

E-2 Freeway Health Risk Assessment

1. Methodology

1.1 Source Identification (Hollywood Freeway)

The California Department of Transportation (Caltrans) Performance Measurement System (PeMS) collects and maintains traffic volume counts for vehicles traversing the California state highway system. Consistent with SCAQMD recommendations, the roadway segment lengths analyzed in this study were determined based on freeway segments located within an approximate 0.25-mile radius of the project site boundaries, which is based on SCAQMD recommendations for siting sources of toxics in relation to sensitive receptors (schools, residential uses).¹ **Table 1, Freeway and Ramp Traffic Volumes**, presents the annual average daily traffic volumes (AADT) and peak hour traffic volumes for the freeway segments considered in this assessment. The traffic volumes represent the average volumes for the period of August 2017 through July 2018 based on Caltrans data for the freeway mainline for US Route 101 and years 2013 or 2017 for US Route 101 on- and off-ramps. To evaluate impacts to future project receptors, these traffic volumes were projected to years 2024 through 2053 with a 1 percent annual growth rate.

**TABLE 1
FREEWAY AND RAMP TRAFFIC VOLUMES**

Sources/Freeway Segment	Post Mile	AADT	Peak Hour
Freeway - Main Segment			
1. US 101 Freeway North & South (0.68 miles)	North 7.72 South 6.99	196,837	10,819
Ramps			
2. US 101 North Freeway Off-Ramp to Cahuenga Boulevard (0.17 miles)	N/A	4,901	288
3. US 101 South Freeway Off-Ramp to Vine Street (0.23 miles)	N/A	14,301	786
4. US 101 South Freeway On-Ramp from Cahuenga Boulevard (0.23 miles)	N/A	3,977	300
5. US 101 North Freeway On-Ramp from Argyle Avenue/Franklin Avenue (0.17 miles)	N/A	14,600	853
6. US 101 South Freeway Off-Ramp to Gower Street (0.19 miles)	N/A	6,701	368
7. US 101 South Freeway On-Ramp from Argyle Avenue (0.24 miles)	N/A	3,238	206
8. US 101 North Freeway Off-Ramp to Gower Street (0.13 miles)	N/A	4,351	255

SOURCE: California Department of Transportation, Performance Measurement System (PeMS) and Traffic Counts, <http://pems.dot.ca.gov>, <http://traffic-counts.dot.ca.gov>, August 2017-July 2018.

1.2 Emissions Calculations (Hollywood Freeway)

Vehicle traffic and speed data was obtained from the Caltrans PeMS database for the US Route 101 mainline. Vehicle traffic data for on-and off-ramps were obtained from Caltrans PeMS as well as from traffic count data from Caltrans Traffic Census Program. On- and off-ramp vehicle speeds were set at 15 miles per hour, which provides for a conservative (i.e., health protective)

¹ South Coast Air Quality Management District, Air Quality Issues in School Site Selection, June 2005.

analysis since emissions factors are relatively high at this speed. Vehicle traffic data was obtained for the segments of the US Route 101 mainline and US Route 101 on- and off-ramps within 0.25 mile of the site. Hourly traffic data was also obtained to account for temporal variation of traffic flow. An annual traffic growth rate of one percent was applied to account for future traffic flow.

Emission factors were obtained from the CARB EMFAC2017 emissions model. EMFAC was run for 2024 through 2050 to identify the average total organic gases (TOG) emission factors from light-duty automobiles, and TOG and diesel particulate matter (DPM) emission factors from heavy-duty diesel trucks typical of the US Route 101 over the lifetime of the project's operations. Vehicle emission factors were calculated assuming exposure duration of 30 years. Vehicle emissions were then calculated for each year from 2024 (the earliest year of project buildout and occupancy) through 2050 based on average traffic flow and vehicle speed along the study segment. Since EMFAC2017 does not have the option to model emissions factors for years past 2050, emission factors for 2050 were used to represent year 2051 to year 2053. Emission factors were also obtained from the CARB EMFAC2017 emissions for 2024 to identify the average nitrogen oxides (NO_x) and carbon monoxide (CO) emission factors from light-duty automobiles heavy-duty diesel trucks typical of the US Route 101.

1.3 Dispersion Modeling (Hollywood Freeway)

Dispersion modeling was performed using the AERMOD, version 19191 using the urban dispersion modeling parameter consistent with SCAQMD recommendations. Meteorological data from the SCAQMD's University of Southern California/Downtown Los Angeles monitoring station was used to represent local weather conditions and prevailing winds data. Terrain data from U.S. Geological Survey (USGS) was used to assign elevations to sources and modeling receptors.

For modeling purposes, receptors were located on the project site. The dispersion modeling took into account variable traffic volumes at different times of day. Hourly emissions for freeway sources were calculated using hourly PeMS traffic data with corresponding emission factors based on hourly mean speed data (on- and off-ramps were conservatively set at a slower speed of 15 miles per hour).

3.4 Cancer Risk and Health Risk Calculations (Hollywood Freeway)

Cancer risk was calculated using the methodology and exposure parameters provided in the SCAQMD's *Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0, Attachment M* (Risk Assessment Procedures).² This is the most recent version of the SCAQMD's Risk Assessment Procedures that incorporates information from the Office of Environmental Health Hazard Assessment (OEHHA) *Guidance Manual for Preparation of Health Risk*

² South Coast Air Quality Management District, Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0, Attachment M, March 2016, <http://www.aqmd.gov/docs/default-source/permitting/attachment-m.pdf?sfvrsn=4>. Accessed January 2020.

Assessments (Guidance Manual)³ that OEHHA adopted in March 2015. The SCAQMD uses the Risk Assessment Procedures for permit applications for stationary sources deemed complete on or after July 5, 2015. The exposure duration was set at 30 years, which is the SCAQMD recommended duration for residential exposure.⁴

In performing health risk calculations, carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below which there are no risks). Any exposure, therefore, will have some associated risk. Incremental health risks associated with exposure to carcinogenic compounds is defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. Under a deterministic approach (i.e., point estimate methodology), the cancer risk probability is determined by multiplying the chemical's annual concentration by its unit risk factor (URF). The URF is a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. It represents an upper bound estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ($\mu\text{g}/\text{m}^3$). The URFs utilized in the assessment and the corresponding cancer potency factors (CPF) were obtained principally from OEHHA Guidance Manual.

For the inhalation pathway, the cancer risk characterization procedure requires the incorporation of several discrete variables to effectively quantify dose. Once determined, contaminant dose is multiplied by the CPF in units of inverse dose expressed in milligrams per kilogram per day ($\text{mg}/\text{kg}/\text{day}$)⁻¹ and other exposure factors to derive the cancer risk estimate. Therefore, to accommodate the unique exposures associated with the proposed population, the following dose algorithm was utilized.

$$\text{CDI} = (\text{C}_{\text{AIR}} \times \{\text{BR}/\text{BW}\} \times \text{A} \times \text{EF})$$

Where:

CDI	=	Chronic daily intake ($\text{mg}/\text{kg}/\text{day}$);
C_{AIR}	=	Concentration of contaminant in air (mg/m^3);
$\{\text{BR}/\text{BW}\}$	=	Daily Breathing Rate normalized to body weight (l/kg body weight-day);
EF	=	Exposure frequency (days/year);
A	=	Inhalation absorption factor (unitless).

SCAQMD recommended default values for the parameters listed above were used in the HRA analysis. The daily breathing rate $\{\text{BR}/\text{BW}\}$ used in the analysis was based on SCAQMD recommendations which vary depending on age which are shown in the SCAQMD's *SCAQMD Recommended Residential Daily Breathing Rates for Point Estimate Dose Calculations (L / kg body weight)*. The recommended exposure frequency (EF) is 350 days per

³ Office of Environmental Health Hazard Assessment, Air Toxics Hotspots Program – Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments, February 2015, <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>. Accessed January 2020.

⁴ South Coast Air Quality Management District, Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Version 8.0, p. 19, June 5, 2015, <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/riskassprocjune15.pdf?sfvrsn=2>. Accessed January 2020.

year which is equivalent to 0.96 (350 days / 365 days a year). The inhalation absorption factor (A) is assumed to be 1 for inhalation-based risk assessment.

Once dose is calculated, cancer risk is calculated by accounting for cancer potency of the specific pollutant, age sensitivity, exposure duration, averaging time for lifetime cancer risk, and fraction of time spent at home (sensitive receptor). The CPF is specific for each pollutant and is determined through peer reviewed scientific studies. OEHHA has determined that DPM has a CPF of $1.1 \text{ (mg/kg-day)}^{-1}$ and that toxic air contaminants (TACs) associated with automobile and truck TOG emissions have unit risk factors ranging from $3.40\text{E-}5 \text{ (ug/m}^3\text{)}^{-1}$ to $0.6 \text{ (mg/kg-day)}^{-1}$.⁵ The Age Sensitivity Factor (ASF) accounts for greater susceptibility in early life, starting from the 3rd trimester of pregnancy to 30 years. The fraction of time at home (FAH) takes into account the time actually residing at the sensitive receptor location. Fraction of time at home also takes into account time spent at time for various age groups. Exposure duration for purposes of this HRA was assumed to be 30 years, consistent with SCAQMD recommendations for residential exposure.

As shown in the equation below, the incremental increase in cancer risk is the product of the dose and the pollutant-specific CPF, ASF, ED, and FAH values. Cancer risk is calculated by multiplying the inhalation dose by the inhalation cancer potency factor to yield the potential inhalation excess cancer risk. The following equation illustrates the formula for calculating cancer risk. To convert this risk value to chances in one million of developing cancer, the potential cancer risk is multiplied by 10^6 .

$$\text{Cancer Risk} = \text{Dose (mg/kg-day)} \times \text{CPF (mg/kg-day)}^{-1} \times \text{ASF} \times \text{ED/AT} \times \text{FAH}$$

Where:

Dose	=	Amount of a specific pollutant a person is exposed to (mg/kg-day)
CPF	=	Cancer Potency Factor, the cancer potency of a specific pollutant (mg/kg-day) ⁻¹
ASF	=	Age Sensitivity Factor (unitless)
ED/AT	=	Exposure Duration, how long a person will be exposed to a specific pollutant in their lifetime (years)/Averaging Time, length of time over which the average dose is calculated (days)
FAH	=	Fraction of time at home (unitless)

Potential non-cancer effects of chronic (i.e., long term) exposures were evaluated using the Hazard Index approach as described in the OEHHA Guidance Manual. The Hazard Index is calculated by dividing the maximum modeled concentration of a TAC at the maximum impacted sensitive receptor by the Reference Exposure Level (REL). The REL is the concentration at or below which no adverse non-cancer health effects are known or expected to occur for that TAC. Therefore, a Hazard Index of less than 1.0 means that the maximum impacted sensitive receptor

⁵ Office of Environmental Health Hazard Assessment, Hot Spots Unit Risk and Cancer Potency Values, <https://oehha.ca.gov/media/CPF042909.pdf>. Accessed January 2020.

would be exposed to TAC concentrations at a level in which adverse non-cancer health effects would not be known or expected to occur. The chronic REL for DPM is 5 $\mu\text{g}/\text{m}^3$ and the chronic hazard index target organ for DPM is the respiratory system.⁶ The chronic REL for TACs associated with TOG range from between 0.35 $\mu\text{g}/\text{m}^3$ to 140 $\mu\text{g}/\text{m}^3$ with hazard index target organs such as the respiratory and developmental systems.⁷

Potential non-cancer effects of acute (i.e., short term) exposures for 1-hour (including CO and NO_x) and 8-hour exposure periods were also evaluated using the Hazard Index approach as described in the OEHHA Guidance Manual. The acute 1-hour REL for TACs associated with DPM range from between 0.2 $\mu\text{g}/\text{m}^3$ to 210 $\mu\text{g}/\text{m}^3$ with hazard index target organs such as the respiratory and developmental systems.⁸ The acute 1-hour REL for TACs associated with TOG range from between 2.5 $\mu\text{g}/\text{m}^3$ to 660 $\mu\text{g}/\text{m}^3$ with hazard index target organs such as the respiratory and developmental systems. The acute 1-hour REL for CO is 2,300 that has a target hazard index organ of the cardiovascular system.⁹ The acute 1-hour REL for NO_x is 470 that has a target hazard index organ of the respiratory system.¹⁰ The acute 8-hour REL for TACs associated with DPM range from between 0.015 $\mu\text{g}/\text{m}^3$ to 0.17 $\mu\text{g}/\text{m}^3$ with hazard index target organs such as the respiratory and developmental systems.¹¹ The acute 8-hour REL for TACs associated with TOG range from between 0.7 $\mu\text{g}/\text{m}^3$ to 330 $\mu\text{g}/\text{m}^3$ with hazard index target organs such as the respiratory and developmental systems.¹²

⁶ Office of Environmental Health Hazard Assessment/California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values and OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs, February 23, 2017, <http://www.arb.ca.gov/toxics/healthval/healthval.htm>. Accessed January 2020.

⁷ Office of Environmental Health Hazard Assessment/California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values and OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs, February 23, 2017, <http://www.arb.ca.gov/toxics/healthval/healthval.htm>. Accessed January 2020.

⁸ Office of Environmental Health Hazard Assessment/California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values and OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs, February 23, 2017, <http://www.arb.ca.gov/toxics/healthval/healthval.htm>. Accessed January 2020.

⁹ Office of Environmental Health Hazard Assessment/California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values and OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs, February 23, 2017, <http://www.arb.ca.gov/toxics/healthval/healthval.htm>. Accessed January 2020.

¹⁰ Office of Environmental Health Hazard Assessment/California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values and OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs, February 23, 2017, <http://www.arb.ca.gov/toxics/healthval/healthval.htm>. Accessed January 2020.

¹¹ Office of Environmental Health Hazard Assessment/California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values and OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs, February 23, 2017, <http://www.arb.ca.gov/toxics/healthval/healthval.htm>. Accessed January 2020.

¹² Office of Environmental Health Hazard Assessment/California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values and OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs, February 23, 2017, <http://www.arb.ca.gov/toxics/healthval/healthval.htm>. Accessed January 2020.

2. Impact Analysis

2.1 Cancer Risk

Health risk impacts (cancer risk) were assessed for future on-site residents. **Table 2**, *Summary of Carcinogenic Risks for On-Site Sensitive Receptors*, summarizes the carcinogenic risk for representative receptors located throughout the site. For carcinogenic exposures, the cancer risk from DPM emissions for the project site resulted in a maximum carcinogenic risk of 9.83 per one million for the 30-year residential exposure scenario. This scenario is based on a highly conservative 30-year, 24-hours-per-day, seven-days-per-week exposure. The 30-year lifetime exposure is the SCAQMD recommended default assumption for residential exposure and takes into account early life (infant and children) exposure. Cancer risk for on-site receptors which are further away from the freeway be less than 9.83 one million.

TABLE 2
SUMMARY OF CARCINOGENIC RISKS FOR ON-SITE SENSITIVE RECEPTORS

Risk Scenario	Carcinogenic Risk in One Million*
Maximum Exposed Individual (MEI) (closest to freeway)	9.83

See calculation worksheets presented in Appendix A.
* The significance threshold is 10 in one million.

SOURCE: ESA, 2018

The HRA worksheets (provided in Appendix A) provide a detailed breakdown of these calculations. In summary, the project site's worst-case location would not be exposed to cancer risk in excess of the SCAQMD significance threshold of 10 per one million. As a result, on-site residential uses would be provided an adequate health-based separation distance from the freeway and impacts would be considered less than significant.

It should be noted that the calculated cancer risk assumes no mitigation such as mechanical filtration and exposure with windows open. The City has adopted regulations regarding the filtration of outdoor air for indoor environments. Subsections 99.05.504.5.3 and 99.04.504.6 of the LAMC require that buildings located within 1,000 feet of a freeway provide regularly occupied areas of the building with air filtration media for outside and return air that meets or exceeds the ASHRAE Standard 52.2 MERV of 13, to the satisfaction of the City of Los Angeles Department of Building and Safety. Per ASHRAE Standard 52.2, MERV 13 would result in a removal efficiency of more than 50 percent for particles from 0.3 to 1.0 micrometers (μm), 85 percent for 1.0 to 3.0 μm , and 90 percent for 3.0 to 10.0 μm .¹³ Thus, MERV 13 filters would reduce typical indoor PM10 and PM2.5 concentrations by more than 50 percent, with increasing reductions approaching 85 and 90 percent for particles with an aerodynamic diameter greater than

¹³ ASHRAE, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size. https://www.ashrae.org/File%20Library/docLib/StdsAddenda/52_2_2012_2015Supplement.pdf. Accessed January 2020.

1.0 μm . Therefore, actual cancer risk impacts to on-site residents would be lower than those reported above.

