Ontario International Airport Connector Project

ONTCONNECTOR

APPENDIX H
AIR QUALITY TECHNICAL REPORT
(APPENDIX A)

October 2024

Prepared by:

sbcta

San Bernardino County Transportation Authority
1170 West Third Street, Second Floor
San Bernardino, CA 92410-1715

AIR QUALITY DATA OUTPUT

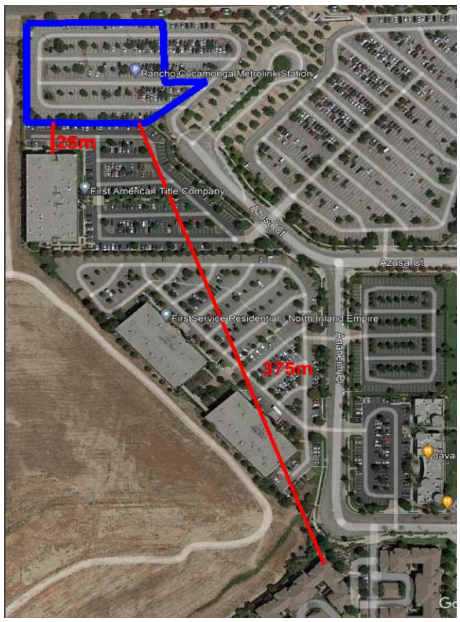
RC TBM - Off Road

Equipment Emissions Factors https://goo.gl/maps/BSVtDazZVQfuJxWk9

Equipment[8.]	Equipment Description	HP[1.]	Fuel Consumption (gal/hp-hr)	Load Factor[9.]	Usage Factor[10.]	Emission Factor[11.] (g/hp-hr)					
						NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Bobcat T650	Tractors/Loaders/Backhoes	74.3	0.019	0.37	0.70	4.4704	0.3682	0.3387	1.9126	0.5714	0.0018
CAT 200	Excavator	118	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
CAT 308 Excavator	Excavator	69.5	0.020	0.38	0.70	2.0430	0.2115	0.1945	1.6020	0.2778	0.0019
CAT 320	Excavator	172	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
CAT 350	Excavator	414	0.020	0.38	0.70	0.2602	0.0092	0.0085	0.3989	0.0437	0.0019
CAT 963D	Tractors/Loaders/Backhoes	189	0.019	0.37	0.70	0.4702	0.0184	0.0169	0.4494	0.0584	0.0018
CAT CS44B 1[2.]	Roller	100.6	0.019	0.38	0.70	0.9321	0.0434	0.0399	1.2798	0.0865	0.0018
CAT D4	Rubber Tired Dozer	130	0.019	0.40	0.70	0.5059	0.0264	0.0243	1.1915	0.0765	0.0018
CAT M322F Wheel Excavator	Excavator	169	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
Concrete Trucks[3.]	Off-Highway Trucks	400	0.020	0.38	0.70	0.3862	0.0136	0.0125	0.4500	0.0672	0.0019
Doosan XP825-HP750	Air Compressor	266	0.016	0.48	0.70	0.0731	0.0040	0.0036	0.3154	0.0258	0.0015
Generac MLT4060MV-STD 6kW[4.]	Generator Sets	12.2	0.042	0.74	0.70	2.5094	0.0599	0.0551	2.7725	0.2548	0.0054
Genie GTH-1056 Telehandler	Forklift	121	0.010	0.20	0.70	0.2884	0.0145	0.0133	0.6349	0.0386	0.0010
Genie GTH-5519 Telehandler	Forklift	74	0.010	0.20	0.70	2.6477	0.2079	0.1913	1.1120	0.3367	0.0010
Liebherr LB36	Bore/Drill Rig	523	0.026	0.50	0.70	0.3837	0.0136	0.0125	0.4935	0.0498	0.0024
Linkbelt LS248H	Crane	270	0.015	0.29	0.70	0.7233	0.0301	0.0277	0.4274	0.0720	0.0014
MQ Power Whisperwatt	Generator Sets	300	0.016	0.74	1	0.1631	0.0078	0.0072	0.3613	0.0505	0.0015
Muck Trucks[4.]	Other Construction Equipment	5.5	0.024	0.42	0.70	1.6966	0.0958	0.0881	1.9476	0.2829	0.0023
Skyjack SJ86T Manlift	Aerial Lift	74	0.016	0.31	0.70	0.4787	0.0094	0.0087	0.9746	0.0317	0.0015
Takeuchi TB235-2	Excavator	24.4	0.022	0.38	0.70	2.8902	0.4028	0.3706	4.2550	1.5152	0.0020
Trucks for material[3.]	Off-Highway Trucks	400	0.020	0.38	0.70	0.3862	0.0136	0.0125	0.4500	0.0672	0.0019
Volvo L50 Wheel Loader	Tractors/Loaders/Backhoes	90	0.019	0.37	0.70	0.6945	0.0234	0.0215	1.2827	0.0678	0.0018
Yanmar ViO55	Excavator	48.4	0.022	0.38	0.70	1.3011	0.0377	0.0346	1.6119	0.1502	0.0021

Site Details		
Site Size (acres)[5.]	NOx/CO Receptor Distance (meters)[6.]	$PM_{10}/PM_{2.5}$ Receptor Distance (meters)[6.]
1.977	25	375

LST Allowable Emissions (lbs/day)[7.]	
NO_X	170
PM_{10}	66
$PM_{2.5}$	36
CO	1232



Fugitive Dust

PM10 (Tons) / Month	PM2.5 (Tons) / Month
0.42	0.04

Fugitive Dust Formula

PM10 (Tons) / Month = Site Size * .21 (Acre to PM10 monthly conversion)

PM2.5 (Tons) / Month = PM10 (Tons) / Month * .1 (PM10 to PM2.5 conversion)

Notes:

1. Horsepowers are gathered through an internet search as well as emails with clients
2. Horsepower bin of 100 was used due to the horsepower of the equipment being fractionally over 100.
3. Assumed to be one vehicle
4. Lower hp bin unavailable since no hourly data, went with closest available bin
5. From client produced map - VENT SHAFT Combined 082422.pdf
6. See map
7. In correlation with the table "Site Details" these thresholds were taken from Appendix C for Southwest San Bernardino Valley http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2
8. Equipment data is found from APPENDIX 2 of "DRAFT Air Quality Exercise Concept Const Sup Memo 090722"
9. Load factor is gathered from Appendix A of EPA's "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling
10. Usage factor was assigned to represent the amount of hours that equipment would run for. ".7" represents 7 hours of the 10 hour shift, "1" represents the full 10 hours.
11. Emission Factors were dictated by EMFAC's Off Road Emissions https://arb.ca.gov/emfac/emissions-inventory/915f433fca11ec6a58e135c2eba4f2020312a4d2

Equipment Schedule

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
Bobcat T650																							0.5	1	1	1	1	0.5																		1	1	1	4	4	4	4	4	4						
CAT 200																																														1	1	0.5												
CAT 308 Excavator																									0.5	1	1	0.5																																
CAT 320																											1.5	3	3	3	3	3	1.5																											
CAT 350																																																							1	0.5				
CAT 963D																											0.5	1	1	1	1	1	0.5																											
CAT CS44B 1																																														1	1	0.5							1	0.5				
CAT D4																																																												
CAT M322F Wheel Excavator																							0.5	1	1	1	1	0.5																																
Concrete Trucks																															1	2	2	2	2	2	2	2	2	2	2	2	2	2					2	2	2	2	2	2						
Doosan XP825-HP750																															1	2	2	2	2	2	2	2	2	2	2	2	2	2					2	2	2	2	2	2						
Generac MLT4060MV-STD 6kW																															3	6	6	6	6	6	6	6	6	6	6	6	6	6					10	10	10	10	10	10						
GenieGTH-1056 Telehandler																							0.5	1	0.5																								2	2	2	2	2	2						
Genie GTH-5519 Telehandler																															1	2	2	2	2	2	2	2	2	2	2	2	2	2																
Liebherr LB36																									0.5	1	1	0.5																																
Linkbelt LS248H																											0.5	1	1	1	2	3	2.5	2	2	2	2	2	2	2	2	2	2	2					2	2	2	2	2	2						
MQ Power Whisperwatt																															1	2	2	2	2	2	2	2	2	2	2	2	2	2					2	2	2	2	2	2						
Muck Trucks																																																												
Skyjack SJ86T Manlift																									0.5	1	1	0.5																																
Takeuchi TB235-2																											1	2	2	2	2	2	1																											
Trucks for material																							0.5	1	1	1	1.5	1.5	1	1	2	3	2.5	2	2	2	2	2	2	2	2	2	2	2		1	1	1	2	2	2	2	2	2	1	0.5				
Volvo L50 Wheel Loader																							0.5	1	0.5																					1	1	0.5	2	2	2	2	2	2	1	0.5				
Yanmar ViO55																							0.5	1	0.5																					1	1	1							1	0.5				

Pollution based on Schedule (tons/month)

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
PM_{10}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
$PM_{2.5}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.1	0.1	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Pollution based on Schedule (lbs/day)

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0	4.9	5.7	7.9	7.1	4.3	4.3	9.6	14.8	12.7	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	0.0	4.3	4.3	3.8	19.3	19.3	19.3	19.3	19.3	19.3	2.8	1.4	0.0	0.0	0.0	0.0
PM_{10}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.3	32.4	32.5	32.5	32.7	32.6	32.4	32.4	32.7	32.9	32.8	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	0.0	32.4	32.4	32.4	33.2	33.2	33.2	33.2	33.2	33.2	32.3	32.2	0.0	0.0	0.0	0.0
$PM_{2.5}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.4	3.5	3.5	3.7	3.6	3.5	3.5	3.7	3.9	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	0.0	3.4	3.4	3.4	4.2	4.2	4.2	4.2	4.2	4.2	3.3	3.3	0.0	0.0	0.0	0.0
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	4.4	5.2	6.0	9.4	9.8	6.8	6.8	13.3	19.7	16.3	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	0.0	4.6	4.6	3.4	18.9	18.9	18.9	18.9	18.9	18.9	3.9	1.9	0.0	0.0	0.0	0.0
VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.7	0.8	1.2	1.3	0.9	0.9	1.8	2.7	2.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.0	0.6	0.6	0.5	2.8	2.8	2.8	2.8	2.8	2.8	0.4	0.2	0.0	0.0	0.0	0.0
SO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Cells with this contain equipment in a double shift.

