

Appendix 3.4 Table 10
Fugitive Dust Emission Factor Derivations
Heavenly Mountain Resort Epic Discovery Project

Dust Emission Factor Derivation

Bulldozing Overburden - Source: AP-42, Table 11.9-1, 7/98 and CalEEMod Appendix A, page 9.

$$E_{PM10} = (0.75)(s^{1.5})/(M^{1.4}) \qquad E_{PM2.5} = (0.105 \cdot 5.7)(s^{1.2})/(M^{1.3})$$

s = silt content =	6.9%	CalEEMod Appendix A, page 9 default value vs. 8.3% from EPA, <i>Compilation of Air Pollutant Emission Factors, Volume 1 (Stationary Point and Area Sources)</i> , Chapter 13.2.2 (Unpaved Roads), Table 13.2.2-1 (Typical Silt Content Values of Surface
M = moisture content =	7.9%	CalEEMod Appendix A, page 9 default value and EPA, <i>Compilation of Air Pollutant Emission Factors, Volume 1 (Stationary Point and Area Sources)</i> , Chapter 11.9 (Western Surface Coal Mining), Table 11.9-3 (Typical Silt Content Values for Correction Factors
E = emission factor =	0.75	PM ₁₀ lb/hr
E = emission factor =	0.41	PM _{2.5} lb/hr

Finish Grading (Grader) - Source: AP-42, Table 11.9-1, 7/98

$$E_{PM10} = (0.60)(0.051)(S^{2.0}) \qquad E_{PM2.5} = (0.031)(0.04)(S^{2.5})$$

S = mean vehicle speed =	7.1	mph (CalEEMod default value from Appendix A, page 8)
E = emission factor =	1.54	PM ₁₀ lbs/VMT
E = emission factor =	0.167	PM _{2.5} lbs/VMT

Appendix 3.4 Table 10
Fugitive Dust Emission Factor Derivations
Heavenly Mountain Resort Epic Discovery Project

Dust Emission Factor Derivation

Unpaved Road Travel - Source: AP-42, Section 13.2.2, 11/06.

$$E = (k)(s/12)^{0.9}(W/3)^{0.45}$$

k = particle size constant =	1.5 for PM ₁₀
k = particle size constant =	0.15 for PM _{2.5}
s = silt content (%) =	6.9 (EPA, <i>Compilation of Air Pollutant Emission Factors, Volume 1 (Stationary Point and Area Sources)</i> , Chapter 13.2.2 (Unpaved Roads), Table 13.2.2-1 (Typical Silt Content Values of Surface Material on Industrial Unpaved Roads, page 13.2.2-3, November

Vehicle Weights

W = water truck empty weight =	10.0 tons empty (estimated)
W = water truck loaded weight =	26.7 tons loaded (estimated with 4,000 gallon water capacity)
W = water truck average weight =	18.3 tons average
W = dump truck or transmixer empty weight =	15.0 tons (empty for heavy duty Diesel trucks)
W = dump truck or transmixer loaded weight =	40.0 tons (loaded for heavy duty Diesel trucks)
W = dump truck or transmixer average weight =	27.5 tons (average for heavy duty Diesel trucks)
W = forklift average weight =	8.0 tons empty (estimated)
W = auto/pickup average weight =	2.4 tons (CARB Area Source Manual, 9/97)
W = delivery truck average weight =	27.5 tons (for heavy duty Diesel trucks)
W = 3 ton truck average weight =	5.4 tons (estimate)
W = manlift =	25 tons (estimate from Terex Model RM75)
W = crawler crane	45 tons (estimate from Manitowoc Model 999)
W = rough terrain crane/picker =	88 tons (estimate from Grove RT 9130E)
W = farm tractor =	3.1 tons (estimate from New Holland Model T4050)
W = scraper average weight =	28.2 tons empty (615 scraper, Caterpillar Performance Handbook, 10/89)
W = weight backhoe =	7.0 tons (estimate from Caterpillar model 416)
	48.6 tons loaded (615 scraper, Caterpillar Performance Handbook, 10/89)
	27.9 tons mean weight
W = fuel truck avg. veh. weight =	8.0 tons empty (estimated)
=	18.2 tons loaded (estimated with 3,000 gallons Diesel fuel capacity)
=	13.1 tons average
W = loader avg. veh. Weight =	33.35 tons (avg. of loaded and unloaded weights, 980H loader, Caterpillar Performance Handbook, 2006)
W= compactor wt. =	15.00 tons (estimate from Caterpillar model Cp-433)
W = Cat 631B water pull scraper =	55.85 tons (avg. of loaded and unloaded weights, 631B with 10,000 gallons water, Caterpillar Performance Handbook 43, 2011)
W = Cat 641 water pull scraper =	68.5 tons (avg. of loaded and unloaded weights, 641 with 10,000 gallons water, Caterpillar Performance Handbook 43, 2011)
W = Cat 775E rock haul truck =	82.9 tons average
W = Wabco 50 rock haul truck =	66.7 tons average
W = Dresser 210M rock haulpak truck =	75.3 tons average
W = ATV	0.85 ton, assuming curb weight of 1,400 lbs plus driver and equipment weight of 300 lbs.
W = pickup average weight =	3.5 tons (estimate for Ford F-250 4WD)
W = materials delivery truck average weight =	10 tons (estimate for single-axle delivery truck)
W = F-350 Mountain Tour truck average weight =	5 tons (estimate for Ford F-350 4WD carrying 1 ton of visitors)

PM₁₀ Emission Factors

E = water truck emission factor =	2.06
E = dump truck emission factor =	2.47
E = forklift emission factor =	1.42

Appendix 3.4 Table 10
Fugitive Dust Emission Factor Derivations
Heavenly Mountain Resort Epic Discovery Project

Dust Emission Factor Derivation

E = auto/pickup emission factor =	0.82
E = delivery truck emission factor =	2.47
E = man-lift emission factor =	2.37
E = crawler crane emission factor =	3.08
E = rough terrain crane/picker emission factor =	4.17
E = farm tractor emission factor =	0.93
E = 3-ton truck emission factor =	1.19
E = scraper emission factor =	2.49
E = fuel truck emission factor =	1.77
E = loader emission factor =	2.69
E = backhoe emission factor =	1.33
E = compactor emission factor =	1.88
E = Caterpillar water pull 631B emission factor =	3.40
E = Caterpillar water pull 641 emission factor =	3.73
E = Cat 775E rock haul truck emission factor =	4.06
E = Wabco 50 rock haul truck emission factor =	3.68
E = Dresser 210M rock haulpak truck emission factor =	3.89
E = ATV emission factor =	0.52
E = pickup truck emission factor =	0.98
E = materials delivery truck emission factor =	1.57
E = F-350 Mountain Tour truck emission factor =	1.15

Appendix 3.4 Table 10
Fugitive Dust Emission Factor Derivations
Heavenly Mountain Resort Epic Discovery Project

Dust Emission Factor Derivation

PM_{2.5} Emission Factors

lb PM_{2.5}/VMT

E = water truck emission factor =	0.21
E = dump truck emission factor =	0.25
E = forklift emission factor =	0.14
E = auto/pickup emission factor =	0.08
E = delivery truck emission factor =	0.25
E = man-lift emission factor =	0.24
E = crawler crane emission factor =	0.31
E = rough terrain crane/picker emission factor =	0.42
E = farm tractor emission factor =	0.09
E = 3-ton truck emission factor =	0.12
E = scraper emission factor =	0.25
E = fuel truck emission factor =	0.18
E = loader emission factor =	0.27
E = backhoe emission factor =	0.13
E = compactor emission factor =	0.19
E = Caterpillar water pull 631B emission factor =	0.34
E = Caterpillar water pull 641 emission factor =	0.37
E = Cat 775E rock haul truck emission factor =	0.41
E = Wabco 50 rock haul truck emission factor =	0.37
E = Dresser 210M rock haulpak truck emission factor =	0.39
E = ATV emission factor =	0.052
E = pickup truck emission factor	0.098
E = materials delivery truck emission factor =	0.157
E = F-350 Mountain Tour truck emission factor =	0.115

Gravel Road Travel - Source: AP-42, Section 13.2.2, 11/06.

$$E = (k)(s/12)^{0.9}(W/3)^{0.45}$$

k = particle size constant =	1.5 for PM10
k = particle size constant =	0.15 for PM2.5
s = silt fraction =	6.40 (AP-42, Table 13.2.2-1, 11/06, gravel road)

Vehicle Weights

W = water truck avg. veh. weight =	10.0 tons empty (estimated)
=	24.7 tons loaded (estimated with 4,000 gallon water capacity)
=	17.4 tons average
W = dump truck avg. veh. weight =	15.0 tons (for heavy duty Diesel trucks)
=	40.0 tons (for heavy duty Diesel trucks)
=	27.5 tons (for heavy duty Diesel trucks)
W = forklift avg. veh. weight =	8 tons empty (estimated)
W = auto/pickup avg. vehicle weight =	2.4 tons (CARB Area Source Manual, 9/97)
W = delivery truck avg. veh. wt. =	27.5 tons (for heavy duty Diesel trucks)

PM₁₀ Emission Factors

lb PM₁₀/VMT

E = auto/pickup emiss. factor =	0.77
E = delivery truck emiss. factor =	2.31

Appendix 3.4 Table 10
Fugitive Dust Emission Factor Derivations
Heavenly Mountain Resort Epic Discovery Project

Dust Emission Factor Derivation

PM_{2.5} Emission Factors

E = auto/pickup emiss. factor =
 E = delivery truck emiss. factor =

lb PM_{2.5}/VMT

0.077
 0.23

Paved Road Travel - Source AP-42, Section 13.2.1, 11/11

$E = k(sL)^{0.91}(W)^{1.02}$

k = particle size constant =
 k = particle size constant =

0.0022 for PM₁₀ (AP42, Table 13.2.1-1)
 0.00054 for PM_{2.5} (AP42, Table 13.2.1-1)

sL = silt loading =
 sL = silt loading =

0.6 g/m² (AP42, Table 13.2.1-2)
 0.86 grains/ft²

Daily Emission Factors (lbs/day) Annual Emission Factors (tpy)

PM ₁₀ Factor - Heavy Trucks	0.0564	lb PM ₁₀ /VMT	0.0529
PM _{2.5} Factor - Heavy Trucks	0.0138	lb PM _{2.5} /VMT	0.0130
PM ₁₀ Factor - Materials Delivery Trucks	0.0201	lb PM ₁₀ /VMT	0.0189
PM _{2.5} Factor - Materials Delivery Trucks	0.0049	lb PM _{2.5} /VMT	0.0046
PM ₁₀ Factor - Worker/Visitor/Employee Auto/Pickup Trucks	0.0047	lb PM ₁₀ /VMT	0.0044
PM _{2.5} Factor - Worker/Visitor/Employee Auto/Pickup Trucks	0.0012	lb PM _{2.5} /VMT	0.0011

Dust Control for Unpaved Road Travel and Active Excavation Area - Source: Control of Open Fugitive Dust Sources, Scraping, and Grading U.S EPA, 9/88

$C = 100 - (0.8)(p)(d)(t)(i)$

p = potential average hourly daytime

evaporation rate =

0.171 mm/hr, based on 26.3" during May-Oct during 1919-1979 (NOAA, *Mean Monthly, Seasonal, and Annual Pan Evaporation for the United States*, NOAA Technical Report NWS 34, Table 1, December 1982,

evaporation rate =

0.129 mm/hr (Ibid)

d = average hourly daytime traffic rate =

8 vehicles/hr (estimated)

t = time between watering applications =

4

hr/application (1st application at start of construction day; 2nd application half-way through 8-hour construction day, or 1st application at start of operation day; 2nd application half-way through 10-hour operation day)

i = application intensity =

1.4 L/m² (typical level in EPA document, page 3-23)

C = average summer watering control efficiency =

96.8%

C = average annual watering control efficiency =

97.6%

Wind Erosion of Active Construction Area - Source: "Improvement of Specific Emission Factors (BACM Project No. 1), Final Report", prepared for South Coast AQMD by Midwest Research Institute, March 1996

Level 2 Emission Factor =

0.011 ton/acre-month

Construction Schedule =

26 days/month

=

0.85 lbs/acre-day

=

1.94E-05 PM₁₀ lbs/scf-day

7.76E-06 PM_{2.5} lbs/scf-day

**Appendix 3.4 Table 11
EMFAC2011 Emission Factors for Materials Delivery Trucks
Heavenly Mountain Resort Epic Discovery Project**

EMFAC2011 Emission Rates
 Region Type: Air District
 Region: El Dorado County APCD
 Calendar Year: 2015
 Season: Summer
 Vehicle Classification: EMFAC2011 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	ROG_RUNEX (gms/mile)	ROG_IDLEX (gms/vehicle/day)	ROG_STREX (gms/vehicle/day)	ROG_DIURN (gms/vehicle/day)	ROG_HTSK (gms/vehicle/day)	ROG_RUNLS (gms/mile)
El Dorado County APCD	2015	Summer	T7 single construction	DSL	Aggregated	Aggregated	25.2	1561.2	0	0.34899641	3.043649612	0	0	0	0

Appendix 3.4 Table 11
EMFAC2011 Emission Factors for Materials Delivery Trucks
Heavenly Mountain Resort Epic Discovery Project

ROG_RESTL (gms/vehicle/day)	TOG_RUNEX (gms/mile)	TOG_IDLEX (gms/vehicle/day)	TOG_STREX (gms/vehicle/day)	TOG_DIURN (gms/vehicle/day)	TOG_HTSK (gms/vehicle/day)	TOG_RUNLS (gms/mile)	TOG_RESTL (gms/vehicle/day)	CO_RUNEX (gms/mile)	CO_IDLEX (gms/vehicle/day)	CO_STREX (gms/vehicle/day)	NOX_RUNEX (gms/mile)
0	0.397305847	3.464963396	0	0	0	0	0	1.64391862	9.796066101	0	12.25433958