2.2 Non-Cancer Risk

Table 3, Summary of Non-Cancer Chronic Risks for On-Site Sensitive Receptors, summarizes the carcinogenic risk for representative receptors located throughout the Project Site. For non-cancer chronic (annual) exposures, the maximum chronic (annual) health impact from the combined TACs associated with TOG and DPM of vehicle emissions from the Hollywood Freeway to future Project Site residents would be a Hazard Index of approximately 0.007 (respiratory irritant). For non-cancer 1-hour acute exposures, the maximum 1-hour acute health impact from the combined CO, NO_x, and TACs associated with TOG and DPM of vehicle emissions from the Hollywood Freeway to future Project Site residents would be a Hazard Index of approximately 0.004 (eye irritant). For non-cancer 8-hour acute exposures, the maximum 8-hour acute health impact from the combined TACs associated with TOG and DPM of vehicle emissions from the Hollywood Freeway to future Project Site residents would be a Hazard Index of approximately 0.014 (respiratory irritant). As a result, on-site residential uses would be provided an adequate health-based separation distance from the freeway and non-cancer impacts would be less than significant.

**TABLE 3
SUMMARY OF NON-CANCER RISKS FOR ON-SITE SENSITIVE RECEPTORS**

Risk Scenario	Chronic Hazard Index *	Exposure duration
Maximum Exposed Individual (MEI) (closest to freeway)	0.007 (respiratory irritant)	Annual
Maximum Exposed Individual (MEI) (closest to freeway)	0.004 (eye irritant)	1-hour
Maximum Exposed Individual (MEI) (closest to freeway)	0.014 (respiratory irritant)	8-hour

See calculation worksheets presented in Appendix A.
* The significance threshold is 1.0.

Source: ESA, 2018

APPENDIX A

Health Risk Assessment Worksheets and Output Files

Hollywood Center

Caltrans Performance Measurement System (PeMS) Traffic Volume Counts - US101 (August 2017-July 2018, Argyle)

US-101 Mainline

Row Labels	Column Labels						
	Average of Auto Flow (Veh/Hour)		Average of Truck Flow (Veh/Hour)		Average of Speed (mph)		
	N	S	N	S	N	S	
0:00:00		2338	2077	54	95	68	66
1:00:00		1607	1571	47	80	68	66
2:00:00		1305	1369	50	78	68	66
3:00:00		990	1157	62	79	68	65
4:00:00		1307	1640	84	99	68	67
5:00:00		2631	3609	99	141	69	67
6:00:00		4036	4771	108	164	67	65
7:00:00		4937	4650	130	165	65	65
8:00:00		5387	4610	147	171	62	65
9:00:00		5527	4827	155	186	60	64
10:00:00		5377	4959	164	196	58	62
11:00:00		5291	4727	158	190	60	63
12:00:00		5452	4538	144	188	60	62
13:00:00		5717	4421	122	180	56	62
14:00:00		5831	4443	76	181	43	63
15:00:00		5308	4579	65	181	31	61
16:00:00		4626	4679	86	170	26	60
17:00:00		4301	4701	96	164	25	60
18:00:00		4331	4625	104	165	29	60
19:00:00		4693	4306	110	152	39	63
20:00:00		4695	3822	87	138	57	65
21:00:00		4476	3733	80	137	66	67
22:00:00		4297	3569	80	136	67	67
23:00:00		3378	2797	69	119	67	66
Total		97837	90181	2378	3557	1348	1536

Source: Caltrans, Performance Measurement System (PeMS), US-101, <http://pems.dot.ca.gov/>.

Hollywood Center

Caltrans Performance Measurement System (PeMS) Traffic Volume Counts - US101 (August 2017-July 2018, Argyle)

US-101 NB Argyle On-ramp

Row Labels	Average of Flow (Veh/Hour)	Flow	Autos	Trucks	
0:00:00		385	385	374	12
1:00:00		260	260	252	8
2:00:00		239	239	232	7
3:00:00		125	125	121	4
4:00:00		81	81	79	2
5:00:00		133	133	129	4
6:00:00		312	312	302	10
7:00:00		560	560	543	17
8:00:00		705	705	683	22
9:00:00		755	755	732	23
10:00:00		748	748	725	23
11:00:00		773	773	749	24
12:00:00		835	835	809	26
13:00:00		853	853	827	26
14:00:00		844	844	819	26
15:00:00		811	811	787	25
16:00:00		800	800	776	24
17:00:00		792	792	768	24
18:00:00		799	799	775	24
19:00:00		815	815	790	25
20:00:00		774	774	751	24
21:00:00		722	722	700	22
22:00:00		784	784	760	24
23:00:00		693	693	672	21

Total 14600

Source: Caltrans, Performance Measurement System (PeMS), US-101, <http://pems.dot.ca.gov/>.

Hollywood Center

Caltrans Performance Measurement System (PeMS) Traffic Volume Counts - US101 (August 2017-July 2018, Cahuenga)
US-101 SB Cahuenga On-ramp

Row Labels	Average of Flow (Veh/Hour)	Flow	Autos	Trucks
0:00:00	193	193	187	6
1:00:00	152	152	147	5
2:00:00	156	156	151	5
3:00:00	79	79	76	2
4:00:00	46	46	45	1
5:00:00	52	52	50	2
6:00:00	83	83	80	3
7:00:00	123	123	119	4
8:00:00	135	135	131	4
9:00:00	162	162	157	5
10:00:00	170	170	165	5
11:00:00	179	179	174	5
12:00:00	184	184	179	6
13:00:00	184	184	178	6
14:00:00	180	180	174	5
15:00:00	159	159	154	5
16:00:00	143	143	138	4
17:00:00	153	153	148	5
18:00:00	186	186	181	6
19:00:00	214	214	208	7
20:00:00	222	222	215	7
21:00:00	229	229	222	7
22:00:00	294	294	285	9
23:00:00	300	300	291	9

Total 3977

Source: Caltrans, Performance Measurement System (PeMS), US-101, <http://pems.dot.ca.gov/>.

Hollywood Center

Caltrans Performance Measurement System (PeMS) Traffic Volume Counts - US101 (August 2017-July 2018, Argyle)

US-101 SB Argyle On-ramp

Row Labels	Average of Flow (Veh/Hour)	Flow	Autos	Trucks	
0:00:00		113	113	110	3
1:00:00		85	85	82	3
2:00:00		90	90	87	3
3:00:00		49	49	47	1
4:00:00		38	38	37	1
5:00:00		51	51	49	2
6:00:00		73	73	71	2
7:00:00		106	106	103	3
8:00:00		127	127	123	4
9:00:00		155	155	150	5
10:00:00		162	162	157	5
11:00:00		165	165	160	5
12:00:00		171	171	166	5
13:00:00		165	165	160	5
14:00:00		180	180	174	6
15:00:00		165	165	160	5
16:00:00		148	148	144	5
17:00:00		143	143	138	4
18:00:00		149	149	144	5
19:00:00		171	171	166	5
20:00:00		161	161	156	5
21:00:00		160	160	155	5
22:00:00		205	205	199	6
23:00:00		206	206	199	6
Total		3238			

Source: Caltrans, Performance Measurement System (PeMS), US-101, <http://pems.dot.ca.gov/>.

Hollywood Center
Caltrans Traffic Volume Counts - US101 On- and Off-Ramps (2013 Near Argyle)

RAMP	Vehicles	Auto	Trucks	FWY	Year	Notes
NB Off-ramp Cahuenga (SLINE3)	4901	4751	150	US 101	2013	http://www.dot.ca.gov/trafficops/census/docs/2016-ramp-vol-district07.pdf
SB Off-ramp Vine (SLINE4)	14301	13863	438	US 101	2013	http://www.dot.ca.gov/trafficops/census/docs/2016-ramp-vol-district07.pdf
SB On-ramp Cahuenga (SLINE5)				US 101		2018 PeMs
NB On-ramp Argyle/Franklin (SLINE6)				US 101		2018 PeMs
SB Off-ramp Gower (SLINE7)	6701	6496	205	US 101	2013	http://www.dot.ca.gov/trafficops/census/docs/2016-ramp-vol-district07.pdf
SB On-ramp Argyle (SLINE8)				US 101		2018 PeMs
NB Off-ramp Gower (SLINE9)	4351	4218	133	US 101	2013	http://www.dot.ca.gov/trafficops/census/docs/2016-ramp-vol-district07.pdf

% Auto	0.969399	Ratio between total auto flow and total flow (2017)
% Trucks	0.030601	Ratio between total truck flow count and total flow (2017)

Mainline Ratio for Ramp Hourly Flow Calculation

Sum of Average Hourly Traffic	North	South
Auto	97837	90181
Trucks	2378	3557

North Bound Ratio

Time of Day	Auto	Trucks
0:00:00	0.023899	0.0226
1:00:00	0.01642	0.01993
2:00:00	0.013341	0.02106
3:00:00	0.01012	0.02626
4:00:00	0.013354	0.03537
5:00:00	0.026896	0.04162
6:00:00	0.041251	0.04553
7:00:00	0.05046	0.05475
8:00:00	0.055065	0.06181
9:00:00	0.056496	0.06527
10:00:00	0.054956	0.06891
11:00:00	0.054076	0.06639
12:00:00	0.055727	0.06049
13:00:00	0.058438	0.05117
14:00:00	0.0596	0.03194
15:00:00	0.054251	0.02746
16:00:00	0.047279	0.0361
17:00:00	0.043961	0.04048
18:00:00	0.044263	0.04358
19:00:00	0.047971	0.04638
20:00:00	0.047985	0.03673
21:00:00	0.045744	0.03382
22:00:00	0.043916	0.03352
23:00:00	0.034528	0.02883

South Bound Ratio

Time of Day	Auto	Trucks
0:00:00	0.02303	0.02685
1:00:00	0.017422	0.02263
2:00:00	0.015178	0.02202
3:00:00	0.012833	0.02225
4:00:00	0.018186	0.02795
5:00:00	0.040024	0.03975
6:00:00	0.052905	0.04621
7:00:00	0.051566	0.04637
8:00:00	0.051116	0.04802
9:00:00	0.053526	0.05233
10:00:00	0.054988	0.05499
11:00:00	0.052419	0.05329
12:00:00	0.050324	0.05299
13:00:00	0.049026	0.05065
14:00:00	0.049272	0.0509
15:00:00	0.050776	0.0508
16:00:00	0.051882	0.04793
17:00:00	0.052125	0.04607
18:00:00	0.051283	0.04627
19:00:00	0.047743	0.04284
20:00:00	0.042385	0.03893
21:00:00	0.041399	0.03838
22:00:00	0.039573	0.0381
23:00:00	0.031018	0.03349

*Ratio is average hourly flow divided by total flow

Hollywood Center
EMFAC 2024 Emission Factors

<i>Heavy Duty Vehicles PM10</i>	
Speed	Average of emission_rate (grams/mile)
5	0.01952169
10	0.016979014
15	0.013000302
20	0.010003049
25	0.008403828
30	0.007812116
35	0.008118501
40	0.008939221
45	0.010362416
50	0.012459003
55	0.016150807
60	0.019134433
65	0.022680814
70	0.027984736

<i>Light Duty Vehicles TOG</i>	
Speed	Average of emission_rate (grams/mile)
5	0.176860371
10	0.114640168
15	0.078440249
20	0.055948728
25	0.04186747
30	0.032909237
35	0.027180471
40	0.023843918
45	0.022115872
50	0.021457027
55	0.021906048
60	0.02353241
65	0.026309712
70	0.02721027

<i>Heavy Duty Vehicles TOG</i>	
Speed	Average of emission_rate (grams/mile)
5	0.231947132
10	0.1789691
15	0.104205427
20	0.05353613
25	0.036298805
30	0.028755035
35	0.024284742
40	0.020940772
45	0.018576658
50	0.018358681
55	0.019785798
60	0.024168064
65	0.029433751
70	0.039869266

Hollywood Center
 EMFAC 2024-2025 Emission Factors

<i>Heavy Duty Vehicles PM10</i>	
Speed	Average of emission_rate (grams/mile)
5	0.019028408
10	0.016519931
15	0.012642829
20	0.009732522
25	0.008186417
30	0.007641773
35	0.007978682
40	0.008829258
45	0.010276862
50	0.012374799
55	0.016094813
60	0.019042428
65	0.022525823
70	0.027911218

<i>Light Duty Vehicles TOG</i>	
Speed	Average of emission_rate (grams/mile)
5	0.171467791
10	0.111064101
15	0.076038015
20	0.054234863
25	0.040583623
30	0.031892926
35	0.026327062
40	0.023088266
45	0.021413973
50	0.020771882
55	0.021204313
60	0.022792455
65	0.025476413
70	0.026210964

<i>Heavy Duty Vehicles TOG</i>	
Speed	Average of emission_rate (grams/mile)
5	0.231573365
10	0.178534205
15	0.103595978
20	0.052887797
25	0.035740832
30	0.028295154
35	0.023883417
40	0.020584718
45	0.018254946
50	0.018010886
55	0.019408484
60	0.023637472
65	0.028708873
70	0.038860271

Hollywood Center
 EMFAC 2026-2039 Emission Factors

<i>Heavy Duty Vehicles PM10</i>	
Speed	Average of emission_rate (grams/mile)
5	0.013288008
10	0.013107194
15	0.008874025
20	0.007022935
25	0.006013637
30	0.0058849
35	0.006444681
40	0.00752547
45	0.009126059
50	0.011211378
55	0.014832564
60	0.017504219
65	0.020186786
70	0.025831413

<i>Light Duty Vehicles TOG</i>	
Speed	Average of emission_rate (grams/mile)
5	0.127589568
10	0.090878467
15	0.056412341
20	0.040221974
25	0.030108343
30	0.023591084
35	0.019346583
40	0.016923895
45	0.015660654
50	0.015148639
55	0.015487513
60	0.016817756
65	0.018744728
70	0.017908395

<i>Heavy Duty Vehicles TOG</i>	
Speed	Average of emission_rate (grams/mile)
5	0.220095493
10	0.181999965
15	0.095295714
20	0.046526134
25	0.03040413
30	0.023889799
35	0.019955795
40	0.017070919
45	0.015135916
50	0.014589066
55	0.015835296
60	0.018591366
65	0.021866074
70	0.028542726

Hollywood Center
 EMFAC 2040-2053 Emission Factors

<i>Heavy Duty Vehicles PM10</i>	
Speed	Average of emission_rate (grams/mile)
5	0.010580278
10	0.009021957
15	0.00706824
20	0.005703253
25	0.004966764
30	0.005008342
35	0.005632282
40	0.006831966
45	0.008527466
50	0.010626765
55	0.01423383
60	0.016812416
65	0.019002546
70	0.024502303

<i>Light Duty Vehicles TOG</i>	
Speed	Average of emission_rate (grams/mile)
5	0.104874952
10	0.066626936
15	0.04632117
20	0.033018056
25	0.024737029
30	0.019342046
35	0.015790387
40	0.013804939
45	0.012759773
50	0.01232334
55	0.012628978
60	0.013856739
65	0.015416985
70	0.013764183

<i>Heavy Duty Vehicles TOG</i>	
Speed	Average of emission_rate (grams/mile)
5	0.205978802
10	0.15310009
15	0.088069412
20	0.042892671
25	0.027650526
30	0.021600165
35	0.017820943
40	0.015183945
45	0.013481143
50	0.012827668
55	0.013987359
60	0.016021573
65	0.018308245
70	0.023025148

Hollywood Center
EMFAC 2024 Emission Factors

<i>Heavy Duty Vehicles CO</i>	
Speed	Average of emission_rate (grams/mile)
5	2.123057098
10	1.402262702
15	0.76722735
20	0.408705476
25	0.285724588
30	0.223934239
35	0.179128718
40	0.145105646
45	0.120150803
50	0.110431335
55	0.113964289
60	0.139941744
65	0.182336431
70	0.271445621

<i>Light Duty Vehicles CO</i>	
Speed	Average of emission_rate (grams/mile)
5	1.512418046
10	1.344907327
15	1.203279367
20	1.085198398
25	0.984718445
30	0.898228457
35	0.824247256
40	0.765345623
45	0.717672949
50	0.676789719
55	0.642577357
60	0.611429427
65	0.592842243
70	0.583102908

Hollywood Center
EMFAC 2024 Emission Factors

<i>Heavy Duty Vehicles NOX</i>	
Speed	Average of emission_rate (grams/mile)
5	10.58914863
10	7.204846037
15	4.142351878
20	2.805285792
25	2.132901272
30	1.752988545
35	1.519733001
40	1.25188444
45	1.045511173
50	0.93266233
55	1.024263711
60	1.199534815
65	1.491714729
70	1.911262083

<i>Light Duty Vehicles NOX</i>	
Speed	Average of emission_rate (grams/mile)
5	0.097827524
10	0.056882846
15	0.050171529
20	0.045049765
25	0.040412162
30	0.037463233
35	0.035476214
40	0.034425811
45	0.033933047
50	0.03381838
55	0.034721452
60	0.036343279
65	0.038149554
70	0.038189484

NB Off-ramp Gower (SLINE9)													2024			2024-2025			2026-2039			2040-2053				
Time	Length (mi)	2013 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2013 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto TOG EF (Gas) (g/mi)	Truck PM10 EF (Dsl) (g/mi)	Truck TOG EF (Dsl) (g/mi)	Auto TOG EF (Gas) (g/mi)	Truck PM10 EF (Dsl) (g/mi)	Truck TOG EF (Dsl) (g/mi)	Auto TOG EF (Gas) (g/mi)	Truck PM10 EF (Dsl) (g/mi)	Truck TOG EF (Dsl) (g/mi)	Auto TOG EF (Gas) (g/mi)	Truck PM10 EF (Dsl) (g/mi)	Truck TOG EF (Dsl) (g/mi)	
0:00:00	0.128	101	106	106	109	115	3	3	3	3	3	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
1:00:00	0.128	69	72	72	75	79	3	3	3	3	3	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
2:00:00	0.128	56	59	59	61	64	3	3	3	3	3	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
3:00:00	0.128	43	45	45	46	49	3	3	3	3	3	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
4:00:00	0.128	56	59	59	61	64	5	5	5	5	6	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
5:00:00	0.128	113	118	118	122	129	6	6	6	6	7	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
6:00:00	0.128	174	182	182	188	199	6	6	6	6	7	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
7:00:00	0.128	213	223	223	230	244	7	7	7	8	8	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
8:00:00	0.128	232	242	243	251	265	8	8	8	9	9	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
9:00:00	0.128	238	249	249	257	272	9	9	9	10	10	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
10:00:00	0.128	232	242	243	251	265	9	9	9	10	10	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
11:00:00	0.128	228	238	239	246	261	9	9	9	10	10	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
12:00:00	0.128	235	246	246	254	269	8	8	8	9	9	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
13:00:00	0.128	246	257	258	266	281	7	7	7	8	8	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881	
14:00:00	0.128	251	262	263	271	287	4	4	4	4	4	5	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881
15:00:00	0.128	229	239	240	248	262	4	4	4	4	4	5	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881
16:00:00	0.128	199	208	208	215	228	5	5	5	5	5	6	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881
17:00:00	0.128	185	193	194	200	211	5	5	5	5	5	6	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881
18:00:00	0.128	187	195	196	202	214	6	6	6	6	6	7	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881
19:00:00	0.128	202	211	211	218	231	6	6	6	6	6	7	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881
20:00:00	0.128	202	211	211	218	231	5	5	5	5	5	6	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881
21:00:00	0.128	193	202	202	209	221	5	5	5	5	5	6	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881
22:00:00	0.128	185	193	194	200	211	4	4	4	4	4	5	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881
23:00:00	0.128	146	153	153	158	167	4	4	4	4	4	5	15	15	0.0784	0.0130	0.1042	0.0760	0.0126	0.1036	0.0564	0.0089	0.0953	0.0463	0.0071	0.0881

Source: ESA, 2020.

