Miles Lane Affordable Housing Project
Watsonville, CA
Appendix: Traffic Noise Model Data - Existing and Existing Plus Project
Prepared by MIG, August 2019

ID	Road	Segment	Existing 2019			Existing 2019 Plus Project			Net Change		
			ADT	CNEL (50 Ft)	CNEL (200 Ft)	ADT	CNEL (50 Ft)	CNEL (200 Ft)	ADT	CNEL (50 Ft)	CNEL (200 Ft)
1	Freedom Blvd	Marin St to Stanford St	26,754	--	62.9	26,921	--	63	167	--	0.1
2	Miles Lane	Freedom Blvd to Santa Clara	1,209	53.8	47.4	1,543	54.9	48.5	334	1.1	1.1

Notes
Freedom Lane ADT is from Santa Cruz County (Santa Cruz County 2019) for 2015, adjusted upwards to 2019 conditions
by applying a 1% growth factor per year.
Miles Lane ADT is based on peak hour vehicle trips from TIA (Kimley Horn 2019), scaled by the Caltrans' K factor for Highway 129 for 2017 (0.085)
Existing plus project ADT is equal to existing ADT plus trip generation information from the Project TIA.

Santa Cruz County 2015. *SCC Traffic Counts 2010-2015. Available at: https://sccrtc.org/funding-planning/statistics/*

	Miles Lane Affordable Housing Project							
Watsonville, CA								
Appendix: Traffic Noise Model Inputs - Existing Conditions								
Prepared by MIG, August 2019								
ID	Road	Segment	Length (Miles)	Length (Feet)	Average Lanes	Average Width (Feet)	Vehicle Speed (MPH)	ADT
1	Freedom Blvd	Marin St to Stanford St	0.29	1,531	2	50	25	26,754
2	Miles Lane	Freedom Blvd to Santa Clara	0.23	1,214	2	30	25	1,209

Miles Lane Affordable Housing Project

Watsonville, CA

Appendix: Traffic Noise Model Inputs - Project Conditions

Prepared by MIG, August 2019

ID	Road	Segment	Length (Miles)	Length (Feet)	Average Lanes	Average Width (Feet)	Vehicle Speed (MPH)	ADT
1	Freedom Blvd	Marin St to Stanford St	0.29	1,531	2	50	25	26,921
2	Miles Lane	Freedom Blvd to Santa Clara	0.23	1,214	2	30	25	1,543

Miles Lane Affordable Housing Project

Watsonville, CA

Appendix: Traffic Noise Model Inputs - Vehicle Fleet Mix

Prepared by MIG, August 2019

	TNM2.5/EMFAC2017 VEHICLE POPULATION INFORMATION		
TNM Vehicle Type	Vehicle Class (EMFAC2007)	2019 Vehicle Population	2019 Vehicle Population %
Auto	LDA	260,162	48.0%
Auto	LDT1	26,922	5.0%
Auto	LDT2	108,581	20.0%
Auto	LHDT1	19,376	3.6%
Auto	MDV	91,842	16.9%
	Subtotal	*506,882*	*93.4%*
Medium Truck	LHDT2	4,347	0.8%
Medium Truck	MHDT	6,108	1.1%
Medium Truck	OBUS	779	0.1%
Medium Truck	SBUS	779	0.1%
	Subtotal	*12,014*	*2.2%*
Heavy Truck	HHDT	4,700	0.9%
Heavy Truck	MH	2,689	0.5%
Heavy Truck	UBUS	326	0.1%
	Subtotal	*7,715*	*1.4%*
Motorcycle	MC	15,895	2.9%
	Subtotal	*15,895*	*2.9%*
	TOTAL	542,506	100.0%

EMFAC2017 (v1.0.2) Emission Rates
Region Type: Air District
Region: MONTEREY BAY UNIFIED APCD
Calendar Year: 2019
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/

