

APPENDIX E: VMT ANALYSIS MEMORANDUM

Date: August 30, 2024

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To: County of San Bernardino
Public Works Department

Site: Glen Helen Specific Plan Amendment
EPD Project Number 23-065

Subject: Vehicle Miles Traveled (VMT) Screening Analysis Memorandum

This memo evaluates the potential vehicle miles traveled for the Glen Helen Specific Plan Amendment (Project) located in the County of San Bernardino (County). This Vehicle Miles Traveled (VMT) screening analysis is based on the requirements of the County of San Bernardino *Transportation Impact Study Guidelines* (July 2019).

Project Description and Trip Generation

The Glen Helen Specific Plan (GHSP) was adopted in 2005 and encompasses approximately 3,400 acres in unincorporated San Bernardino County. The GHSP area is bisected by Interstate 15 and Cajon Creek. The proposed Project intends to rezone a total of 456.6 acres of land use within the GHSP. The proposed land use changes are shown in Table 1 and the Project Land Use plan is shown in Figure 1.

Table 1: GHSP Amendment Proposed Land Use Changes

Code	Land Use Designation	Net Acreage	Maximum Density	Dwelling Units	Maximum FAR	Maximum Square Footage
C/TS (HD-O)	Commercial/Traveler Services (High Density Residential Overlay) either residential or commercial not both	96.2 64.4	35 DU/AC	336	0.4	1,676,189 1,122,106
CI and CI-O	Corridor Industrial and Corridor Industrial Overlay	132.9 292.4			0.5 ²	2,894,562 4,751,089 ²
GH/SP-SFR-SF	Glen Helen/Specific Plan- Single Family Residential-Sycamore Flats	94.7	7 DU/AC	418	N/A	
DR	Destination Recreation	132.8 53.8	1 DU/5AC	10 ¹	0.25	1,446,192 585,882
TOTAL		456.6		771 428		6,016,943 6,459,077

¹To be conservative the DR area was evaluated to buildout with an additional 7 dwelling units; thus, totaling 17 units within the DR land use and providing for a total buildout of 435 dwelling units

²There are 79.0 acres within the North Glen Helen Subarea within the CI that are limited to a maximum FAR of 0.03 (103,237 SF) due to existing development constraints such as earthquake faults and lack of water and sewer connections, the gross floor area of all buildings

divided by the net acreage. Therefore, the maximum CI square footage is calculated based on 213.4 acres with a maximum FAR of 0.5 (4,647,852 SF) and 79.0 acres with a maximum FAR of 0.03 (103,237 SF) for a maximum total of 4,751,089 SF of CI

The Project trip generation including a conservative total of 435 dwelling units (instead of 428 dwelling units) was evaluated using trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation*, 11th Edition (2021) and *San Diego Municipal Code Land Development Code Trip Generation Manual* (2003). The Project trip generation is shown in Table 2. As shown in Table 2, the Project would generate -6,031 net total daily trips, including 882 net AM peak hour trips and -616 net PM peak hour trips.

Background

Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating Transportation impacts. SB743 specified that the new criteria should promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks and a diversity of land uses. The bill also specified that delay-based level of service could no longer be considered an indicator of a significant impact on the environment. In response, Section 15064.3 was added to the CEQA Guidelines beginning January 1, 2019. Section 15064.3 - Determining the Significance of Transportation Impacts states that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. Section 15064.3(c) states that the provisions of the section shall apply statewide beginning on July 1, 2020.

The Project is a proposed specific plan amendment to the 2005 GHSP, and only involves changes in land use. As the Project does not propose specific development and any development within the specific plan would require further transportation analysis, the appropriate baseline for a VMT screening analysis is the previous GHSP land uses compared to the Projects proposed land use changes.

VMT Screening Analysis

The Project is located in the County of San Bernardino. The County has adopted guidelines for preparation of VMT analyses¹. The County's TIS Guidelines provide criteria for projects that would be considered to have a less-than significant impact on VMT and therefore could be screened out for further analysis. If a project meets one of the following criteria, then the VMT impact of the project is considered less-than significant and no further analysis of VMT would be required:

1. The project is located within a Transit Priority Area (TPA).
2. The project is located in a low VMT generating area.
3. Project Type - the project is a local-serving land use or generates less than 110 daily vehicle trips.