2024			2024-2025			2026-2039			2040-2053			2024			2024-2025			2026-2039			2040-2053		
Auto TOG Emissions (g/s)	Truck PM Emissions (g/s)	Truck TOG Emissions (g/s)	Auto TOG Emissions (g/s)	Truck PM Emissions (g/s)	Truck TOG Emissions (g/s)	Auto TOG Emissions (g/s)	Truck PM Emissions (g/s)	Truck TOG Emissions (g/s)	Auto TOG Emissions (g/s)	Truck PM Emissions (g/s)	Truck TOG Emissions (g/s)	Auto TOG Scalar	Truck PM Scalar	Truck TOG Scalar	Auto TOG Scalar	Truck PM Scalar	Truck TOG Scalar	Auto TOG Scalar	Truck PM Scalar	Truck TOG Scalar	Auto TOG Scalar	Truck PM Scalar	Truck TOG Scalar
2.95E-04	1.38E-06	1.11E-05	2.86E-04	1.35E-06	1.10E-05	2.18E-04	9.45E-07	1.01E-05	1.89E-04	7.52E-07	9.38E-06	0.4046	0.3333	0.3333	0.4030	0.3333	0.3333	0.4022	0.3000	0.3000	0.4007	0.3000	0.3000
2.00E-04	1.38E-06	1.11E-05	1.94E-04	1.35E-06	1.10E-05	1.50E-04	9.45E-07	1.01E-05	1.30E-04	7.52E-07	9.38E-06	0.2748	0.3333	0.3333	0.2738	0.3333	0.3333	0.2768	0.3000	0.3000	0.2753	0.3000	0.3000
1.64E-04	1.38E-06	1.11E-05	1.59E-04	1.35E-06	1.10E-05	1.22E-04	9.45E-07	1.01E-05	1.05E-04	7.52E-07	9.38E-06	0.2252	0.3333	0.3333	0.2243	0.3333	0.3333	0.2251	0.3000	0.3000	0.2230	0.3000	0.3000
1.25E-04	1.38E-06	1.11E-05	1.21E-04	1.35E-06	1.10E-05	9.21E-05	9.45E-07	1.01E-05	8.05E-05	7.52E-07	9.38E-06	0.1718	0.3333	0.3333	0.1711	0.3333	0.3333	0.1697	0.3000	0.3000	0.1707	0.3000	0.3000
1.64E-04	2.31E-06	1.85E-05	1.59E-04	2.24E-06	1.84E-05	1.22E-04	1.57E-06	1.69E-05	1.05E-04	1.50E-06	1.88E-05	0.2252	0.5556	0.5556	0.2243	0.5556	0.5556	0.2251	0.5000	0.5000	0.2230	0.6000	0.6000
3.28E-04	2.77E-06	2.22E-05	3.18E-04	2.69E-06	2.21E-05	2.44E-04	1.89E-06	2.03E-05	2.12E-04	1.76E-06	2.19E-05	0.4504	0.6667	0.6667	0.4487	0.6667	0.6667	0.4502	0.6000	0.6000	0.4495	0.7000	0.7000
5.07E-04	2.77E-06	2.22E-05	4.91E-04	2.69E-06	2.21E-05	3.76E-04	1.89E-06	2.03E-05	3.27E-04	1.76E-06	2.19E-05	0.6947	0.6667	0.6667	0.6920	0.6667	0.6667	0.6937	0.6000	0.6000	0.6934	0.7000	0.7000
6.21E-04	3.23E-06	2.59E-05	6.02E-04	3.14E-06	2.57E-05	4.60E-04	2.52E-06	2.71E-05	4.01E-04	2.01E-06	2.50E-05	0.8511	0.7778	0.7778	0.8479	0.7778	0.7778	0.8487	0.8000	0.8000	0.8502	0.8000	0.8000
6.74E-04	3.69E-06	2.96E-05	6.56E-04	3.59E-06	2.94E-05	5.02E-04	2.83E-06	3.04E-05	4.36E-04	2.26E-06	2.81E-05	0.9237	0.8889	0.8889	0.9240	0.8889	0.8889	0.9262	0.9000	0.9000	0.9233	0.9000	0.9000
6.93E-04	4.15E-06	3.33E-05	6.72E-04	4.04E-06	3.31E-05	5.14E-04	3.15E-06	3.38E-05	4.47E-04	2.51E-06	3.13E-05	0.9504	1.0000	1.0000	0.9468	1.0000	1.0000	0.9483	1.0000	1.0000	0.9477	1.0000	1.0000
6.74E-04	4.15E-06	3.33E-05	6.56E-04	4.04E-06	3.31E-05	5.02E-04	3.15E-06	3.38E-05	4.36E-04	2.51E-06	3.13E-05	0.9237	1.0000	1.0000	0.9240	1.0000	1.0000	0.9262	1.0000	1.0000	0.9233	1.0000	1.0000
6.63E-04	4.15E-06	3.33E-05	6.45E-04	4.04E-06	3.31E-05	4.92E-04	3.15E-06	3.38E-05	4.29E-04	2.51E-06	3.13E-05	0.9084	1.0000	1.0000	0.9087	1.0000	1.0000	0.9077	1.0000	1.0000	0.9094	1.0000	1.0000
6.85E-04	3.69E-06	2.96E-05	6.64E-04	3.59E-06	2.94E-05	5.08E-04	2.83E-06	3.04E-05	4.42E-04	2.26E-06	2.81E-05	0.9389	0.8889	0.8889	0.9354	0.8889	0.8889	0.9373	0.9000	0.9000	0.9373	0.9000	0.9000
7.15E-04	3.23E-06	2.59E-05	6.96E-04	3.14E-06	2.57E-05	5.33E-04	2.52E-06	2.71E-05	4.62E-04	2.01E-06	2.50E-05	0.9809	0.7778	0.7778	0.9810	0.7778	0.7778	0.9815	0.8000	0.8000	0.9791	0.8000	0.8000
7.29E-04	1.85E-06	1.48E-05	7.10E-04	1.79E-06	1.47E-05	5.43E-04	1.26E-06	1.35E-05	4.72E-04	1.25E-06	1.56E-05	1.0000	0.4444	0.4444	1.0000	0.4444	0.4444	1.0000	0.4000	0.4000	1.0000	0.5000	0.5000
6.65E-04	1.85E-06	1.48E-05	6.48E-04	1.79E-06	1.47E-05	4.96E-04	1.26E-06	1.35E-05	4.31E-04	1.25E-06	1.56E-05	0.9122	0.4444	0.4444	0.9125	0.4444	0.4444	0.9151	0.4000	0.4000	0.9129	0.5000	0.5000
5.79E-04	2.31E-06	1.85E-05	5.61E-04	2.24E-06	1.84E-05	4.30E-04	1.57E-06	1.69E-05	3.75E-04	1.50E-06	1.88E-05	0.7939	0.5556	0.5556	0.7909	0.5556	0.5556	0.7934	0.5000	0.5000	0.7944	0.6000	0.6000
5.37E-04	2.31E-06	1.85E-05	5.23E-04	2.24E-06	1.84E-05	4.00E-04	1.57E-06	1.69E-05	3.47E-04	1.50E-06	1.88E-05	0.7366	0.5556	0.5556	0.7376	0.5556	0.5556	0.7380	0.5000	0.5000	0.7352	0.6000	0.6000
5.43E-04	2.77E-06	2.22E-05	5.29E-04	2.69E-06	2.21E-05	4.04E-04	1.89E-06	2.03E-05	3.52E-04	1.76E-06	2.19E-05	0.7443	0.6667	0.6667	0.7452	0.6667	0.6667	0.7454	0.6000	0.6000	0.7456	0.7000	0.7000
5.87E-04	2.77E-06	2.22E-05	5.69E-04	2.69E-06	2.21E-05	4.36E-04	1.89E-06	2.03E-05	3.80E-04	1.76E-06	2.19E-05	0.8053	0.6667	0.6667	0.8023	0.6667	0.6667	0.8044	0.6000	0.6000	0.8049	0.7000	0.7000
5.87E-04	2.31E-06	1.85E-05	5.69E-04	2.24E-06	1.84E-05	4.36E-04	1.57E-06	1.69E-05	3.80E-04	1.50E-06	1.88E-05	0.8053	0.5556	0.5556	0.8023	0.5556	0.5556	0.8044	0.5000	0.5000	0.8049	0.6000	0.6000
5.62E-04	2.31E-06	1.85E-05	5.45E-04	2.24E-06	1.84E-05	4.18E-04	1.57E-06	1.69E-05	3.63E-04	1.50E-06	1.88E-05	0.7710	0.5556	0.5556	0.7681	0.5556	0.5556	0.7712	0.5000	0.5000	0.7700	0.6000	0.6000
5.37E-04	1.85E-06	1.48E-05	5.23E-04	1.79E-06	1.47E-05	4.00E-04	1.26E-06	1.35E-05	3.47E-04	1.25E-06	1.56E-05	0.7366	0.4444	0.4444	0.7376	0.4444	0.4444	0.7380	0.4000	0.4000	0.7352	0.5000	0.5000
4.26E-04	1.85E-06	1.48E-05	4.13E-04	1.79E-06	1.47E-05	3.16E-04	1.26E-06	1.35E-05	2.75E-04	1.25E-06	1.56E-05	0.5840	0.4444	0.4444	0.5817	0.4444	0.4444	0.5830	0.4000	0.4000	0.5819	0.5000	0.5000
7.29E-04	4.15E-06	3.33E-05	7.10E-04	4.04E-06	3.31E-05	5.43E-04	3.15E-06	3.38E-05	4.72E-04	2.51E-06	3.13E-05												
Maximum																							

On and Off Ramps * Ratio Applied from US101 Ramps tab

NB Off-ramp Cahuenga (SLINE3)													2024		2024		2024		
Time	Length (mi)	2013 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2013 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto CO EF (g/mi)	Truck CO EF (Dsl) (g/mi)	Auto CO Emissions (g/s)	Truck CO Emissions (g/s)	Auto CO Scalar	Truck CO Scalar
0:00:00	0.167	114	119	119	123	130	3	3	3	3	3	15	15	1.2033	0.7672	6.63E-03	1.07E-04	0.4020	0.3000
1:00:00	0.167	78	82	82	84	89	3	3	3	3	3	15	15	1.2033	0.7672	4.57E-03	1.07E-04	0.2770	0.3000
2:00:00	0.167	63	66	66	68	72	3	3	3	3	3	15	15	1.2033	0.7672	3.68E-03	1.07E-04	0.2230	0.3000
3:00:00	0.167	48	50	50	52	55	4	4	4	4	4	15	15	1.2033	0.7672	2.79E-03	1.42E-04	0.1689	0.4000
4:00:00	0.167	63	66	66	68	72	5	5	5	5	5	15	15	1.2033	0.7672	3.68E-03	1.78E-04	0.2230	0.5000
5:00:00	0.167	128	134	134	138	146	6	6	6	6	6	15	15	1.2033	0.7672	7.46E-03	2.13E-04	0.4527	0.6000
6:00:00	0.167	196	205	205	212	224	7	7	7	7	7	15	15	1.2033	0.7672	1.14E-02	2.49E-04	0.6926	0.7000
7:00:00	0.167	240	251	251	259	274	8	8	8	8	9	15	15	1.2033	0.7672	1.40E-02	2.84E-04	0.8480	0.8000
8:00:00	0.167	262	274	274	283	300	9	9	9	9	10	15	15	1.2033	0.7672	1.53E-02	3.20E-04	0.9257	0.9000
9:00:00	0.167	268	280	280	290	306	10	10	10	10	11	15	15	1.2033	0.7672	1.56E-02	3.55E-04	0.9459	1.0000
10:00:00	0.167	261	273	273	282	298	10	10	10	10	11	15	15	1.2033	0.7672	1.52E-02	3.55E-04	0.9223	1.0000
11:00:00	0.167	257	269	269	278	294	10	10	10	10	11	15	15	1.2033	0.7672	1.50E-02	3.55E-04	0.9088	1.0000
12:00:00	0.167	265	277	277	286	303	9	9	9	9	10	15	15	1.2033	0.7672	1.54E-02	3.20E-04	0.9358	0.9000
13:00:00	0.167	278	290	291	301	318	8	8	8	8	9	15	15	1.2033	0.7672	1.62E-02	2.84E-04	0.9797	0.8000
14:00:00	0.167	283	296	296	306	324	5	5	5	5	5	15	15	1.2033	0.7672	1.65E-02	1.78E-04	1.0000	0.5000
15:00:00	0.167	258	270	270	279	295	4	4	4	4	4	15	15	1.2033	0.7672	1.50E-02	1.42E-04	0.9122	0.4000
16:00:00	0.167	225	235	236	243	257	5	5	5	5	5	15	15	1.2033	0.7672	1.31E-02	1.78E-04	0.7939	0.5000
17:00:00	0.167	209	218	219	226	239	6	6	6	6	6	15	15	1.2033	0.7672	1.21E-02	2.13E-04	0.7365	0.6000
18:00:00	0.167	210	219	220	227	240	7	7	7	7	8	15	15	1.2033	0.7672	1.22E-02	2.49E-04	0.7399	0.7000
19:00:00	0.167	228	238	239	246	261	7	7	7	7	8	15	15	1.2033	0.7672	1.33E-02	2.49E-04	0.8041	0.7000
20:00:00	0.167	228	238	239	246	261	6	6	6	6	7	15	15	1.2033	0.7672	1.33E-02	2.13E-04	0.8041	0.6000
21:00:00	0.167	217	227	227	235	248	5	5	5	5	5	15	15	1.2033	0.7672	1.26E-02	1.78E-04	0.7669	0.5000
22:00:00	0.167	209	218	219	226	239	5	5	5	5	5	15	15	1.2033	0.7672	1.21E-02	1.78E-04	0.7365	0.5000
23:00:00	0.167	164	171	172	177	187	4	4	4	4	4	15	15	1.2033	0.7672	9.53E-03	1.42E-04	0.5777	0.4000
1.65E-02 3.55E-04																			
Maximum																			