Appendix 3.4 Table 11
EMFAC2011 Emission Factors for Materials Delivery Trucks
Heavenly Mountain Resort Epic Discovery Project

NOX_IDLEX (gms/vehicle/day)	NOX_STREX (gms/vehicle/day)	CO2_RUNEX (gms/mile)	CO2_IDLEX (gms/vehicle/day)	CO2_STREX (gms/vehicle/day)	CO2_RUNEX(Pavley I+LCFS) (gms/mile)	CO2_IDLEX(Pavley I+LCFS) (gms/vehicle/day)	CO2_STREX(Pavley I+LCFS) (gms/vehicle/day)	PM10_RUNEX (gms/mile)	PM10_IDLEX (gms/vehicle/day)
28.99646283	0	1752.856221	2582.641929	0	1709.034815	2518.075881	0	0.234302407	0.350342545

**Appendix 3.4 Table 11
EMFAC2011 Emission Factors for Materials Delivery Trucks
Heavenly Mountain Resort Epic Discovery Project**

PM10_STREX (gms/vehicle/day)	PM10_PMTW (gms/mile)	PM10_PMBW (gms/mile)	PM2_5_RUNEX (gms/mile)	PM2_5_IDLEX (gms/vehicle/day)	PM2_5_STREX (gms/vehicle/day)	PM2_5_PMTW (gms/mile)	PM2_5_PMBW (gms/mile)	SOX_RUNEX (gms/mile)	SOX_IDLEX (gms/vehicle/day)	SOX_STREX (gms/vehicle/day)
0	0.035999812	0.061739677	0.215558214	0.322315141	0	0.008999953	0.026459862	0.016723068	0.024639611	0

**Appendix 3.4 Table 12
Construction Onsite Offroad Equipment Hours, Emission Factors, and Emissions in Nevada
Heavenly Mountain Resort Epic Discovery Project**

Offroad Equipment Description	HP	Load Factor (-) ⁽¹⁾	Off-Road or On-Road?	Tier	Annual Use (hrs/yr)	Daily Use (hrs/day)	Average Speed ⁽⁴⁾ (mph)	Daily Distance Traveled (mi)	Annual Distance Traveled (mi)	ARB Off-Road or EPA Nonroad ⁽²⁾ Emission Factors (g/bhp-hr)								Onroad Emission Factors (lbs/VMT) (3)										
										NOx	CO	VOC	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO _{2e}	NOx	CO	VOC	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O
Site Preparation																												
Water truck, 2012 Model Year	381 (1)	0.57	On		52	4	5.0	20.0	260.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backhoe, Cat 416F	75 (1)	0.55	Off	3	80	8	0.5	4.0	40.0	6.9 (4)	3.49 (2)	1.80 (4)	0.0056 (5)	0.76 (4)	0.70 (6)	591 (7)	0.024 (18,19)	0.0048 (18,20)	593 (21,22)	-	-	-	-	-	-	-	-	-
Wheeled Loader, Cat 924K	87 (1)	0.54	Off	3	36	4	2.0	8.0	72.0	2.45 (4)	0.843 (2)	0.10 (4)	0.0050 (5)	0.11 (4)	0.10 (6)	531 (7)	0.022 (18,19)	0.0043 (18,20)	533 (21,22)	-	-	-	-	-	-	-	-	-
ATV, 2013 Yamaha Rhino 700 FI 4x4	40 (10)	0.57 (11)	Off	3	156.0	12.0	7.5	90.0	1,170	8.43 (12)	107.23 (12)	3.85 (12)	0.010 (13)	0.06 (12)	0.055 (6)	456 (7)	0.018 (18,19)	0.0037 (18,20)	457 (21,22)	-	-	-	-	-	-	-	-	-
Site Preparation Subtotal:	-	-	-	-	324.0	35.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grading																												
Water truck, 2012 Model Year	381 (1)	0.57	On		52	4	5	20.0	260.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backhoe, Cat 416F	75 (1)	0.55	Off	3	80	8	0.5	4.0	40.0	6.9 (4)	3.49 (2)	1.80 (4)	0.0056 (5)	0.76 (4)	0.70 (6)	591 (7)	0.024 (18,19)	0.0048 (18,20)	593 (21,22)	-	-	-	-	-	-	-	-	-
Wheeled Loader, Cat 924K	87 (1)	0.54	Off	3	36	4	2.0	8.0	72.0	2.45 (4)	0.843 (2)	0.10 (4)	0.0050 (5)	0.11 (4)	0.10 (6)	531 (7)	0.022 (18,19)	0.0043 (18,20)	533 (21,22)	-	-	-	-	-	-	-	-	-
Mini-Excavator Cat 308E2 CR SB	65	0.57	Off	3	93.6	7.2	0.5	3.6	46.8	4.58 (4)	0.748 (2)	0.14 (4)	0.0050 (5)	0.11 (4)	0.10 (6)	531 (7)	0.022 (18,19)	0.0043 (18,20)	533 (21,22)	-	-	-	-	-	-	-	-	-
Drill Rig	82 (1)	0.75	Off		20	4	1.0	4.0	20.0	4.32 (16)	1.24 (16)	0.25 (16)	0.0049 (16)	0.13 (16)	0.12 (16)	521 (16)	0.021 (18,19)	0.0042 (18,20)	523 (21,22)	-	-	-	-	-	-	-	-	-
Sweyco Trail Dozer, tracked	80 (9)	0.64	Off	3	93.6	7.2	1.5	10.8	140.4	5.01 (4)	0.867 (2)	0.19 (4)	0.0050 (5)	0.24 (4)	0.22 (6)	531 (7)	0.022 (18,19)	0.0043 (18,20)	533 (21,22)	-	-	-	-	-	-	-	-	-
ATV, 2013 Yamaha Rhino 700 FI 4x4	40 (10)	0.57	Off	3	156.0	12.0	7.5	90.0	1,170	8.43 (12)	107.2 (12)	3.85 (12)	0.010 (13)	0.060 (12)	0.055 (6)	456 (7)	0.018 (18,19)	0.0037 (18,20)	457 (21,22)	-	-	-	-	-	-	-	-	-
Grading Subtotal:	-	-	-	-	531.2	46.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Structure Construction																												
Water truck, 2012 Model Year	381 (1)	0.57	On		368	4	5	20.0	1840.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backhoe, Cat 416F	75 (1)	0.55	Off	3	160	8	0.5	4.0	80.0	6.9 (4)	3.49 (2)	1.80 (4)	0.0056 (5)	0.76 (4)	0.70 (6)	591 (7)	0.024 (18,19)	0.0048 (18,20)	593 (21,22)	-	-	-	-	-	-	-	-	-
Wheeled Loader, Cat 924K	87 (1)	0.54	Off	3	108	4	2.0	8.0	216.0	2.45 (4)	0.84 (2)	0.10 (4)	0.0050 (5)	0.11 (4)	0.10 (6)	531 (7)	0.022 (18,19)	0.0043 (18,20)	533 (21,22)	-	-	-	-	-	-	-	-	-
Boom truck with crane, 2013 Altec AC23-95B	300 (15)	0.57	On		40	4	1.5	6.0	200.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mini-Excavator Cat 308E2 CR SB	65	0.57	Off	3	446.4	7.2	0.5	3.6	223.2	4.58 (4)	0.748 (2)	0.14 (4)	0.0050 (5)	0.11 (4)	0.10 (6)	531 (7)	0.022 (18,19)	0.0043 (18,20)	533 (21,22)	-	-	-	-	-	-	-	-	-
Forklift	149 (1)	0.3	Off		160	6.4	2.0	12.8	320.0	7.43 (16)	4.13 (16)	0.86 (16)	0.0049 (16)	0.62 (16)	0.57 (16)	521 (16)	0.021 (18,19)	0.0042 (18,20)	523 (21,22)	-	-	-	-	-	-	-	-	-
Drill Rig	82 (1)	0.75	Off		60	4	1.0	4.0	60.0	4.32 (16)	1.24 (16)	0.25 (16)	0.0049 (16)	0.13 (16)	0.12 (16)	521 (16)	0.021 (18,19)	0.0042 (18,20)	523 (21,22)	-	-	-	-	-	-	-	-	-
Sweyco Trail Dozer, tracked	80 (9)	0.64	Off	3	446.4	7.2	1.5	10.8	669.6	5.01 (4)	0.87 (2)	0.19 (4)	0.0050 (5)	0.24 (4)	0.22 (6)	531 (7)	0.022 (18,19)	0.0043 (18,20)	533 (21,22)	-	-	-	-	-	-	-	-	-
ATV, 2013 Yamaha Rhino 700 FI 4x4	40 (10)	0.57	Off	3	1,840.0	20.0	7.5	150.0	13,800	8.43 (12)	107.2 (12)	3.85 (12)	0.010 (13)	0.060 (12)	0.055 (6)	456 (7)	0.018 (18,19)	0.0037 (18,20)	457 (21,22)	-	-	-	-	-	-	-	-	-
Helicopter	300	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Structural Construction Subtotal:	-	-	-	-	3,628.8	64.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals:	4,484	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

1) CalEEMod (Version 2013.2.2) default value.
2) EPA, *Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling – Compression-Ignition*, ReportNR-009d, EPA-420-R-10-018, Table A4, July 2010
3) EMFAC2011-LDV V2.50.57.246 and EMFAC2011-HD.
4) Estimated
5) Calculated from BSFC assuming 15 ppmw sulfur in Diesel fuel.
6) OFFROAD2007 uses a PM_{2.5}/PM₁₀ ratio = 0.92
7) Density of Distillate Fuel No. 2 (metric tons fuel/bbl fuel) = 0.1346 (CFR Part 98, Subpart MM, Table MM-1)
CO₂ emission factor for Distillate Fuel No. 2 (metric tons CO₂/bbl fuel) = 0.4296 (CFR Part 98, Subpart MM, Table MM-1)
CO₂ emission factor for gasoline (metric tons CO₂/bbl fuel) = 0.3686 (CFR Part 98, Subpart MM, Table MM-1)
9) Sweyco Trail Dozer Model 480 specification
10) Kawasaki Mule, <http://www.kawasaki.com/Products/product-specifications.aspx?scid=15&id=753>
11) Assumed same as above equipment, rounded.
12) EPA, *Exhaust Emission Factors for Nonroad Engine Modeling: Spark-Ignition*, Report NR-010e, EPA-420-R-05-019, Table 6, page 8, December 2005.
13) The sulfur concentration in gasoline is assumed to be 30 ppmw, based on EPA News Release, *EPA Sets Cleaner Fuel and Car Standards, Slashing Air Pollution and Providing Health Benefits to Thousands*, March 3, 2014, "The final fuel standards will reduce gasoline sulfur levels by more than 60 percent – down from 30 to 10 parts per million (ppm) in 2017."
14) Caterpillar, *Lease a Cat Backhoe Loader*, http://www.catresourcecenter.com/construction-backhoe-loaders.asp?SRC=CATBC1630&utm_term=excavator&utm_content=MHEX#2
15) Example: 2013 Altec AC23-95B, 29-ton crane, 10-wheel
16) CalEEMod Appendix D Table 3.4 for 2012 Forklift with 51 - 120 hp
17) Tables 4 and 5 in Appendix A, authored by Panorama Environmental, Inc. for PG&E's CEQA document to the CPUC for the Santa Cruz 115kV Reinforcement Project, http://www.cpuc.ca.gov/environment/info/panoramaenv/SantaCruz_115kVReinforcement/SantaCruz_115%20Reinforcement%20Project.html#EIR
18) Diesel fuel CO₂ emission factor (kg CO₂/MMBtu) = 73.96 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-1 to Subpart C, p. 71951, November 29, 2013.)
19) Diesel fuel CH₄ emission factor (kg CH₄/MMBtu) = 0.003 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-2 to Subpart C, p. 71952, November 29, 2013.)
20) Diesel fuel N₂O emission factor (kg N₂O/MMBtu) = 0.0006 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-2 to Subpart C, p. 71952, November 29, 2013.)
21) CH₄ Global Warming Potential (-) = 25 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table 2, p. 71909, November 29, 2013.)
22) N₂O Global Warming Potential (-) = 298 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table 2, p. 71909, November 29, 2013.)