The applicability of each criterion to the proposed project is discussed below.

Screening Criteria 1 - Transit Priority Area Screening: According to the County's guidelines, projects located in a TPA may be presumed to have a less than significant impact.

The Project is not located in a TPA and would not satisfy the requirements of Screening Criteria 1.

Screening Criteria 2 - Low VMT Area Screening: According to the County's guidelines, projects located in a low VMT generating area may be presumed to have a less than significant impact.

The Project zone is not considered a low VMT area and would not satisfy the requirements of Screening Criteria 2.

¹ County of San Bernardino, *Traffic Impact Study Guidelines*, July 2019.

Screening Criteria 3 – Project Type Screening: This criterion would apply to land uses that are considered local serving, as well as projects that generate less than 110 daily vehicle trips. The land uses changes proposed by the Project would not qualify as locally serving; however, as shown in Table 2, the Project would generate -6,031 net new daily trips. Therefore, as the Project would generate less trips than the previous specific plan, the Project would meet Screening Criteria 3.

Conclusion

The proposed GHSP amendment would not satisfy Screening Criteria 1 and 2; however, the reduction in trips from the proposed GHSP amendment would meet Screening Criteria 3 – Project Type Screening. Therefore, the GHSP amendment's impact on VMT would be considered less than significant and a further analysis of VMT would not be required.

If you have any questions, please feel free to contact us at techservices@epdsolutions.com or at (949) 794-1180.