Region	Calendar Ye	Vehicle Cat	Model Year	Speed	Fuel	Population	VMT	Trips
MONTEREY	2019	HHDT	Aggregated	Aggregated	GAS	1.180305	112.51207	23.61553
MONTEREY	2019	HHDT	Aggregated	Aggregated	DSL	4637.023	605910.7	52267.24
MONTEREY	2019	HHDT	Aggregated	Aggregated	NG	62.02116	2528.5258	241.8825
MONTEREY	2019	LDA	Aggregated	Aggregated	GAS	254039.9	9563831.9	1176567
MONTEREY	2019	LDA	Aggregated	Aggregated	DSL	3285.302	122143.27	15032.31
MONTEREY	2019	LDA	Aggregated	Aggregated	ELEC	2836.486	109043.25	14214.75
MONTEREY	2019	LDT1	Aggregated	Aggregated	GAS	26830.23	961309.1	121921.7
MONTEREY	2019	LDT1	Aggregated	Aggregated	DSL	42.40935	683.04246	137.4739
MONTEREY	2019	LDT1	Aggregated	Aggregated	ELEC	48.99494	1761.6148	239.859
MONTEREY	2019	LDT2	Aggregated	Aggregated	GAS	107798	3789296.5	487753.4
MONTEREY	2019	LDT2	Aggregated	Aggregated	DSL	470.7872	20038.831	2296.832
MONTEREY	2019	LDT2	Aggregated	Aggregated	ELEC	312.2955	10893.046	1588.619
MONTEREY	2019	LHDT1	Aggregated	Aggregated	GAS	10159.8	334037.32	151365.9
MONTEREY	2019	LHDT1	Aggregated	Aggregated	DSL	9215.821	326226.04	115923.4
MONTEREY	2019	LHDT2	Aggregated	Aggregated	GAS	1347.708	44827.271	20078.85
MONTEREY	2019	LHDT2	Aggregated	Aggregated	DSL	2999.316	111106.14	37727.62
MONTEREY	2019	MCY	Aggregated	Aggregated	GAS	15895.12	154585.55	31790.25
MONTEREY	2019	MDV	Aggregated	Aggregated	GAS	90072.87	3078869.8	407220.6
MONTEREY	2019	MDV	Aggregated	Aggregated	DSL	1708.067	72456.982	8304.534
MONTEREY	2019	MDV	Aggregated	Aggregated	ELEC	60.87057	2055.967	305.6117
MONTEREY	2019	MH	Aggregated	Aggregated	GAS	2025.38	16304.808	202.619
MONTEREY	2019	MH	Aggregated	Aggregated	DSL	663.3742	6181.6931	66.33742
MONTEREY	2019	MHDT	Aggregated	Aggregated	GAS	781.5823	45226.172	15637.9
MONTEREY	2019	MHDT	Aggregated	Aggregated	DSL	5326.882	316891.87	55209.68
MONTEREY	2019	OBUS	Aggregated	Aggregated	GAS	304.2465	18215.411	6087.365
MONTEREY	2019	OBUS	Aggregated	Aggregated	DSL	474.9405	32641.441	4569.132
MONTEREY	2019	SBUS	Aggregated	Aggregated	GAS	45.61607	3421.0085	182.4643
MONTEREY	2019	SBUS	Aggregated	Aggregated	DSL	733.5493	23087.941	8465.057
MONTEREY	2019	UBUS	Aggregated	Aggregated	GAS	63.14667	6194.4399	252.5867
MONTEREY	2019	UBUS	Aggregated	Aggregated	DSL	111.9225	15730.147	447.6899
MONTEREY	2019	UBUS	Aggregated	Aggregated	ELEC	0.006497	0.1390781	0.025986
MONTEREY	2019	UBUS	Aggregated	Aggregated	NG	151.0121	19417.493	604.0482