**Appendix 3.4 Table 12
Construction Onsite Offroad Equipment Hours, Emission Factors, and Emissions in Nevada
Heavenly Mountain Resort Epic Discovery Project**

Daily Offroad Equipment Emissions (lbs/day)										Annual Offroad Equipment Emissions (tpy)										Weight (tons)	
NOx	CO	VOC	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e	NOx	CO	VOC	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e		
2.55E-01	2.18E-01	1.10E-01	3.34E-01	3.16E-03	2.91E-03	1.70E+02	0.0069 (18,19)	0.0014 (18,20)	171 (21,22)	1.66E-03	1.42E-03	7.12E-04	2.17E-03	2.06E-05	1.89E-05	1.11E+00	0.000045 (18,19)	0.0000090 (18,20)	1.11 (21,22)		
5.02E+00	2.54E+00	1.31E+00	4.04E-03	5.53E-01	5.09E-01	4.30E+02	0.017 (18,19)	0.0035 (18,20)	431 (21,22)	2.51E-02	1.27E-02	6.55E-03	2.02E-05	2.76E-03	2.54E-03	2.15E+00	0.000087 (18,19)	0.000017 (18,20)	2.16 (21,22)	1.2 (14)	
1.02E+00	3.49E-01	4.14E-02	2.07E-03	4.56E-02	4.19E-02	2.20E+02	0.009 (18,19)	0.0018 (18,20)	221 (21,22)	4.57E-03	1.57E-03	1.86E-04	9.31E-06	2.05E-04	1.89E-04	9.91E-01	0.000040 (18,19)	0.0000080 (18,20)	0.99 (21,22)	14.18 (8)	
5.09E+00	6.47E+01	2.32E+00	6.02E-03	3.62E-02	3.33E-02	2.75E+02	0.0112 (18,19)	0.0022 (18,20)	276 (21,22)	3.31E-02	4.20E-01	1.51E-02	3.92E-05	2.35E-04	2.16E-04	1.79E+00	0.000073 (18,19)	0.000015 (18,20)	1.79 (21,22)	0.79	
13.9	68	3.9	0.349	0.70	0.64	1,391	0.056 (18,19)	0.0113 (18,20)	1,396 (21,22)	0.064	0.44	0.023	0.002243	0.0032	0.0030	6.0	0.00024 (18,19)	0.000049 (18,20)	6.1 (21,22)		
2.55E-01	2.18E-01	1.10E-01	3.34E-01	3.16E-03	2.91E-03	1.70E+02	0.0069 (18,19)	0.0014 (18,20)	171 (21,22)	1.66E-03	1.42E-03	7.12E-04	2.17E-03	2.06E-05	1.89E-05	1.11E+00	0.000045 (18,19)	0.0000090 (18,20)	1.11 (21,22)		
5.02E+00	2.54E+00	1.31E+00	4.04E-03	5.53E-01	5.09E-01	4.30E+02	0.017 (18,19)	0.0035 (18,20)	431 (21,22)	2.51E-02	1.27E-02	6.55E-03	2.02E-05	2.76E-03	2.54E-03	2.15E+00	0.000087 (18,19)	0.000017 (18,20)	2.16 (21,22)	1.2 (14)	
1.02E+00	3.49E-01	4.14E-02	2.07E-03	4.56E-02	4.19E-02	2.20E+02	0.009 (18,19)	0.0018 (18,20)	221 (21,22)	4.57E-03	1.57E-03	1.86E-04	9.31E-06	2.05E-04	1.89E-04	9.91E-01	0.000040 (18,19)	0.0000080 (18,20)	0.99 (21,22)	14.18 (8)	
2.69E+00	4.40E-01	8.23E-02	2.94E-03	6.47E-02	5.95E-02	3.12E+02	0.0127 (18,19)	0.0025 (18,20)	314 (21,22)	1.75E-02	2.86E-03	5.35E-04	1.91E-05	4.21E-04	3.87E-04	2.03E+00	0.000082 (18,19)	0.0000165 (18,20)	2.04 (21,22)		
2.34E+00	6.71E-01	1.36E-01	2.66E-03	7.24E-02	6.66E-02	2.83E+02	0.011 (18,19)	0.0023 (18,20)	284 (21,22)	5.85E-03	1.68E-03	3.41E-04	6.64E-06	1.81E-04	1.67E-04	7.06E-01	0.000029 (18,19)	0.000006 (18,20)	0.71 (21,22)		
4.07E+00	7.04E-01	1.54E-01	4.06E-03	1.95E-01	1.79E-01	4.32E+02	0.018 (18,19)	0.0035 (18,20)	433 (21,22)	2.65E-02	4.58E-03	1.00E-03	2.64E-05	1.27E-03	1.17E-03	2.81E+00	0.000114 (18,19)	0.000023 (18,19)	2.82 (21,22)	4.5	
5.09E+00	6.47E+01	2.32E+00	6.02E-03	3.62E-02	3.33E-02	2.75E+02	0.0112 (18,19)	0.0022 (18,20)	276 (21,22)	3.31E-02	4.20E-01	1.51E-02	3.92E-05	2.35E-04	2.16E-04	1.79E+00	0.000073 (18,19)	0.000015 (18,20)	1.79 (21,22)	0.79	
20.5	70	4.2	0.3562	0.970	0.892	2,122	0.086 (18,19)	0.017 (18,20)	2,129 (21,22)	0.114	0.45	0.024	0.002295	0.00510	0.00469	11.6	0.00047 (18,19)	0.000094 (18,20)	11.6 (21,22)		
2.55E-01	2.18E-01	1.10E-01	3.34E-01	3.16E-03	2.91E-03	1.70E+02	0.0069 (18,19)	0.0014 (18,20)	171 (21,22)	1.17E-02	1.00E-02	5.04E-03	1.54E-02	1.46E-04	1.34E-04	7.84E+00	0.00032 (18,19)	0.000064 (18,20)	7.87 (21,22)		
5.02E+00	2.54E+00	1.31E+00	4.04E-03	5.53E-01	5.09E-01	4.30E+02	0.017 (18,19)	0.0035 (18,20)	431 (21,22)	5.02E-02	2.54E-02	1.31E-02	4.04E-05	5.53E-03	5.09E-03	4.30E+00	0.00017 (18,19)	0.000035 (18,20)	4.31 (21,22)	1.2 (14)	
1.02E+00	3.49E-01	4.14E-02	2.07E-03	4.56E-02	4.19E-02	2.20E+02	0.009 (18,19)	0.0018 (18,20)	221 (21,22)	1.37E-02	4.71E-03	5.59E-04	2.79E-05	6.15E-04	5.66E-04	2.97E+00	0.00012 (18,19)	0.000024 (18,20)	2.98 (21,22)	14.18 (8)	
7.65E-02	6.54E-02	3.29E-02	1.00E-01	9.49E-04	8.73E-04	5.11E+01	0.0021 (18,19)	0.0004 (18,20)	51 (21,22)	1.28E-03	1.09E-03	5.48E-04	1.67E-03	1.58E-05	1.46E-05	8.52E-01	0.000035 (18,19)	0.0000069 (18,20)	0.86 (21,22)		
2.69E+00	4.40E-01	8.23E-02	2.94E-03	6.47E-02	5.95E-02	3.12E+02	0.0127 (18,19)	0.0025 (18,20)	314 (21,22)	8.35E-02	1.36E-02	2.55E-03	9.11E-05	2.01E-03	1.85E-03	9.69E+00	0.000393 (18,19)	0.000079 (18,20)	9.72 (21,22)		
4.69E+00	2.61E+00	5.44E-01	3.09E-03	3.91E-01	3.60E-01	3.29E+02	0.0133 (18,19)	0.0027 (18,20)	330 (21,22)	5.86E-02	3.26E-02	6.80E-03	3.86E-05	4.89E-03	4.50E-03	4.11E+00	0.000167 (18,19)	0.000033 (18,20)	4.12 (21,22)		
2.34E+00	6.71E-01	1.36E-01	2.66E-03	7.24E-02	6.66E-02	2.83E+02	0.011 (18,19)	0.0023 (18,20)	284 (21,22)	1.76E-02	5.03E-03	1.02E-03	1.99E-05	5.43E-04	5.00E-04	2.12E+00	0.00009 (18,19)	0.000017 (18,20)	2.13 (21,22)		
4.07E+00	7.04E-01	1.54E-01	4.06E-03	1.95E-01	1.79E-01	4.32E+02	0.018 (18,19)	0.0035 (18,20)	433 (21,22)	1.26E-01	2.18E-02	4.79E-03	1.26E-04	6.05E-03	5.56E-03	1.34E+01	0.00054 (18,19)	0.000109 (18,20)	13.43 (21,22)	4.5	
8.48E+00	1.08E+02	3.87E+00	1.00E-02	6.03E-02	5.55E-02	4.58E+02	0.019 (18,19)	0.0037 (18,20)	460 (21,22)	3.90E-01	4.96E+00	1.78E-01	4.62E-04	2.77E-03	2.55E-03	2.11E+01	0.00086 (18,19)	0.00017 (18,20)	21.2 (21,22)	0.79	
0.00 (17)	0.00 (17)	0.00 (17)	0.00 (17)	0.00 (17)	0.00 (6,17)	0 (17)	0.000 (18,19)	0.000 (18,20)	0 (21,22)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00000 (18,19)	0.000000 (18,20)	0.00 (21,22)		
28.6	115.4	6.3	0.46	1.4	1.3	2,685	0.11 (18,19)	0.022 (18,20)	2,695 (21,22)	0.75	5.1	0.21	0.0179	0.023	0.021	66.3	0.0027 (18,19)	0.00054 (18,20)	66.6 (21,22)		
-	-	-	-	-	-	-	-	-	-	0.93	6.0	0.26	0.022	0.031	0.028	84.0	0.0034	0.00068	84.3		

**Appendix 3.4 Table 13
Operation Onsite Emissions in California
Heavenly Mountain Resort Epic Discovery Project**

Epic Discovery Operation Onsite Emissions in California

Epic Discovery Mountain Tour Vehicle Emissions in California

Mountain Tour Vehicle Travel Daily Emissions in California (Maximum)																										
Peak Day Number of Tour Vehicles	Tour Vehicle Trips Per Day	Number of Tours Per Day	Tour Distance in CA LTAB (miles)		Tour Vehicle Daily VMT (miles/ day)	Emission Factors (lbs/vmt)									Daily Emissions (lbs/day)											
						NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)		
2	2	2	4.75	1	28.4	0.00091	0.011	0.00072	0.000021	0.000011	0.000010	2.6	0.00011	0.000021	0.026	0.30	0.021	0.00061	0.00031	0.00028	75.1	0.0030	0.00061	75.3		
						Unpaved-Road Fugitive Dust:		0.98	0.098											27.7	2.8					

Mountain Tour Vehicle Travel Annual Emissions in California																										
Annual Average Number of Tour Vehicles	Tour Vehicle Trips Per Day	Number of Tours Per Day	Tour Distance in CA LTAB (miles)		Annual/ Season Number of Tour Operation Days	Annual/ Season Tour Vehicle VMT (miles/ year)	Emission Factors (lbs/vmt)									Annual Emissions (tons/yr)										
							NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)	
2	2	2	4.75	1	90	1,710	0.00091	0.011	0.00072	0.0000213	0.000011	0.000010	2.6	0.00011	0.000021	0.00078	0.0090	0.00062	0.000018	0.0000092	0.0000085	2.3	0.000092	0.000018	2.3	
						Unpaved-Road Fugitive Dust:		0.98	0.098											0.84	0.084					

Epic Discovery General Operation and Maintenance Onroad Vehicle Emissions in California

Epic Discovery General Operation and Maintenance Onroad Vehicle Travel Daily Emissions in California (Maximum)																										
Peak Day Number of Epic Discovery General O&M Onroad Vehicles			Round-Trip Distance in CA LTAB (miles)	Carpool Factor (Employees per Vehicle)	O&M Daily VMT (miles/ day)	Emission Factors (lbs/vmt)									Daily Emissions (lbs/day)											
						NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)		
2	1	1	5	1	10	0.00091	0.011	0.00072	0.000021	0.000011	0.000010	2.64	0.00011	0.000021	0.009	0.11	0.007	0.00021	0.00011	0.00010	26.4	0.0011	0.00021	26.5		
						Unpaved-Road Fugitive Dust:		0.98	0.098											9.8	0.98					

Epic Discovery General O&M Onroad Vehicle Travel Annual Emissions in California																										
Annual Average Number of Epic Discovery General O&M Onroad Vehicles			Round-Trip Distance in CA LTAB (miles)	Carpool Factor (Employees per Vehicle)	Annual Number of O&M Days	Annual O&M Onroad Vehicle VMT (miles/ year)	Emission Factors (lbs/vmt)									Annual Emissions (tons/yr)										
							NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)	
2.0	1	1	5	1	90	900	0.00091	0.011	0.00072	0.000021	0.000011	0.000010	2.64	0.00011	0.000021	0.0004	0.005	0.00033	0.000010	0.000005	0.000004	1.19	0.00005	0.000010	1.19	
						Unpaved-Road Fugitive Dust:		0.98	0.098											0.44	0.044					

1) The total distance is the twice daily tour distance plus the twice daily round trips to leave visitors off and pick them up, based on 1.5 miles one-way to end of East Peak Zipline and 0.85 mile to end of Sky Meadows Zipline Canopy Tour.
 2) Diesel fuel CO₂ emission factor (kg CO₂/MMBtu) = 73.96 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-1 to Subpart C, p. 71951, November 29, 2013.)
 3) Diesel fuel CH₄ emission factor (kg CH₄/MMBtu) = 0.003 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-2 to Subpart C, p. 71952, November 29, 2013.)
 4) Diesel fuel N₂O emission factor (kg N₂O/MMBtu) = 0.0006 Ibid
 5) CH₄ Global Warming Potential (-) = 25 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table 2, p. 71909, November 29, 2013.)
 6) N₂O Global Warming Potential (-) = 298 Ibid

**Appendix 3.4 Table 14
Daily Operation Onsite Fugitive Dust Emissions in California
Heavenly Mountain Resort Epic Discovery Project**

Daily Operation Onsite Fugitive Dust Emissions in California

PM_{2.5} (lb/day)				
Equipment	Project Phase:	Daily Fugitive Dust Emission		
		Operation		
Mountain Tour F-350 Truck		0.105		
PICKUP 3/4 TON 4X4 CREW CAB		0.031		
ATVs		0.025		
PM_{2.5} Subtotal (lbs/day) =		0.16		

PM₁₀ (lb/day)				
Equipment	Project Phase:	Daily Fugitive Dust Emission		
		Operation		
Mountain Tour F-350 Truck		1.05		
PICKUP 3/4 TON 4X4 CREW CAB		0.31		
ATVs		0.25		
PM₁₀ Subtotal (lbs/day) =		1.61		