Formula

1. Pollution based on schedule (tons/ month) = Equipment Quantity * Emission Factor * Usage Factor * Load Factor * Horsepower * gram to tons conversion
2. Pollution based on schedule (lbs/ day) = Equipment Quantity * Emission Factor * Usage Factor * Load Factor * Horsepower * gram to lbs conversion / 28 (month to day conversion)
3. For PM 10 and PM2.5 the Fugitive Dust emissions are also added each month

RC TBM - On Road

Vehicle Emissions Factors https://goo.gl/maps/BSVtDazZVQfuJxWk9

Vehicle Type[2.]	Fuel Type	Miles Driven[2.]	Emission Factor[1.] (tons/VMT)[a]					
			NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Worker Vehicles	Mix	14.7	4.84E-08	1.97E-08	6.95E-09	8.68E-07	1.14E-08	3.03E-09
Construction Trucks - T7 Single Dump Class 8	Mix	20	1.53E-06	1.47E-07	6.00E-08	8.75E-08	1.57E-08	1.68E-08
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8	Mix	20	1.09E-06	1.97E-09	9.00E-10	1.44E-09	3.05E-10	2.48E-10

Vehicle Type[2.]	Emission Factor[1.] (ton/trip)[b]					
	NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Worker Vehicles	2.58E-07	2.28E-09	2.10E-09	3.13E-06	3.16E-07	7.37E-10
Construction Trucks - T7 Single Dump Class 8	3.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8	6.28E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. Emissions includes: g/mile for RUNEX, PMBW and PMTW

b. Emissions includes: g/trip for STREX. Assume 2 trips per vehicle per day for STREX.

Notes:

1. Emission factors in units of tons/mile and tons/trip were provided by EMFAC https://arb.ca.gov/emfac/emissions-inventory/6dde440e3ce4f7e51faa86b7085eaa7b4bb418e2

2. From SBCTA_TunneltoONT_DRAFT_TechStudy_Traffic_110222_RLSO.docx

3. Assumed that the trips are split evenly between both sites per Scenario

Quantity Schedule

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
Worker Vehicles																							230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230		230	230	230	230	230	230	230	230	230	230	230				
Construction Trucks - T7 Single Dump Class 8																							100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		100	100	100	100	100	100	100	100	100	100	100				
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8																							10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		10	10	10	10	10	10	10	10	10	10	10				

Pollution based on Schedule (tons/month)

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0	0	0	0
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0	0	0	0
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0

Pollution based on Schedule (lbs/day)

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	0	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	8.46	0	0	0	0
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0	0
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	0	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	0	0	0	0
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0	0	0	0
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0	0	0	0

Formulas:

1. Pollutantion (tons/month) = ((Emission Factor (tons/VMT) * Quantity of Vehicle * Miles Driven) + (Emission Factor (ton/trip) * Quantity of Vehicle * 2))
2. Pollutantion (lbs/day) = ((Emission Factor (tons/VMT) * Quantity of Vehicle * Miles Driven) + (Emission Factor (ton/trip) * Quantity of Vehicle * 2)) * tons to lbs conversion / 28 (month to day conversion)

Vent Shaft - Off Road

Equipment Emissions Factors https://goo.gl/maps/99ETThasr2tBhu7A6

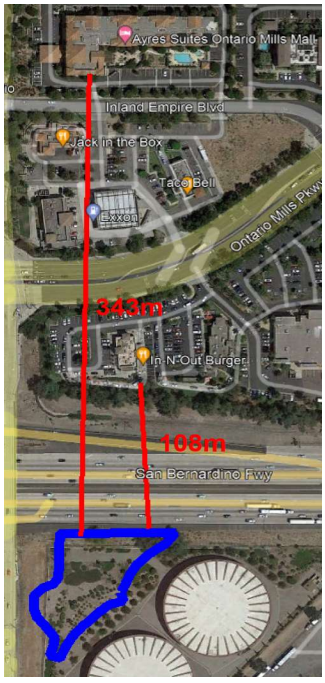
Equipment[8.]	Equipment Description	HP[1.]	Fuel Consumption (gal/hp-hr)	Load Factor[9.]	Usage Factor[10.]	Emission Factor[11.] (g/hp-hr)					
						NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Bobcat T650	Tractors/Loaders/Backhoes	74.3	0.019	0.37	0.70	4.4704	0.3682	0.3387	1.9126	0.5714	0.0018
CAT 200	Excavator	118	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
CAT 308 Excavator	Excavator	69.5	0.020	0.38	0.70	2.0430	0.2115	0.1945	1.6020	0.2778	0.0019
CAT 320	Excavator	172	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
CAT 350	Excavator	414	0.020	0.38	0.70	0.2602	0.0092	0.0085	0.3989	0.0437	0.0019
CAT 963D	Tractors/Loaders/Backhoes	189	0.019	0.37	0.70	0.4702	0.0184	0.0169	0.4494	0.0584	0.0018
CAT CS44B 1[2.]	Roller	100.6	0.019	0.38	0.70	0.9321	0.0434	0.0399	1.2798	0.0865	0.0018
CAT D4	Rubber Tired Dozer	130	0.019	0.40	0.70	0.5059	0.0264	0.0243	1.1915	0.0765	0.0018
CAT M322F Wheel Excavator	Excavator	169	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
Concrete Trucks[3.]	Off-Highway Trucks	400	0.020	0.38	0.70	0.3862	0.0136	0.0125	0.4500	0.0672	0.0019
Doosan XP825-HP750	Air Compressor	266	0.016	0.48	0.70	0.0731	0.0040	0.0036	0.3154	0.0258	0.0015
Generac MLT4060MV-STD 6kW[4.]	Generator Sets	12.2	0.042	0.74	0.70	2.5094	0.0599	0.0551	2.7725	0.2548	0.0054
Genie GTH-1056 Telehandler	Forklift	121	0.010	0.20	0.70	0.2884	0.0145	0.0133	0.6349	0.0386	0.0010
Genie GTH-5519 Telehandler	Forklift	74	0.010	0.20	0.70	2.6477	0.2079	0.1913	1.1120	0.3367	0.0010
Liebherr LB36	Bore/Drill Rig	523	0.026	0.50	0.70	0.3837	0.0136	0.0125	0.4935	0.0498	0.0024
Linkbelt LS248H	Crane	270	0.015	0.29	0.70	0.7233	0.0301	0.0277	0.4274	0.0720	0.0014
MQ Power Whisperwatt	Generator Sets	300	0.016	0.74	1	0.1631	0.0078	0.0072	0.3613	0.0505	0.0015
Muck Trucks[4.]	Other Construction Equipment	5.5	0.024	0.42	0.70	1.6966	0.0958	0.0881	1.9476	0.2829	0.0023
Skyjack SJ86T Manlift	Aerial Lift	74	0.016	0.31	0.70	0.4787	0.0094	0.0087	0.9746	0.0317	0.0015
Takeuchi TB235-2	Excavator	24.4	0.022	0.38	0.70	2.8902	0.4028	0.3706	4.2550	1.5152	0.0020
Trucks for material[3.]	Off-Highway Trucks	400	0.020	0.38	0.70	0.3862	0.0136	0.0125	0.4500	0.0672	0.0019
Volvo L50 Wheel Loader	Tractors/Loaders/Backhoes	90	0.019	0.37	0.70	0.6945	0.0234	0.0215	1.2827	0.0678	0.0018
Yanmar ViO55	Excavator	48.4	0.022	0.38	0.70	1.3011	0.0377	0.0346	1.6119	0.1502	0.0021

Site Details		
Site Size (acres)[5.]	NOx/CO Receptor Distance (meters)[6.]	PM_{10}/$PM_{2.5}$ Receptor Distance (meters)[6.]
0.988	122	248

LST Allowable Emissions (lbs/day)[7.]	
NO_X	211
PM_{10}	103
$PM_{2.5}$	32
CO	2423

Fugitive Dust

PM10 (Tons) / Month	PM2.5 (Tons) / Month
0.21	0.02



Fugitive Dust Formula

PM10 (Tons) / Month = Site Size * .21 (Acre to PM10 monthly conversion)

PM2.5 (Tons) / Month = PM10 (Tons) / Month * .1 (PM10 to PM2.5 conversion)

Notes:

1. Horsepowers are gathered through an internet search as well as emails with clients
2. Horsepower bin of 100 was used due to the horsepower of the equipment being fractionally over 100.
3. Assumed to be one vehicle
4. Lower hp bin unavailable since no hourly data, went with closest available bin
5. From client produced map - VENT SHAFT Combined 082422.pdf
6. See map
7. In correlation with the table "Site Details" these thresholds were taken from Appendix C for Southwest San Bernardino Valley http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2
8. Equipment data is found from APPENDIX 2 of "DRAFT Air Quality Exercise Concept Const Sup Memo 090722"
9. Load factor is gathered from Appendix A of EPA's "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling
10. Usage factor was assigned to represent the amount of hours that equipment would run for. ".7" represents
7 hours of the 10 hour shift, "1" represents the full 10 hours.
11. Emission Factors were dictated by EMFAC's Off Road Emissions https://arb.ca.gov/emfac/emissions-inventory/915f433fca11ec6a58e135c2eba4f2020312a4d2

Equipment Schedule

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
Bobcat T650																													1	1	0.5		2	2	2																	2	2	2	1	0.5				
CAT 200																																																												
CAT 308 Excavator																														1	0.5																								1	0.5				
CAT 320																															1	2																												
CAT 350																													1																															
CAT 963D																															1	2																												
CAT CS44B 1																																																												
CAT D4																																																												
CAT M322F Wheel Excavator																													1	1	0.5		2	2	2																	2	2	2						
Concrete Trucks																																	2	2	2																	2	2	2						
Doosan XP825-HP750																																	2	2	2																	2	2	2						
Generac MLT4060MV-STD 6kW																																	10	10	10																	10	10	10						
GenieGTH-1056 Telehandler																													1				2	2	2																	2	2	2						
Genie GTH-5519 Telehandler																																																												
Liebherr LB36																														1	0.5																													
Linkbelt LS248H																															1	2	2	2	2																	2	2	2						
MQ Power Whisperwatt																																	2	2	2																	2	2	2						
Muck Trucks																																																												
Skyjack SJ86T Manlift																														1	0.5																													
Takeuchi TB235-2																															1	2																												
Trucks for material																													1	1	1.5	2	2	2	2																	2	2	2	1	0.5				
Volvo L50 Wheel Loader																													1				2	2	2																	2	2	2	1	0.5				
Yanmar ViO55																													1				2	2	2																	2	2	2	1	0.5				

Pollution based on Schedule (tons/month)

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
PM_{10}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0
$PM_{2.5}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Pollution based on Schedule (lbs/day)

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	5.7	6.0	6.2	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	17.0	17.0	4.4	2.2	0.0	0.0	0.0	0.0
PM_{10}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.3	16.4	16.4	16.4	16.9	16.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.9	16.9	16.9	16.4	16.2	0.0	0.0	0.0	0.0
$PM_{2.5}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.9	1.9	1.9	2.3	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	2.3	1.9	1.7	0.0	0.0	0.0	0.0
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	6.0	6.9	7.7	20.6	20.6	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6	20.6	20.6	3.6	1.8	0.0	0.0	0.0	0.0
VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.8	1.0	1.2	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5	0.6	0.3	0.0	0.0	0.0	0.0
SO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Cells with this contain equipment in a double shift.