SB Off-ramp Vine (SLINE4)													2024		2024		2024		
Time	Length (mi)	2013 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2013 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto CO EF (g/mi)	Truck CO EF (Dsl) (g/mi)	Auto CO Emissions (g/s)	Truck CO Emissions (g/s)	Auto CO Scalar	Truck CO Scalar
0:00:00	0.234	319	333	334	345	365	12	13	13	13	13	15	15	1.2033	0.7672	2.61E-02	6.49E-04	0.4183	0.5200
1:00:00	0.234	242	253	253	262	277	10	10	10	10	11	15	15	1.2033	0.7672	1.98E-02	4.99E-04	0.3178	0.4000
2:00:00	0.234	210	219	220	227	240	10	10	10	10	11	15	15	1.2033	0.7672	1.71E-02	4.99E-04	0.2751	0.4000
3:00:00	0.234	178	186	186	192	203	10	10	10	10	11	15	15	1.2033	0.7672	1.46E-02	4.99E-04	0.2337	0.4000
4:00:00	0.234	252	263	264	272	288	12	13	13	13	14	15	15	1.2033	0.7672	2.06E-02	6.49E-04	0.3304	0.5200
5:00:00	0.234	555	580	581	600	634	17	18	18	18	19	15	15	1.2033	0.7672	4.54E-02	8.98E-04	0.7286	0.7200
6:00:00	0.234	733	766	767	792	838	20	21	21	22	23	15	15	1.2033	0.7672	6.00E-02	1.05E-03	0.9623	0.8400
7:00:00	0.234	715	747	749	773	817	20	21	21	22	23	15	15	1.2033	0.7672	5.85E-02	1.05E-03	0.9384	0.8400
8:00:00	0.234	709	741	742	766	811	21	22	22	23	24	15	15	1.2033	0.7672	5.80E-02	1.10E-03	0.9309	0.8800
9:00:00	0.234	742	775	777	802	848	23	24	24	25	26	15	15	1.2033	0.7672	6.07E-02	1.20E-03	0.9736	0.9600
10:00:00	0.234	762	796	798	824	871	24	25	25	26	27	15	15	1.2033	0.7672	6.23E-02	1.25E-03	1.0000	1.0000
11:00:00	0.234	727	760	761	786	831	23	24	24	25	26	15	15	1.2033	0.7672	5.95E-02	1.20E-03	0.9548	0.9600
12:00:00	0.234	698	729	731	755	798	23	24	24	25	26	15	15	1.2033	0.7672	5.71E-02	1.20E-03	0.9158	0.9600
13:00:00	0.234	680	711	712	735	777	22	23	23	24	25	15	15	1.2033	0.7672	5.57E-02	1.15E-03	0.8932	0.9200
14:00:00	0.234	683	714	715	738	781	22	23	23	24	25	15	15	1.2033	0.7672	5.59E-02	1.15E-03	0.8970	0.9200
15:00:00	0.234	704	736	737	761	805	22	23	23	24	25	15	15	1.2033	0.7672	5.76E-02	1.15E-03	0.9246	0.9200
16:00:00	0.234	719	751	753	777	822	21	22	22	23	24	15	15	1.2033	0.7672	5.88E-02	1.10E-03	0.9435	0.8800
17:00:00	0.234	723	755	757	782	827	20	21	21	22	23	15	15	1.2033	0.7672	5.91E-02	1.05E-03	0.9485	0.8400
18:00:00	0.234	711	743	744	769	813	20	21	21	22	23	15	15	1.2033	0.7672	5.82E-02	1.05E-03	0.9334	0.8400
19:00:00	0.234	662	692	693	716	757	19	20	20	21	22	15	15	1.2033	0.7672	5.42E-02	9.98E-04	0.8693	0.8000
20:00:00	0.234	588	614	616	636	672	17	18	18	18	19	15	15	1.2033	0.7672	4.81E-02	8.98E-04	0.7714	0.7200
21:00:00	0.234	574	600	601	621	656	17	18	18	18	19	15	15	1.2033	0.7672	4.70E-02	8.98E-04	0.7538	0.7200
22:00:00	0.234	549	574	575	594	628	17	18	18	18	19	15	15	1.2033	0.7672	4.49E-02	8.98E-04	0.7211	0.7200
23:00:00	0.234	430	449	450	465	492	15	16	16	16	17	15	15	1.2033	0.7672	3.51E-02	7.99E-04	0.5641	0.6400
6.23E-02 1.25E-03																			
Maximum																			

SB On-ramp Cahuenga (SLINES)													2024		2024		2024			
Time	Length (mi)	2017 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2017 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto CO EF (Gas) (g/mi)	Truck CO EF (Dsl) (g/mi)	Auto CO Emissions (g/s)	Truck CO Emissions (g/s)	Auto CO Scalar	Truck CO Scalar	
0:00:00	0.227	187	192	193	199	210	6	6	6	6	6	7	15	15	1.2033	0.7672	1.46E-02	2.90E-04	0.6421	0.6667
1:00:00	0.227	147	151	151	156	165	5	5	5	5	5	6	15	15	1.2033	0.7672	1.14E-02	2.42E-04	0.5050	0.5556
2:00:00	0.227	151	155	156	161	170	5	5	5	5	5	6	15	15	1.2033	0.7672	1.17E-02	2.42E-04	0.5184	0.5556
3:00:00	0.227	76	78	78	81	86	2	2	2	2	2	2	15	15	1.2033	0.7672	5.91E-03	9.66E-05	0.2609	0.2222
4:00:00	0.227	45	46	46	48	51	1	1	1	1	1	1	15	15	1.2033	0.7672	3.49E-03	4.83E-05	0.1538	0.1111
5:00:00	0.227	50	51	52	53	56	2	2	2	2	2	2	15	15	1.2033	0.7672	3.87E-03	9.66E-05	0.1706	0.2222
6:00:00	0.227	80	82	82	85	90	3	3	3	3	3	3	15	15	1.2033	0.7672	6.21E-03	1.45E-04	0.2742	0.3333
7:00:00	0.227	119	122	123	127	134	4	4	4	4	4	4	15	15	1.2033	0.7672	9.25E-03	1.93E-04	0.4080	0.4444
8:00:00	0.227	131	135	135	139	147	4	4	4	4	4	5	15	15	1.2033	0.7672	1.02E-02	1.93E-04	0.4515	0.4444
9:00:00	0.227	157	161	162	167	177	5	5	5	5	5	6	15	15	1.2033	0.7672	1.22E-02	2.42E-04	0.5385	0.5556
10:00:00	0.227	165	170	170	176	186	5	5	5	5	5	6	15	15	1.2033	0.7672	1.29E-02	2.42E-04	0.5686	0.5556
11:00:00	0.227	174	179	179	185	196	5	5	5	5	5	6	15	15	1.2033	0.7672	1.36E-02	2.42E-04	0.5987	0.5556
12:00:00	0.227	179	184	184	190	201	6	6	6	6	6	7	15	15	1.2033	0.7672	1.39E-02	2.90E-04	0.6154	0.6667
13:00:00	0.227	178	183	183	189	200	6	6	6	6	6	7	15	15	1.2033	0.7672	1.39E-02	2.90E-04	0.6120	0.6667
14:00:00	0.227	174	179	179	185	196	5	5	5	5	5	6	15	15	1.2033	0.7672	1.36E-02	2.42E-04	0.5987	0.5556
15:00:00	0.227	154	158	159	164	173	5	5	5	5	5	6	15	15	1.2033	0.7672	1.20E-02	2.42E-04	0.5284	0.5556
16:00:00	0.227	138	142	142	147	155	4	4	4	4	4	5	15	15	1.2033	0.7672	1.08E-02	1.93E-04	0.4749	0.4444
17:00:00	0.227	148	152	152	157	167	5	5	5	5	5	6	15	15	1.2033	0.7672	1.15E-02	2.42E-04	0.5084	0.5556
18:00:00	0.227	181	186	187	193	204	6	6	6	6	6	7	15	15	1.2033	0.7672	1.41E-02	2.90E-04	0.6221	0.6667
19:00:00	0.227	208	214	214	221	234	7	7	7	7	7	8	15	15	1.2033	0.7672	1.62E-02	3.38E-04	0.7157	0.7778
20:00:00	0.227	215	221	222	229	242	7	7	7	7	7	8	15	15	1.2033	0.7672	1.67E-02	3.38E-04	0.7391	0.7778
21:00:00	0.227	222	228	229	236	250	7	7	7	7	7	8	15	15	1.2033	0.7672	1.73E-02	3.38E-04	0.7625	0.7778
22:00:00	0.227	285	293	294	303	321	9	9	9	9	10	10	15	15	1.2033	0.7672	2.22E-02	4.35E-04	0.9799	1.0000
23:00:00	0.227	291	299	300	310	327	9	9	9	9	10	10	15	15	1.2033	0.7672	2.27E-02	4.35E-04	1.0000	1.0000

2.27E-02 4.35E-04
Maximum

NB On-ramp Argyle/Franklin (SLINE6)													2024		2024		2024			
Time	Length (mi)	2017 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2017 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto CO EF (Gas) (g/mi)	Truck CO EF (Dsl) (g/mi)	Auto CO Emissions (g/s)	Truck CO Emissions (g/s)	Auto CO Scalar	Truck CO Scalar	
0:00:00	0.174	374	385	385	398	421	12	12	12	12	13	14	15	15	1.2033	0.7672	2.24E-02	4.44E-04	0.4529	0.4444
1:00:00	0.174	252	259	260	268	284	8	8	8	8	9	9	15	15	1.2033	0.7672	1.50E-02	2.96E-04	0.3047	0.2963
2:00:00	0.174	232	239	239	247	261	7	7	7	7	7	8	15	15	1.2033	0.7672	1.39E-02	2.59E-04	0.2812	0.2593
3:00:00	0.174	121	124	125	129	136	4	4	4	4	4	5	15	15	1.2033	0.7672	7.20E-03	1.48E-04	0.1459	0.1481
4:00:00	0.174	79	81	81	84	89	2	2	2	2	2	2	15	15	1.2033	0.7672	4.70E-03	7.41E-05	0.0953	0.0741
5:00:00	0.174	129	133	133	137	145	4	4	4	4	4	5	15	15	1.2033	0.7672	7.72E-03	1.48E-04	0.1565	0.1481
6:00:00	0.174	302	311	311	321	340	10	10	10	11	11	11	15	15	1.2033	0.7672	1.81E-02	3.70E-04	0.3659	0.3704
7:00:00	0.174	543	558	560	578	611	17	17	18	18	19	19	15	15	1.2033	0.7672	3.24E-02	6.29E-04	0.6565	0.6296
8:00:00	0.174	683	702	704	727	768	22	23	23	23	25	25	15	15	1.2033	0.7672	4.08E-02	8.52E-04	0.8259	0.8519
9:00:00	0.174	732	753	754	779	824	23	24	24	24	26	26	15	15	1.2033	0.7672	4.37E-02	8.89E-04	0.8859	0.8889
10:00:00	0.174	725	746	747	771	816	23	24	24	24	26	26	15	15	1.2033	0.7672	4.33E-02	8.89E-04	0.8776	0.8889
11:00:00	0.174	749	770	772	797	843	24	25	25	26	27	27	15	15	1.2033	0.7672	4.47E-02	9.26E-04	0.9059	0.9259
12:00:00	0.174	809	832	834	861	910	26	27	27	28	29	29	15	15	1.2033	0.7672	4.83E-02	1.00E-03	0.9788	1.0000
13:00:00	0.174	827	850	852	880	930	26	27	27	28	29	29	15	15	1.2033	0.7672	4.94E-02	1.00E-03	1.0000	1.0000
14:00:00	0.174	819	842	844	871	921	26	27	27	28	29	29	15	15	1.2033	0.7672	4.89E-02	1.00E-03	0.9906	1.0000
15:00:00	0.174	787	809	811	837	885	25	26	26	27	28	28	15	15	1.2033	0.7672	4.70E-02	9.63E-04	0.9518	0.9630
16:00:00	0.174	776	798	800	826	873	24	25	25	26	27	27	15	15	1.2033	0.7672	4.63E-02	9.26E-04	0.9388	0.9259
17:00:00	0.174	768	790	791	817	864	24	25	25	26	27	27	15	15	1.2033	0.7672	4.59E-02	9.26E-04	0.9294	0.9259
18:00:00	0.174	775	797	799	825	872	24	25	25	26	27	27	15	15	1.2033	0.7672	4.63E-02	9.26E-04	0.9376	0.9259
19:00:00	0.174	790	812	814	841	889	25	26	26	27	28	28	15	15	1.2033	0.7672	4.72E-02	9.63E-04	0.9553	0.9630
20:00:00	0.174	751	772	774	799	845	24	25	25	26	27	27	15	15	1.2033	0.7672	4.48E-02	9.26E-04	0.9082	0.9259
21:00:00	0.174	700	720	721	745	788	22	23	23	23	25	25	15	15	1.2033	0.7672	4.18E-02	8.52E-04	0.8471	0.8519
22:00:00	0.174	760	782	783	809	855	24	25	25	26	27	27	15	15	1.2033	0.7672	4.54E-02	9.26E-04	0.9200	0.9259
23:00:00	0.174	672	691	692	715	756	21	22	22	22	24	24	15	15	1.2033	0.7672	4.01E-02	8.15E-04	0.8129	0.8148

4.94E-02 1.00E-03
Maximum

SB Off-ramp Gower (SLINE7)													2024		2024		2024			
Time	Length (mi)	2013 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2017 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto CO EF (Gas) (g/mi)	Truck CO EF (Dsl) (g/mi)	Auto CO Emissions (g/s)	Truck CO Emissions (g/s)	Auto CO Scalar	Truck CO Scalar	
0:00:00	0.192	150	157	157	162	171	6	6	6	6	6	7	15	15	1.2033	0.7672	1.01E-02	2.46E-04	0.4209	0.5455
1:00:00	0.192	113	118	118	122	129	5	5	5	5	5	6	15	15	1.2033	0.7672	7.59E-03	2.05E-04	0.3164	0.4545
2:00:00	0.192	99	103	104	107	113	5	5	5	5	5	6	15	15	1.2033	0.7672	6.62E-03	2.05E-04	0.2761	0.4545
3:00:00	0.192	83	87	87	90	95	5	5	5	5	5	6	15	15	1.2033	0.7672	5.59E-03	2.05E-04	0.2332	0.4545
4:00:00	0.192	118	123	124	128	135	6	6	6	6	6	7	15	15	1.2033	0.7672	7.91E-03	2.46E-04	0.3298	0.5455
5:00:00	0.192	260	272	272	281	297	8	8	8	8	9	9	15	15	1.2033	0.7672	1.75E-02	3.28E-04	0.7292	0.7273
6:00:00	0.192	344	359	360	372	393	9	9	9	9	10	10	15	15	1.2033	0.7672	2.31E-02	3.69E-04	0.9625	0.8182
7:00:00	0.192	335	350	351	362	383	10	10	10	10	11	11	15	15	1.2033	0.7672	2.25E-02	4.10E-04	0.9383	0.9091
8:00:00	0.192	332	347	348	359	380	10	10	10	10	11	11	15	15	1.2033	0.7672	2.23E-02	4.10E-04	0.9303	0.9091
9:00:00	0.192	348	364	364	376	398	11	11	11	12	12	13	15	15	1.2033	0.7672	2.34E-02	4.51E-04	0.9759	1.0000
10:00:00	0.192	357	373	374	386	408	11	11	11	12	12	13	15	15	1.2033	0.7672	2.40E-02	4.51E-04	1.0000	1.0000
11:00:00	0.192	341	356	357	369	390	11	11	11	12	12	13	15	15	1.2033	0.7672	2.29E-02	4.51E-04	0.9544	1.0000
12:00:00	0.192	327	342	342	354	374	11	11	11	12	12	13	15	15	1.2033	0.7672	2.20E-02	4.51E-04	0.9169	1.0000
13:00:00	0.192	318	332	332	344	364	10	10	10	10	11	11	15	15	1.2033	0.7672	2.13E-02	4.10E-04	0.8901	0.9091
14:00:00	0.192	320	334	335	346	366	10	10	10	10	11	11	15	15	1.2033	0.7672	2.15E-02	4.10E-04	0.8954	0.9091
15:00:00	0.192	330	345	346	357	377	10	10	10	10	11	11	15	15	1.2033	0.7672	2.22E-02	4.10E-04	0.9249	0.9091
16:00:00	0.192	337	352	353	364	385	10	10	10	10	11	11	15	15	1.2033	0.7672	2.26E-02	4.10E-04	0.9437	0.9091
17:00:00	0.192	339	354	355	366	388	9	9	9	9	10	10	15	15	1.2033	0.7672	2.28E-02	3.69E-04	0.9491	0.8182
18:00:00	0.192	333	348	349	360	381	9	9	9	9	10	10	15	15	1.2033	0.7672	2.24E-02	3.69E-04	0.9330	0.8182
19:00:00	0.192	310	324	325	335	354	9	9	9	9	10	10	15	15	1.2033	0.7672	2.08E-02	3.69E-04	0.8686	0.8182
20:00:00	0.192	275	287	288	297	314	8	8	8	8	9	9	15	15	1.2033	0.7672	1.85E-02	3.28E-04	0.7694	0.7273
21:00:00	0.192	269	281	282	291	308	8	8	8	8	9	9	15	15	1.2033	0.7672	1.81E-02	3.28E-04	0.7534	0.7273
22:00:00	0.192	257	269	269	278	294	8	8	8	8	9	9	15	15	1.2033	0.7672	1.73E-02	3.28E-04	0.7212	0.7273
23:00:00	0.192	201	210	210	217	230	7	7	7	7	8	8	15	15	1.2033	0.7672	1.35E-02	2.87E-04	0.5630	0.6364