**Appendix 3.4 Table 14
Daily Operation Onsite Fugitive Dust Emissions in California
Heavenly Mountain Resort Epic Discovery Project**

Daily Operation Onsite Fugitive Dust I

PM_{2.5} (l	
Equipment	Project Phase:
Mountain Tour F-350 Truck	
PICKUP 3/4 TON 4X4 CREW CAB	
ATVs	
PM_{2.5} Subtotal (lbs/day) =	
PM₁₀ (l	
Equipment	Project Phase:
Mountain Tour F-350 Truck	
PICKUP 3/4 TON 4X4 CREW CAB	
ATVs	
PM₁₀ Subtotal (lbs/day) =	

Appendix 3.4 Table 14
Daily Operation Onsite Fugitive Dust Emissions in California
Heavenly Mountain Resort Epic Discovery Project

Daily Operation Onsite Fugitive Dust I

PM _{2.5} (l)	
Equipment	Project Phase:
Mountain Tour F-350 Truck	
PICKUP 3/4 TON 4X4 CREW CAB	
ATVs	
PM _{2.5} Subtotal (lbs/day) =	

PM ₁₀ (l)	
Equipment	Project Phase:
Mountain Tour F-350 Truck	
PICKUP 3/4 TON 4X4 CREW CAB	
ATVs	
PM ₁₀ Subtotal (lbs/day) =	

Annual Operation Onsite Fugitive Dust Emissions in California

PM _{2.5} (tpy)			
Equipment	Project Phase:	Daily Fugitive Dust Emission	
		Operation	
Mountain Tour F-350 Truck		0.0032	
PICKUP 3/4 TON 4X4 CREW CAB		0.0014	
ATVs		0.0011	
PM _{2.5} Subtotal (tpy) =		0.0057	

PM ₁₀ (tpy)			
Equipment	Project Phase:	Daily Fugitive Dust Emission	
		Operation	
Mountain Tour F-350 Truck		0.032	
PICKUP 3/4 TON 4X4 CREW CAB		0.014	
ATVs		0.011	
PM ₁₀ Subtotal (tpy) =		0.057	

Appendix 3.4 Table 15
Operation Onsite Offroad Equipment Hours, Emission Factors, and Emissions in California
Heavenly Mountain Resort Epic Discovery Project

Daily Offroad Equipment Emissions (lbs/day)										Annual Offroad Equipment Emissions (tpy)									
NOx	CO	VOC	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e	NOx	CO	VOC	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e
4.24E-01	5.39E+00	1.94E-01	5.02E-04	3.02E-03	2.77E-03	2.29E+01	9.29E-04	1.86E-04	23 (21,22)	1.91E-02	2.43E-01	8.71E-03	2.26E-05	1.36E-04	1.25E-04	1.03E+00	4.18E-05	8.37E-06	1.03 (21,22)

**Appendix 3.4 Table 16
Operation Offsite On-Road Vehicle Emissions in California
Heavenly Mountain Resort Epic Discovery Project**

Epic Discovery Operation Offsite On-Road Vehicle Emissions in California

Epic Discovery Visitor Vehicle Emissions in California

Peak Visitor Travel Daily Emissions in California																										
Peak Day Number of Visitor Vehicles from California Driving to Epic Discovery	Visitor Vehicle Round Trips Per Day	California Visitor Vehicle Round Trips Per Day	Round-Trip Distance in CA LTAB ⁽¹⁾ (miles)	California Visitor Daily VMT (miles/day)	Emission Factors (lbs/vmt)										Daily Emissions (lbs/day)											
					NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)			
					137.9	1	137.9	18.0	1	2,476	0.00026	0.0036	0.00027	0.0000085	0.00010	0.000044	0.85	0.000034	0.0000069	0.97	12.7	2.0	0.023	0.26	0.11	2,246
					Paved-Road Fugitive Dust:										0.0047	0.0012									11.6	2.8

Visitor Travel Annual Emissions in California																										
Annual Average Number of Visitor Vehicles from California Driving to Epic Discovery Per Day	Visitor Vehicle Round Trips Per Day	California Visitor Vehicle Round Trips Per Day	Round-Trip Distance in CA LTAB ⁽¹⁾ (miles)	Annual Number of Operation Days	California Annual Visitor VMT (miles/year)	Emission Factors (lbs/vmt)										Annual Emissions (tons/yr)										
						NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)		
						76.8	1	76.8	18.1	1	90	125,055	0.00026	0.0036	0.00027	0.0000085	0.00010	0.000044	0.85	0.000034	0.0000069	0.024	0.34	0.051	0.00057	0.0066
					Paved-Road Fugitive Dust:										0.0047	0.0012									0.29	0.072

Epic Discovery Employee Vehicle Emissions in California

Peak Epic Discovery Employee Travel Daily Emissions in California																								
California Employee Vehicle Round Trips Per Day	Employee Round-Trip Distance in CA LTAB ⁽¹⁾ (miles)	Employee Daily VMT (miles/day)	Emission Factors (lbs/vmt)										Daily Emissions (lbs/day)											
			NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)			
			105.0	25.6	1	2,692	0.00026	0.0036	0.00027	0.0000085	0.00010	0.000044	0.85	0.000034	0.0000069	0.95	12.6	1.75	0.024	0.28	0.12	2,395	0.10	0.019
			Paved-Road Fugitive Dust:										0.0047	0.0012									12.6	3.1

Epic Discovery Employee Travel Annual Emissions in California																									
California Employee Vehicle Round Trips Per Day	Employee Round-Trip Distance in CA LTAB ⁽¹⁾ (miles)	Annual Number of Operation Days	Annual California Employee VMT (miles/year)	Emission Factors (lbs/vmt)										Annual Emissions (tons/yr)											
				NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)			
				91.7	25.6	1	90	211,590	0.00026	0.0036	0.00027	0.0000085	0.00010	0.000044	0.85	0.000034	0.0000069	0.037	0.52	0.069	0.00095	0.011	0.0048	94.1	0.0038
				Paved-Road Fugitive Dust:										0.0047	0.0012									0.50	0.12

- 1) From Fehr & Peers traffic analysis.
- 2) Diesel fuel CO₂ emission factor (kg CO₂/MMBtu) = 73.96 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-1 to Subpart C, p. 71951, November 29, 2013.)
- 3) Diesel fuel CH₄ emission factor (kg CH₄/MMBtu) = 0.003 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-2 to Subpart C, p. 71952, November 29, 2013.)
- 4) Diesel fuel N₂O emission factor (kg N₂O/MMBtu) = 0.0006 Ibid
- 5) CH₄ Global Warming Potential (-) = 25 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table 2, p. 71909, November 29, 2013.)
- 6) N₂O Global Warming Potential (-) = 298 Ibid
- 7) Based on Fehr & Peers survey of visitors to resort parking garage.

**Appendix 3.4 Table 17
Total Project Operation Onsite Emissions
Heavenly Mountain Resort Epic Discovery Project**

Epic Discovery Operation Onsite Emissions, Total

Epic Discovery Mountain Tour Vehicle Emissions, Total

Mountain Tour Vehicle Travel Daily Emissions in LTAB (Maximum)																											
Peak Day Number of Tour Vehicles	Tour Vehicle Trips Per Day	Number of Tours Per Day	Tour Distance in LTAB (miles)	Tour Vehicle Daily VMT (miles/)	Emission Factors (lbs/vmt)										Daily Emissions (lbs/day)												
					NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)				
2	2	2	7.50	1	39.4	0.00091	0.011	0.00072	0.000021	0.000011	0.000010	2.6	0.00011	0.000021	0.036	0.42	0.028	0.00084	0.00042	0.00039	104.2	0.0042	0.00085	104.5			
					Unpaved-Road Fugitive Dust:		0.98	0.098											38.5	3.8							

Mountain Tour Vehicle Travel Annual Emissions in LTAB																											
Annual Average Number of Tour Vehicles	Tour Vehicle Trips Per Day	Number of Tours Per Day	Tour Distance in LTAB (miles)	Annual/Season Number of Tour Operation Days	Annual/Season Tour Vehicle VMT (miles/year)	Emission Factors (lbs/vmt)										Annual Emissions (tons/yr)											
						NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)			
2	2	2	7.50	1	90	2,700	0.00091	0.011	0.00072	0.0000213	0.000011	0.000010	2.6	0.00011	0.000021	0.00123	0.0142	0.00098	0.000029	0.0000146	0.0000134	3.6	0.000145	0.000029	3.6		
					Unpaved-Road Fugitive Dust:		0.98	0.098											1.32	0.132							

Epic Discovery General Operation and Maintenance Onroad Vehicle Emissions in LTAB

Epic Discovery General Operation and Maintenance Onroad Vehicle Travel Daily Emissions in LTAB (Maximum)																										
Peak Day Number of Epic Discovery General O&M Onroad Vehicles	Round-Trip Distance in LTAB (miles)	Carpool Factor (Employees per Vehicle)	O&M Daily VMT (miles/day)	Emission Factors (lbs/vmt)										Daily Emissions (lbs/day)												
				NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)				
2	1	1	10	1	20	0.00091	0.011	0.00072	0.000021	0.000011	0.000010	2.64	0.00011	0.000021	0.018	0.21	0.014	0.00043	0.00022	0.00020	52.9	0.0021	0.00043	53.1		
				Unpaved-Road Fugitive Dust:		0.98	0.098											19.5	1.95							

Epic Discovery General O&M Onroad Vehicle Travel Annual Emissions in LTAB																										
Annual Average Number of Epic Discovery General O&M Onroad Vehicles	Round-Trip Distance in LTAB (miles)	Carpool Factor (Employees per Vehicle)	Annual Number of O&M Days	Annual O&M Onroad Vehicle VMT (miles/year)	Emission Factors (lbs/vmt)										Annual Emissions (tons/yr)											
					NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)			
2.0	1	1	10	1	90	1,800	0.00091	0.011	0.00072	0.000021	0.000011	0.000010	2.64	0.00011	0.000021	0.0008	0.009	0.00065	0.000019	0.000010	0.000009	2.38	0.00010	0.000019	2.39	
				Unpaved-Road Fugitive Dust:		0.98	0.098											0.88	0.088							

- 1) The total distance is the twice daily tour distance plus the twice daily round trips to leave visitors off and pick them up, based on 1.5 miles one-way to end of East Peak Zipline and 0.85 mile to end of Sky Meadows Zipline Canopy Tour.
- 2) Diesel fuel CO₂ emission factor (kg CO₂/MMBtu) = 73.96 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-1 to Subpart C, p. 71951, November 29, 2013.)
- 3) Diesel fuel CH₄ emission factor (kg CH₄/MMBtu) = 0.003 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-2 to Subpart C, p. 71952, November 29, 2013.)
- 4) Diesel fuel N₂O emission factor (kg N₂O/MMBtu) = 0.0006 Ibid
- 5) CH₄ Global Warming Potential (-) = 25 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table 2, p. 71909, November 29, 2013.)
- 6) N₂O Global Warming Potential (-) = 298 Ibid

**Appendix 3.4 Table 18
Total Project Operation Onsite Fugitive Dust Emissions in the Basin
Heavenly Mountain Resort Epic Discovery Project**

Daily Operation Onsite Fugitive Dust Emissions in the Basin

PM _{2.5} (lb/day)			
Equipment	Project Phase:	Daily Fugitive Dust Emission	
		Operation	
Mountain Tour F-350 Truck		0.145	
PICKUP 3/4 TON 4X4 CREW CAB		0.063	
ATVs		0.042	
PM _{2.5} Subtotal (lbs/day) =		0.25	

PM ₁₀ (lb/day)			
Equipment	Project Phase:	Daily Fugitive Dust Emission	
		Operation	
Mountain Tour F-350 Truck		1.45	
PICKUP 3/4 TON 4X4 CREW CAB		0.63	
ATVs		0.42	
PM ₁₀ Subtotal (lbs/day) =		2.50	

Annual Operation Onsite Fugitive Dust Emissions in the Basin

PM _{2.5} (tpy)			
Equipment	Project Phase:	Daily Fugitive Dust Emission	
		Operation	
Mountain Tour F-350 Truck		0.0050	
PICKUP 3/4 TON 4X4 CREW CAB		0.0028	
ATVs		0.0019	
PM _{2.5} Subtotal (tpy) =		0.0097	

PM ₁₀ (tpy)			
Equipment	Project Phase:	Daily Fugitive Dust Emission	
		Operation	
Mountain Tour F-350 Truck		0.050	
PICKUP 3/4 TON 4X4 CREW CAB		0.028	
ATVs		0.019	
PM ₁₀ Subtotal (tpy) =		0.097	

**Appendix 3.4 Table 19
Total Project Operation Offsite Emissions in the Basin
Heavenly Mountain Resort Epic Discovery Project**

Epic Discovery Operation Offsite On-Road Vehicle Emissions in the Basin

Epic Discovery Visitor Vehicle Emissions in the Basin

Peak Visitor Travel Daily Emissions in LTAB																										
Peak Day Total Number of Visitor Vehicles Driving to Epic Discovery	Visitor Vehicle Round Trips Per Day	Number of Visitor Vehicle Round Trips Per Day	Weighted Round-Trip Distance in LTAB ⁽¹⁾ (miles)		Visitor Daily VMT (miles/ day)	Emission Factors (lbs/vmt)									Daily Emissions (lbs/day)											
						NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)		
						224	1	224	17.74	1	3,903	0.00026	0.0036	0.00027	0.0000085	0.00010	0.000044	0.85	0.000034	0.0000069	1.54	20.2	3.2	0.036	0.41	0.18
Paved-Road Fugitive Dust:						0.0047	0.0012												18.3	4.5						