Figure 1: Project Land Use Plan

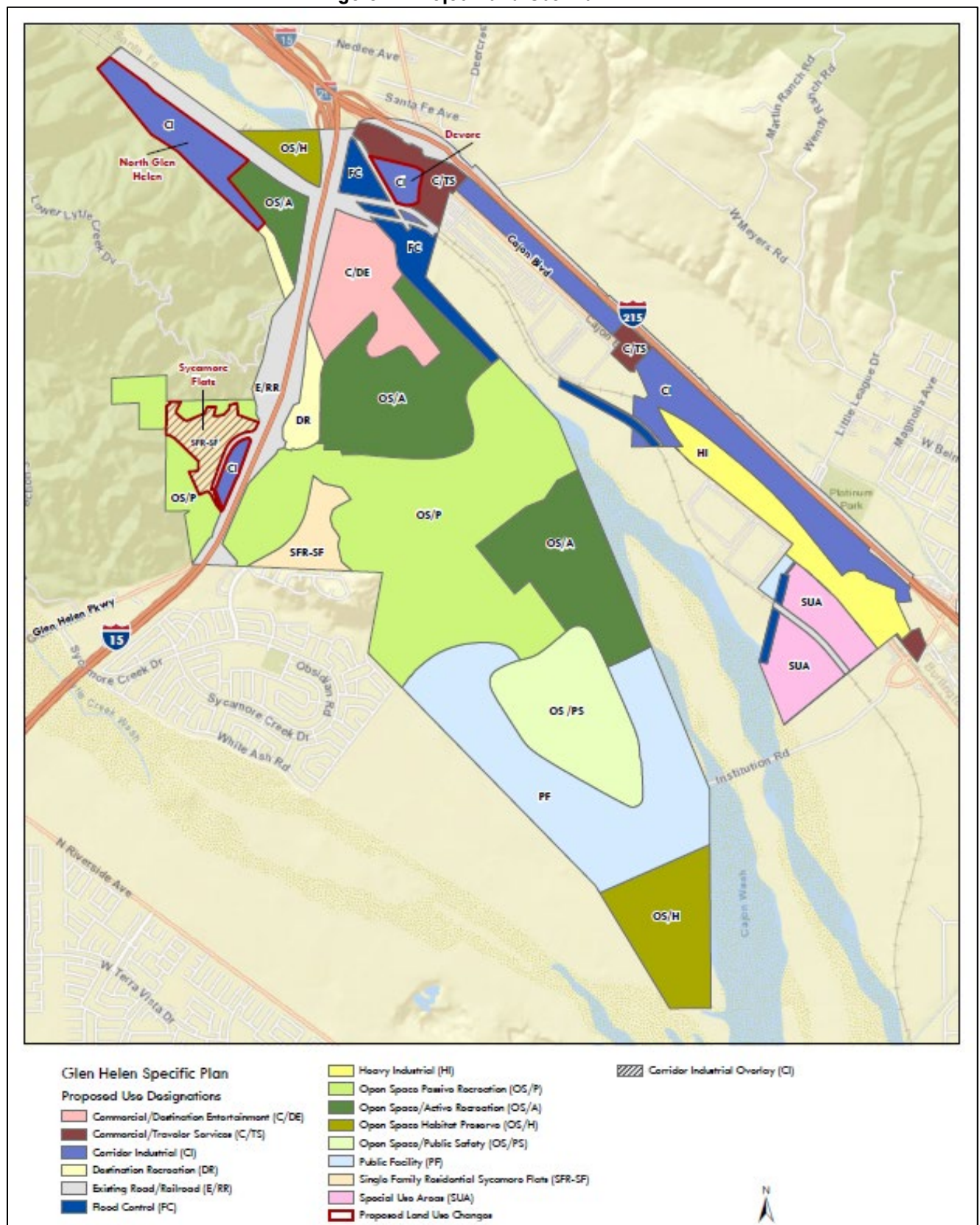


Table 2: Project Trip Generation

Land Use		Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
<u>Trip Rates</u>									
Shopping Center (>150k) ¹		TSF	37.01	0.52	0.32	0.84	1.63	1.77	3.40
Industrial Park ²		TSF	3.37	0.28	0.06	0.34	0.07	0.27	0.34
Single-Family Detached Housing ³		DU	9.43	0.18	0.53	0.70	0.59	0.35	0.94
SANDAG Undeveloped Park ⁴		Acres	5.00	0.15	0.06	0.21	0.14	0.26	0.40
Truck/Trailer Parking ⁵									
Passenger Car		Acres	9.35	0.42	0.12	0.54	0.35	0.63	0.97
2-Axle		Acres	7.78	0.48	0.27	0.75	0.32	0.46	0.79
3-Axle		Acres	9.55	0.46	0.06	0.53	0.32	0.33	0.66
4+ Axle		Acres	10.75	0.16	0.78	0.94	0.23	0.21	0.43
Total		Acres	37.43	1.52	1.23	2.76	1.22	1.63	2.85
<u>Existing Land Use Designation Trip Generation</u>									
Commercial/Traveler Services(C/TS) ¹	1,676.189	TSF	62,036	873	535	1,408	2,735	2,964	5,699
Corridor Industrial(CI) ²	2,894.562	TSF	9,755	797	187	984	216	768	984
Vehicle Mix ⁶		Percent ⁶							
Passenger Vehicles		69.00%	6,731	550	129	679	149	530	679
2-Axle truck		6.80%	663	54	13	67	15	52	67
3-Axle truck		5.50%	537	44	10	54	12	42	54
4+-Axle Trucks		18.70%	1,824	149	35	184	40	144	184
Existing CI Trip Generation		100%	9,755	797	187	984	216	768	984
PCE Trip Generation ⁷		PCE Factor ⁷							
Passenger Vehicles		1.0	6,731	550	129	679	149	530	679
2-Axle truck		1.5	995	81	19	100	22	78	100
3-Axle truck		2.0	1,073	88	20	108	24	84	108
4+-Axle Trucks		3.0	5,472	447	105	552	121	431	552
Existing CI PCE Trip Generation			14,271	1,166	273	1,439	316	1,123	1,439
Glen-Helen/Specific Plan - Single Family Residential-Sycamore Flats (GH/SP SFR-SF) ³	418	DU	3,942	73	219	292	248	145	393
Destination Recreation (DR) ⁴	132.800	Acres	664	20	8	28	19	35	54
Dwelling Unit	17	DU	160	3	9	12	10	6	16
Total Existing Land Use Trip Generation			81,073	2,135	1,044	3,179	3,328	4,273	7,601