2.40E-02 4.51E-04
Maximum

SB On-ramp Argyle (SLINE8)													2024		2024		2024			
Time	Length (mi)	2017 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2017 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto CO EF (Gas) (g/mi)	Truck CO EF (Dsl) (g/mi)	Auto CO Emissions (g/s)	Truck CO Emissions (g/s)	Auto CO Scalar	Truck CO Scalar	
0:00:00	0.244	110	113	113	117	124	3	3	3	3	3	3	15	15	1.2033	0.7672	9.22E-03	1.56E-04	0.5512	0.5000
1:00:00	0.244	82	84	84	87	92	3	3	3	3	3	3	15	15	1.2033	0.7672	6.85E-03	1.56E-04	0.4098	0.5000
2:00:00	0.244	87	89	90	93	98	3	3	3	3	3	3	15	15	1.2033	0.7672	7.26E-03	1.56E-04	0.4341	0.5000
3:00:00	0.244	47	48	48	50	53	1	1	1	1	1	1	15	15	1.2033	0.7672	3.91E-03	5.20E-05	0.2341	0.1667
4:00:00	0.244	37	38	38	39	42	1	1	1	1	1	1	15	15	1.2033	0.7672	3.10E-03	5.20E-05	0.1854	0.1667
5:00:00	0.244	49	50	50	52	55	2	2	2	2	2	2	15	15	1.2033	0.7672	4.08E-03	1.04E-04	0.2439	0.3333
6:00:00	0.244	71	73	73	76	80	2	2	2	2	2	2	15	15	1.2033	0.7672	5.95E-03	1.04E-04	0.3561	0.3333
7:00:00	0.244	103	106	106	110	116	3	3	3	3	3	3	15	15	1.2033	0.7672	8.65E-03	1.56E-04	0.5171	0.5000
8:00:00	0.244	123	126	127	131	138	4	4	4	4	4	5	15	15	1.2033	0.7672	1.03E-02	2.08E-04	0.6146	0.6667
9:00:00	0.244	150	154	155	160	169	5	5	5	5	5	6	15	15	1.2033	0.7672	1.26E-02	2.60E-04	0.7512	0.8333
10:00:00	0.244	157	161	162	167	177	5	5	5	5	5	6	15	15	1.2033	0.7672	1.31E-02	2.60E-04	0.7854	0.8333
11:00:00	0.244	160	165	165	170	180	5	5	5	5	5	6	15	15	1.2033	0.7672	1.35E-02	2.60E-04	0.8049	0.8333
12:00:00	0.244	166	171	171	177	187	5	5	5	5	5	6	15	15	1.2033	0.7672	1.39E-02	2.60E-04	0.8341	0.8333
13:00:00	0.244	160	165	165	170	180	5	5	5	5	5	6	15	15	1.2033	0.7672	1.35E-02	2.60E-04	0.8049	0.8333
14:00:00	0.244	174	179	179	185	196	6	6	6	6	6	7	15	15	1.2033	0.7672	1.46E-02	3.12E-04	0.8732	1.0000
15:00:00	0.244	160	165	165	170	180	5	5	5	5	5	6	15	15	1.2033	0.7672	1.35E-02	2.60E-04	0.8049	0.8333
16:00:00	0.244	144	148	148	153	162	5	5	5	5	5	6	15	15	1.2033	0.7672	1.21E-02	2.60E-04	0.7220	0.8333
17:00:00	0.244	138	142	142	147	155	4	4	4	4	4	5	15	15	1.2033	0.7672	1.16E-02	2.08E-04	0.6927	0.6667
18:00:00	0.244	144	148	148	153	162	5	5	5	5	5	6	15	15	1.2033	0.7672	1.21E-02	2.60E-04	0.7220	0.8333
19:00:00	0.244	166	171	171	177	187	5	5	5	5	5	6	15	15	1.2033	0.7672	1.39E-02	2.60E-04	0.8341	0.8333
20:00:00	0.244	156	160	161	166	176	5	5	5	5	5	6	15	15	1.2033	0.7672	1.30E-02	2.60E-04	0.7805	0.8333
21:00:00	0.244	155	159	160	165	174	5	5	5	5	5	6	15	15	1.2033	0.7672	1.30E-02	2.60E-04	0.7756	0.8333
22:00:00	0.244	199	205	205	212	224	6	6	6	6	6	7	15	15	1.2033	0.7672	1.67E-02	3.12E-04	1.0000	1.0000
23:00:00	0.244	199	205	205	212	224	6	6	6	6	6	7	15	15	1.2033	0.7672	1.67E-02	3.12E-04	1.0000	1.0000

1.67E-02 3.12E-04
Maximum

NB Off-ramp Gower (SLINE9)												2024		2024		2024			
Time	Length (mi)	2013 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2013 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto CO EF (g/mi)	Truck CO EF (Dsl) (g/mi)	Auto CO Emissions (g/s)	Truck CO Emissions (g/s)	Auto CO Scalar	Truck CO Scalar
0:00:00	0.128	101	106	106	109	115	3	3	3	3	3	15	15	1.2033	0.7672	4.53E-03	8.17E-05	0.4046	0.3333
1:00:00	0.128	69	72	72	75	79	3	3	3	3	3	15	15	1.2033	0.7672	3.07E-03	8.17E-05	0.2748	0.3333
2:00:00	0.128	56	59	59	61	64	3	3	3	3	3	15	15	1.2033	0.7672	2.52E-03	8.17E-05	0.2252	0.3333
3:00:00	0.128	43	45	45	46	49	3	3	3	3	3	15	15	1.2033	0.7672	1.92E-03	8.17E-05	0.1718	0.3333
4:00:00	0.128	56	59	59	61	64	5	5	5	5	5	15	15	1.2033	0.7672	2.52E-03	1.36E-04	0.2252	0.5556
5:00:00	0.128	113	118	118	122	129	6	6	6	6	6	15	15	1.2033	0.7672	5.04E-03	1.63E-04	0.4504	0.6667
6:00:00	0.128	174	182	182	188	199	6	6	6	6	6	15	15	1.2033	0.7672	7.77E-03	1.63E-04	0.6947	0.6667
7:00:00	0.128	213	223	223	230	244	7	7	7	7	8	15	15	1.2033	0.7672	9.52E-03	1.91E-04	0.8511	0.7778
8:00:00	0.128	232	242	243	251	265	8	8	8	8	9	15	15	1.2033	0.7672	1.03E-02	2.18E-04	0.9237	0.8889
9:00:00	0.128	238	249	249	257	272	9	9	9	9	10	15	15	1.2033	0.7672	1.06E-02	2.45E-04	0.9504	1.0000
10:00:00	0.128	232	242	243	251	265	9	9	9	9	10	15	15	1.2033	0.7672	1.03E-02	2.45E-04	0.9237	1.0000
11:00:00	0.128	228	238	239	246	261	9	9	9	9	10	15	15	1.2033	0.7672	1.02E-02	2.45E-04	0.9084	1.0000
12:00:00	0.128	235	246	246	254	269	8	8	8	8	9	15	15	1.2033	0.7672	1.05E-02	2.18E-04	0.9389	0.8889
13:00:00	0.128	246	257	258	266	281	7	7	7	7	8	15	15	1.2033	0.7672	1.10E-02	1.91E-04	0.9809	0.7778
14:00:00	0.128	251	262	263	271	287	4	4	4	4	4	15	15	1.2033	0.7672	1.12E-02	1.09E-04	1.0000	0.4444
15:00:00	0.128	229	239	240	248	262	4	4	4	4	4	15	15	1.2033	0.7672	1.02E-02	1.09E-04	0.9122	0.4444
16:00:00	0.128	199	208	208	215	228	5	5	5	5	5	15	15	1.2033	0.7672	8.88E-03	1.36E-04	0.7939	0.5556
17:00:00	0.128	185	193	194	200	211	5	5	5	5	5	15	15	1.2033	0.7672	8.24E-03	1.36E-04	0.7366	0.5556
18:00:00	0.128	187	195	196	202	214	6	6	6	6	6	15	15	1.2033	0.7672	8.33E-03	1.63E-04	0.7443	0.6667
19:00:00	0.128	202	211	211	218	231	6	6	6	6	6	15	15	1.2033	0.7672	9.01E-03	1.63E-04	0.8053	0.6667
20:00:00	0.128	202	211	211	218	231	5	5	5	5	5	15	15	1.2033	0.7672	9.01E-03	1.36E-04	0.8053	0.5556
21:00:00	0.128	193	202	202	209	221	5	5	5	5	5	15	15	1.2033	0.7672	8.63E-03	1.36E-04	0.7710	0.5556
22:00:00	0.128	185	193	194	200	211	4	4	4	4	4	15	15	1.2033	0.7672	8.24E-03	1.09E-04	0.7366	0.4444
23:00:00	0.128	146	153	153	158	167	4	4	4	4	4	15	15	1.2033	0.7672	6.53E-03	1.09E-04	0.5840	0.4444

Source: ESA, 2020.

1.12E-02 **2.45E-04**
Maximum

On and Off Ramps * Ratio Applied from US101 Ramps tab

NB Off-ramp Cahuenga (SLINE3)														2024		2024		2024	
Time	Length (mi)	2013 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2013 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto NOX EF (Gas) (g/mi)	Truck NOX EF (Dsl) (g/mi)	Auto NOX Emissions (g/s)	Truck NOX Emissions (g/s)	Auto NOX Scalar	Truck NOX Scalar
0:00:00	0.167	114	119	119	123	130	3	3	3	3	3	15	15	0.0502	4.1424	2.76E-04	5.75E-04	0.4020	0.3000
1:00:00	0.167	78	82	82	84	89	3	3	3	3	3	15	15	0.0502	4.1424	1.90E-04	5.75E-04	0.2770	0.3000
2:00:00	0.167	63	66	66	68	72	3	3	3	3	3	15	15	0.0502	4.1424	1.53E-04	5.75E-04	0.2230	0.3000
3:00:00	0.167	48	50	50	52	55	4	4	4	4	4	15	15	0.0502	4.1424	1.16E-04	7.67E-04	0.1689	0.4000
4:00:00	0.167	63	66	66	68	72	5	5	5	5	5	15	15	0.0502	4.1424	1.53E-04	9.59E-04	0.2230	0.5000
5:00:00	0.167	128	134	134	138	146	6	6	6	6	6	15	15	0.0502	4.1424	3.11E-04	1.15E-03	0.4527	0.6000
6:00:00	0.167	196	205	205	212	224	7	7	7	7	8	15	15	0.0502	4.1424	4.76E-04	1.34E-03	0.6926	0.7000
7:00:00	0.167	240	251	251	259	274	8	8	8	8	9	15	15	0.0502	4.1424	5.83E-04	1.53E-03	0.8480	0.8000
8:00:00	0.167	262	274	274	283	300	9	9	9	10	10	15	15	0.0502	4.1424	6.36E-04	1.73E-03	0.9257	0.9000
9:00:00	0.167	268	280	281	290	306	10	10	10	11	11	15	15	0.0502	4.1424	6.50E-04	1.92E-03	0.9459	1.0000
10:00:00	0.167	261	273	273	282	298	10	10	10	11	11	15	15	0.0502	4.1424	6.34E-04	1.92E-03	0.9223	1.0000
11:00:00	0.167	257	269	269	278	294	10	10	10	11	11	15	15	0.0502	4.1424	6.25E-04	1.92E-03	0.9088	1.0000
12:00:00	0.167	265	277	277	286	303	9	9	9	10	10	15	15	0.0502	4.1424	6.43E-04	1.73E-03	0.9358	0.9000
13:00:00	0.167	278	290	291	301	318	8	8	8	9	9	15	15	0.0502	4.1424	6.74E-04	1.53E-03	0.9797	0.8000
14:00:00	0.167	283	296	296	306	324	5	5	5	5	5	15	15	0.0502	4.1424	6.87E-04	9.59E-04	1.0000	0.5000
15:00:00	0.167	258	270	270	279	295	4	4	4	4	4	15	15	0.0502	4.1424	6.27E-04	7.67E-04	0.9122	0.4000
16:00:00	0.167	225	235	235	243	257	5	5	5	5	5	15	15	0.0502	4.1424	5.46E-04	9.59E-04	0.7939	0.5000
17:00:00	0.167	209	218	219	226	239	6	6	6	6	6	15	15	0.0502	4.1424	5.06E-04	1.15E-03	0.7365	0.6000
18:00:00	0.167	210	219	220	227	240	7	7	7	7	8	15	15	0.0502	4.1424	5.09E-04	1.34E-03	0.7399	0.7000
19:00:00	0.167	228	238	239	246	261	7	7	7	7	8	15	15	0.0502	4.1424	5.53E-04	1.34E-03	0.8041	0.7000
20:00:00	0.167	228	238	239	246	261	6	6	6	6	7	15	15	0.0502	4.1424	5.53E-04	1.15E-03	0.8041	0.6000
21:00:00	0.167	217	227	227	235	248	5	5	5	5	5	15	15	0.0502	4.1424	5.27E-04	9.59E-04	0.7669	0.5000
22:00:00	0.167	209	218	219	226	239	5	5	5	5	5	15	15	0.0502	4.1424	5.06E-04	9.59E-04	0.7365	0.5000
23:00:00	0.167	164	171	172	177	187	4	4	4	4	4	15	15	0.0502	4.1424	3.97E-04	7.67E-04	0.5777	0.4000
6.87E-04																	1.92E-03		
Maximum																			

SB Off-ramp Vine (SLINE4)														2024		2024		2024	
Time	Length (mi)	2013 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2013 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto NOX EF (Gas) (g/mi)	Truck NOX EF (Dsl) (g/mi)	Auto NOX Emissions (g/s)	Truck NOX Emissions (g/s)	Auto NOX Scalar	Truck NOX Scalar
0:00:00	0.234	319	333	334	345	365	12	13	13	13	14	15	15	0.0502	4.1424	1.09E-03	3.50E-03	0.4183	0.5200
1:00:00	0.234	242	253	253	262	277	10	10	10	11	11	15	15	0.0502	4.1424	8.26E-04	2.69E-03	0.3178	0.4000
2:00:00	0.234	210	219	220	227	240	10	10	10	11	11	15	15	0.0502	4.1424	7.15E-04	2.69E-03	0.2751	0.4000
3:00:00	0.234	178	186	186	192	203	10	10	10	11	11	15	15	0.0502	4.1424	6.07E-04	2.69E-03	0.2337	0.4000
4:00:00	0.234	252	263	264	272	288	12	13	13	13	14	15	15	0.0502	4.1424	8.58E-04	3.50E-03	0.3304	0.5200
5:00:00	0.234	555	580	581	600	634	17	18	18	18	19	15	15	0.0502	4.1424	1.89E-03	4.85E-03	0.7286	0.7200
6:00:00	0.234	733	766	767	792	838	20	21	21	22	23	15	15	0.0502	4.1424	2.50E-03	5.66E-03	0.9623	0.8400
7:00:00	0.234	715	747	749	773	817	20	21	21	22	23	15	15	0.0502	4.1424	2.44E-03	5.66E-03	0.9384	0.8400
8:00:00	0.234	709	741	742	766	811	21	22	22	23	24	15	15	0.0502	4.1424	2.42E-03	5.93E-03	0.9309	0.8800
9:00:00	0.234	742	775	777	802	848	23	24	24	25	26	15	15	0.0502	4.1424	2.53E-03	6.47E-03	0.9736	0.9600
10:00:00	0.234	762	796	798	824	871	24	25	25	26	27	15	15	0.0502	4.1424	2.60E-03	6.74E-03	1.0000	1.0000
11:00:00	0.234	727	760	761	786	831	23	24	24	25	26	15	15	0.0502	4.1424	2.48E-03	6.47E-03	0.9548	0.9600
12:00:00	0.234	698	729	731	755	798	23	24	24	25	26	15	15	0.0502	4.1424	2.38E-03	6.47E-03	0.9158	0.9600
13:00:00	0.234	680	711	712	735	777	22	23	23	24	25	15	15	0.0502	4.1424	2.32E-03	6.20E-03	0.8932	0.9200
14:00:00	0.234	683	714	715	738	781	22	23	23	24	25	15	15	0.0502	4.1424	2.33E-03	6.20E-03	0.8970	0.9200
15:00:00	0.234	704	736	737	761	805	22	23	23	24	25	15	15	0.0502	4.1424	2.40E-03	6.20E-03	0.9246	0.9200
16:00:00	0.234	719	751	753	777	822	21	22	22	23	24	15	15	0.0502	4.1424	2.45E-03	5.93E-03	0.9435	0.8800
17:00:00	0.234	723	755	757	782	827	20	21	21	22	23	15	15	0.0502	4.1424	2.46E-03	5.66E-03	0.9485	0.8400
18:00:00	0.234	711	743	744	769	813	20	21	21	22	23	15	15	0.0502	4.1424	2.43E-03	5.66E-03	0.9334	0.8400
19:00:00	0.234	662	692	693	716	757	19	20	20	21	22	15	15	0.0502	4.1424	2.26E-03	5.39E-03	0.8693	0.8000
20:00:00	0.234	588	614	616	636	672	17	18	18	18	19	15	15	0.0502	4.1424	2.00E-03	4.85E-03	0.7714	0.7200
21:00:00	0.234	574	600	601	621	656	17	18	18	18	19	15	15	0.0502	4.1424	1.96E-03	4.85E-03	0.7538	0.7200
22:00:00	0.234	549	574	575	594	628	17	18	18	18	19	15	15	0.0502	4.1424	1.87E-03	4.85E-03	0.7211	0.7200
23:00:00	0.234	430	449	450	465	492	15	16	16	16	17	15	15	0.0502	4.1424	1.47E-03	4.31E-03	0.5641	0.6400
2.60E-03																	6.74E-03		
Maximum																			