Visitor Travel Annual Emissions in LTAB																										
Annual Average Number of Visitor Vehicles Driving to Epic Discovery Per Day	Visitor Vehicle Round Trips Per Day	Number of Visitor Vehicle Round Trips Per Day	Weighted Round-Trip Distance in LTAB ⁽¹⁾ (miles)		Annual Number of Operation Days	Annual Visitor VMT (miles/ year)	Emission Factors (lbs/vmt)									Annual Emissions (tons/yr)										
							NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)	
							247.0	1	249.6	8.73	1	90	196,020	0.00026	0.0036	0.00027	0.0000085	0.00010	0.000044	0.85	0.000034	0.0000069	0.052	0.73	0.14	0.00096
Paved-Road Fugitive Dust:						0.0047	0.0012												0.46	0.113						

Epic Discovery Employee Vehicle Emissions in the Basin

Peak Epic Discovery Employee Travel Daily Emissions in LTAB																										
		Employee Vehicle Round Trips Per Day	Round-Trip Distance in LTAB ⁽¹⁾ (miles)		Employee Daily VMT (miles/ day)	Emission Factors (lbs/vmt)									Daily Emissions (lbs/day)											
						NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)		
								140.0	25.6	1	3,589	0.00026	0.0036	0.00027	0.0000085	0.00010	0.000044	0.85	0.000034	0.0000069	1.26	16.7	2.33	0.032	0.38	0.16
Paved-Road Fugitive Dust:						0.0047	0.0012												16.8	4.13						

Epic Discovery Employee Travel Annual Emissions in California																										
		Employee Vehicle Round Trips Per Day	Round-Trip Distance in LTAB ⁽¹⁾ (miles)		Annual Number of Operation Days	Annual Employee VMT (miles/ year)	Emission Factors (lbs/vmt)									Annual Emissions (tons/yr)										
							NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	NOx	CO	ROG	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e ^(5,6)	
									122.3	25.6	1	90	282,150	0.00026	0.0036	0.00027	0.0000085	0.00010	0.000044	0.85	0.000034	0.0000069	0.050	0.69	0.092	0.0013
Paved-Road Fugitive Dust:						0.0047	0.0012												0.66	0.16						

1) Weighted distance calculated in Fehr & Peers transportation analysis.

2) Diesel fuel CO₂ emission factor (kg CO₂/MMBtu) = 73.96 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-1 to Subpart C, p. 71951, November 29, 2013.)

3) Diesel fuel CH₄ emission factor (kg CH₄/MMBtu) = 0.003 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table C-2 to Subpart C, p. 71952, November 29, 2013.)

4) Diesel fuel N₂O emission factor (kg N₂O/MMBtu) = 0.0006 Ibid

5) CH₄ Global Warming Potential (-) = 25 (EPA. 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule, Federal Register, Volume 78, Number 230, Table 2, p. 71909, November 29, 2013.)

6) N₂O Global Warming Potential (-) = 298 Ibid

Appendix 3.4 Table 20
GHG Emission Factors for Electric Energy Use
Heavenly Mountain Resort Epic Discovery Project

Utility = Sierra Pacific Resources

<u>Pollutant</u>	<u>Emission Factors</u> (lbs/MWh) Reference	Maximum Daily Use (lbs)	Annual Emission (tons)
CO ₂	1,328.16 CalEEMod, Version 2013.2.2	505	30.3
CH ₄	0.029 CalEEMod, Version 2013.2.2	0.011	0.0007
N ₂ O	0.00617 CalEEMod, Version 2013.2.2	0.002	0.0001
CO ₂ e		506	30.4
Electric motor use =	120 days/season *	10	hrs/day max. =
Electric motor power (kW) =	38	= hp of	51
			1,200 hrs/season

Appendix 3.4 Table 21
Total Project Operation Onsite Offroad Equipment Hours, Emission Factors, and Emissions in the Basin
Heavenly Mountain Resort Epic Discovery Project

Daily Offroad Equipment Emissions (lbs/day)										Annual Offroad Equipment Emissions (tpy)										Weight (tons)
NOx	CO	VOC	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e	NOx	CO	VOC	SOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e	
7.06E-01	8.98E+00	3.23E-01	8.37E-04	5.03E-03	4.62E-03	3.82E+01	1.55E-03	3.10E-04	38 (21.22)	3.18E-02	4.04E-01	1.45E-02	3.77E-05	2.26E-04	2.08E-04	1.72E+00	6.97E-05	1.39E-05	1.72 (21.22)	

APPENDIX 3.6-A
NOISE TERMINOLOGY AND
MODELING TABLES

Appendix A

Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three (+5 dB for TRPA calculations) and nighttime hours weighted by a factor of 10 (or +10 dB) prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Data Input Sheet

Project #: 2013-194
Description: Existing Heavenly Summer Epic
Ldn/CNEL: CNEL
Hard/Soft: Soft

Segment	Roadway Name	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	US 50	Loop Road to Kingsbury Way	26,790	77	10	13	3	1	30	100	
2	US 50.	Loop Road to Casino Core	20,930	77	10	13	3	1	30	100	
3	US 50.	Casino Core to Stateline Ave	21,920	77	10	13	3	1	30	100	
4	US 50.	Stateline Ave to Friday Ave	24,170	77	10	13	3	1	30	100	
5	US 50.	Friday Ave to Park Ave	24,830	77	10	13	3	1	30	100	
6	US 50	Park Ave to Pioneer Trail	30,610	77	10	13	3	1	30	100	
7	US 50	Pioneer Trail to Ski Run Blvd	23,590	77	10	13	3	1	30	100	
8	Pioneer Trail	South of US 50	7,900	77	10	13	3	1	30	100	
9	Park Ave	West of US 50	2,560	77	10	13	2	1	25	100	
10	Park Ave	East of US 50	5,950	77	10	13	2	1	25	100	
11											
12											
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22											

Appendix B

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Predicted Levels

Project #: 2013-194
Description: Existing Heavenly Summer Epic
Ldn/CNEL: CNEL
Hard/Soft: Soft

Segment	Roadway Name	Segment	Autos	Medium Trucks	Heavy Trucks	Total
1	US 50	Loop Road to Kingsbury Way	60.3	56.2	58.6	63
2	US 50.	Loop Road to Casino Core	59.2	55.1	57.5	62
3	US 50.	Casino Core to Stateline Ave	59.4	55.3	57.7	63
4	US 50.	Stateline Ave to Friday Ave	59.8	55.8	58.1	63
5	US 50.	Friday Ave to Park Ave	60.0	55.9	58.2	63
6	US 50	Park Ave to Pioneer Trail	60.9	56.8	59.1	64
7	US 50	Pioneer Trail to Ski Run Blvd	59.7	55.7	58.0	63
8	Pioneer Trail	South of US 50	55.0	50.9	53.3	58
9	Park Ave	West of US 50	47.9	43.0	47.6	51
10	Park Ave	East of US 50	51.5	46.7	51.3	55

Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2013-194
 Description: Existing Heavenly Summer Epic
 Ldn/CNEL: CNEL
 Hard/Soft: Soft

Segment	Roadway Name	Segment	----- Distances to Traffic Noise Contours -----				
			75	70	65	60	55
1	US 50	Loop Road to Kingsbury Way	17	36	79	169	365
2	US 50.	Loop Road to Casino Core	14	31	67	144	309
3	US 50.	Casino Core to Stateline Ave	15	32	69	148	319
4	US 50.	Stateline Ave to Friday Ave	16	34	73	158	340
5	US 50.	Friday Ave to Park Ave	16	35	75	161	347
6	US 50	Park Ave to Pioneer Trail	18	40	86	185	398
7	US 50	Pioneer Trail to Ski Run Blvd	16	33	72	155	335
8	Pioneer Trail	South of US 50	7	16	35	75	162
9	Park Ave	West of US 50	3	6	12	27	58
10	Park Ave	East of US 50	5	10	22	47	101

Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Data Input Sheet

Project #: 2013-194
 Description: Existing Plus Project Heavenly Summer Epic
 Ldn/CNEL: CNEL
 Hard/Soft: Soft

Segment	Roadway Name	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	US 50	Loop Road to Kingsbury Way	27,080	77	10	13	3	1	30	100	
2	US 50.	Loop Road to Casino Core	20,990	77	10	13	3	1	30	100	
3	US 50.	Casino Core to Stateline Ave	21,980	77	10	13	3	1	30	100	
4	US 50.	Stateline Ave to Friday Ave	24,230	77	10	13	3	1	30	100	
5	US 50.	Friday Ave to Park Ave	24,920	77	10	13	3	1	30	100	
6	US 50	Park Ave to Pioneer Trail	31,160	77	10	13	3	1	30	100	
7	US 50	Pioneer Trail to Ski Run Blvd	23,960	77	10	13	3	1	30	100	
8	Pioneer Trail	South of US 50	8,080	77	10	13	3	1	30	100	
9	Park Ave	West of US 50	2,600	77	10	13	2	1	25	100	
10	Park Ave	East of US 50	6,630	77	10	13	2	1	25	100	
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Appendix B

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Predicted Levels

Project #: 2013-194
Description: Existing Plus Project Heavenly Summer Epic
Ldn/CNEL: CNEL
Hard/Soft: Soft

Segment	Roadway Name	Segment	Autos	Medium Trucks	Heavy Trucks	Total
1	US 50	Loop Road to Kingsbury Way	60.3	56.2	58.6	63
2	US 50.	Loop Road to Casino Core	59.2	55.1	57.5	62
3	US 50.	Casino Core to Stateline Ave	59.4	55.3	57.7	63
4	US 50.	Stateline Ave to Friday Ave	59.8	55.8	58.1	63
5	US 50.	Friday Ave to Park Ave	60.0	55.9	58.2	63
6	US 50	Park Ave to Pioneer Trail	60.9	56.9	59.2	64
7	US 50	Pioneer Trail to Ski Run Blvd	59.8	55.7	58.1	63
8	Pioneer Trail	South of US 50	55.1	51.0	53.3	58
9	Park Ave	West of US 50	47.9	43.1	47.7	51
10	Park Ave	East of US 50	52.0	47.1	51.8	56

Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2013-194
 Description: Existing Plus Project Heavenly Summer Epic
 Ldn/CNEL: CNEL
 Hard/Soft: Soft

Segment	Roadway Name	Segment	----- Distances to Traffic Noise Contours -----				
			75	70	65	60	55
1	US 50	Loop Road to Kingsbury Way	17	37	79	170	367
2	US 50.	Loop Road to Casino Core	14	31	67	144	310
3	US 50.	Casino Core to Stateline Ave	15	32	69	148	319
4	US 50.	Stateline Ave to Friday Ave	16	34	73	158	341
5	US 50.	Friday Ave to Park Ave	16	35	75	161	347
6	US 50	Park Ave to Pioneer Trail	19	40	87	187	403
7	US 50	Pioneer Trail to Ski Run Blvd	16	34	73	157	338
8	Pioneer Trail	South of US 50	8	16	35	76	164
9	Park Ave	West of US 50	3	6	13	27	58
10	Park Ave	East of US 50	5	11	23	51	109

Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Data Input Sheet

Project #: 2013-194
 Description: Year 2035 Heavenly Summer Epic
 Ldn/CNEL: CNEL
 Hard/Soft: Soft

Segment	Roadway Name	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	US 50	Loop Road to Kingsbury Way	29,600	77	10	13	3	1	30	100	
2	US 50.	Loop Road to Casino Core	23,100	77	10	13	3	1	30	100	
3	US 50.	Casino Core to Stateline Ave	24,300	77	10	13	3	1	30	100	
4	US 50.	Stateline Ave to Friday Ave	26,500	77	10	13	3	1	30	100	
5	US 50.	Friday Ave to Park Ave	26,400	77	10	13	3	1	30	100	
6	US 50	Park Ave to Pioneer Trail	32,800	77	10	13	3	1	30	100	
7	US 50	Pioneer Trail to Ski Run Blvd	24,800	77	10	13	3	1	30	100	
8	Pioneer Trail	South of US 50	9,000	77	10	13	3	1	30	100	
9	Park Ave	West of US 50	3,200	77	10	13	2	1	25	100	
10	Park Ave	East of US 50	6,600	77	10	13	2	1	25	100	
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											

Appendix B

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Predicted Levels

Project #: 2013-194
Description: Year 2035 Heavenly Summer Epic
Ldn/CNEL: CNEL
Hard/Soft: Soft

Segment	Roadway Name	Segment	Autos	Medium Trucks	Heavy Trucks	Total
1	US 50	Loop Road to Kingsbury Way	60.7	56.6	59.0	64
2	US 50.	Loop Road to Casino Core	59.6	55.6	57.9	63
3	US 50.	Casino Core to Stateline Ave	59.9	55.8	58.1	63
4	US 50.	Stateline Ave to Friday Ave	60.2	56.2	58.5	63
5	US 50.	Friday Ave to Park Ave	60.2	56.1	58.5	63
6	US 50	Park Ave to Pioneer Trail	61.2	57.1	59.4	64
7	US 50	Pioneer Trail to Ski Run Blvd	59.9	55.9	58.2	63
8	Pioneer Trail	South of US 50	55.5	51.5	53.8	59
9	Park Ave	West of US 50	48.8	44.0	48.6	52
10	Park Ave	East of US 50	52.0	47.1	51.7	56

Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2013-194
 Description: Year 2035 Heavenly Summer Epic
 Ldn/CNEL: CNEL
 Hard/Soft: Soft