Formula

1. Pollution based on schedule (tons/ month) = Equipment Quantity * Emission Factor * Usage Factor * Load Factor * Horsepower * gram to tons conversion
2. Pollution based on schedule (lbs/ day) = Equipment Quantity * Emission Factor * Usage Factor * Load Factor * Horsepower * gram to lbs conversion / 28 (month to day conversion)
3. For PM 10 and PM2.5 the Fugitive Dust emissions are also added each month

Vent Shaft - On Road

Vehicle Emissions Factors https://goo.gl/maps/99ETThasr2tBhu7A6

Vehicle Type[2.]	Fuel Type	Miles Driven[2.]	Emission Factor[1.] (tons/VMT)[a]					
			NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Worker Vehicles	Mix	14.7	4.84E-08	1.97E-08	6.95E-09	8.68E-07	1.14E-08	3.03E-09
Construction Trucks - T7 Single Dump Class 8	Mix	20	1.53E-06	1.47E-07	6.00E-08	8.75E-08	1.57E-08	1.68E-08
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8	Mix	20	1.09E-06	1.97E-09	9.00E-10	1.44E-09	3.05E-10	2.48E-10

Vehicle Type[2.]	Emission Factor[1.] (ton/trip)[b]					
	NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Worker Vehicles	2.58E-07	2.28E-09	2.10E-09	3.13E-06	3.16E-07	7.37E-10
Construction Trucks - T7 Single Dump Class 8	3.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8	6.28E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. Emissions includes: g/mile for RUNEX, PMBW and PMTW

b. Emissions includes: g/trip for STREX. Assume 2 trips per vehicle per day for STREX.

Notes:

1. Emission factors in units of tons/mile and tons/trip were provided by EMFAC https://arb.ca.gov/emfac/emissions-inventory/6dde440e3ce4f7e51faa86b7085eaa7b4bb418e2
2. From SBCTA_TunneltoONT_DRAFT_TechStudy_Traffic_110222_RLSO.docx
3. Assumed that the trips are split evenly between both sites per Scenario

Quantity Schedule

	Month																																																											
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
Worker Vehicles																													230	230	230	230	230	230	230																	230	230	230	230	230				
Construction Trucks - T7 Single Dump Class 8																													100	100	100	100	100	100	100																	100	100	100	100	100				
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8																													10	10	10	10	10	10	10																	10	10	10	10	10				

Pollution based on Schedule (tons/month)

	Month																																																											
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0.11	0.11	0.11	0.11	0	0	0	0
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0	0	0	0
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0.12	0.12	0.12	0.12	0	0	0	0
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0	0	0	0
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0

Pollution based on Schedule (lbs/day)

	Month																																																											
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.46	8.46	8.46	8.46	8.46	8.46	8.46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.46	8.46	8.46	8.46	8.46	0	0	0	0
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.73	0.73	0.73	0.73	0.73	0	0	0	0
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.29	0.29	0.29	0.29	0.29	0	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.10	9.10	9.10	9.10	9.10	9.10	9.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.10	9.10	9.10	9.10	9.10	0	0	0	0
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	0.43	0.43	0.43	0.43	0	0	0	0
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.09	0.09	0.09	0.09	0	0	0	0

Formulas:
1. Pollutantion (tons/month) = ((Emission Factor (tons/VMT) * Quantity of Vehicle * Miles Driven) + (Emission Factor (ton/trip) * Quantity of Vehicle * 2))
2. Pollutantion (lbs/day) = ((Emission Factor (tons/VMT) * Quantity of Vehicle * Miles Driven) + (Emission Factor (ton/trip) * Quantity of Vehicle * 2)) * tons to lbs conversion / 28 (month to day conversion)

ONT T2 - Off Road

Equipment Emissions Factors https://goo.gl/maps/Jnmf9fKSYmd11xGf8

Equipment[8.]	Equipment Description	HP[1.]	Fuel Consumption (gal/hp-hr)	Load Factor[9.]	Usage Factor[10.]	Emission Factor[11.] (g/hp-hr)					
						NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Bobcat T650	Tractors/Loaders/Backhoes	74.3	0.019	0.37	0.70	4.4704	0.3682	0.3387	1.9126	0.5714	0.0018
CAT 200	Excavator	118	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
CAT 308 Excavator	Excavator	69.5	0.020	0.38	0.70	2.0430	0.2115	0.1945	1.6020	0.2778	0.0019
CAT 320	Excavator	172	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
CAT 350	Excavator	414	0.020	0.38	0.70	0.2602	0.0092	0.0085	0.3989	0.0437	0.0019
CAT 963D	Tractors/Loaders/Backhoes	189	0.019	0.37	0.70	0.4702	0.0184	0.0169	0.4494	0.0584	0.0018
CAT CS44B 1[2.]	Roller	100.6	0.019	0.38	0.70	0.9321	0.0434	0.0399	1.2798	0.0865	0.0018
CAT D4	Rubber Tired Dozer	130	0.019	0.40	0.70	0.5059	0.0264	0.0243	1.1915	0.0765	0.0018
CAT M322F Wheel Excavator	Excavator	169	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
Concrete Trucks[3.]	Off-Highway Trucks	400	0.020	0.38	0.70	0.3862	0.0136	0.0125	0.4500	0.0672	0.0019
Doosan XP825-HP750	Air Compressor	266	0.016	0.48	0.70	0.0731	0.0040	0.0036	0.3154	0.0258	0.0015
Generac MLT4060MV-STD 6kW[4.]	Generator Sets	12.2	0.042	0.74	0.70	2.5094	0.0599	0.0551	2.7725	0.2548	0.0054
Genie GTH-1056 Telehandler	Forklift	121	0.010	0.20	0.70	0.2884	0.0145	0.0133	0.6349	0.0386	0.0010
Genie GTH-5519 Telehandler	Forklift	74	0.010	0.20	0.70	2.6477	0.2079	0.1913	1.1120	0.3367	0.0010
Liebherr LB36	Bore/Drill Rig	523	0.026	0.50	0.70	0.3837	0.0136	0.0125	0.4935	0.0498	0.0024
Linkbelt LS248H	Crane	270	0.015	0.29	0.70	0.7233	0.0301	0.0277	0.4274	0.0720	0.0014
MQ Power Whisperwatt	Generator Sets	300	0.016	0.74	1	0.1631	0.0078	0.0072	0.3613	0.0505	0.0015
Muck Trucks[4.]	Other Construction Equipment	5.5	0.024	0.42	0.70	1.6966	0.0958	0.0881	1.9476	0.2829	0.0023
Skyjack SJ86T Manlift	Aerial Lift	74	0.016	0.31	0.70	0.4787	0.0094	0.0087	0.9746	0.0317	0.0015
Takeuchi TB235-2	Excavator	24.4	0.022	0.38	0.70	2.8902	0.4028	0.3706	4.2550	1.5152	0.0020
Trucks for material[3.]	Off-Highway Trucks	400	0.020	0.38	0.70	0.3862	0.0136	0.0125	0.4500	0.0672	0.0019
Volvo L50 Wheel Loader	Tractors/Loaders/Backhoes	90	0.019	0.37	0.70	0.6945	0.0234	0.0215	1.2827	0.0678	0.0018
Yanmar ViO55	Excavator	48.4	0.022	0.38	0.70	1.3011	0.0377	0.0346	1.6119	0.1502	0.0021

Site Details		
Site Size (acres)[5.]	NOx/CO Receptor Distance (meters)[6.]	$PM_{10}/PM_{2.5}$ Receptor Distance (meters)[6.]
1.977	49.5	738

LST Allowable Emissions (lbs/day)[7.]		
NO_X	170	2acres/25
PM_{10}	160	2acres/500
$PM_{2.5}$	150	2acres/500
CO	1232	2acres/25

Fugitive Dust

PM10 (Tons) / Month	PM2.5 (Tons) / Month
0.42	0.04

Fugitive Dust Formula

PM10 (Tons) / Month = Site Size * .21 (Acre to PM10 monthly conversion)

PM2.5 (Tons) / Month = PM10 (Tons) / Month * .1 (PM10 to PM2.5 conversion)

Notes:

1. Horsepowers are gathered through an internet search as well as emails with clients
2. Horsepower bin of 100 was used due to the horsepower of the equipment being fractionally over 100.
3. Assumed to be one vehicle
4. Lower hp bin unavailable since no hourly data, went with closest available bin
5. From client produced map - VENT SHAFT Combined 082422.pdf
6. See map
7. In correlation with the table "Site Details" these thresholds were taken from Appendix C for Southwest San Bernardino Valley http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2
8. Equipment data is found from APPENDIX 2 of "DRAFT Air Quality Exercise Concept Const Sup Memo 090722"
9. Load factor is gathered from Appendix A of EPA's "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling
10. Usage factor was assigned to represent the amount of hours that equipment would run for. ".7" represents
7 hours of the 10 hour shift, "1" represents the full 10 hours.
11. Emission Factors were dictated by EMFAC's Off Road Emissions https://arb.ca.gov/emfac/emissions-inventory/915f433fca11ec6a58e135c2eba4f2020312a4d2

Equipment Schedule

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
Bobcat T650																							1	2	2	2	2	2																			1	1	1	0.5										
CAT 200																																															1	1	1											
CAT 308 Excavator																							1	2	2	2	2	2																																
CAT 320																							2	4	4	4	4	4																																
CAT 350																																																							1	0.5				
CAT 963D																							1	2	2	2	2	2																																
CAT CS44B 1																																															1	1	1						1	0.5				
CAT D4																																																							1	0.5				
CAT M322F Wheel Excavator																							1	2	2	2	2	2																																
Concrete Trucks																							1	2	2	2	2	2																								2	2	2						
Doosan XP825-HP750																							1	2	2	2	2	2																								2	2	2						
Generac MLT4060MV-STD 6kW																							8	16	16	16	16	16																								10	10	10						
GenieGTH-1056 Telehandler																							1	2	2	2	2	2																								2	2	2						
Genie GTH-5519 Telehandler																																																												
Liebherr LB36																							1	2	2	2	2	2																																
Linkbelt LS248H																							1	2	2	2	2	2																								2	2	2						
MQ Power Whisperwatt																							1	2	2	2	2	2																								2	2	2						
Muck Trucks																							1	2	2	2	2	2																																
Skyjack SJ86T Manlift																							1	2	2	2	2	2																																
Takeuchi TB235-2																							2	4	4	4	4	4																																
Trucks for material																							1	2	2	2	2	2																			1	1	1	0.5		2	2	2	1	0.5				
Volvo L50 Wheel Loader																							1	2	2	2	2	2																			1	1	1						1	0.5				
Yanmar ViO55																																															1	1	1	0.5					1	0.5				

Pollution based on Schedule (tons/month)

	Month																																																											
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
PM_{10}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
$PM_{2.5}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Pollution based on Schedule (lbs/day)

	Month																																																											
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.3	4.3	1.6	0.0	11.0	11.0	11.0	3.2	1.6	0.0	0.0	0.0	0.0
PM_{10}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.9	33.6	33.6	33.6	33.6	33.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32.4	32.4	32.3	0.0	32.6	32.6	32.6	32.3	32.2	0.0	0.0	0.0	0.0
$PM_{2.5}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	4.6	4.6	4.6	4.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4	3.3	0.0	3.6	3.6	3.6	3.3	3.3	0.0	0.0	0.0	0.0
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	36.2	36.2	36.2	36.2	36.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	4.6	4.6	1.2	0.0	14.4	14.4	14.4	4.9	2.4	0.0	0.0	0.0	0.0
VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.6	4.6	4.6	4.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.2	0.0	1.8	1.8	1.8	0.5	0.2	0.0	0.0	0.0	0.0
SO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Cells with this contain equipment in a double shift.