SB On-ramp Cahuenga (SLINE5)														2024		2024		2024	
Time	Length (mi)	2017 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2017 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto NOX EF (Gas) (g/mi)	Truck NOX EF (Dsl) (g/mi)	Auto NOX Emissions (g/s)	Truck NOX Emissions (g/s)	Auto NOX Scalar	Truck NOX Scalar
0:00:00	0.227	187	192	193	199	210	6	6	6	6	7	15	15	0.0502	4.1424	6.07E-04	1.57E-03	0.6421	0.6667
1:00:00	0.227	147	151	151	156	165	5	5	5	5	6	15	15	0.0502	4.1424	4.77E-04	1.30E-03	0.5050	0.5556
2:00:00	0.227	151	155	155	156	170	5	5	5	5	6	15	15	0.0502	4.1424	4.90E-04	1.30E-03	0.5184	0.5556
3:00:00	0.227	76	78	78	81	86	2	2	2	2	2	15	15	0.0502	4.1424	2.46E-04	5.22E-04	0.2609	0.2222
4:00:00	0.227	45	46	46	48	51	1	1	1	1	1	15	15	0.0502	4.1424	1.45E-04	2.61E-04	0.1538	0.1111
5:00:00	0.227	50	51	52	53	56	2	2	2	2	2	15	15	0.0502	4.1424	1.61E-04	5.22E-04	0.1706	0.2222
6:00:00	0.227	80	82	82	85	90	3	3	3	3	3	15	15	0.0502	4.1424	2.59E-04	7.83E-04	0.2742	0.3333
7:00:00	0.227	119	122	123	127	134	4	4	4	4	4	15	15	0.0502	4.1424	3.86E-04	1.04E-03	0.4080	0.4444
8:00:00	0.227	131	135	135	139	147	4	4	4	4	4	15	15	0.0502	4.1424	4.27E-04	1.04E-03	0.4515	0.4444
9:00:00	0.227	157	161	162	167	177	5	5	5	5	5	15	15	0.0502	4.1424	5.09E-04	1.30E-03	0.5385	0.5556
10:00:00	0.227	165	170	170	176	186	5	5	5	5	6	15	15	0.0502	4.1424	5.37E-04	1.30E-03	0.5686	0.5556
11:00:00	0.227	174	179	179	185	196	5	5	5	5	6	15	15	0.0502	4.1424	5.66E-04	1.30E-03	0.5987	0.5556
12:00:00	0.227	179	184	184	190	201	6	6	6	6	7	15	15	0.0502	4.1424	5.81E-04	1.57E-03	0.6154	0.6667
13:00:00	0.227	178	183	183	189	200	6	6	6	6	7	15	15	0.0502	4.1424	5.78E-04	1.57E-03	0.6120	0.6667
14:00:00	0.227	174	179	179	185	196	5	5	5	5	6	15	15	0.0502	4.1424	5.66E-04	1.30E-03	0.5987	0.5556
15:00:00	0.227	154	158	159	164	173	5	5	5	5	5	15	15	0.0502	4.1424	4.99E-04	1.30E-03	0.5284	0.5556
16:00:00	0.227	138	142	142	147	155	4	4	4	4	4	15	15	0.0502	4.1424	4.49E-04	1.04E-03	0.4749	0.4444
17:00:00	0.227	148	152	152	157	167	5	5	5	5	6	15	15	0.0502	4.1424	4.80E-04	1.30E-03	0.5084	0.5556
18:00:00	0.227	181	186	187	193	204	6	6	6	6	7	15	15	0.0502	4.1424	5.88E-04	1.57E-03	0.6221	0.6667
19:00:00	0.227	208	214	214	221	234	7	7	7	7	8	15	15	0.0502	4.1424	6.76E-04	1.83E-03	0.7157	0.7778
20:00:00	0.227	215	221	222	229	242	7	7	7	7	8	15	15	0.0502	4.1424	6.98E-04	1.83E-03	0.7391	0.7778
21:00:00	0.227	222	228	229	236	250	7	7	7	7	8	15	15	0.0502	4.1424	7.20E-04	1.83E-03	0.7625	0.7778
22:00:00	0.227	285	293	294	303	321	9	9	9	10	10	15	15	0.0502	4.1424	9.26E-04	2.35E-03	0.9799	1.0000
23:00:00	0.227	291	299	300	310	327	9	9	9	10	10	15	15	0.0502	4.1424	9.45E-04	2.35E-03	1.0000	1.0000

9.45E-04 2.35E-03
Maximum

NB On-ramp Argyle/Franklin (SLINE6)														2024		2024		2024	
Time	Length (mi)	2017 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2017 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto NOX EF (Gas) (g/mi)	Truck NOX EF (Dsl) (g/mi)	Auto NOX Emissions (g/s)	Truck NOX Emissions (g/s)	Auto NOX Scalar	Truck NOX Scalar
0:00:00	0.174	374	385	385	398	421	12	12	12	13	14	15	15	0.0502	4.1424	9.32E-04	2.40E-03	0.4529	0.4444
1:00:00	0.174	252	259	260	268	284	8	8	8	9	9	15	15	0.0502	4.1424	6.27E-04	1.60E-03	0.3047	0.2963
2:00:00	0.174	232	239	239	247	261	7	7	7	7	8	15	15	0.0502	4.1424	5.79E-04	1.40E-03	0.2812	0.2593
3:00:00	0.174	121	124	125	129	136	4	4	4	4	5	15	15	0.0502	4.1424	3.00E-04	8.00E-04	0.1459	0.1481
4:00:00	0.174	79	81	81	84	89	2	2	2	2	2	15	15	0.0502	4.1424	1.96E-04	4.00E-04	0.0953	0.0741
5:00:00	0.174	129	133	133	137	145	4	4	4	4	5	15	15	0.0502	4.1424	3.22E-04	8.00E-04	0.1565	0.1481
6:00:00	0.174	302	311	311	321	340	10	10	10	11	11	15	15	0.0502	4.1424	7.53E-04	2.00E-03	0.3659	0.3704
7:00:00	0.174	543	558	560	578	611	17	17	18	18	19	15	15	0.0502	4.1424	1.35E-03	3.40E-03	0.6565	0.6296
8:00:00	0.174	683	702	704	727	768	22	23	23	23	25	15	15	0.0502	4.1424	1.70E-03	4.60E-03	0.8259	0.8519
9:00:00	0.174	732	753	754	779	824	23	24	24	24	26	15	15	0.0502	4.1424	1.82E-03	4.80E-03	0.8859	0.8889
10:00:00	0.174	725	746	747	771	816	23	24	24	24	26	15	15	0.0502	4.1424	1.81E-03	4.80E-03	0.8776	0.8889
11:00:00	0.174	749	770	772	797	843	24	25	25	26	27	15	15	0.0502	4.1424	1.86E-03	5.00E-03	0.9059	0.9259
12:00:00	0.174	809	832	834	861	910	26	27	27	28	29	15	15	0.0502	4.1424	2.01E-03	5.40E-03	0.9788	1.0000
13:00:00	0.174	827	850	852	880	930	26	27	27	28	29	15	15	0.0502	4.1424	2.06E-03	5.40E-03	1.0000	1.0000
14:00:00	0.174	819	842	844	871	921	26	27	27	28	29	15	15	0.0502	4.1424	2.04E-03	5.40E-03	0.9906	1.0000
15:00:00	0.174	787	809	811	837	885	25	26	26	27	28	15	15	0.0502	4.1424	1.96E-03	5.20E-03	0.9518	0.9630
16:00:00	0.174	776	798	800	826	873	24	25	25	26	27	15	15	0.0502	4.1424	1.93E-03	5.00E-03	0.9388	0.9259
17:00:00	0.174	768	790	791	817	864	24	25	25	26	27	15	15	0.0502	4.1424	1.91E-03	5.00E-03	0.9294	0.9259
18:00:00	0.174	775	797	799	825	872	24	25	25	26	27	15	15	0.0502	4.1424	1.93E-03	5.00E-03	0.9376	0.9259
19:00:00	0.174	790	812	814	841	889	25	26	26	27	28	15	15	0.0502	4.1424	1.97E-03	5.20E-03	0.9553	0.9630
20:00:00	0.174	751	772	774	799	845	24	25	25	26	27	15	15	0.0502	4.1424	1.87E-03	5.00E-03	0.9082	0.9259
21:00:00	0.174	700	720	721	745	788	22	23	23	23	25	15	15	0.0502	4.1424	1.74E-03	4.60E-03	0.8471	0.8519
22:00:00	0.174	760	782	783	809	855	24	25	25	26	27	15	15	0.0502	4.1424	1.89E-03	5.00E-03	0.9200	0.9259
23:00:00	0.174	672	691	692	715	756	21	22	22	22	24	15	15	0.0502	4.1424	1.67E-03	4.40E-03	0.8129	0.8148

2.06E-03 5.40E-03
Maximum

SB Off-ramp Gower (SLINE7)														2024		2024		2024	
Time	Length (mi)	2013 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2013 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto NOX EF (Gas) (g/mi)	Truck NOX EF (Dsl) (g/mi)	Auto NOX Emissions (g/s)	Truck NOX Emissions (g/s)	Auto NOX Scalar	Truck NOX Scalar
0:00:00	0.192	150	157	157	162	171	6	6	6	6	7	15	15	0.0502	4.1424	4.21E-04	1.33E-03	0.4209	0.5455
1:00:00	0.192	113	118	118	122	129	5	5	5	5	6	15	15	0.0502	4.1424	3.16E-04	1.11E-03	0.3164	0.4545
2:00:00	0.192	99	103	103	104	113	5	5	5	5	5	15	15	0.0502	4.1424	2.76E-04	1.11E-03	0.2761	0.4545
3:00:00	0.192	83	87	87	90	95	5	5	5	5	5	15	15	0.0502	4.1424	2.33E-04	1.11E-03	0.2332	0.4545
4:00:00	0.192	118	123	124	128	135	6	6	6	6	7	15	15	0.0502	4.1424	3.30E-04	1.33E-03	0.3298	0.5455
5:00:00	0.192	260	272	272	281	297	8	8	8	8	9	15	15	0.0502	4.1424	7.29E-04	1.77E-03	0.7292	0.7273
6:00:00	0.192	344	359	360	372	393	9	9	9	10	10	15	15	0.0502	4.1424	9.63E-04	1.99E-03	0.9625	0.8182
7:00:00	0.192	335	350	351	362	383	10	10	10	11	11	15	15	0.0502	4.1424	9.38E-04	2.21E-03	0.9383	0.9091
8:00:00	0.192	332	347	348	359	380	10	10	10	10	11	15	15	0.0502	4.1424	9.30E-04	2.21E-03	0.9303	0.9091
9:00:00	0.192	348	364	364	376	398	11	11	12	12	13	15	15	0.0502	4.1424	9.76E-04	2.43E-03	0.9759	1.0000
10:00:00	0.192	357	373	374	386	408	11	11	12	12	13	15	15	0.0502	4.1424	1.00E-03	2.43E-03	1.0000	1.0000
11:00:00	0.192	341	356	357	369	390	11	11	12	12	13	15	15	0.0502	4.1424	9.54E-04	2.43E-03	0.9544	1.0000
12:00:00	0.192	327	342	342	354	374	11	11	12	12	13	15	15	0.0502	4.1424	9.17E-04	2.43E-03	0.9169	1.0000
13:00:00	0.192	318	332	333	344	364	10	10	10	11	11	15	15	0.0502	4.1424	8.90E-04	2.21E-03	0.8901	0.9091
14:00:00	0.192	320	334	335	346	366	10	10	10	11	11	15	15	0.0502	4.1424	8.95E-04	2.21E-03	0.8954	0.9091
15:00:00	0.192	330	345	346	357	377	10	10	10	11	11	15	15	0.0502	4.1424	9.25E-04	2.21E-03	0.9249	0.9091
16:00:00	0.192	337	352	353	364	385	10	10	10	11	11	15	15	0.0502	4.1424	9.44E-04	2.21E-03	0.9437	0.9091
17:00:00	0.192	339	354	355	366	388	9	9	9	9	10	15	15	0.0502	4.1424	9.49E-04	1.99E-03	0.9491	0.8182
18:00:00	0.192	333	348	349	360	381	9	9	9	9	10	15	15	0.0502	4.1424	9.33E-04	1.99E-03	0.9330	0.8182
19:00:00	0.192	310	324	325	335	354	9	9	9	9	10	15	15	0.0502	4.1424	8.69E-04	1.99E-03	0.8686	0.8182
20:00:00	0.192	275	287	288	297	314	8	8	8	8	9	15	15	0.0502	4.1424	7.69E-04	1.77E-03	0.7694	0.7273
21:00:00	0.192	269	281	282	291	308	8	8	8	8	9	15	15	0.0502	4.1424	7.53E-04	1.77E-03	0.7534	0.7273
22:00:00	0.192	257	269	269	278	294	8	8	8	8	9	15	15	0.0502	4.1424	7.21E-04	1.77E-03	0.7212	0.7273
23:00:00	0.192	201	210	210	217	230	7	7	7	7	8	15	15	0.0502	4.1424	5.63E-04	1.55E-03	0.5630	0.6364

1.00E-03 2.43E-03
Maximum

SB On-ramp Argyle (SLINE8)														2024		2024		2024	
Time	Length (mi)	2017 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2017 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto NOX EF (Gas) (g/mi)	Truck NOX EF (Dsl) (g/mi)	Auto NOX Emissions (g/s)	Truck NOX Emissions (g/s)	Auto NOX Scalar	Truck NOX Scalar
0:00:00	0.244	110	113	113	117	124	3	3	3	3	3	15	15	0.0502	4.1424	3.84E-04	8.42E-04	0.5512	0.5000
1:00:00	0.244	82	84	84	87	92	3	3	3	3	3	15	15	0.0502	4.1424	2.86E-04	8.42E-04	0.4098	0.5000
2:00:00	0.244	87	89	90	93	98	3	3	3	3	3	15	15	0.0502	4.1424	3.03E-04	8.42E-04	0.4341	0.5000
3:00:00	0.244	47	48	48	50	53	1	1	1	1	1	15	15	0.0502	4.1424	1.63E-04	2.81E-04	0.2341	0.1667
4:00:00	0.244	37	38	38	39	42	1	1	1	1	1	15	15	0.0502	4.1424	1.29E-04	2.81E-04	0.1854	0.1667
5:00:00	0.244	49	50	50	52	55	2	2	2	2	2	15	15	0.0502	4.1424	1.70E-04	5.62E-04	0.2439	0.3333
6:00:00	0.244	71	73	73	76	80	2	2	2	2	2	15	15	0.0502	4.1424	2.48E-04	5.62E-04	0.3561	0.3333
7:00:00	0.244	103	106	106	110	116	3	3	3	3	3	15	15	0.0502	4.1424	3.60E-04	8.42E-04	0.5171	0.5000
8:00:00	0.244	123	126	127	131	138	4	4	4	4	5	15	15	0.0502	4.1424	4.28E-04	1.12E-03	0.6146	0.6667
9:00:00	0.244	150	154	155	160	169	5	5	5	5	6	15	15	0.0502	4.1424	5.24E-04	1.40E-03	0.7512	0.8333
10:00:00	0.244	157	161	162	167	177	5	5	5	5	6	15	15	0.0502	4.1424	5.48E-04	1.40E-03	0.7854	0.8333
11:00:00	0.244	160	165	165	170	180	5	5	5	5	6	15	15	0.0502	4.1424	5.61E-04	1.40E-03	0.8049	0.8333
12:00:00	0.244	166	171	171	177	187	5	5	5	5	6	15	15	0.0502	4.1424	5.82E-04	1.40E-03	0.8341	0.8333
13:00:00	0.244	160	165	165	170	180	5	5	5	5	6	15	15	0.0502	4.1424	5.61E-04	1.40E-03	0.8049	0.8333
14:00:00	0.244	174	179	179	185	196	6	6	6	6	7	15	15	0.0502	4.1424	6.09E-04	1.68E-03	0.8732	1.0000
15:00:00	0.244	160	165	165	170	180	5	5	5	5	6	15	15	0.0502	4.1424	5.61E-04	1.40E-03	0.8049	0.8333
16:00:00	0.244	144	148	148	153	162	5	5	5	5	6	15	15	0.0502	4.1424	5.03E-04	1.40E-03	0.7220	0.8333
17:00:00	0.244	138	142	142	147	155	4	4	4	4	5	15	15	0.0502	4.1424	4.83E-04	1.12E-03	0.6927	0.6667
18:00:00	0.244	144	148	148	153	162	5	5	5	5	6	15	15	0.0502	4.1424	5.03E-04	1.40E-03	0.7220	0.8333
19:00:00	0.244	166	171	171	177	187	5	5	5	5	6	15	15	0.0502	4.1424	5.82E-04	1.40E-03	0.8341	0.8333
20:00:00	0.244	156	160	161	166	176	5	5	5	5	6	15	15	0.0502	4.1424	5.44E-04	1.40E-03	0.7805	0.8333
21:00:00	0.244	155	159	160	165	174	5	5	5	5	6	15	15	0.0502	4.1424	5.41E-04	1.40E-03	0.7756	0.8333
22:00:00	0.244	199	205	205	212	224	6	6	6	6	7	15	15	0.0502	4.1424	6.97E-04	1.68E-03	1.0000	1.0000
23:00:00	0.244	199	205	205	212	224	6	6	6	6	7	15	15	0.0502	4.1424	6.97E-04	1.68E-03	1.0000	1.0000