Segment	Roadway Name	Segment	----- Distances to Traffic Noise Contours -----				
			75	70	65	60	55
1	US 50	Loop Road to Kingsbury Way	18	39	84	181	390
2	US 50.	Loop Road to Casino Core	15	33	71	153	330
3	US 50.	Casino Core to Stateline Ave	16	34	74	159	342
4	US 50.	Stateline Ave to Friday Ave	17	36	78	168	362
5	US 50.	Friday Ave to Park Ave	17	36	78	168	361
6	US 50	Park Ave to Pioneer Trail	19	42	90	194	417
7	US 50	Pioneer Trail to Ski Run Blvd	16	35	75	161	346
8	Pioneer Trail	South of US 50	8	18	38	82	176
9	Park Ave	West of US 50	3	7	14	31	67
10	Park Ave	East of US 50	5	11	23	50	109

Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Data Input Sheet

Project #: 2013-194
 Description: Cumulative Plus Project Heavenly Summer Epic
 Ldn/CNEL: CNEL
 Hard/Soft: Soft

Segment	Roadway Name	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	US 50	Loop Road to Kingsbury Way	29,890	77	10	13	3	1	30	100	
2	US 50.	Loop Road to Casino Core	23,160	77	10	13	3	1	30	100	
3	US 50.	Casino Core to Stateline Ave	24,360	77	10	13	3	1	30	100	
4	US 50.	Stateline Ave to Friday Ave	26,580	77	10	13	3	1	30	100	
5	US 50.	Friday Ave to Park Ave	26,490	77	10	13	3	1	30	100	
6	US 50	Park Ave to Pioneer Trail	33,350	77	10	13	3	1	30	100	
7	US 50	Pioneer Trail to Ski Run Blvd	24,170	77	10	13	3	1	30	100	
8	Pioneer Trail	South of US 50	9,180	77	10	13	3	1	30	100	
9	Park Ave	West of US 50	3,240	77	10	13	2	1	25	100	
10	Park Ave	East of US 50	7,280	77	10	13	2	1	25	100	
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											

Appendix B

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Predicted Levels

Project #: 2013-194
Description: Cumulative Plus Project Heavenly Summer Epic
Ldn/CNEL: CNEL
Hard/Soft: Soft

Segment	Roadway Name	Segment	Autos	Medium Trucks	Heavy Trucks	Total
1	US 50	Loop Road to Kingsbury Way	60.8	56.7	59.0	64
2	US 50.	Loop Road to Casino Core	59.6	55.6	57.9	63
3	US 50.	Casino Core to Stateline Ave	59.9	55.8	58.1	63
4	US 50.	Stateline Ave to Friday Ave	60.2	56.2	58.5	63
5	US 50.	Friday Ave to Park Ave	60.2	56.2	58.5	63
6	US 50	Park Ave to Pioneer Trail	61.2	57.2	59.5	64
7	US 50	Pioneer Trail to Ski Run Blvd	59.8	55.8	58.1	63
8	Pioneer Trail	South of US 50	55.6	51.6	53.9	59
9	Park Ave	West of US 50	48.9	44.0	48.7	52
10	Park Ave	East of US 50	52.4	47.5	52.2	56

Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2013-194
 Description: Cumulative Plus Project Heavenly Summer Epic
 Ldn/CNEL: CNEL
 Hard/Soft: Soft

Segment	Roadway Name	Segment	----- Distances to Traffic Noise Contours -----				
			75	70	65	60	55
1	US 50	Loop Road to Kingsbury Way	18	39	84	182	392
2	US 50.	Loop Road to Casino Core	15	33	71	154	331
3	US 50.	Casino Core to Stateline Ave	16	34	74	159	342
4	US 50.	Stateline Ave to Friday Ave	17	36	78	168	363
5	US 50.	Friday Ave to Park Ave	17	36	78	168	362
6	US 50	Park Ave to Pioneer Trail	20	42	91	196	422
7	US 50	Pioneer Trail to Ski Run Blvd	16	34	73	158	340
8	Pioneer Trail	South of US 50	8	18	38	83	179
9	Park Ave	West of US 50	3	7	15	31	68
10	Park Ave	East of US 50	5	12	25	54	116

APPENDIX 3.7-A
TRANSPORTATION
DATA/MODELING TABLES

Traffic Count Data

ALL TRAFFIC DATA

City of South Lake Tahoe
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7731-001 US-50-Lake Parkway.ppd

Date : 12/13/2013

Unshifted Count = All Vehicles

START TIME	Lake Parkway Southbound					US-50 Westbound					Lake Parkway Northbound					US-50 Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
15:00	29	2	6	0	37	33	212	20	0	265	12	5	46	0	63	6	213	6	0	225	590	0
15:15	26	4	7	0	37	30	203	20	0	253	8	5	63	0	76	4	167	2	0	173	539	0
15:30	16	2	3	0	21	55	210	26	0	291	9	4	54	0	67	6	185	8	0	199	578	0
15:45	22	7	4	0	33	34	201	30	0	265	16	3	67	0	86	3	176	11	0	190	574	0
Total	93	15	20	0	128	152	826	96	0	1074	45	17	230	0	292	19	741	27	0	787	2281	0
16:00	32	2	8	0	42	33	205	20	0	258	12	2	62	0	76	9	217	8	0	234	610	0
16:15	38	3	11	0	52	51	212	12	0	275	9	4	66	0	79	5	226	4	0	235	641	0
16:30	27	3	2	0	32	38	247	24	0	309	16	6	78	0	100	5	191	6	0	202	643	0
16:45	21	0	2	0	23	35	214	12	0	261	4	3	57	0	64	1	195	7	0	203	551	0
Total	118	8	23	0	149	157	878	68	0	1103	41	15	263	0	319	20	829	25	0	874	2445	0
17:00	27	3	1	0	31	29	217	17	0	263	5	3	62	0	70	2	174	4	0	180	544	0
17:15	17	2	4	0	23	34	222	25	0	281	4	4	58	0	66	3	199	9	0	211	581	0
17:30	15	1	4	0	20	24	188	12	0	224	6	3	55	0	64	3	188	8	0	199	507	0
17:45	15	0	4	0	19	31	184	23	0	238	8	2	38	0	48	3	158	3	0	164	469	0
Total	74	6	13	0	93	118	811	77	0	1006	23	12	213	0	248	11	719	24	0	754	2101	0
Grand Total	285	29	56	0	370	427	2515	241	0	3183	109	44	706	0	859	50	2289	76	0	2415	6827	0
Apprch %	77.0%	7.8%	15.1%	0.0%		13.4%	79.0%	7.6%	0.0%		12.7%	5.1%	82.2%	0.0%		2.1%	94.8%	3.1%	0.0%			
Total %	4.2%	0.4%	0.8%	0.0%	5.4%	6.3%	36.8%	3.5%	0.0%	46.6%	1.6%	0.6%	10.3%	0.0%	12.6%	0.7%	33.5%	1.1%	0.0%	35.4%	100.0%	

PM PEAK HOUR	Lake Parkway Southbound					US-50 Westbound					Lake Parkway Northbound					US-50 Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 15:45 to 16:45																					
Peak Hour For Entire Intersection Begins at 15:45																					
15:45	22	7	4	0	33	34	201	30	0	265	16	3	67	0	86	3	176	11	0	190	574
16:00	32	2	8	0	42	33	205	20	0	258	12	2	62	0	76	9	217	8	0	234	610
16:15	38	3	11	0	52	51	212	12	0	275	9	4	66	0	79	5	226	4	0	235	641
16:30	27	3	2	0	32	38	247	24	0	309	16	6	78	0	100	5	191	6	0	202	643
Total Volume	119	15	25	0	159	156	865	86	0	1107	53	15	273	0	341	22	810	29	0	861	2468
% App Total	74.8%	9.4%	15.7%	0.0%		14.1%	78.1%	7.8%	0.0%		15.5%	4.4%	80.1%	0.0%		2.6%	94.1%	3.4%	0.0%		
PHF	.783	.536	.568	.000	.764	.765	.876	.717	.000	.896	.828	.625	.875	.000	.853	.611	.896	.659	.000	.916	.960

ALL TRAFFIC DATA

City of South Lake Tahoe
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7731-002 US-50-Stateline Avenue.ppd

Date : 12/13/2013

Unshifted Count = All Vehicles

START TIME	Stateline Avenue Southbound					US-50 Westbound					Stateline Avenue Northbound					US-50 Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
15:00	11	1	14	0	26	1	226	10	0	237	0	0	0	0	0	20	247	6	0	273	536	0
15:15	12	0	13	0	25	1	202	2	0	205	0	0	0	0	0	22	188	5	0	215	445	0
15:30	9	0	23	0	32	2	207	3	0	212	0	0	0	0	0	42	244	11	0	297	541	0
15:45	11	1	28	0	40	4	197	6	0	207	0	0	0	0	0	27	221	9	0	257	504	0
Total	43	2	78	0	123	8	832	21	0	861	0	0	0	0	0	111	900	31	0	1042	2026	0
16:00	10	1	49	0	60	1	214	5	0	220	0	0	0	0	0	21	242	4	0	267	547	0
16:15	6	0	21	0	27	2	214	6	0	222	0	0	0	0	0	19	252	4	0	275	524	0
16:30	6	0	9	0	15	1	247	1	0	249	0	0	0	0	0	19	232	3	0	254	518	0
16:45	5	0	12	0	17	2	223	3	0	228	0	0	0	0	0	15	238	7	0	260	505	0
Total	27	1	91	0	119	6	898	15	0	919	0	0	0	0	0	74	964	18	0	1056	2094	0
17:00	4	0	18	0	22	1	206	2	0	209	0	0	0	0	0	18	208	10	0	236	467	0
17:15	1	0	15	0	16	2	212	2	0	216	0	0	0	0	0	25	246	9	0	280	512	0
17:30	6	1	23	0	30	1	190	6	0	197	0	0	0	0	0	27	232	7	0	266	493	0
17:45	6	1	12	0	19	3	159	0	0	162	0	0	0	0	0	23	193	5	0	221	402	0
Total	17	2	68	0	87	7	767	10	0	784	0	0	0	0	0	93	879	31	0	1003	1874	0
Grand Total	87	5	237	0	329	21	2497	46	0	2564	0	0	0	0	0	278	2743	80	0	3101	5994	0
Apprch %	26.4%	1.5%	72.0%	0.0%		0.8%	97.4%	1.8%	0.0%		0.0%	0.0%	0.0%	0.0%		9.0%	88.5%	2.6%	0.0%			
Total %	1.5%	0.1%	4.0%	0.0%	5.5%	0.4%	41.7%	0.8%	0.0%	42.8%	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	45.8%	1.3%	0.0%	51.7%	100.0%	

PM PEAK HOUR	Stateline Avenue Southbound					US-50 Westbound					Stateline Avenue Northbound					US-50 Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 15:30 to 16:30																					
Peak Hour For Entire Intersection Begins at 15:30																					
15:30	9	0	23	0	32	2	207	3	0	212	0	0	0	0	0	42	244	11	0	297	541
15:45	11	1	28	0	40	4	197	6	0	207	0	0	0	0	0	27	221	9	0	257	504
16:00	10	1	49	0	60	1	214	5	0	220	0	0	0	0	0	21	242	4	0	267	547
16:15	6	0	21	0	27	2	214	6	0	222	0	0	0	0	0	19	252	4	0	275	524
Total Volume	36	2	121	0	159	9	832	20	0	861	0	0	0	0	0	109	959	28	0	1096	2116
% App Total	22.6%	1.3%	76.1%	0.0%		1.0%	96.6%	2.3%	0.0%		0.0%	0.0%	0.0%	0.0%		9.9%	87.5%	2.6%	0.0%		
PHF	.818	.500	.617	.000	.663	.563	.972	.833	.000	.970	.000	.000	.000	.000	.000	.649	.951	.636	.000	.923	.967

ALL TRAFFIC DATA

City of South Lake Tahoe
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7731-003 US-50-Transit Way.ppd

Date : 12/13/2013

Unshifted Count = All Vehicles

START TIME	Southbound					US-50 Westbound					Transit Way Northbound					US-50 Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
15:00	0	0	0	0	0	0	232	0	0	232	0	0	3	0	3	0	279	5	0	284	519	0
15:15	0	0	0	0	0	5	219	0	0	224	1	0	4	0	5	0	222	10	0	232	461	0
15:30	0	0	0	0	0	2	212	0	0	214	0	0	4	0	4	0	288	7	0	295	513	0
15:45	0	0	0	0	0	6	230	0	0	236	3	0	4	0	7	0	246	9	0	255	498	0
Total	0	0	0	0	0	13	893	0	0	906	4	0	15	0	19	0	1035	31	0	1066	1991	0
16:00	0	0	0	0	0	3	259	0	0	262	0	0	5	0	5	0	282	8	0	290	557	0
16:15	0	0	0	0	0	5	225	0	0	230	0	0	5	0	5	0	256	12	0	268	503	0
16:30	0	0	0	0	0	3	256	0	0	259	0	0	1	0	1	0	257	9	0	266	526	0
16:45	0	0	0	0	0	4	222	0	0	226	0	0	1	0	1	0	256	10	0	266	493	0
Total	0	0	0	0	0	15	962	0	0	977	0	0	12	0	12	0	1051	39	0	1090	2079	0
17:00	0	0	0	0	0	2	231	0	0	233	1	0	4	0	5	0	238	9	0	247	485	0
17:15	0	0	0	0	0	4	204	0	0	208	1	0	2	0	3	0	281	10	0	291	502	0
17:30	0	0	0	0	0	1	207	0	0	208	1	0	4	0	5	0	254	4	0	258	471	0
17:45	0	0	0	0	0	1	174	0	0	175	0	0	1	0	1	0	241	12	0	253	429	0
Total	0	0	0	0	0	8	816	0	0	824	3	0	11	0	14	0	1014	35	0	1049	1887	0
Grand Total	0	0	0	0	0	36	2671	0	0	2707	7	0	38	0	45	0	3100	105	0	3205	5957	0
Apprch %	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	98.7%	0.0%	0.0%	15.6%	0.0%	84.4%	0.0%	0.0%	0.8%	0.0%	96.7%	3.3%	0.0%	53.8%	100.0%	0
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	44.8%	0.0%	0.0%	45.4%	0.1%	0.0%	0.6%	0.0%	0.8%	0.0%	52.0%	1.8%	0.0%	53.8%	100.0%	0