Proposed Land Use Designation Trip Generation

Commercial/Traveler Services(C/TS)¹	1,122.106	TSF	41,529	584	359	943	1,831	1,984	3,815
Corridor Industrial(CI)²	4,751.089	TSF	16,011	1,308	307	1,615	355	1,260	1,615
<u>Vehicle Mix⁶</u>		<u>Percent⁶</u>							
Passenger Vehicles		69.00%	11,047	902	212	1,114	245	869	1,114
2-Axle truck		6.80%	1,089	89	21	110	24	86	110
3-Axle truck		5.50%	881	72	17	89	20	69	89
4+-Axle Trucks		18.70%	2,994	245	57	302	66	236	302
Proposed CI Trip Generation		100%	16,011	1,308	307	1,615	355	1,260	1,615
<u>PCE Trip Generation⁷</u>		<u>PCE Factor⁷</u>							
Passenger Vehicles		1.0	11,047	902	212	1,114	245	869	1,114
2-Axle truck		1.5	1,634	134	31	165	36	129	165
3-Axle truck		2.0	1,762	144	34	178	40	138	178
4+-Axle Trucks		3.0	8,982	735	171	906	198	708	906
Proposed CI PCE Trip Generation			23,425	1,916	447	2,363	519	1,844	2,363
Truck Trailer Parking⁵	79.000	Acres	2,957	120	98	218	96	129	225
<u>Vehicle Mix⁵</u>		<u>Percent⁵</u>							
Passenger Vehicles		24.97%	738	32	11	43	26	51	77
2-Axle truck		20.79%	615	38	21	59	26	36	62
3-Axle truck		25.52%	755	37	5	42	26	26	52
4+-Axle Trucks		28.72%	849	13	61	74	18	16	34
Proposed Truck Trailer Trip Generation		100%	2,957	120	98	218	96	129	225
<u>PCE Trip Generation⁷</u>		<u>PCE Factor⁷</u>							
Passenger Vehicles		1.0	738	32	11	43	26	51	77
2-Axle truck		1.5	923	57	32	89	39	54	93
3-Axle truck		2.0	1,510	74	10	84	52	52	104
4+-Axle Trucks		3.0	2,547	39	183	222	54	48	102
Proposed Truck Trailer PCE Trip Generation			5,718	202	236	438	171	205	376
Glen-Helen/Specific Plan - Single Family Residential-Sycamore Flats (GH/SP SFR-SF)³	418	DU	3,942	73	220	293	248	145	393
Destination Recreation (DR)⁴	53.800	Acres	269	8	3	11	8	14	22
Dwelling Unit	17	DU	160	3	9	12	10	6	16
Total Proposed Land Use Trip Generation			75,043	2,787	1,273	4,060	2,786	4,199	6,985
Net Trip Generation			-6,031	652	230	882	-542	-74	-616

TSF = Thousand Square Feet

PCE = Passenger Car Equivalent

¹ Trip rates from the Institute of Transportation Engineers, *Trip Generation Manual*, 11th Edition, 2021. Land Use Code 820 -Shopping Center (>150k).

² Trip rates from the Institute of Transportation Engineers, *Trip Generation Manual*, 11th Edition, 2021. Land Use Code 130 -Industrial Park.

³ Trip rates from the Institute of Transportation Engineers, *Trip Generation Manual*, 11th Edition, 2021. Land Use Code 210 -Single-Family Detached Housing.

⁴ Trip rates from San Diego Municipal Code Land Development Code *Trip Generation Manual*. Land Use Code - Undeveloped Park.

⁵ Trip rates and vehicle mix from surveys collected at Truck Trailer Parking lots in 14387 Valley Blvd, Fontana, CA on June 21, and June 22, 2022, 8911 Eucalyptus Avenue, Ontario, CA on August 23 and August 24, 2022, 19180 Cajon Boulevard, Devore, on September 29, 2022 and September 30, 2022

⁶ Vehicle Mix from the SCAQMD Warehouse Truck Trip Study Data Results and Usage, July 2014. Classification: SCAQMD Composite

⁷ Passenger Car Equivalent (PCE) factors from the San Bernardino County CMP, Appendix B - Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County, 2016.