6.97E-04 1.68E-03
Maximum

NB Off-ramp Gower (SLINE9)													2024		2024		2024			
Time	Length (mi)	2013 Auto Flow (vehicle/hr)	2024 Auto Flow (vehicle/hr)	2024-2025 Average Auto Flow (vehicle/hr)	2026-2039 Average Auto Flow (vehicle/hr)	2040-2053 Average Auto Flow (vehicle/hr)	2013 Truck Flow (vehicle/hr)	2024 Truck Flow (vehicle/hr)	2024-2025 Average Truck Flow (vehicle/hr)	2026-2039 Average Truck Flow (vehicle/hr)	2040-2053 Average Truck Flow (vehicle/hr)	Auto Speed (mph)	Truck Speed (mph)	Auto NOX EF (Gas) (g/mi)	Truck NOX EF (Dsl) (g/mi)	Auto NOX Emissions (g/s)	Truck NOX Emissions (g/s)	Auto NOX Scalar	Truck NOX Scalar	
0:00:00	0.128	101	106	106	109	115	3	3	3	3	3	15	15	0.0502	4.1424	1.89E-04	4.41E-04	0.4046	0.3333	
1:00:00	0.128	69	72	72	75	79	3	3	3	3	3	15	15	0.0502	4.1424	1.28E-04	4.41E-04	0.2748	0.3333	
2:00:00	0.128	56	59	59	61	64	3	3	3	3	3	15	15	0.0502	4.1424	1.05E-04	4.41E-04	0.2252	0.3333	
3:00:00	0.128	43	45	45	46	49	3	3	3	3	3	15	15	0.0502	4.1424	8.01E-05	4.41E-04	0.1718	0.3333	
4:00:00	0.128	56	59	59	61	64	5	5	5	5	5	15	15	0.0502	4.1424	1.05E-04	7.35E-04	0.2252	0.5556	
5:00:00	0.128	113	118	118	122	129	6	6	6	6	6	7	15	15	0.0502	4.1424	2.10E-04	8.82E-04	0.4504	0.6667
6:00:00	0.128	174	182	182	188	199	6	6	6	6	6	7	15	15	0.0502	4.1424	3.24E-04	8.82E-04	0.6947	0.6667
7:00:00	0.128	213	223	223	230	244	7	7	7	7	8	8	15	15	0.0502	4.1424	3.97E-04	1.03E-03	0.8511	0.7778
8:00:00	0.128	232	242	243	251	265	8	8	8	8	9	9	15	15	0.0502	4.1424	4.31E-04	1.18E-03	0.9237	0.8889
9:00:00	0.128	238	249	249	257	272	9	9	9	9	10	10	15	15	0.0502	4.1424	4.43E-04	1.32E-03	0.9504	1.0000
10:00:00	0.128	232	242	243	251	265	9	9	9	9	10	10	15	15	0.0502	4.1424	4.31E-04	1.32E-03	0.9237	1.0000
11:00:00	0.128	228	238	239	246	261	9	9	9	9	10	10	15	15	0.0502	4.1424	4.24E-04	1.32E-03	0.9084	1.0000
12:00:00	0.128	235	246	246	254	269	8	8	8	8	9	9	15	15	0.0502	4.1424	4.38E-04	1.18E-03	0.9389	0.8889
13:00:00	0.128	246	257	258	266	281	7	7	7	7	8	8	15	15	0.0502	4.1424	4.58E-04	1.03E-03	0.9809	0.7778
14:00:00	0.128	251	262	263	271	287	4	4	4	4	4	5	15	15	0.0502	4.1424	4.66E-04	5.88E-04	1.0000	0.4444
15:00:00	0.128	229	239	240	248	262	4	4	4	4	4	5	15	15	0.0502	4.1424	4.26E-04	5.88E-04	0.9122	0.4444
16:00:00	0.128	199	208	208	215	228	5	5	5	5	5	6	15	15	0.0502	4.1424	3.70E-04	7.35E-04	0.7939	0.5556
17:00:00	0.128	185	193	194	200	211	5	5	5	5	5	6	15	15	0.0502	4.1424	3.44E-04	7.35E-04	0.7366	0.5556
18:00:00	0.128	187	195	196	202	214	6	6	6	6	6	7	15	15	0.0502	4.1424	3.47E-04	8.82E-04	0.7443	0.6667
19:00:00	0.128	202	211	211	218	231	6	6	6	6	6	7	15	15	0.0502	4.1424	3.76E-04	8.82E-04	0.8053	0.6667
20:00:00	0.128	202	211	211	218	231	5	5	5	5	5	6	15	15	0.0502	4.1424	3.76E-04	7.35E-04	0.8053	0.5556
21:00:00	0.128	193	202	202	209	221	5	5	5	5	5	6	15	15	0.0502	4.1424	3.60E-04	7.35E-04	0.7710	0.5556
22:00:00	0.128	185	193	194	200	211	4	4	4	4	4	5	15	15	0.0502	4.1424	3.44E-04	5.88E-04	0.7366	0.4444
23:00:00	0.128	146	153	153	158	167	4	4	4	4	4	5	15	15	0.0502	4.1424	2.72E-04	5.88E-04	0.5840	0.4444

4.66E-04 1.32E-03
Maximum

Source: ESA, 2020.

Hollywood Center
 Freeway Health Risk Assessment for Future Project Residents

Maximum Individual Cancer Risk Calculations - Sensitive Receptors (Maximum Impacted Senior Residential Receptor)
 Evaluated as a residential receptor, starting with the 3rd Trimester

Cancer Risk Calculations

Parameter		Age Bins				Total 30 Year Exposure
		3rd Trimester	0 < 2	2 < 16	16 < 30	
DBR	Daily Breathing Rate (L/kg (body weight) per day)	361	1090	572	261	30.25
A	Inhalation absorption factor (default = 1).	1	1	1	1	
EF	Exposure Frequency (days/year)	350	350	350	350	
ED	Exposure Duration (years)	0.25	2	14	14	
FAH	Fraction of Time at Home ^a	1.00	1.00	1.00	0.73	
AT	Averaged Exposure Time Period (days)	25550	25550	25550	25550	
ASF	Age Sensitivity Factor	10	10	3	1	
Diesel Particulate Matter						
CONC	Toxic Air Contaminant Concentration ($\mu\text{g}/\text{m}^3$)	1.03E-02	1.03E-02	9.62E-03	9.68E-03	
DOSE	$[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)	1.28E-02	3.08E-01	1.06E+00	3.54E-01	
WF	Weight Fraction					
	Diesel Particulate Matter	1.00E+00	1.00E+00	1.00E+00	1.00E+00	
CPF	Cancer Potency Factor (mg/kg-d) ¹					
	Diesel Particulate Matter	1.1	1.1	1.1	1.1	
Organics						
Truck	CONC Toxic Air Contaminant Concentration ($\mu\text{g}/\text{m}^3$)	0.01762	0.01738	0.01524	0.01452	
	DOSE $[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)	2.18E-02	5.19E-01	1.67E+00	5.31E-01	
Non-Truck	CONC Toxic Air Contaminant Concentration ($\mu\text{g}/\text{m}^3$)	0.63095	0.6114	0.46202	0.39959	
	DOSE $[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)	7.80E-01	1.83E+01	5.07E+01	1.46E+01	
WF	Weight Fraction					
	Acetaldehyde - Truck	6.70E-02	6.70E-02	7.13E-02	7.96E-02	
	Acetaldehyde - Non-Truck	1.67E-02	1.67E-02	1.43E-02	1.21E-02	
	Benzene - Truck	2.16E-02	2.16E-02	2.25E-02	2.33E-02	
	Benzene - Non-Truck	2.38E-02	2.38E-02	2.45E-02	2.55E-02	
	Butadiene - Truck	2.79E-03	2.79E-03	2.62E-03	2.46E-03	
	Butadiene - Non-Truck	5.22E-03	5.22E-03	5.48E-03	5.86E-03	
	Formaldehyde - Truck	1.35E-01	1.35E-01	1.44E-01	1.60E-01	
	Formaldehyde - Non-Truck	4.08E-02	4.08E-02	3.64E-02	3.25E-02	
	Naphthalene - Truck	8.54E-04	8.54E-04	9.33E-04	9.97E-04	
	Naphthalene - Non-Truck	6.53E-04	6.53E-04	6.78E-04	7.49E-04	
CPF	Cancer Potency Factor (mg/kg-d) ¹					
	Acetaldehyde - Truck	0.01	0.01	0.01	0.01	
	Acetaldehyde - Non-Truck	0.01	0.01	0.01	0.01	
	Benzene - Truck	0.1	0.1	0.1	0.1	
	Benzene - Non-Truck	0.1	0.1	0.1	0.1	
	Butadiene - Truck	0.6	0.6	0.6	0.6	
	Butadiene - Non-Truck	0.6	0.6	0.6	0.6	
	Formaldehyde - Truck	0.021	0.021	0.021	0.021	
	Formaldehyde - Non-Truck	0.021	0.021	0.021	0.021	
	Naphthalene - Truck	0.000034	0.000034	0.000034	0.000034	
	Naphthalene - Non-Truck	0.000034	0.000034	0.000034	0.000034	
RISK	Cancer Risk (in one million) $[= \text{DOSE} \times \text{CPF} \times \text{ASF}]$					
(Without MERV 13 Filters)	Diesel Particulate Matter	1.41E-01	3.38E+00	3.48E+00	3.89E-01	7.40
	Acetaldehyde	1.45E-03	3.40E-02	2.53E-02	2.19E-03	0.06
	Benzene	1.90E-02	4.45E-01	3.83E-01	3.85E-02	0.89
	Butadiene	2.48E-02	5.80E-01	5.07E-01	5.21E-02	1.16
	Formaldehyde	7.31E-03	1.71E-01	1.31E-01	1.17E-02	0.32
	Naphthalene	1.79E-07	2.66E-07	2.75E-07	3.15E-08	0.000001
	Total	0.19	4.61	4.53	0.49	9.83
RISK	Cancer Risk (in one million) $[= \text{DOSE} \times \text{CPF} \times \text{ASF}]$					
(With MERV 13 Filters)	Diesel Particulate Matter	7.03E-02	1.69E+00	1.74E+00	1.95E-01	3.70
	Acetaldehyde	1.45E-03	3.40E-02	2.53E-02	2.19E-03	0.06
	Benzene	1.90E-02	4.45E-01	3.83E-01	3.85E-02	0.89
	Butadiene	2.48E-02	5.80E-01	5.07E-01	5.21E-02	1.16
	Formaldehyde	7.31E-03	1.71E-01	1.31E-01	1.17E-02	0.32
	Naphthalene	1.79E-07	2.66E-07	2.75E-07	3.15E-08	0.000001
	Total	0.12	2.92	2.79	0.30	6.13

Note:

a. FAH values of 1.0 for the child age groups are conservatively used.

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (2015),

<https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>. Accessed August 2018.

SCAQMD, Permit Application Package "N," Version 8.1, Table 4.1 D, p. 15, (2017),

<http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/attachmentn-v8-1.pdf?sfvrsn=4>. Accessed August 2018.

Hollywood Center
Freeway Health Risk Assessment for Future Project Residents

Maximum Individual Cancer Risk Calculations - Sensitive Receptors (Maximum Impacted Multi-Family Residential Receptor)
Evaluated as a residential receptor, starting with the 3rd Trimester

Cancer Risk Calculations

Parameter		Age Bins				Total 30 Year Exposure
		3rd Trimester	0 < 2	2 < 16	16 < 30	
DBR	Daily Breathing Rate (L/kg (body weight) per day)	361	1090	572	261	30.25
A	Inhalation absorption factor (default = 1).	1	1	1	1	
EF	Exposure Frequency (days/year)	350	350	350	350	
ED	Exposure Duration (years)	0.25	2	14	14	
FAH	Fraction of Time at Home ^a	1.00	1.00	1.00	0.73	
AT	Averaged Exposure Time Period (days)	25550	25550	25550	25550	
ASF	Age Sensitivity Factor	10	10	3	1	
Diesel Particulate Matter						
CONC	Toxic Air Contaminant Concentration ($\mu\text{g}/\text{m}^3$)	9.46E-03	9.43E-03	8.80E-03	8.84E-03	
DOSE	$[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)	1.17E-02	2.82E-01	9.65E-01	3.23E-01	
WF	Weight Fraction					
	Diesel Particulate Matter	1.00E+00	1.00E+00	1.00E+00	1.00E+00	
CPF	Cancer Potency Factor (mg/kg-d) ⁻¹					
	Diesel Particulate Matter	1.1	1.1	1.1	1.1	
Organics						
Truck	CONC Toxic Air Contaminant Concentration ($\mu\text{g}/\text{m}^3$)	0.0165	0.01628	0.0143	0.01362	
	DOSE $[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)	2.04E-02	4.86E-01	1.57E+00	4.98E-01	
Non-Truck	CONC Toxic Air Contaminant Concentration ($\mu\text{g}/\text{m}^3$)	0.58367	0.56559	0.4275	0.36971	
	DOSE $[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)	7.22E-01	1.69E+01	4.69E+01	1.35E+01	
WF	Weight Fraction					
	Acetaldehyde - Truck	6.70E-02	6.70E-02	7.13E-02	7.96E-02	
	Acetaldehyde - Non-Truck	1.67E-02	1.67E-02	1.43E-02	1.21E-02	
	Benzene - Truck	2.16E-02	2.16E-02	2.25E-02	2.33E-02	
	Benzene - Non-Truck	2.38E-02	2.38E-02	2.45E-02	2.55E-02	
	Butadiene - Truck	2.79E-03	2.79E-03	2.62E-03	2.46E-03	
	Butadiene - Non-Truck	5.22E-03	5.22E-03	5.48E-03	5.86E-03	
	Formaldehyde - Truck	1.35E-01	1.35E-01	1.44E-01	1.60E-01	
	Formaldehyde - Non-Truck	4.08E-02	4.08E-02	3.64E-02	3.25E-02	
	Naphthalene - Truck	8.54E-04	8.54E-04	9.33E-04	9.97E-04	
	Naphthalene - Non-Truck	6.53E-04	6.53E-04	6.78E-04	7.49E-04	
CPF	Cancer Potency Factor (mg/kg-d) ⁻¹					
	Acetaldehyde - Truck	0.01	0.01	0.01	0.01	
	Acetaldehyde - Non-Truck	0.01	0.01	0.01	0.01	
	Benzene - Truck	0.1	0.1	0.1	0.1	
	Benzene - Non-Truck	0.1	0.1	0.1	0.1	
	Butadiene - Truck	0.6	0.6	0.6	0.6	
	Butadiene - Non-Truck	0.6	0.6	0.6	0.6	
	Formaldehyde - Truck	0.021	0.021	0.021	0.021	
	Formaldehyde - Non-Truck	0.021	0.021	0.021	0.021	
	Naphthalene - Truck	0.000034	0.000034	0.000034	0.000034	
	Naphthalene - Non-Truck	0.000034	0.000034	0.000034	0.000034	
RISK	Cancer Risk (in one million) $[= \text{DOSE} \times \text{CPF} \times \text{ASF}]$					
(Without MERV 13 Filters)	Diesel Particulate Matter	1.29E-01	3.10E+00	3.19E+00	3.55E-01	6.77
	Acetaldehyde	1.34E-03	3.15E-02	2.35E-02	2.03E-03	0.06
	Benzene	1.76E-02	4.12E-01	3.55E-01	3.57E-02	0.82
	Butadiene	2.29E-02	5.37E-01	4.70E-01	4.82E-02	1.08
	Formaldehyde	6.77E-03	1.59E-01	1.22E-01	1.09E-02	0.30
	Naphthalene	1.66E-07	2.49E-07	2.58E-07	2.95E-08	0.000001
	Total	0.18	4.24	4.16	0.45	9.02
RISK	Cancer Risk (in one million) $[= \text{DOSE} \times \text{CPF} \times \text{ASF}]$					
(With MERV 13 Filters)	Diesel Particulate Matter	6.43E-02	1.55E+00	1.59E+00	1.78E-01	3.38
	Acetaldehyde	1.34E-03	3.15E-02	2.35E-02	2.03E-03	0.06
	Benzene	1.76E-02	4.12E-01	3.55E-01	3.57E-02	0.82
	Butadiene	2.29E-02	5.37E-01	4.70E-01	4.82E-02	1.08
	Formaldehyde	6.77E-03	1.59E-01	1.22E-01	1.09E-02	0.30
	Naphthalene	1.66E-07	2.49E-07	2.58E-07	2.95E-08	0.000001
	Total	0.11	2.69	2.56	0.27	5.64

Note:

a. FAH values of 1.0 for the child age groups are conservatively used.