PM PEAK HOUR	Southbound					US-50 Westbound					Transit Way Northbound					US-50 Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 15:45 to 16:45																					
Peak Hour For Entire Intersection Begins at 15:45																					
15:45	0	0	0	0	0	6	230	0	0	236	3	0	4	0	7	0	246	9	0	255	498
16:00	0	0	0	0	0	3	259	0	0	262	0	0	5	0	5	0	282	8	0	290	557
16:15	0	0	0	0	0	5	225	0	0	230	0	0	5	0	5	0	256	12	0	268	503
16:30	0	0	0	0	0	3	256	0	0	259	0	0	1	0	1	0	257	9	0	266	526
Total Volume	0	0	0	0	0	17	970	0	0	987	3	0	15	0	18	0	1041	38	0	1079	2084
% App Total	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	98.3%	0.0%	0.0%	16.7%	0.0%	83.3%	0.0%	0.0%	0.9%	0.0%	96.5%	3.5%	0.0%	51.7%	100.0%
PHF	.000	.000	.000	.000	.000	.708	.936	.000	.000	.942	.250	.000	.750	.000	.643	.000	.923	.792	.000	.930	.935

ALL TRAFFIC DATA

City of South Lake Tahoe
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7731-004 US-50-Friday Avenue.ppd

Date : 12/13/2013

Unshifted Count = All Vehicles

START TIME	Friday Avenue Southbound					US-50 Westbound					Northbound					US-50 Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
15:00	1	0	4	0	5	0	217	4	0	221	0	0	0	0	0	3	270	0	0	273	499	0
15:15	2	0	3	0	5	0	234	2	0	236	0	0	0	0	0	4	246	0	0	250	491	0
15:30	0	0	4	0	4	0	205	3	0	208	0	0	0	0	0	1	288	0	0	289	501	0
15:45	2	0	7	0	9	0	233	3	0	236	0	0	0	0	0	4	265	0	0	269	514	0
Total	5	0	18	0	23	0	889	12	0	901	0	0	0	0	0	12	1069	0	0	1081	2005	0
16:00	6	0	7	0	13	0	249	1	0	250	0	0	0	0	0	5	269	0	0	274	537	0
16:15	2	0	4	0	6	0	227	2	0	229	0	0	0	0	0	3	261	0	0	264	499	0
16:30	1	0	3	0	4	0	256	1	0	257	0	0	0	0	0	8	282	0	0	290	551	0
16:45	1	0	6	0	7	0	217	1	0	218	0	0	0	0	0	6	255	0	0	261	486	0
Total	10	0	20	0	30	0	949	5	0	954	0	0	0	0	0	22	1067	0	0	1089	2073	0
17:00	1	0	6	0	7	0	226	1	0	227	0	0	0	0	0	1	250	0	0	251	485	0
17:15	2	0	7	0	9	0	203	1	0	204	0	0	0	0	0	1	287	0	0	288	501	0
17:30	0	0	2	0	2	0	209	1	0	210	0	0	0	0	0	2	249	0	0	251	463	0
17:45	1	0	2	0	3	0	169	0	0	169	0	0	0	0	0	2	251	0	0	253	425	0
Total	4	0	17	0	21	0	807	3	0	810	0	0	0	0	0	6	1037	0	0	1043	1874	0
Grand Total	19	0	55	0	74	0	2645	20	0	2665	0	0	0	0	0	40	3173	0	0	3213	5952	0
Apprch %	25.7%	0.0%	74.3%	0.0%		0.0%	99.2%	0.8%	0.0%		0.0%	0.0%	0.0%	0.0%		1.2%	98.8%	0.0%	0.0%			
Total %	0.3%	0.0%	0.9%	0.0%	1.2%	0.0%	44.4%	0.3%	0.0%	44.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	53.3%	0.0%	0.0%	54.0%	100.0%	

PM PEAK HOUR	Friday Avenue Southbound					US-50 Westbound					Northbound					US-50 Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 15:45 to 16:45																					
Peak Hour For Entire Intersection Begins at 15:45																					
15:45	2	0	7	0	9	0	233	3	0	236	0	0	0	0	0	4	265	0	0	269	514
16:00	6	0	7	0	13	0	249	1	0	250	0	0	0	0	0	5	269	0	0	274	537
16:15	2	0	4	0	6	0	227	2	0	229	0	0	0	0	0	3	261	0	0	264	499
16:30	1	0	3	0	4	0	256	1	0	257	0	0	0	0	0	8	282	0	0	290	551
Total Volume	11	0	21	0	32	0	965	7	0	972	0	0	0	0	0	20	1077	0	0	1097	2101
% App Total	34.4%	0.0%	65.6%	0.0%		0.0%	99.3%	0.7%	0.0%		0.0%	0.0%	0.0%	0.0%		1.8%	98.2%	0.0%	0.0%		
PHF	.458	.000	.750	.000	.615	.000	.942	.583	.000	.946	.000	.000	.000	.000	.000	.625	.955	.000	.000	.946	.953

ALL TRAFFIC DATA

City of South Lake Tahoe
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7731-005 US-50-Park Avenue.ppd
 Date : 12/13/2013

Unshifted Count = All Vehicles

START TIME	Park Avenue Southbound					US-50 Westbound					Park Avenue Northbound					US-50 Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
15:00	4	6	26	0	36	19	196	2	0	217	52	8	24	0	84	11	247	16	0	274	611	0
15:15	1	2	26	0	29	10	224	0	0	234	42	1	18	0	61	17	257	23	0	297	621	0
15:30	5	3	32	0	40	13	202	0	0	215	60	3	29	0	92	18	275	23	0	316	663	0
15:45	1	2	28	0	31	22	217	0	0	239	55	4	19	0	78	15	247	23	0	285	633	0
Total	11	13	112	0	136	64	839	2	0	905	209	16	90	0	315	61	1026	85	0	1172	2528	0
16:00	2	6	42	0	50	18	244	0	0	262	74	2	20	0	96	14	266	22	0	302	710	0
16:15	1	2	24	0	27	11	225	5	0	241	54	4	25	0	83	15	251	19	0	285	636	0
16:30	1	2	22	0	25	16	245	2	0	263	65	2	22	0	89	24	280	23	0	327	704	0
16:45	0	4	31	0	35	15	210	3	0	228	51	5	14	0	70	14	248	22	0	284	617	0
Total	4	14	119	0	137	60	924	10	0	994	244	13	81	0	338	67	1045	86	0	1198	2667	0
17:00	4	2	27	0	33	14	215	5	0	234	63	6	21	0	90	12	247	23	0	282	639	0
17:15	4	6	18	0	28	14	198	2	0	214	58	9	23	0	90	23	263	27	0	313	645	0
17:30	3	3	27	0	33	12	214	0	0	226	48	2	24	0	74	14	266	19	0	299	632	0
17:45	5	2	30	0	37	12	159	3	0	174	42	1	18	0	61	16	222	17	0	255	527	0
Total	16	13	102	0	131	52	786	10	0	848	211	18	86	0	315	65	998	86	0	1149	2443	0
Grand Total	31	40	333	0	404	176	2549	22	0	2747	664	47	257	0	968	193	3069	257	0	3519	7638	0
Apprch %	7.7%	9.9%	82.4%	0.0%	5.3%	6.4%	92.8%	0.8%	0.0%	36.0%	68.6%	4.9%	26.5%	0.0%	12.7%	5.5%	87.2%	7.3%	0.0%	46.1%	100.0%	
Total %	0.4%	0.5%	4.4%	0.0%	5.3%	2.3%	33.4%	0.3%	0.0%	36.0%	8.7%	0.6%	3.4%	0.0%	12.7%	2.5%	40.2%	3.4%	0.0%	46.1%	100.0%	

PM PEAK HOUR	Park Avenue Southbound					US-50 Westbound					Park Avenue Northbound					US-50 Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 15:45 to 16:45																					
Peak Hour For Entire Intersection Begins at 15:45																					
15:45	1	2	28	0	31	22	217	0	0	239	55	4	19	0	78	15	247	23	0	285	633
16:00	2	6	42	0	50	18	244	0	0	262	74	2	20	0	96	14	266	22	0	302	710
16:15	1	2	24	0	27	11	225	5	0	241	54	4	25	0	83	15	251	19	0	285	636
16:30	1	2	22	0	25	16	245	2	0	263	65	2	22	0	89	24	280	23	0	327	704
Total Volume	5	12	116	0	133	67	931	7	0	1005	248	12	86	0	346	68	1044	87	0	1199	2683
% App Total	3.8%	9.0%	87.2%	0.0%		6.7%	92.6%	0.7%	0.0%		71.7%	3.5%	24.9%	0.0%		5.7%	87.1%	7.3%	0.0%		
PHF	.625	.500	.690	.000	.665	.761	.950	.350	.000	.955	.838	.750	.860	.000	.901	.708	.932	.946	.000	.917	.945

ALL TRAFFIC DATA

City of South Lake Tahoe
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7731-006 US-50-Pioneer Trail.ppd

Date : 12/13/2013

Unshifted Count = All Vehicles

START TIME	Pioneer Trail Southbound					US-50 Westbound					Pioneer Trail Northbound					US-50 Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
15:00	0	0	2	0	2	53	233	1	0	287	6	0	74	0	80	0	227	1	0	228	597	0
15:15	4	0	0	0	4	52	234	2	0	288	4	0	79	0	83	1	242	5	0	248	623	0
15:30	2	0	2	0	4	51	247	1	0	299	4	0	100	0	104	2	244	3	0	249	656	0
15:45	1	0	1	0	2	68	242	1	0	311	2	0	96	0	98	1	226	3	0	230	641	0
Total	7	0	5	0	12	224	956	5	0	1185	16	0	349	0	365	4	939	12	0	955	2517	0
16:00	2	0	1	0	3	66	288	1	0	355	3	0	84	0	87	0	252	6	0	258	703	0
16:15	0	1	2	0	3	73	249	2	0	324	5	0	104	0	109	5	193	3	0	201	637	0
16:30	0	0	4	0	4	60	267	0	0	327	4	0	92	0	96	1	272	4	0	277	704	0
16:45	0	1	2	0	3	58	243	0	0	301	8	0	89	0	97	3	233	4	0	240	641	0
Total	2	2	9	0	13	257	1047	3	0	1307	20	0	369	0	389	9	950	17	0	976	2685	0
17:00	2	2	2	0	6	61	260	3	0	324	6	1	82	0	89	0	237	2	0	239	658	0
17:15	0	0	1	0	1	46	236	0	0	282	3	0	86	0	89	5	261	2	0	268	640	0
17:30	2	0	5	0	7	53	238	3	0	294	2	0	89	0	91	4	255	6	0	265	657	0
17:45	1	0	0	0	1	55	185	1	0	241	2	1	95	0	98	1	198	4	0	203	543	0
Total	5	2	8	0	15	215	919	7	0	1141	13	2	352	0	367	10	951	14	0	975	2498	0
Grand Total	14	4	22	0	40	696	2922	15	0	3633	49	2	1070	0	1121	23	2840	43	0	2906	7700	0
Apprch %	35.0%	10.0%	55.0%	0.0%		19.2%	80.4%	0.4%	0.0%		4.4%	0.2%	95.5%	0.0%		0.8%	97.7%	1.5%	0.0%			
Total %	0.2%	0.1%	0.3%	0.0%	0.5%	9.0%	37.9%	0.2%	0.0%	47.2%	0.6%	0.0%	13.9%	0.0%	14.6%	0.3%	36.9%	0.6%	0.0%	37.7%	100.0%	

PM PEAK HOUR	Pioneer Trail Southbound					US-50 Westbound					Pioneer Trail Northbound					US-50 Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 15:45 to 16:45																						
Peak Hour For Entire Intersection Begins at 15:45																						
15:45	1	0	1	0	2	68	242	1	0	311	2	0	96	0	98	1	226	3	0	230	641	
16:00	2	0	1	0	3	66	288	1	0	355	3	0	84	0	87	0	252	6	0	258	703	
16:15	0	1	2	0	3	73	249	2	0	324	5	0	104	0	109	5	193	3	0	201	637	
16:30	0	0	4	0	4	60	267	0	0	327	4	0	92	0	96	1	272	4	0	277	704	
Total Volume	3	1	8	0	12	267	1046	4	0	1317	14	0	376	0	390	7	943	16	0	966	2685	
% App Total	25.0%	8.3%	66.7%	0.0%		20.3%	79.4%	0.3%	0.0%		3.6%	0.0%	96.4%	0.0%		0.7%	97.6%	1.7%	0.0%			
PHF	.375	.250	.500	.000	.750	.914	.908	.500	.000	.927	.700	.000	.904	.000	.894	.350	.867	.667	.000	.872	.953	

ALL TRAFFIC DATA

City of South Lake Tahoe
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 13-7731-007 Bellamy Court-Park Avenue.ppd
 Date : 12/13/2013