Formula

1. Pollution based on schedule (tons/ month) = Equipment Quantity * Emission Factor * Usage Factor * Load Factor * Horsepower * gram to tons conversion
2. Pollution based on schedule (lbs/ day) = Equipment Quantity * Emission Factor * Usage Factor * Load Factor * Horsepower * gram to lbs conversion / 28 (month to day conversion)
3. For PM 10 and PM2.5 the Fugitive Dust emissions are also added each month

ONT T2 - On Road

Vehicle Emissions Factors https://goo.gl/maps/Jnmf9fKSYmd11xGf8

Vehicle Type[2.]	Fuel Type	Miles Driven[2.]	Emission Factor[1.] (tons/VMT)[a]					
			NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Worker Vehicles	Mix	14.7	4.84E-08	1.97E-08	6.95E-09	8.68E-07	1.14E-08	3.03E-09
Construction Trucks - T7 Single Dump Class 8	Mix	20	1.53E-06	1.47E-07	6.00E-08	8.75E-08	1.57E-08	1.68E-08
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8	Mix	20	1.09E-06	1.97E-09	9.00E-10	1.44E-09	3.05E-10	2.48E-10

Vehicle Type[2.]	Emission Factor[1.] (ton/trip)[b]					
	NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Worker Vehicles	2.58E-07	2.28E-09	2.10E-09	3.13E-06	3.16E-07	7.37E-10
Construction Trucks - T7 Single Dump Class 8	3.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8	6.28E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. Emissions includes: g/mile for RUNEX, PMBW and PMTW

b. Emissions includes: g/trip for STREX. Assume 2 trips per vehicle per day for STREX.

Notes:

1. Emission factors in units of tons/mile and tons/trip were provided by EMFAC https://arb.ca.gov/emfac/emissions-inventory/6dde440e3ce4f7e51faa86b7085eaa7b4bb418e2
2. From SBCTA_TunneltoONT_DRAFT_TechStudy_Traffic_110222_RLSO.docx
3. Assumed that the trips are split evenly between both sites per Scenario

Quantity Schedule

	Month																																																											
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
Worker Vehicles																							230	230	230	230	230	230																			230	230	230	230		230	230	230	230	230				
Construction Trucks - T7 Single																							100	100	100	100	100	100																			100	100	100	100		100	100	100	100	100				
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8																							10	10	10	10	10	10																			10	10	10	10		10	10	10	10	10				

Pollution based on Schedule (tons/month)

	Month																																																											
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0.11	0.11	0.11	0.11	0.11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0.11	0.11	0.11	0	0.11	0.11	0.11	0.11	0.11	0	0	0	0
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0	0.01	0.01	0.01	0.01	0.01	0	0	0	0
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0.12	0.12	0.12	0.12	0.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0.12	0.12	0.12	0	0.12	0.12	0.12	0.12	0.12	0	0	0	0
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0	0.01	0.01	0.01	0.01	0.01	0	0	0	0
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0

Pollution based on Schedule (lbs/day)

	Month																																																											
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.46	8.46	8.46	8.46	8.46	8.46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.46	8.46	8.46	8.46	0	8.46	8.46	8.46	8.46	8.46	0	0	0	0
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.73	0.73	0.73	0.73	0	0.73	0.73	0.73	0.73	0.73	0	0	0	0
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.29	0.29	0.29	0.29	0.29	0.29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.29	0.29	0.29	0.29	0	0.29	0.29	0.29	0.29	0.29	0	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.10	9.10	9.10	9.10	9.10	9.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.10	9.10	9.10	9.10	0	9.10	9.10	9.10	9.10	9.10	0	0	0	0
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	0.43	0.43	0.43	0.43	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	0.43	0.43	0.43	0	0.43	0.43	0.43	0.43	0.43	0	0	0	0
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.09	0.09	0.09	0.09	0.09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.09	0.09	0.09	0	0.09	0.09	0.09	0.09	0.09	0	0	0	0

Formulas:

1. Pollutantion (tons/month) = ((Emission Factor (tons/VMT) * Quantity of Vehicle * Miles Driven) + (Emission Factor (ton/trip) * Quantity of Vehicle * 2))
2. Pollutantion (lbs/day) = ((Emission Factor (tons/VMT) * Quantity of Vehicle * Miles Driven) + (Emission Factor (ton/trip) * Quantity of Vehicle * 2)) * tons to lbs conversion / 28 (month to day conversion)

ONT T4 - Off Road

Equipment Emissions Factors https://goo.gl/maps/Wh7RuhJoetaHh1u88

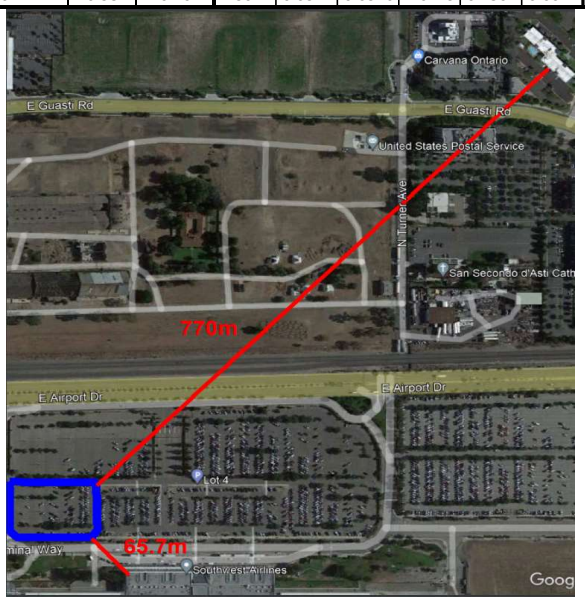
Equipment[8.]	Equipment Description	HP[1.]	Fuel Consumption (gal/hp-hr)	Load Factor[9.]	Usage Factor[10.]	Emission Factor[11.] (g/hp-hr)					
						NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Bobcat T650	Tractors/Loaders/Backhoes	74.3	0.019	0.37	0.70	4.4704	0.3682	0.3387	1.9126	0.5714	0.0018
CAT 200	Excavator	118	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
CAT 308 Excavator	Excavator	69.5	0.020	0.38	0.70	2.0430	0.2115	0.1945	1.6020	0.2778	0.0019
CAT 320	Excavator	172	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
CAT 350	Excavator	414	0.020	0.38	0.70	0.2602	0.0092	0.0085	0.3989	0.0437	0.0019
CAT 963D	Tractors/Loaders/Backhoes	189	0.019	0.37	0.70	0.4702	0.0184	0.0169	0.4494	0.0584	0.0018
CAT CS44B 1[2.]	Roller	100.6	0.019	0.38	0.70	0.9321	0.0434	0.0399	1.2798	0.0865	0.0018
CAT D4	Rubber Tired Dozer	130	0.019	0.40	0.70	0.5059	0.0264	0.0243	1.1915	0.0765	0.0018
CAT M322F Wheel Excavator	Excavator	169	0.020	0.38	0.70	0.3857	0.0186	0.0171	1.1730	0.0562	0.0019
Concrete Trucks[3.]	Off-Highway Trucks	400	0.020	0.38	0.70	0.3862	0.0136	0.0125	0.4500	0.0672	0.0019
Doosan XP825-HP750	Air Compressor	266	0.016	0.48	0.70	0.0731	0.0040	0.0036	0.3154	0.0258	0.0015
Generac MLT4060MV-STD 6kW[4.]	Generator Sets	12.2	0.042	0.74	0.70	2.5094	0.0599	0.0551	2.7725	0.2548	0.0054
Genie GTH-1056 Telehandler	Forklift	121	0.010	0.20	0.70	0.2884	0.0145	0.0133	0.6349	0.0386	0.0010
Genie GTH-5519 Telehandler	Forklift	74	0.010	0.20	0.70	2.6477	0.2079	0.1913	1.1120	0.3367	0.0010
Liebherr LB36	Bore/Drill Rig	523	0.026	0.50	0.70	0.3837	0.0136	0.0125	0.4935	0.0498	0.0024
Linkbelt LS248H	Crane	270	0.015	0.29	0.70	0.7233	0.0301	0.0277	0.4274	0.0720	0.0014
MQ Power Whisperwatt	Generator Sets	300	0.016	0.74	1	0.1631	0.0078	0.0072	0.3613	0.0505	0.0015
Muck Trucks[4.]	Other Construction Equipment	5.5	0.024	0.42	0.70	1.6966	0.0958	0.0881	1.9476	0.2829	0.0023
Skyjack SJ86T Manlift	Aerial Lift	74	0.016	0.31	0.70	0.4787	0.0094	0.0087	0.9746	0.0317	0.0015
Takeuchi TB235-2	Excavator	24.4	0.022	0.38	0.70	2.8902	0.4028	0.3706	4.2550	1.5152	0.0020
Trucks for material[3.]	Off-Highway Trucks	400	0.020	0.38	0.70	0.3862	0.0136	0.0125	0.4500	0.0672	0.0019
Volvo L50 Wheel Loader	Tractors/Loaders/Backhoes	90	0.019	0.37	0.70	0.6945	0.0234	0.0215	1.2827	0.0678	0.0018
Yanmar ViO55	Excavator	48.4	0.022	0.38	0.70	1.3011	0.0377	0.0346	1.6119	0.1502	0.0021

Site Details		
Site Size (acres)[5.]	NOx/CO Receptor Distance (meters)[6.]	PM_{10}/$PM_{2.5}$ Receptor Distance (meters)[6.]
1.977	155	770

LST Allowable Emissions (lbs/day)[7.]	
NO_X	263
PM_{10}	160
$PM_{2.5}$	150
CO	3218

Fugitive Dust

PM10 (Tons) / Month	PM2.5 (Tons) / Month
0.42	0.04



Fugitive Dust Formula

PM10 (Tons) / Month = Site Size * .21 (Acre to PM10 monthly conversion)

PM2.5 (Tons) / Month = PM10 (Tons) / Month * .1 (PM10 to PM2.5 conversion)

Notes:

1. Horsepowers are gathered through an internet search as well as emails with clients
2. Horsepower bin of 100 was used due to the horsepower of the equipment being fractionally over 100.
3. Assumed to be one vehicle
4. Lower hp bin unavailable since no hourly data, went with closest available bin
5. From client produced map - VENT SHAFT Combined 082422.pdf
6. See map
7. In correlation with the table "Site Details" these thresholds were taken from Appendix C for Southwest San Bernardino Valley http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2
8. Equipment data is found from APPENDIX 2 of "DRAFT Air Quality Exercise Concept Const Sup Memo 090722"
9. Load factor is gathered from Appendix A of EPA's "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling
10. Usage factor was assigned to represent the amount of hours that equipment would run for. ".7" represents
7 hours of the 10 hour shift, "1" represents the full 10 hours.
11. Emission Factors were dictated by EMFAC's Off Road Emissions https://arb.ca.gov/emfac/emissions-inventory/915f433fca11ec6a58e135c2eba4f2020312a4d2