Total Veh. 542,506

RESULTS: SOUND LEVELS   Miles Lane Affordable Housing Project

MIG						13 August 2019		
C. Dugan						TNM 2.5		
						Calculated with TNM 2.5		

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:			Miles Lane Affordable Housing Project			
RUN:			Freedom Blvd (Ex)			
BARRIER DESIGN:			INPUT HEIGHTS			Average pavement type shall be used unless
						a State highway agency substantiates the use
ATMOSPHERICS:			68 deg F, 50% RH			of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Lden	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver (100 Feet)	2	1	0.0	66.3	0	66.3	0	Snd Lvl	66.3	0.0	0	0.0
Receiver (150 Feet)	3	1	0.0	64.4	0	64.4	0	Snd Lvl	64.4	0.0	0	0.0
Receiver (200 Feet)	4	1	0.0	62.9	0	62.9	0	Snd Lvl	62.9	0.0	0	0.0

Dwelling Units		# DUs	Noise Reduction		
			Min	Avg	Max
			dB	dB	dB
All Selected		3	0.0	0.0	0.0
All Impacted		3	0.0	0.0	0.0
All that meet NR Goal		3	0.0	0.0	0.0

Miles Lane Affordable Housing Project

MIG						**13 August 2019**					
C. Dugan						**TNM 2.5**					
						Calculated with TNM 2.5					

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	**Miles Lane Affordable Housing Project**	
RUN:	**Freedom Blvd (Pr)**	
BARRIER DESIGN:	**INPUT HEIGHTS**	**Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.**
ATMOSPHERICS:	**68 deg F, 50% RH**	

Receiver

Name	No.	#DUs	Existing Lden	No Barrier Lden Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Lden	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver (100 Feet)	2	1	0.0	66.3	0	66.3	0	Snd Lvl	66.3	0.0	0	0.0
Receiver (150 Feet)	3	1	0.0	64.4	0	64.4	0	Snd Lvl	64.4	0.0	0	0.0
Receiver (200 Feet)	4	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	3	0.0	0.0	0.0
All that meet NR Goal	3	0.0	0.0	0.0

MIG						13 August 2019					
C. Dugan						TNM 2.5					
						Calculated with TNM 2.5					

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:			Miles Lane Affordable Housing Project								
RUN:			Miles Lane (Ex)								
BARRIER DESIGN:			INPUT HEIGHTS			Average pavement type shall be used unless					
						a State highway agency substantiates the use					
ATMOSPHERICS:			68 deg F, 50% RH			of a different type with approval of FHWA.					

Receiver

Name	No.	#DUs	Existing Lden	No Barrier Lden Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Lden	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver (50 Feet)	2	1	0.0	53.8	0	53.8	0	Snd Lvl	53.8	0.0	0	0.0
Receiver (100 Feet)	3	1	0.0	50.9	0	50.9	0	Snd Lvl	50.9	0.0	0	0.0
Receiver (200 Feet)	4	1	0.0	47.4	0	47.4	0	Snd Lvl	47.4	0.0	0	0.0

Dwelling Units		# DUs	Noise Reduction		
			Min	Avg	Max
			dB	dB	dB
All Selected		3	0.0	0.0	0.0
All Impacted		3	0.0	0.0	0.0
All that meet NR Goal		3	0.0	0.0	0.0

RESULTS: SOUND LEVELS   Miles Lane Affordable Housing Project

MIG							**13 August 2019**			
C. Dugan							**TNM 2.5**			
							Calculated with TNM 2.5			
RESULTS: SOUND LEVELS										
PROJECT/CONTRACT:		**Miles Lane Affordable Housing Project**								
RUN:		**Miles Lane (Pr)**								
BARRIER DESIGN:		**INPUT HEIGHTS**				**Average pavement type shall be used unless**				
						a State highway agency substantiates the use				
ATMOSPHERICS:		**68 deg F, 50% RH**				**of a different type with approval of FHWA.**				

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Lden	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver (50 Feet)	2	1	0.0	54.9	0	54.9	0	Snd Lvl	54.9	0.0	0	0.0
Receiver (100 Feet)	3	1	0.0	51.9	0	51.9	0	Snd Lvl	51.9	0.0	0	0.0
Receiver (200 Feet)	4	1	0.0	48.5	0	48.5	0	Snd Lvl	48.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	3	0.0	0.0	0.0
All that meet NR Goal	3	0.0	0.0	0.0