Unshifted Count = All Vehicles

START TIME	Park Avenue Southbound					Bellamy Court Westbound					Park Avenue Northbound					Driveway Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
15:00	8	13	4	0	25	8	0	22	0	30	10	22	0	0	32	5	4	14	0	23	110	0
15:15	7	20	1	0	28	1	3	11	0	15	10	28	4	0	42	7	0	20	0	27	112	0
15:30	13	12	4	0	29	3	2	27	0	32	16	25	5	0	46	10	2	11	0	23	130	0
15:45	10	24	2	0	36	4	4	21	0	29	14	26	6	0	46	8	1	20	0	29	140	0
Total	38	69	11	0	118	16	9	81	0	106	50	101	15	0	166	30	7	65	0	102	492	0
16:00	6	20	4	0	30	5	1	30	0	36	11	32	6	0	49	6	0	23	0	29	144	0
16:15	6	15	2	0	23	1	1	28	0	30	13	24	3	0	40	11	0	22	0	33	126	0
16:30	6	18	5	0	29	11	0	34	0	45	8	26	7	0	41	9	3	24	0	36	151	0
16:45	7	17	5	0	29	5	2	21	0	28	9	17	4	0	30	8	0	16	0	24	111	0
Total	25	70	16	0	111	22	4	113	0	139	41	99	20	0	160	34	3	85	0	122	532	0
17:00	10	16	2	0	28	2	1	22	0	25	13	26	0	0	39	16	1	22	0	39	131	0
17:15	8	26	1	0	35	3	0	24	0	27	6	20	2	0	28	11	0	16	0	27	117	0
17:30	5	18	1	0	24	5	1	20	0	26	9	22	2	0	33	9	2	11	0	22	105	0
17:45	8	16	2	0	26	6	0	10	0	16	8	14	1	0	23	4	1	8	0	13	78	0
Total	31	76	6	0	113	16	2	76	0	94	36	82	5	0	123	40	4	57	0	101	431	0
Grand Total	94	215	33	0	342	54	15	270	0	339	127	282	40	0	449	104	14	207	0	325	1455	0
Apprch %	27.5%	62.9%	9.6%	0.0%		15.9%	4.4%	79.6%	0.0%		28.3%	62.8%	8.9%	0.0%		32.0%	4.3%	63.7%	0.0%			
Total %	6.5%	14.8%	2.3%	0.0%	23.5%	3.7%	1.0%	18.6%	0.0%	23.3%	8.7%	19.4%	2.7%	0.0%	30.9%	7.1%	1.0%	14.2%	0.0%	22.3%	100.0%	

PM PEAK HOUR	Park Avenue Southbound					Bellamy Court Westbound					Park Avenue Northbound					Driveway Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 15:45 to 16:45																					
Peak Hour For Entire Intersection Begins at 15:45																					
15:45	10	24	2	0	36	4	4	21	0	29	14	26	6	0	46	8	1	20	0	29	140
16:00	6	20	4	0	30	5	1	30	0	36	11	32	6	0	49	6	0	23	0	29	144
16:15	6	15	2	0	23	1	1	28	0	30	13	24	3	0	40	11	0	22	0	33	126
16:30	6	18	5	0	29	11	0	34	0	45	8	26	7	0	41	9	3	24	0	36	151
Total Volume	28	77	13	0	118	21	6	113	0	140	46	108	22	0	176	34	4	89	0	127	561
% App Total	23.7%	65.3%	11.0%	0.0%		15.0%	4.3%	80.7%	0.0%		26.1%	61.4%	12.5%	0.0%		26.8%	3.1%	70.1%	0.0%		
PHF	.700	.802	.650	.000	.819	.477	.375	.831	.000	.778	.821	.844	.786	.000	.898	.773	.333	.927	.000	.882	.929

ALL TRAFFIC DATA

City of South Lake Tahoe
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7731-008 Lake Parkway -Park Avenue.ppd

Date : 12/13/2013

Unshifted Count = All Vehicles

START TIME	Park Avenue Southbound					Lake Parkway Westbound					Park Avenue Northbound					Lake Parkway Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
15:00	19	0	19	0	38	0	50	27	0	77	0	0	0	0	0	6	29	0	0	35	150	0
15:15	29	1	11	0	41	0	37	34	0	71	1	0	0	0	1	8	39	0	0	47	160	0
15:30	17	0	8	0	25	0	60	36	0	96	0	0	0	0	0	10	46	0	0	56	177	0
15:45	32	0	15	0	47	1	42	40	0	83	0	0	2	0	2	6	51	0	0	57	189	0
Total	97	1	53	0	151	1	189	137	0	327	1	0	2	0	3	30	165	0	0	195	676	0
16:00	28	0	20	0	48	1	45	44	0	90	0	0	0	0	0	6	34	0	0	40	178	0
16:15	21	0	16	0	37	0	45	29	0	74	2	0	0	0	2	9	45	0	0	54	167	0
16:30	31	0	24	0	55	0	39	36	0	75	0	0	0	0	0	5	32	0	0	37	167	0
16:45	21	0	16	0	37	0	38	25	0	63	0	0	0	0	0	7	44	0	0	51	151	0
Total	101	0	76	0	177	1	167	134	0	302	2	0	0	0	2	27	155	0	0	182	663	0
17:00	24	0	17	0	41	0	31	33	0	64	0	0	0	0	0	4	28	0	0	32	137	0
17:15	30	0	15	0	45	1	27	22	0	50	0	0	0	0	0	7	40	0	0	47	142	0
17:30	22	1	10	0	33	0	26	24	0	50	0	1	0	0	1	6	35	0	0	41	125	0
17:45	19	0	11	0	30	0	25	21	0	46	0	0	0	0	0	1	36	0	0	37	113	0
Total	95	1	53	0	149	1	109	100	0	210	0	1	0	0	1	18	139	0	0	157	517	0
Grand Total	293	2	182	0	477	3	465	371	0	839	3	1	2	0	6	75	459	0	0	534	1856	0
Apprch %	61.4%	0.4%	38.2%	0.0%		0.4%	55.4%	44.2%	0.0%		50.0%	16.7%	33.3%	0.0%		14.0%	86.0%	0.0%	0.0%			
Total %	15.8%	0.1%	9.8%	0.0%	25.7%	0.2%	25.1%	20.0%	0.0%	45.2%	0.2%	0.1%	0.1%	0.0%	0.3%	4.0%	24.7%	0.0%	0.0%	28.8%	100.0%	

PM PEAK HOUR	Park Avenue Southbound					Lake Parkway Westbound					Park Avenue Northbound					Lake Parkway Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 15:30 to 16:30																					
Peak Hour For Entire Intersection Begins at 15:30																					
15:30	17	0	8	0	25	0	60	36	0	96	0	0	0	0	0	10	46	0	0	56	177
15:45	32	0	15	0	47	1	42	40	0	83	0	0	2	0	2	6	51	0	0	57	189
16:00	28	0	20	0	48	1	45	44	0	90	0	0	0	0	0	6	34	0	0	40	178
16:15	21	0	16	0	37	0	45	29	0	74	2	0	0	0	2	9	45	0	0	54	167
Total Volume	98	0	59	0	157	2	192	149	0	343	2	0	2	0	4	31	176	0	0	207	711
% App Total	62.4%	0.0%	37.6%	0.0%		0.6%	56.0%	43.4%	0.0%		50.0%	0.0%	50.0%	0.0%		15.0%	85.0%	0.0%	0.0%		
PHF	.766	.000	.738	.000	.818	.500	.800	.847	.000	.893	.250	.000	.250	.000	.500	.775	.863	.000	.000	.908	.940

ALL TRAFFIC DATA

City of South Lake Tahoe
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7731-001 US-50-Lake Parkway.ppd

Date : 12/14/2013

Unshifted Count = All Vehicles

START TIME	Lake Parkway Southbound					US-50 Westbound					Lake Parkway Northbound					US-50 Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
12:00	16	3	4	0	23	27	148	13	0	188	11	8	44	0	63	8	147	12	0	167	441	0
12:15	27	2	4	0	33	30	158	9	0	197	15	2	41	0	58	3	166	9	0	178	466	0
12:30	16	4	8	0	28	34	194	10	0	238	8	3	41	0	52	5	143	11	0	159	477	0
12:45	17	1	9	0	27	17	141	8	0	166	13	4	38	0	55	10	146	4	0	160	408	0
Total	76	10	25	0	111	108	641	40	0	789	47	17	164	0	228	26	602	36	0	664	1792	0
13:00	10	0	1	0	11	32	168	9	0	209	16	4	37	0	57	3	166	8	0	177	454	0
13:15	14	2	3	0	19	35	174	18	0	227	7	3	44	0	54	0	171	6	0	177	477	0
13:30	7	0	6	0	13	34	153	12	0	199	8	4	46	0	58	3	140	12	0	155	425	0
13:45	13	3	7	0	23	26	180	14	0	220	8	0	42	0	50	5	154	8	0	167	460	0
Total	44	5	17	0	66	127	675	53	0	855	39	11	169	0	219	11	631	34	0	676	1816	0
Grand Total	120	15	42	0	177	235	1316	93	0	1644	86	28	333	0	447	37	1233	70	0	1340	3608	0
Apprch %	67.8%	8.5%	23.7%	0.0%		14.3%	80.0%	5.7%	0.0%		19.2%	6.3%	74.5%	0.0%		2.8%	92.0%	5.2%	0.0%			
Total %	3.3%	0.4%	1.2%	0.0%	4.9%	6.5%	36.5%	2.6%	0.0%	45.6%	2.4%	0.8%	9.2%	0.0%	12.4%	1.0%	34.2%	1.9%	0.0%	37.1%	100.0%	

NOON PEAK START TIME	Lake Parkway Southbound					US-50 Westbound					Lake Parkway Northbound					US-50 Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 12:30 to 13:30																					
Peak Hour For Entire Intersection Begins at 12:30																					
12:30	16	4	8	0	28	34	194	10	0	238	8	3	41	0	52	5	143	11	0	159	477
12:45	17	1	9	0	27	17	141	8	0	166	13	4	38	0	55	10	146	4	0	160	408
13:00	10	0	1	0	11	32	168	9	0	209	16	4	37	0	57	3	166	8	0	177	454
13:15	14	2	3	0	19	35	174	18	0	227	7	3	44	0	54	0	171	6	0	177	477
Total Volume	57	7	21	0	85	118	677	45	0	840	44	14	160	0	218	18	626	29	0	673	1816
% App Total	67.1%	8.2%	24.7%	0.0%		14.0%	80.6%	5.4%	0.0%		20.2%	6.4%	73.4%	0.0%		2.7%	93.0%	4.3%	0.0%		
PHF	.838	.438	.583	.000	.759	.843	.872	.625	.000	.882	.688	.875	.909	.000	.956	.450	.915	.659	.000	.951	.952

ALL TRAFFIC DATA

City of South Lake Tahoe
 All Vehicles on Unshifted
 Nothing on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7731-002 US-50-Stateline Avenue.ppd

Date : 12/14/2013

Unshifted Count = All Vehicles

START TIME	Stateline Avenue Southbound					US-50 Westbound					Stateline Avenue Northbound					US-50 Eastbound					Total	Utum Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
12:00	10	1	19	0	30	1	184	2	0	187	0	0	0	0	0	14	199	14	0	227	444	0
12:15	11	0	22	0	33	2	156	5	0	163	0	0	0	0	0	22	194	6	0	222	418	0
12:30	4	2	17	0	23	1	192	5	0	198	0	0	0	0	0	11	199	3	0	213	434	0
12:45	5	0	22	0	27	0	154	4	0	158	0	0	0	0	0	20	190	6	0	216	401	0
Total	30	3	80	0	113	4	686	16	0	706	0	0	0	0	0	67	782	29	0	878	1697	0
13:00	10	0	15	0	25	1	194	6	0	201	0	0	0	0	0	6	235	13	0	254	480	0
13:15	8	0	20	0	28	3	156	3	0	162	0	0	0	0	0	13	182	5	0	200	390	0
13:30	6	0	15	0	21	2	165	9	0	176	0	0	0	0	0	14	196	9	0	219	416	0
13:45	6	1	19	0	26	1	177	1	0	179	0	0	0	0	0	19	189	6	0	214	419	0
Total	30	1	69	0	100	7	692	19	0	718	0	0	0	0	0	52	802	33	0	887	1705	0
Grand Total	60	4	149	0	213	11	1378	35	0	1424	0	0	0	0	0	119	1584	62	0	1765	3402	0
Apprch %	28.2%	1.9%	70.0%	0.0%		0.8%	96.8%	2.5%	0.0%		0.0%	0.0%	0.0%	0.0%		6.7%	89.7%	3.5%	0.0%			
Total %	1.8%	0.1%	4.4%	0.0%	6.3%	0.3%	40.5%	1.0%	0.0%	41.9%	0.0%	0.0%	0.0%	0.0%		3.5%	46.6%	1.8%	0.0%	51.9%	100.0%	

NOON PEAK START TIME	Stateline Avenue Southbound					US-50 Westbound					Stateline Avenue Northbound					US-50 Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 12:15 to 13:15																					
Peak Hour For Entire Intersection Begins at 12:15																					
12:15	11	0	22	0	33	2	156	5	0	163	0	0	0	0	0	22	194	6	0	222	418
12:30	4	2	17	0	23	1	192	5	0	198	0	0	0	0	0	11	199	3	0	213	434
12:45	5	0	22	0	27	0	154	4	0	158	0	0	0	0	0	20	190	6	0	216	401
13:00	10	0	15	0	25	1	194	6	0	201	0	0	0	0	0	6	235	13	0	254	480
Total Volume	30	2	76	0	108	4	696	20	0	720	0	0	0	0	0	59	818	28	0	905	1733
% App Total	27.8%	1.9%	70.4%	0.0%		0.6%	96.7%	2.8%	0.0%		0.0%	0.0%	0.0%	0.0%		6.5%	90.4%	3.1%	0.0%		
PHF	.682	.250	.864	.000	.818	.500	.897	.833	.000	.896	.000	.000	.000	.000	.000	.670	.870	.538	.000	.891	.903