Equipment Schedule

Equipment (Month)	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
Bobcat T650																													1	1
CAT 200																														
CAT 308 Excavator																														
CAT 320																														
CAT 350																														
CAT 963D																														
CAT CS44B 1																														
CAT D4																														
CAT M322F Wheel Excavator																													1	1
Concrete Trucks																														
Doosan XP825-HP750																														
Generac MLT4060MV-STD 6kW																														
GenieGTH-1056 Telehandler																													1	1
Genie GTH-5519 Telehandler																														
Liebherr LB36																														
Linkbelt LS248H																														
MQ Power Whisperwatt																														
Muck Trucks																														
Skyjack SJ86T Manlift																														
Takeuchi TB235-2																														
Trucks for material																													1	1
Volvo L50 Wheel Loader																													1	1
Yanmar ViO55																													1	1

Equipment (Month)	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
Bobcat T650	1																			1	1	1	0.5							
CAT 200																														
CAT 308 Excavator	1																													
CAT 320		4	4																	4	4									
CAT 350																									1	0.5				
CAT 963D		2	2																	2	2									
CAT CS44B 1																									1	0.5				
CAT D4																									1	0.5				
CAT M322F Wheel Excavator	1																													
Concrete Trucks				2	2																	2	2	2						
Doosan XP825-HP750				2	2																	2	2	2						
Generac MLT4060MV-STD 6kW				10	10																	10	10	10						
GenieGTH-1056 Telehandler				2	2																	2	2	2						
Genie GTH-5519 Telehandler																														
Liebherr LB36	1																													
Linkbelt LS248H		2	2	2	2															2	2	2	2	2						
MQ Power Whisperwatt				2	2																	2	2	2						
Muck Trucks																														
Skyjack SJ86T Manlift	1																													
Takeuchi TB235-2		4	4																	4	4									
Trucks for material	1	2	2	2	2															3	3	3	2.5	2	1	0.5				
Volvo L50 Wheel Loader																									1	0.5				
Yanmar ViO55																				1	1	1	0.5		1	0.5				

Pollution based on Schedule (tons/month)

Equipment (Month)	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
NO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
PM_{10}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
$PM_{2.5}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Equipment (Month)	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
PM_{10}	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
$PM_{2.5}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Pollution based on Schedule (lbs/day)

Equipment (Month)	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
NO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0
PM_{10}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32.4
$PM_{2.5}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.4
VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
SO_X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Equipment (Month)	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	5.7	7.8	7.8	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	11.0	14.1	12.6	11.0	3.2	1.6	0.0	0.0	0.0	0.0
PM_{10}	32.5	32.7	32.7	32.6	32.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.9	32.9	32.8	32.7	32.6	32.3	32.2	0.0	0.0	0.0	0.0
$PM_{2.5}$	3.5	3.7	3.7	3.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8	3.7	3.6	3.3	3.3	0.0	0.0	0.0	0.0
CO	6.0	11.3	11.3	14.4	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6	13.6	16.7	15.5	14.4	4.9	2.4	0.0	0.0	0.0	0.0
VOC	0.8	1.7	1.7	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2	2.2	2.0	1.8	0.5	0.2	0.0	0.0	0.0	0.0
SO_X	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

(Pink highlight) Cells with this contain equipment in a double shift.

Formula

1. Pollution based on schedule (tons/ month) = Equipment Quantity * Emission Factor * Usage Factor * Load Factor * Horsepower * gram to tons conversion
2. Pollution based on schedule (lbs/ day) = Equipment Quantity * Emission Factor * Usage Factor * Load Factor * Horsepower * gram to lbs conversion / 28 (month to day conversion)
3. For PM 10 and PM2.5 the Fugitive Dust emissions are also added each month

ONT T4 - On Road

Vehicle Emissions Factors https://goo.gl/maps/Wh7RuhJoetaHh1u88

Vehicle Type[2.]	Fuel Type	Miles Driven[2.]	Emission Factor[1.] (tons/VMT)[a]					
			NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Worker Vehicles	Mix	14.7	4.84E-08	1.97E-08	6.95E-09	8.68E-07	1.14E-08	3.03E-09
Construction Trucks - T7 Single Dump Class 8	Mix	20	1.53E-06	1.47E-07	6.00E-08	8.75E-08	1.57E-08	1.68E-08
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8	Mix	20	1.09E-06	1.97E-09	9.00E-10	1.44E-09	3.05E-10	2.48E-10

Vehicle Type[2.]	Emission Factor[1.] (ton/trip)[b]					
	NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_X
Worker Vehicles	2.58E-07	2.28E-09	2.10E-09	3.13E-06	3.16E-07	7.37E-10
Construction Trucks - T7 Single Dump Class 8	3.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8	6.28E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. Emissions includes: g/mile for RUNEX, PMBW and PMTW

b. Emissions includes: g/trip for STREX. Assume 2 trips per vehicle per day for STREX.

Notes:

1. Emission factors in units of tons/mile and tons/trip were provided by EMFAC https://arb.ca.gov/emfac/emissions-inventory/6dde440e3ce4f7e51faa86b7085eaa7b4bb418e2
2. From SBCTA_TunneltoONT_DRAFT_TechStudy_Traffic_110222_RLSO.docx
3. Assumed that the trips are split evenly between both sites per Scenario

Quantity Schedule

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
Worker Vehicles																													230	230	230	230	230	230	230															230	230	230	230	230	230	230				
Construction Trucks - T7 Single Dump Class 8																													100	100	100	100	100	100	100															100	100	100	100	100	100	100				
Ancillary Delivery Trucks -T6 Instate Delivery/T7 Tractor Class 8																													10	10	10	10	10	10	10															10	10	10	10	10	10	10				

Pollution based on Schedule (tons/month)

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0	0	0	0
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0	0	0	0
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0

Pollution based on Schedule (lbs/day)

	Month																																																										
Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.46	8.46	8.46	8.46	8.46	8.46	8.46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.46	8.46	8.46	8.46	8.46	8.46	8.46	0	0	0	0
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0	0
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.10	9.10	9.10	9.10	9.10	9.10	9.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.10	9.10	9.10	9.10	9.10	9.10	9.10	0	0	0	0
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0	0	0	0
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0	0	0	0

Formulas:

1. Pollutantion (tons/month) = ((Emission Factor (tons/VMT) * Quantity of Vehicle * Miles Driven) + (Emission Factor (ton/trip) * Quantity of Vehicle * 2))
2. Pollutantion (lbs/day) = ((Emission Factor (tons/VMT) * Quantity of Vehicle * Miles Driven) + (Emission Factor (ton/trip) * Quantity of Vehicle * 2)) * tons to lbs conversion / 28 (month to day conversion)

Localized Significance Thresholds

Construction Area	Maximum Daily Localized Construction Emissions (lb/day)			
	NO_x	PM_{10}	$PM_{2.5}$	CO
Rancho Cucamonga Metrolink Station and TBM Retrieval	19.27	33.22	4.17	19.68
SCAQMD Threshold (2 acres, 25m/200m)	170	66	36	1232
Exceed Threshold?	**N**	**N**	**N**	**N**
Vent Shaft	16.98	16.86	2.33	20.55
SCAQMD Threshold (1 acre, 100m/200m)	211	103	32	2423
Exceed Threshold?	**N**	**N**	**N**	**N**
Ontario Airport T4 Station	14.14	32.86	3.84	16.70
SCAQMD Threshold (2 acres, 50m/500m)	263	160	150	3218
Exceed Threshold?	**N**	**N**	**N**	**N**
Ontario Airport T2 Station	27.78	33.63	4.55	36.21
SCAQMD Threshold (2 acres, 25m/500m)	170	160	150	1232
Exceed Threshold?	**N**	**N**	**N**	**N**

Total of each Project

Construction Area	Construction Emissions (tons)					
	NO_x	PM_{10}	$PM_{2.5}$	CO	VOC	SO_x
Rancho Cucamonga Metrolink Station and TBM Retrieval	7.8	14.2	1.7	8.7	0.9	0.05
Vent Shaft	3.0	2.7	0.4	3.4	0.3	0.02
Ontario Airport T4 Station	3.0	6.0	0.7	3.5	0.3	0.02
Ontario Airport T2 Station	4.3	6.5	0.8	5.2	0.5	0.03
Total Emissions from Project Construction (tons)	**18.1**	**29.4**	**3.6**	**20.8**	**2.0**	**0.12**

Rancho Cucamonga Metrolink Station and TBM Retrieval (tons/month)

	Month																																																												
Pollutant	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60	Total
NO_X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.16	0.17	0.18	0.21	0.20	0.16	0.16	0.23	0.30	0.27	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.00	0.17	0.17	0.16	0.36	0.36	0.36	0.36	0.36	0.36	0.15	0.13	0.00	0.00	0.00	0.00	7.80
PM_{10}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.00	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.00	0.00	0.00	0.00	14.22
$PM_{2.5}$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.00	0.00	0.00	0.00	1.68
CO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.17	0.18	0.20	0.24	0.24	0.21	0.21	0.29	0.37	0.33	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.00	0.18	0.18	0.16	0.36	0.36	0.36	0.36	0.36	0.36	0.17	0.14	0.00	0.00	0.00	0.00	8.69
VOC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.01	0.01	0.01	0.04	0.04	0.04	0.04	0.04	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.85
SO_X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

Vent Shaft (tons/month)

	Month																																																										
Pollutant	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60	Total
NO_X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.18	0.19	0.19	0.33	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.33	0.17	0.14	0.00	0.00	0.00	0.00	3.00
PM_{10}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.22	0.22	0.22	0.23	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.22	0.22	0.00	0.00	0.00	0.00	2.68
$PM_{2.5}$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.37
CO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.20	0.21	0.22	0.38	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.38	0.16	0.14	0.00	0.00	0.00	0.00	3.40
VOC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.02	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.32
SO_X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

Ontario Airport T4 Station (tons/month)

	Month																																																												
Pollutant	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60	Total
NO_X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.18	0.21	0.21	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.29	0.27	0.25	0.15	0.13	0.00	0.00	0.00	0.00	3.02
PM_{10}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.00	0.00	0.00	0.00	6.02
$PM_{2.5}$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.70
CO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.20	0.26	0.26	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.29	0.33	0.32	0.30	0.18	0.15	0.00	0.00	0.00	0.00	3.54
VOC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.33
SO_X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

Ontario Airport T2 Station (tons/month)

	Month																																																												
Pollutant	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60	Total
NO_X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.47	0.47	0.47	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.17	0.13	0.00	0.25	0.25	0.25	0.15	0.13	0.00	0.00	0.00	0.00	4.28
PM_{10}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.44	0.44	0.44	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.43	0.00	0.43	0.43	0.43	0.43	0.43	0.00	0.00	0.00	0.00	6.50
$PM_{2.5}$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.06	0.06	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.80
CO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.58	0.58	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.13	0.00	0.30	0.30	0.30	0.18	0.15	0.00	0.00	0.00	0.00	5.17
VOC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.06	0.06	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.03	0.03	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.51
SO_X	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03