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (2015),

<https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>. Accessed August 2018.

SCAQMD, Permit Application Package "N," Version 8.1, Table 4.1 D, p. 15, (2017),

<http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/attachmtn-v8-1.pdf?sfvrsn=4>. Accessed August 2018.

Hollywood Center

Freeway Health Risk Assessment for Future Project Residents

Maximum Individual Non-Cancer Impact Calculations - Sensitive Receptors (Maximum Impacted Senior Residential Receptor) (IMPACT AT ALL OTHER LOCATIONS ON THE PROJECT SITE WOULD BE LESS THAN SHOWN)

Maximum Non-cancer Chronic Hazards / Toxicological Endpoints*

Receptor Group	Pollutant	Vehicle Class	CREL ¹	CONC	WFrac	CONC _{WF}	HI		ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	
Project:																						
MEI - Max	TOG	DPM	Truck	5.00E+00	1.03E-02	1.00E+00	1.03E-02	2.07E-03	-	-	-	-	-	-	-	-	-	-	-	2.07E-03	-	
MEI - Max		Acetaldehyde	Truck	1.40E+02	1.76E-02	6.70E-02	1.18E-03	8.44E-06	-	-	-	-	-	-	-	-	-	-	-	-	8.44E-06	-
MEI - Max		Acetaldehyde	Non-Truck	1.40E+02	6.31E-01	1.67E-02	1.05E-02	7.52E-05	-	-	-	-	-	-	-	-	-	-	-	-	7.52E-05	-
MEI - Max		Acrolein	Truck	3.50E-01	1.76E-02	3.10E-04	5.47E-06	1.56E-05	-	-	-	-	-	-	-	-	-	-	-	-	1.56E-05	-
MEI - Max		Acrolein	Non-Truck	3.50E-01	6.31E-01	1.18E-03	7.42E-04	2.12E-03	-	-	-	-	-	-	-	-	-	-	-	-	2.12E-03	-
MEI - Max		Benzene	Truck	3.00E+00	1.76E-02	2.16E-02	3.80E-04	1.27E-04	-	-	-	-	-	-	1.27E-04	-	-	-	-	-	-	-
MEI - Max		Benzene	Non-Truck	3.00E+00	6.31E-01	2.38E-02	1.50E-02	5.00E-03	-	-	-	-	-	-	5.00E-03	-	-	-	-	-	-	-
MEI - Max		1,3 - Butadiene	Truck	2.00E+00	1.76E-02	2.79E-03	4.92E-05	2.46E-05	-	-	-	2.46E-05	-	-	-	-	-	-	-	2.46E-05	-	-
MEI - Max		1,3 - Butadiene	Non-Truck	2.00E+00	6.31E-01	5.22E-03	3.29E-03	1.65E-03	-	-	-	1.65E-03	-	-	-	-	-	-	-	1.65E-03	-	-
MEI - Max		Formaldehyde	Truck	9.00E+00	1.76E-02	1.35E-01	2.38E-03	2.64E-04	-	-	-	-	-	-	-	-	-	-	-	-	2.64E-04	-
MEI - Max		Formaldehyde	Non-Truck	9.00E+00	6.31E-01	4.08E-02	2.58E-02	2.86E-03	-	-	-	-	-	-	-	-	-	-	-	-	2.86E-03	-
MEI - Max		Napthalene	Truck	9.00E+00	1.76E-02	8.54E-04	1.51E-05	1.67E-06	-	-	-	-	-	-	-	-	-	-	-	-	1.67E-06	-
MEI - Max		Napthalene	Non-Truck	9.00E+00	6.31E-01	6.53E-04	4.12E-04	4.58E-05	-	-	-	-	-	-	-	-	-	-	-	-	4.58E-05	-
									Total Risk Threshold			0.002			0.005				0.002	0.007		
									Over?			1.00			1.00				1.00	1.00		
												NO			NO				NO	NO		

Notes:
 1. California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values," "OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs," "OEHHA/ARB Approved Acute Reference Exposure Levels and Target Organs," and "OEHHA/ARB Approved 8-Hour Reference Exposure Levels and Target Organs," <http://www.arb.ca.gov/toxics/healthval/healthval.htm>. Tables last updated: May 8, 2018. Downloaded: 08/14/18.

Source: ESA, 2020

Where:
 CON_{CWF} Pollutant Concentration (µg/m³) multiplied by the weight fraction
 CREL Chronic Reference Exposure Level
 HI Hazard Index
 MEI Maximally Exposed Individual
 WFrac Weight fraction of speciated component

* Key to Toxicological Endpoints
 ALIM Alimentary Tract EYE Eye NS Nervous System
 BN Bone HEM Hematologic System REPRO Reproductive System
 CVS Cardiovascular System IMMUN Immune System RESP Respiratory System
 DEV Developmental System KIDN Kidney SK Skin
 ENDC Endocrine System

Hollywood Center

Freeway Health Risk Assessment for Future Project Residents

Maximum Individual Non-Cancer Impact Calculations - Sensitive Receptors (Maximum Impacted Senior Residential Receptor) (IMPACT AT ALL OTHER LOCATIONS ON THE PROJECT SITE WOULD BE LESS THAN SHOWN)

Maximum Non-cancer Acute 1-Hour Hazards / Toxicological Endpoints*

Receptor Group	Pollutant	Vehicle Class	AREL-1hr ¹	CONC	Wfrac	CONC _{WF}	HI		ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK			
Project:																								
DPM																								
MEI - Max	Arsenic	Truck	0.2	4.04E-02	0.000005	2.02E-07	1.01E-06		-	-	1.01E-06	1.01E-06	-	-	-	-	-	1.01E-06	1.01E-06	-	-			
MEI - Max	Chlorine	Truck	210	4.04E-02	0.000344	1.39E-05	6.62E-08		-	-	-	-	-	6.62E-08	-	-	-	-	-	6.62E-08	-			
MEI - Max	Copper	Truck	100	4.04E-02	0.000025	1.01E-06	1.01E-08		-	-	-	-	-	-	-	-	-	-	-	1.01E-08	-			
MEI - Max	Manganese	Truck	—	4.04E-02	0.00004	1.62E-06	-		-	-	-	-	-	-	-	-	-	-	-	-	-			
MEI - Max	Mercury	Truck	0.6	4.04E-02	0.00003	1.21E-06	2.02E-06		-	-	-	2.02E-06	-	-	-	-	-	2.02E-06	2.02E-06	-	-			
MEI - Max	Nickel	Truck	0.2	4.04E-02	0.000019	7.67E-07	3.84E-06		-	-	-	-	-	-	3.84E-06	-	-	-	-	-	-			
MEI - Max	Sulfates	Truck	120	4.04E-02	0.017429	7.04E-04	5.87E-06		-	-	-	-	-	-	-	-	-	-	-	5.87E-06	-			
MEI - Max	Vanadium	Truck	30	4.04E-02	0.000029	1.17E-06	3.90E-08		-	-	-	-	-	3.90E-08	-	-	-	-	-	3.90E-08	-			
TOG																								
MEI - Max	Acetaldehyde	Truck	4.70E+02	7.00E-02	6.70E-02	4.69E-03	9.98E-06		-	-	-	-	-	9.98E-06	-	-	-	-	-	9.98E-06	-			
MEI - Max	Acetaldehyde	Non-Truck	4.70E+02	2.88E+00	1.67E-02	4.81E-02	1.02E-04		-	-	-	-	-	1.02E-04	-	-	-	-	-	1.02E-04	-			
MEI - Max	Acrolein	Truck	2.50E+00	7.00E-02	3.10E-04	2.17E-05	8.69E-06		-	-	-	-	-	8.69E-06	-	-	-	-	-	8.69E-06	-			
MEI - Max	Acrolein	Non-Truck	2.50E+00	2.88E+00	1.18E-03	3.39E-03	1.35E-03		-	-	-	-	-	1.35E-03	-	-	-	-	-	1.35E-03	-			
MEI - Max	Benzene	Truck	2.70E+01	7.00E-02	2.16E-02	1.51E-03	5.59E-05		-	-	-	5.59E-05	-	5.59E-05	5.59E-05	-	-	-	5.59E-05	-	-			
MEI - Max	Benzene	Non-Truck	2.70E+01	2.88E+00	2.38E-02	6.85E-02	2.54E-03		-	-	-	2.54E-03	-	2.54E-03	2.54E-03	-	-	-	2.54E-03	-	-			
MEI - Max	1,3 - Butadiene	Truck	6.60E+02	7.00E-02	2.79E-03	1.96E-04	2.96E-07		-	-	-	2.96E-07	-	-	-	-	-	-	2.96E-07	-	-			
MEI - Max	1,3 - Butadiene	Non-Truck	6.60E+02	2.88E+00	5.22E-03	1.50E-02	2.28E-05		-	-	-	2.28E-05	-	-	-	-	-	-	2.28E-05	-	-			
MEI - Max	Formaldehyde	Truck	5.50E+01	7.00E-02	1.35E-01	9.44E-03	1.72E-04		-	-	-	-	-	1.72E-04	-	-	-	-	-	-	-			
MEI - Max	Formaldehyde	Non-Truck	5.50E+01	2.88E+00	4.08E-02	1.18E-01	2.14E-03		-	-	-	-	-	2.14E-03	-	-	-	-	-	-	-			
MEI - Max	Carbon Monoxide (CO)	Truck/Non-Truck	2.30E+04	6.69E+01	1.00E+00	6.69E+01	2.91E-03		-	-	2.91E-03	-	-	-	-	-	-	-	-	-	-			
MEI - Max	Nitrogen Oxides (NOX)	Truck/Non-Truck	4.70E+02	6.04E+00	1.00E+00	6.04E+00	1.29E-02		-	-	-	-	-	-	-	-	-	-	-	1.29E-02	-			
Total Risk Threshold																								
Over?																								
									0.003		0.003		0.004		0.003		0.003		3.03E-06		0.003		0.001	
									1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
									NO		NO		NO		NO		NO		NO		NO		NO	

Notes:

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Source: ESA, 2020

Where:

CONC_{WF} Pollutant Concentration (µg/m³) multiplied by the weight fraction
 AREL-1HR Acute Reference Exposure Level (1-hr)
 HI Hazard Index
 MEI Maximally Exposed Individual
 Wfrac Weight fraction of specified component

* Key to Toxicological Endpoints

ALIM	Alimentary Tract	EYE	Eye	NS	Nervous System
BN	Bone	HEM	Hematologic System	REPRO	Reproductive System
CVS	Cardiovascular System	IMMUN	Immune System	RESP	Respiratory System
DEV	Developmental System	KIDN	Kidney	SK	Skin
ENDC	Endocrine System				

Hollywood Center

Freeway Health Risk Assessment for Future Project Residents

Maximum Individual Non-Cancer Impact Calculations - Sensitive Receptors (Maximum Impacted Senior Residential Receptor) (IMPACT AT ALL OTHER LOCATIONS ON THE PROJECT SITE WOULD BE LESS THAN SHOWN)

Maximum Non-cancer Acute 8-Hour Hazards / Toxicological Endpoints*

Receptor Group	Pollutant	Vehicle Class	AREL-8hr ¹	CONC	WFrac	CONC _{WF}	HI		ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	
Project:																						
DPM																						
MEI - Max	Arsenic	Truck	0.015	2.71E-02	0.000005	1.36E-07	9.04E-06		-	-	9.04E-06	9.04E-06	-	-	-	-	-	9.04E-06	9.04E-06	9.04E-06	9.04E-06	
MEI - Max	Chlorine	Truck	—	2.71E-02	0.000344	9.33E-06	-		-	-	-	-	-	-	-	-	-	-	-	-	-	
MEI - Max	Copper	Truck	—	2.71E-02	0.000025	6.78E-07	-		-	-	-	-	-	-	-	-	-	-	-	-	-	
MEI - Max	Manganese	Truck	0.170	2.71E-02	0.00004	1.08E-06	6.38E-06		-	-	-	-	-	-	-	-	-	6.38E-06	-	-	-	
MEI - Max	Mercury	Truck	0.060	2.71E-02	0.00003	8.13E-07	1.36E-05		-	-	-	1.36E-05	-	-	-	-	1.36E-05	1.36E-05	1.36E-05	-	-	
MEI - Max	Nickel	Truck	0.060	2.71E-02	0.000019	5.15E-07	8.58E-06		-	-	-	-	-	-	-	8.58E-06	-	-	8.58E-06	-	-	
MEI - Max	Sulfates	Truck	—	2.71E-02	0.017429	4.73E-04	-		-	-	-	-	-	-	-	-	-	-	-	-	-	
MEI - Max	Vanadium	Truck	—	2.71E-02	0.000029	7.86E-07	-		-	-	-	-	-	-	-	-	-	-	-	-	-	
TOG																						
MEI - Max	Acetaldehyde	Truck	3.00E+02	5.40E-02	6.70E-02	3.62E-03	1.21E-05		-	-	-	-	-	-	-	-	-	-	-	1.21E-05	-	
MEI - Max	Acetaldehyde	Non-Truck	3.00E+02	2.15E+00	1.67E-02	3.60E-02	1.20E-04		-	-	-	-	-	-	-	-	-	-	-	1.20E-04	-	
MEI - Max	Acrolein	Truck	7.00E-01	5.40E-02	3.10E-04	1.68E-05	2.40E-05		-	-	-	-	-	-	-	-	-	-	-	2.40E-05	-	
MEI - Max	Acrolein	Non-Truck	7.00E-01	2.15E+00	1.18E-03	2.53E-03	3.62E-03		-	-	-	-	-	-	-	-	-	-	-	3.62E-03	-	
MEI - Max	Benzene	Truck	3.00E+00	5.40E-02	2.16E-02	1.17E-03	3.89E-04		-	-	-	-	-	-	3.89E-04	-	-	-	-	-	-	
MEI - Max	Benzene	Non-Truck	3.00E+00	2.15E+00	2.38E-02	5.12E-02	1.71E-02		-	-	-	-	-	-	1.71E-02	-	-	-	-	-	-	
MEI - Max	1,3 - Butadiene	Truck	9.00E+00	5.40E-02	2.79E-03	1.51E-04	1.68E-05		-	-	-	1.68E-05	-	-	-	-	-	-	1.68E-05	-	-	
MEI - Max	1,3 - Butadiene	Non-Truck	9.00E+00	2.15E+00	5.22E-03	1.12E-02	1.25E-03		-	-	-	1.25E-03	-	-	-	-	-	-	1.25E-03	-	-	
MEI - Max	Formaldehyde	Truck	9.00E+00	5.40E-02	1.35E-01	7.29E-03	8.10E-04		-	-	-	-	-	-	-	-	-	-	-	8.10E-04	-	
MEI - Max	Formaldehyde	Non-Truck	9.00E+00	2.15E+00	4.08E-02	8.80E-02	9.78E-03		-	-	-	-	-	-	-	-	-	-	-	9.78E-03	-	
Total Risk Threshold											9.04E-06	0.0013			0.0175	8.58E-06	1.36E-05	2.90E-05	0.0013	0.0144	9.04E-06	
Over?											NO	NO			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Notes:
 1. California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values," "OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs," "OEHHA/ARB Approved Acute Reference Exposure Levels and Target Organs," and "OEHHA/ARB Approved 8-Hour Reference Exposure Levels and Target Organs," <http://www.arb.ca.gov/toxics/healthval/healthval.htm>. Tables last updated: May 8, 2018. Downloaded: 08/14/18.

Source: ESA, 2020

Where:
 CONC_{WF} Pollutant Concentration (µg/m³) multiplied by the weight fraction
 AREL-8HR Acute Reference Exposure Level (8-hr)
 HI Hazard Index
 MEI Maximally Exposed Individual
 WFrac Weight fraction of speciated component

* Key to Toxicological Endpoints
 ALIM Alimentary Tract EYE Eye NS Nervous System
 BN Bone HEM Hematologic System REPRO Reproductive System
 CVS Cardiovascular System IMMUN Immune System RESP Respiratory System
 DEV Developmental System KIDN Kidney SK Skin
 ENDC Endocrine System

