
Piedmont Housing Element Update
Alameda CTC CMP/MTS System Analysis Summary - 2040 PM Peak Hour**

Link Location	Segment Limits		# Lanes	No Project Volume	Plus Project Volume	V/C Ratio - No Project	V/C Ratio - Plus Project	No Project LOS	Plus Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >=0.03
Freeway Segments											
I-580 Eastbound											
Between	SR24	Oakland Avenue	5	9,045	9,203	0.90	0.92	E	E	No	-
Between		Oakland Avenue Grand Ave	4	9,697	9,746	1.21	1.22	F	F	-	No
Between	Lakeshore Avenue	Park Boulevard	5	10,610	10,594	1.06	1.06	F	F	-	No
I-580 Westbound											
Between	Park Boulevard	Lakeshore Avenue	4	8,035	8,064	1.00	1.01	F	F	-	No
Between	Grand Ave	Oakland Avenue	4	8,068	8,057	1.01	1.01	F	F	-	No
Between	Oakland Avenue	SR24	5	7,279	7,296	0.73	0.73	C	C	No	-
SR 13 - Northbound											
Between	Moraga Ave	SR24	3	4,842	4,771	0.81	0.80	D	D	No	-
SR 13 - Southbound											
Between	SR24	Moraga Ave	2	4,450	4,437	1.11	1.11	F	F	-	No
SR 24 - Eastbound											
Between	Claremont Avenue	Broadway	4	9,304	9,312	1.16	1.16	F	F	-	No
Between	Broadway	SR13	5	9,872	9,876	0.99	0.99	E	E	No	-
SR 24 - Westbound											
Between	SR13	Broadway	5	4,838	4,839	0.48	0.48	B	B	No	-
Between	Broadway	Claremont Avenue	4	4,713	4,686	0.59	0.59	C	C	No	-
Arterials											
MacArthur Boulevard - Eastbound											
Between	Oakland Avenue	Grand Ave	2	1,363	1,291	0.85	0.81	D	D	No	-
Between	Lakeshore Avenue	Park Boulevard	2	429	396	0.27	0.25	A	A	No	-
MacArthur Boulevard - Westbound											
Between	Park Boulevard	Lakeshore Avenue	2	827	872	0.52	0.55	B	B	No	-
Between	Grand Ave	Oakland Avenue	2	1,983	1,959	1.24	1.22	F	F	-	No
Broadway - Northbound											
Between	40th Street	51st Street	2	1,600	1,594	1.00	1.00	F	E	No	-
Broadway - Southbound											
Between	51st Street	40th Street	2	1,057	1,137	0.66	0.71	C	C	No	-
College Avenue - Northbound											
Between	Broadway	Chabot Road	1	249	262	0.31	0.33	A	A	No	-
College Avenue - Southbound											
Between	Chabot Road	Broadway	1	362	384	0.45	0.48	B	B	No	-

Fehr & Peers, 2022.