Regional Emission Threshold

Construction Area	Maximum Daily Regional Construction Emissions (lb/day)					
	NO_x	PM_{10}	$PM_{2.5}$	CO	VOC	SO_x
Rancho Cucamonga Metrolink Station and TBM Retrieval	27.7	33.9	4.5	28.8	3.3	0.1
Vent Shaft	25.4	17.6	2.6	29.7	3.0	0.1
Ontario Airport T4 Station	22.6	33.6	4.1	25.8	2.7	0.1
Ontario Airport T2 Station	36.2	34.4	4.8	45.3	5.0	0.2
Maximum Daily Regional Construction Emissions	**95.2**	**118.3**	**15.0**	**107.0**	**11.1**	**0.6**
SCAQMD Threshold	100	150	55	550	75	150
Exceed Threshold?	**N**	**N**	**N**	**N**	**N**	**N**

Ontario International Airport Connector Project

ONTCONNECTOR

APPENDIX H

AIR QUALITY TECHNICAL REPORT

October 2024

Prepared by:

sbcta

San Bernardino County Transportation Authority
1170 West Third Street, Second Floor
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FIGURES

TABLES

ACRONYMS AND ABBREVIATIONS

%	percent
—	Not applicable
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AQMP	Air Quality Management Plan
AQS	Air Quality System
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
EPA	Environmental Protection Agency
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	Greenhouse Gas
HAP	Hazardous Air Pollutant
ID	Identification
lbs/day	pounds per day
LOS	Level-of-Service
LSTs	localized significance threshold
MEP	Mechanical, electrical, and plumbing
MM	Mitigation Measure
MPO	Metropolitan Planning Organization
MSAT	mobile source air toxics
MSF	maintenance and storage facility
N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO	nitrogen oxide
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen

O^3	ozone
ONT	Ontario International Airport
Pb	lead
PM	particulate matter
PM_{10}	particulate matter sized 10 microns or less in diameter
$PM_{2.5}$	particulate matter sized 2.5 microns or less in diameter
Ppb	Parts per billion
ppm	parts per million
Project	Ontario International Airport Connector Project
ROW	right-of-way
RTP/SCS	Regional Transportation Plan / Sustainable Communities Strategy
RTSs	regional thresholds of significance
SBCTA	San Bernardino County Transportation Authority
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SO^2	sulfur dioxide
TAC	Toxic Air Contaminant
TBM	tunnel boring machine
TCM	Transportation Control Measures
TCR	Transportation Conformity Rule
U.S. DOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USC	United States Code
VMT	Vehicle Miles Traveled
VOC	volatile organic compound

1 INTRODUCTION

San Bernardino County Transportation Authority (SBCTA) is proposing the Ontario International Airport (ONT) Connector Project (Project) in the City of Ontario and the City of Rancho Cucamonga. The purpose of this technical report is to describe the existing air quality setting, applicable regulations, methodology for the analysis, and potential impacts from construction and operation of the Build Alternative and the No Build Alternative. The information contained in this technical report will be used to support the environmental review process pursuant to National Environmental Policy Act (NEPA).

1.1 NO BUILD ALTERNATIVE

The No Build Alternative would not result in a new direct electrically powered, on-demand fixed transit guideway connection from the Cucamonga Metrolink Station to ONT. Existing roads, highways, and transit services, such as Omnitrans' limited-service bus route to ONT, known as ONT Connect or Route 380, would be the primary transportation options for access to ONT. As such, the No Build Alternative would not result in reduced air quality emissions and would not contribute to improved air quality. Some highway improvements may be undertaken by other agencies as part of separate planned projects, which would take place with either the No Build or Build Alternative associated with this project.

1.2 BUILD ALTERNATIVE

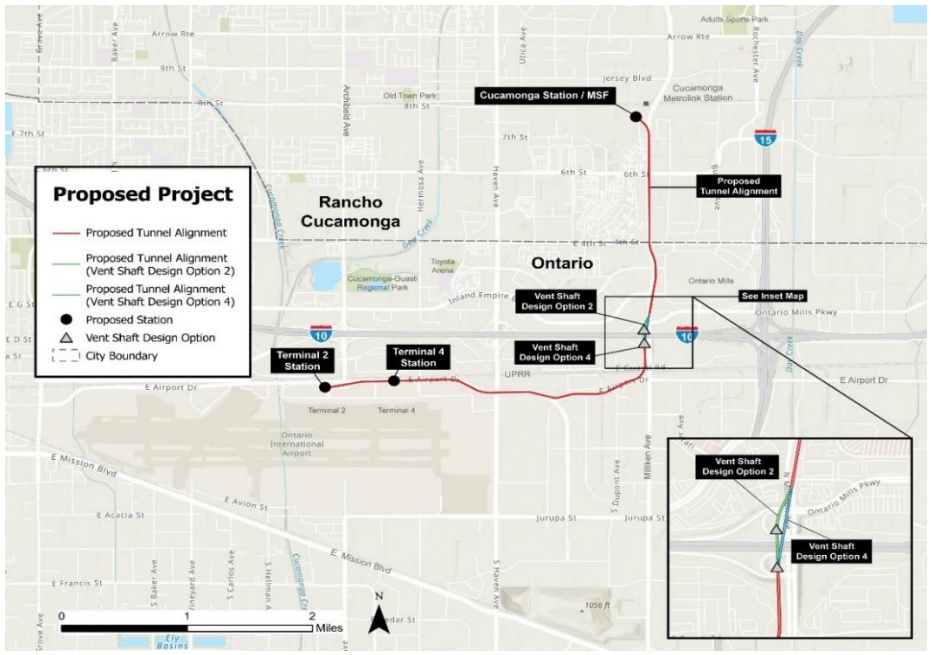
The Build Alternative includes a 4.2-mile tunnel alignment, three passenger stations, a maintenance and storage facility (MSF), and an access and ventilation shaft in the cities of Rancho Cucamonga and Ontario within the County of San Bernardino (see Figure 1 and Figure 2). The Build Alternative would include autonomous electric vehicles that would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. The Build Alternative would provide a peak one-way passenger throughput of approximately a minimum of 100 per hour. Operations would be managed by Omnitrans, with on-demand service provided daily from 4:00 a.m. to 11:30 p.m., including weekends and holidays.

Overall construction of the Build Alternative would last approximately 56 months, with project elements varying in their specific construction duration (see Table 1). Construction is projected to start in 2025 and is anticipated to be completed in 2031.

Figure 1: Regional Location Map

Source: AECOM 2024

Figure 2: Build Alternative Site



Source: AECOM 2024

Table 1: Typical Sequencing of Transit Construction Activities

Activity	Location of Construction Activities	Typical Duration (Total Months)	Description
Utility Relocation	At Grade	7-14	Relocate utilities from temporary and permanent elements related to the construction and/or operation of the Project.
Construction Staging Laydown Yard	At Grade	3-6	Prepare existing lots to store construction equipment and materials, including the tunnel boring machine (TBM), office space.
Roadway	At Grade	6-18	Reconfigure roadway, demolition of existing roadway installation of curb and gutter and other public right-of-way (ROW) improvements.
At-grade Guideway	At Grade	6-18	Install asphalt and striping for guideway.
Station Construction (overall)	At Grade	24-48	Install maintenance and storage facility (MEP), canopies, faregates, ticketing, finishes, stairs, and walkways.
Parking	At Grade	3-6	Restoring existing parking stalls temporarily unavailable due to construction, as applicable.
MSF	At Grade	8-12	Install MEP, fencing, enclosed bays, specialized washing equipment, and rebar installation, and concrete pours.
Utility Relocation	Underground	7-14	Relocate and hang underground utilities from temporary and permanent elements related to the construction and operation of the Project.
Open Cut and Cut and Cover Construction	Underground	18-24	Supports the construction of the TBM launching and receiving pit, and of the access ramps connecting the tunnel with the at-grade stations. Install soldier piles for beam and lag support of excavation (SOE) and excavation. Cover excavation with temporary decking.
Bored Tunnel	Underground	16-24	Underground guideway construction.
Ventilation and Emergency Access Shaft	Underground	6-8	Install ventilation and emergency access shaft.
Underground Guideway	Underground	12-18	Install asphalt and striping for guideway.

2 REGULATORY SETTING

2.1 FEDERAL

The following sections describe applicable federal policies and regulations.

2.1.1 Federal Transportation Improvement Program

Federal Transportation Improvement Program (FTIP) is a federal document that details programs and projects listed in the Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) and ensures compliance with federal and state requirements. The FTIP lists multi-modal transportation projects, including the Southern California Association of Governments' (SCAG) Federal Transit Administration (FTA)-funding projects, which are required to be included in the FTIP. Projects included in the FTIP relate to transit, bus and rail, highway improvements, active transportation, intersection improvements, among other transportation-related projects. SCAG completed their FTIP in 2023 and passed all five of the transportation conformity requirements tests, required by U.S. Department of Transportation (U.S. DOT) Metropolitan Transportation Regulation and United States Environmental Protection Agency (U.S. EPA) Transportation Conformity Regulations. The 2023 SCAG FTIP passed the consistency with the 2020 RTP/SCS test, regional emissions tests, timely implementation of Transportation Control Measures (TCM) test, inter-agency consultation and public involvement test, and the financial constraint test.

2.1.2 National Environmental Policy Act [42 United States Code (USC) Section 4321 et seq.]

NEPA requires consideration of potential environmental effects, including Air Quality effects, in the evaluation of any proposed federal agency action. NEPA also obligates federal agencies to consider the environmental consequences and costs in their projects and programs as part of the planning process. General NEPA procedures are set forth in the Council on Environmental Quality regulations 42 USC 4332 Section 102.

2.1.3 Clean Air Act and National Ambient Air Quality Standards

U.S. EPA under Clean Air Act (CAA) of 1970, 42 United States Code (USC) Section 7401, et seq., amended in 1977 and 1990, has developed National Ambient Air Quality Standards (NAAQS) to protect human health and welfare. NAAQS, codified in 40 CFR Part 50, include primary standards, which are designed to protect human health, including sensitive subpopulations, such as children, the elderly, and those with chronic respiratory problems. The secondary standards are designed to protect public welfare, including economic interests, visibility, vegetation, animal species, and other concerns not related to human health.

NAAQS apply to the following criteria pollutants:

- Particulate matter (PM) including PM sized 10 microns or less in diameter (PM_{10}),

- PM sized 2.5 microns or less in diameter ($PM_{2.5}$),
- Carbon monoxide (CO),
- Sulfur dioxide (SO_2),
- Nitrogen dioxide (NO_2),
- Lead (Pb), and
- Ground-level ozone (O_3).

O_3 is not emitted directly from emission sources but is created near the ground level by a chemical reaction between oxides of nitrogen (NO_X) and volatile organic compounds (VOCs) in the presence of sunlight. As a result, NO_X and VOCs are referred to as ozone precursors and are regulated as a means to prevent O_3 formation. NO_X is composed primarily of NO_2 and nitrogen oxide (NO). SO_2 and NO_X are also precursors to secondary PM formation (in particular, $PM_{2.5}$).

NAAQS are expressed in terms of a concentration level and an associated averaging period. The concentration levels may be expressed as parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$). States and municipalities are able to adopt standards more stringent than NAAQS. Current NAAQS for criteria pollutants and the Federal Register references are included in the Federal and State Air Quality Standards, sourced from the California Air Resources Board and summarized in Table 2.

CAA requires geographic areas to be designated according to their ability to attain NAAQS, and these areas are categorized for each criteria pollutant as:

- Attainment Area: Areas where no exceedance of NAAQS for a specific criteria pollutant occurred.
- Nonattainment Area: Areas where exceedance of NAAQS for a specific criteria pollutant occurred.
- Maintenance Area: Areas that have previously been designated as nonattainment areas but are still in need of efforts to maintain the improved conditions in the future. Most of the CAA rules for nonattainment areas are still applicable to a maintenance area.
- Unclassified Area: Areas where EPA is unable to determine attainment status after evaluating available information.

If an area is designated as nonattainment for a criteria pollutant under NAAQS, state governments must develop a specific State Implementation Plan (SIP) and implement control plans to reduce the emission level of that pollutant.

Per CAA Section 176(c), federal agencies are required to ensure that their actions conform to the SIP in nonattainment or maintenance areas for purposes of reducing the severity and number of violations of NAAQS in an effort to achieve attainment of these standards. There are two sections of the conformity regulations in CAA that are applicable to federal actions:

Table 2: Federal and State Air Quality Standards

Criteria Pollutant	Averaging Time	California Ambient Air Quality Standards (CAAQS)	NAAQS
O_3	1-Hour	0.09 ppm	—
O_3	8-Hour	0.070 ppm	0.070 ppm
PM_{10}	24-hour	50 µg/m^3	150 µg/m^3
PM_{10}	Annual	20 µg/m^3	—
$PM_{2.5}$	24-Hour	—	35 µg/m^3
$PM_{2.5}$	Annual	12.0 µg/m^3	12.0 µg/m^3
CO	1-Hour	20 ppm	35 ppm
CO	8-Hour	9 ppm	9 ppm
NO_2	1-Hour	0.18 ppm	0.10 ppm
NO_2	Annual	0.030 ppm	0.053 ppm
SO_2	1-Hour	0.25 ppm	75 ppb
SO_2	24-Hour	0.04 ppm	0.14 ppm
SO_2	Annual Arithmetic Mean	—	0.03 ppm
Pb	30-Day Average	1.5 µg/m^3	—
Pb	Rolling 3-Month Average, 24-Hour	—	1.5 µg/m^3
Sulfates	24-Hour	25 µg/m^3	—
Hydrogen Sulfides	1-Hour	0.03 ppm (42 µg/m^3)	—
Vinyl Chloride	24-Hour	0.01 ppm (26 µg/m^3)	—

Source: California Air Resources Board 2016
— = not applicable
ppb = parts per billion
ppm = parts per million

- Transportation projects funded or approved by Federal Highway Administration (FHWA) or FTA are governed by the CAA's Transportation Conformity Rule (TCR). The TCR is enforced on both a regional level and project level.
- Non-FHWA/FTA projects or components of a FHWA/FTA transportation project requiring actions by other federal agencies such as Federal Aviation Administration, which are governed by the CAA's General Conformity Rule. This rule does not apply to the proposed Project because no federal agencies other than FTA are lead or corporate agencies for this federal action.

2.1.4 Mobile Source Air Toxics

In addition to the criteria pollutants, CAA also lists 187 air toxins, known as hazardous air pollutants (HAPs). CAA authorizes EPA to characterize and control emissions of these pollutants. However, unlike the criteria pollutants, the majority of air toxics do not have ambient air quality standards. Of the 187 HAPs, 93 have been identified as mobile source air toxics (MSAT), and the following nine MSATs are priority pollutants:

- Acetaldehyde;
- Acrolein;
- Benzene
- 1,3-butadiene;
- Diesel PM plus diesel exhaust organic gases (diesel PM);
- Ethylbenzene;
- Formaldehyde;
- Naphthalene; and
- Polycyclic organic matter.

To reduce emissions of MSATs, EPA has issued various regulations, including the following:

- March 2001: Regulation targeting 21 HAPs from motor vehicles and their fuel. The goal of regulation was to reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 67 to 76 percent (%), and reduce on-highway diesel PM emissions by 90%.
- February 2007: Regulation limiting the benzene content of gasoline and reducing toxic emissions from passenger vehicles and gasoline cans. EPA estimates that, in 2030, this rule will reduce total emissions of MSATs by 330,000 tons and VOC emissions by over 1 million tons.
- April 2014: Regulation requiring Tier 3 standards for motor vehicles. The standards will reduce both tailpipe and evaporative emissions from all passenger vehicles and provide more stringent gasoline sulfur standards.

2.2 STATE

2.2.1 California Clean Air Act

Along with the federal CAA regulations, enforced by EPA, California must also comply with the air quality regulations under California Clean Air Act (CCAA). CCAA was adopted in 1988 and requires California Air Resources Board (CARB) to establish CAAQS. These standards are also included in Table 2. In most cases, CAAQS are more stringent than NAAQS. California has also established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. Other CARB responsibilities include, but are not

limited to, overseeing local air district compliance with state and federal laws; approving local air quality plans; submitting SIPs to EPA; monitoring air quality; determining and updating area designations and maps; and setting emission standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels. In addition to CARB, Regional Air Quality Management Districts and Air Pollution Control Districts administer CCAA on the regional and local levels.

CCAA requires that each area exceeding CAAQS for O_3, CO, SO_2, and NO_2 develop a plan aimed at achieving those standards. California Health and Safety Code Section 40914 requires air districts to design a plan that achieves an annual reduction in district-wide emissions of 5% or more, averaged every consecutive 3-year period. To satisfy this requirement, the local air districts have to develop and implement air pollution reduction measures, which are described in their air quality attainment plans, and outline strategies for achieving CAAQS for any criteria pollutants for which the region is classified as nonattainment.

2.2.2 Tanner Toxics Act

Toxic air contaminants (TACs) in California are regulated primarily through Tanner Air Toxics Act (Chapter 1047, Statutes of 1983) and Air Toxics Hot Spots Information and Assessment Act (Chapter 1252, Statutes of 1987). Assembly Bill 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review must occur before CARB can designate a substance as a Toxic Air Contaminant (TAC). Air Toxics Hot Spots Information and Assessment Act requires that TAC emissions from stationary sources be quantified and compiled into an inventory according to criteria and guidelines developed by CARB, and, if directed to do so by the local air district, a health risk assessment must be prepared to determine the potential health impacts of such emissions.

2.3 REGIONAL AND LOCAL

2.3.1 South Coast Air Quality Management District

The local Air Quality Management or Air Pollution Control Districts are responsible for preparing the portion of the California SIP applicable within their boundaries, adoption of air quality control regulations for stationary sources, and implementation of indirect source and transportation air quality control measures. South Coast Air Quality Management District (SCAQMD) is the regulatory agency responsible for improving air quality for large areas of Los Angeles, Orange, Riverside and San Bernardino counties, including the Coachella Valley. The region is home to more than 17 million people—about half the population of the entire state of California. Significance criteria established by the applicable air quality management board or air pollution control district may be relied on to make the impact determinations for specific program elements.

2.3.1.1 Regional Thresholds of Significance

SCAQMD has established recommended screening level thresholds of significance for regional emissions. The SCAQMD regional thresholds of significance (RTSs) are shown in Table 3. The RTSs were designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards, which were established using health-based criteria to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution. Because regional air quality standards have been established for these criteria pollutants to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution, these RTSs can also be used to assess the proposed Project emissions and inform the proposed Project's impacts to regional air quality and health risks.

2.3.1.2 Localized Significance Thresholds

In order to assess local air quality impacts, SCAQMD has developed Localized Significance Thresholds (LSTs) and supporting LST Methodology to assess the proposed Project-related emissions in the proposed Project vicinity (SCAQMD 2008). The LST Methodology found that the primary emissions of concern are NO_2, CO, PM_{10}, and $PM_{2.5}$.

The LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards and are developed based on the ambient concentrations of that pollutant for each source receptor area. Because the LSTs consider the ambient air quality, LSTs can also be used to identify those projects that would result in significant levels of air pollution and impact sensitive receptors.

Table 3: SCAQMD Regional Thresholds of Significance for Select Criteria Pollutants

Pollutant	Daily Emissions in lbs/day (Construction)	Daily Emissions in lbs/day (Operation)
NO_X	100	55
PM_{10}	150	150
$PM_{2.5}$	55	55
CO	550	550
VOC	75	55
SO_X	150	150
Pb[1]	3	3

Notes: lbs/day = pounds per day

[1] This analysis does not directly evaluate Pb because little to no quantifiable and foreseeable emissions of this substance would be generated by the Build Alternative. Pb emissions have significantly decreased due to the near elimination of leaded fuel use.

Source: SCAQMD 2023

The LST Methodology provides Look-Up Tables with different thresholds based on the location and size of a project site and distance to the nearest sensitive receptors. The Look-Up Tables provide thresholds for 1-, 2-, and 5-acre project sites.

2.3.1.3 Air Quality Management Plan

Under CCAA, SCAQMD is required to develop an air quality attainment plan for nonattainment criteria pollutants within the air district. The most recent air quality plan developed by SCAQMD are the 2016 Air Quality Management Plan (AQMP; SCQAMD 2017) to address the 1997 8-hour O_3 standards and $PM_{2.5}$ standards and the 2022 AQMP that is focused on attaining the 2015 8-hour O_3 standard of 70 ppb (SCAQMD 2022). The 2016 and 2022 AQMPs are the legally enforceable blueprint for how the region will meet and maintain NAAQS and CAAQS. These AQMPs identify strategies and control measures needed to achieve attainment of the 8-hour O_3 standard and federal annual and 24-hour standard for $PM_{2.5}$ in the South Coast Air Basin (SCAB) (SCAQMD 2017; 2022). The future emission forecasts are primarily based on demographic and economic growth projections provided by Southern California Association of Governments.

2.3.1.4 Southern California Air Quality Management District Rule 402

Rule 402 (Nuisance), adopted by SCAQMD on May 7, 1976, states a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

2.3.1.5 Southern California Air Quality Management District Rule 403

Rule 403 (Fugitive Dust), adopted by SCAQMD on February 7, 1976, and amended on April 20, 2010, has the purpose of reducing the amount of PM entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions.

2.3.1.6 2020-2045 Regional Transportation Plan/Sustainable Community Strategies (Connect SoCal)

The 2020-2045 RTP/SCS, also known as Connect SoCal, was adopted by the Regional Council on September 3, 2020, and replaces the 2016-2040 RTP/SCS. The RTP/SCS serves as a long-range regional transportation planning tool through the year 2045. The core vision of the 2020-2045 RTP/SCS is to build upon and expand land use and transportation strategies to increase mobility options, reduce Vehicle Miles Travelled (VMT), and achieve a more sustainable growth pattern (SCAG 2020). The 2020-2045 RTP/SCS lists ten goals that were used to develop the plan and its guiding policies. These goals include the following:

1. Encourage regional economic prosperity and global competitiveness.
2. Improve mobility, accessibility, reliability, and travel safety for people and goods.
3. Enhance the preservation, security, and resilience of the regional transportation system.
4. Increase person and goods movement and travel choices within the transportation system.
5. Reduce Greenhouse Gas (GHG) emissions and improve air quality.
6. Support healthy and equitable communities.
7. Adapt to changing climate and support an integrated regional development pattern and transportation network.
8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel.
9. Encourage development of diverse housing types in areas that are supported by multiple transportation options.
10. Promote conservation of natural and agricultural lands and restoration of habitats.

2.3.2 County of San Bernardino

The County of San Bernardino General Plan (County of San Bernardino 2020) is a collection of planning tools intended to guide future decisions, investments, and improvements throughout the County of San Bernardino. The County of San Bernardino General Plan, Natural Resources Element contains the following policy related to air quality that is applicable to the Build Alternative:

- **Policy NR-1.8: Construction and Operations.** Invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. Encourage County contractors and other builders and developers to use low emission construction vehicles and equipment to improve air quality and reduce emissions.

2.3.3 City of Rancho Cucamonga

PlanRC is City of Rancho Cucamonga's General Plan, with long-term goals, objectives, and policies to guide land use planning decisions. Policies included in PlanRC that discuss air quality are detailed below:

- **Goal RC-5: Local Air Quality**. Healthy air quality for all residents.
- **Policy RC-5.1: Pollutant Sources.** Minimize increases of new air pollutant emissions in the city and encourage the use of advance control technologies and clean manufacturing techniques.
- **Policy RC-5.4: Health Risk Assessment.** Consider the health impacts of development of sensitive receptors within 500 feet of a freeway, rail line, arterial, collector or transit corridor sources using health risk assessments to understand potential impacts.
- **Policy RC-5.10: Clean and Green Industry.** Prioritize non-polluting industries and companies using zero or low air pollution technologies.

- **Policy RC-5.11: Dust and Odor.** Require new construction to include measures to minimize dust and odor during construction and operation.

2.3.4 City of Ontario General Plan

City of Ontario's Policy Plan act as the General Plan, detailing long-term planning and policy goals to guide the City of Ontario's growth and development. Policies related to air quality include the following:

- **Goal ER-4:** Improved indoor and outdoor air quality and reduced locally generated pollutant emissions.
- **Policy ER4-5: Transportation.** Promote mass transit and non-motorized mobility options (e.g., walking, biking) to reduce air pollutant emissions.
- **Policy ER4-6: Particulate Matter.** Support efforts to reduce PM to meet State and Federal Clean Air Standards.
- **Policy ER4-7: Other Agency Collaboration.** Collaborate with other agencies within the SCAB to improve regional air quality at the emission source, with a particular focus on sources that affect environmental justice areas in Ontario.

3 METHODOLOGY

3.1 RESOURCE STUDY AREA

The regional study area encompasses the SCAB, where SCAQMD is the agency responsible for attaining state and federal clean air standards, and the local study area includes areas along: 1) the roadway network affected with potential impacts analyzed and 2) the areas immediately adjacent to new stations and tunnel portals.

3.1.1 Construction

Temporary on-road vehicle and off-road equipment emissions associated with the new stations, MSF, Vent Shaft Design Option, and tunnel construction were estimated using the CARB EMFAC2021 and OFFROAD2021 models to estimate emissions factors using construction resource input data from SCAQMD regional information and local sources at construction sites. Construction off-road equipment, size and operating schedule was provided in the technical memo, Air Quality Exercise – Conceptual Construction Support, prepared by HNTB (HNTB 2022). Fugitive emissions were based on total size (in acres) of land disturbed, which was also provided by HNTB. The number of on-road trucks and employees were based on the conceptual construction trucking schedule for excavation, conceptual number of construction employees, arrival, and departure times. Further calculation methodology details are provided in Section 5.3 and Transportation Technical Study dated November 2022. Localized construction emissions include those emissions only generated within the construction sites such as the new off-airport stations, MSF, tunnel portals, haul trucks, and vent shaft, and will be estimated using the same modeling tools described above. Sensitive receptors closest to the proposed Project footprint include commercial properties within 0.01 mile to 0.09 mile of all four construction locations (MSF, stations and Vent Shaft Design Option), an apartment community within 0.23 mile of the Cucamonga Metrolink Station site, a restaurant within 0.07 mile northwest of Vent Shaft Design Option 2, a restaurant within 0.11 mile southwest of Vent Shaft Design Option 4, airport terminals within 0.7 mile of the proposed ONT T2 Station and airport terminals within 0.11 mile of the proposed ONT T4 Station.

The estimated site-specific emissions, the size of source area, and the distance from sensitive receptors to the site boundary were compared with the applicable SCAQMD-established significance thresholds to determine potential localized construction period impacts and whether mitigation measures would be warranted. Distance to sensitive receptors was based on aerial review of construction area and nearby sensitive locations. Distance to the closest sensitive receptor for NO_X and CO were often shorter than $PM_{2.5}$ and PM_{10} because NO_X and CO also must consider commercial and industrialized locations.

3.1.2 Operation

The operational emissions analysis addressed sources of direct air pollutant emissions and potential impacts on local and regional air quality under existing conditions, the No Project Alternative, and the proposed Project. CARB (EMFAC2021) model was used to predict both local and regional emissions, if necessary, based on the VMT data established through the transportation impact analysis along the corridor and sub traffic network affected by the proposed Project. This analysis included a CO hot spot analysis that followed the most recent EPA guideline.

3.2 METHODS FOR NEPA EVALUATION

3.2.1 Localized Construction Emissions

With respect to localized criteria pollutants, the proposed Project area is in a nonattainment or maintenance area for O_3, CO, and PM (PM_{10} and $PM_{2.5}$). To satisfy the NEPA requirements on assessing potential mobile source air quality impacts, the analysis followed the guidelines and procedures established for nonattainment pollutants in 40 CFR Section 93.123 through an analysis addressing localized mobile source-related NO_X (O_3 precursor), CO, PM_{10}, and $PM_{2.5}$ concentrations.

3.2.2 Mesoscale (Regional) Construction Emissions

The purpose of conducting a mesoscale emission-burden analysis is to provide a comparison of regional pollutant emission levels for the proposed Build Alternative to the No Project Alternative providing the decision-maker with a resource measure with respect to the emission burden on a mesoscale or regional level among studied alternatives. The mesoscale analysis network established for this Project, is the area affected by the proposed Project on a regional level within which VMT will be predicted for existing and future conditions.

The CARB EMFAC2021 and OFFROAD2021 models were used to estimate emission factors for on-road and off-road criteria pollutants. For on-road emissions, the annual VMT within this mesoscale were multiplied with EMFAC2021-predicted emission factors to predict daily emission levels for each considered pollutant. The average daily VMT per vehicle was taken from the California Emissions Estimator Model (CalEEMod) guidance (CalEEMod 2021a) and default data tables (CalEEMod, 2021b) for SCAQMD. For each piece of off-road equipment, horsepower and hours of operation per day were multiplied with the OFFROAD2021-predicted emission factors to generate daily emission levels. For all off-road equipment, besides power generators, continuous hours of operation per day assumes a usage factor of 70%, as equipment will not be continuously operated for the full potential workday hours. The factor of 70% is conservative, as it is unlikely any equipment, besides the power generators, will be operating at that high percentage. However, power generators are assumed to operate for the full potential hours.

To account for fugitive dust emissions at the construction sites, factors and methodology discussed in the WRAP Fugitive Dust Handbook (Western Governors' Association 2006) for construction and demolition activities were applied. Based on PM_{10} and $PM_{2.5}$ fugitive dust mitigation measures through best management practice, a 50% control were applied.

3.2.3 Clean Air Act Transportation Conformity

The TCR is enforced on both regional level and project level. On a regional level, demonstration of regional transportation conformity is through the development of a Transportation Improvement Program (TIP) which is the responsibility of the metropolitan planning organization (MPO). On a project level analysis, the conformity determination must show that the individual project is included in the TIP to be consistent with the SIP conformity determination (i.e., to be exempt from a regional emissions analysis and to be in compliance with the NAAQS on a local level). Potential localized emission impacts should be addressed through a hot spot analysis for localized nonattainment or maintenance pollutants to ensure that the transportation project with its activities would not:

- Cause or contribute to any new violation of any NAAQS;
- Increase the frequency or severity of any existing violation of any NAAQS; or
- Delay timely attainment of any NAAQS or any required interim emission reduction or other milestones in any area.

The Federal Statewide Transportation Improvement Program (FSTIP) (Caltrans 2022) is a programming document prepared by California Department of Transportation (Caltrans) in cooperation with the state's MPOs and Regional Transportation Planning Agencies. Federal law requires that the FSTIP be updated at least once every 4 years, cover a programming period of 4 years, be financially constrained, and contain a priority list of projects grouped by Federal Fiscal Year (FFY). In California, the FSTIP is updated every 2 years.

The current 2023 FSTIP is a 4-year (FFY 2023 to 2026) federally mandated document that includes a statewide multimodal program of transportation projects proposed for federal funding under Titles 23 and USC Title 49. It also includes projects that are regionally significant, regardless of the funding source. The FSTIP contains references to the 18 MPOs' Federal Transportation Improvement Programs and a list of rural non-MPO projects. The FSTIP is required to be consistent with the State's transportation vision and goals laid out in local and regional long-range transportation plans. Projects in air quality nonattainment and maintenance areas must be consistent with the SIP for air quality.

As part of the federal TCR project-level conformity requirements, the mobile and stationary source impact assessment for the proposed Project is focused on: 1) potential air quality effects of CO and PM emissions on localized congested intersections around the proposed new stations and tunnel portals where ventilation equipment will operate and where the source pollutant concentrations are the worst; 2) the

corridor and mesoscale roadway including tunnel network emissions from all concerned pollutants as a result of the proposed Project; 3) TCR compliance determination; and 4) construction period emissions.

To satisfy the TCR requirements on assessing potential mobile source air quality impacts of CO emissions, the analysis followed the guidelines and procedures established for nonattainment pollutants in 40 CFR Section 93.123 through an analysis addressing localized mobile source-related CO concentrations.

The guideline identifies four categories of projects to be considered for a CO hot-spot analysis (40 CFR Section 93.123[b][1]), which were used for the CO microscale analysis:

- For projects in or affecting locations, areas, or categories of sites which are identified in the applicable implementation plan as sites of violation or possible violation;
- For projects affecting intersections that are at Level-of-Service (LOS) D, E, or F, or those intersections that will change to LOS D, E, or F because of increased traffic volumes related to the proposed Project;
- For any project affecting one or more of the top three intersections in the nonattainment or maintenance area with highest traffic volumes, as identified in the applicable implementation plan; and
- For any project affecting one or more of the top three intersections in the nonattainment or maintenance area with the worst LOS, as identified in the applicable implementation plan.

A screening analysis was performed at a set number of intersections for which LOS and traffic volume forecasts were made for a future Build Year. It is assumed that the proposed Project would not worsen the congestion around new stations, and further microscale analysis for CO is unlikely warranted.

For temporary on-road vehicle and off-road equipment emissions associated with the new stations, MSF, Vent Shaft Design Option, and tunnel construction estimated were also considered under NEPA. Although not directly applicable for an FTA project which is governed by the transportation conformity rule, the de minimis thresholds in terms of annual nonattainment or maintenance pollutant emissions established in the Clean Air Act General Conformity Rule (40 CFR Parts 51 and 93) were used to determine the effects of construction emissions under the Build Alternative. According to the nonattainment and maintenance status for San Bernardino County where the proposed Project is located, the applicable de minimis thresholds were used to compare the maximum annual pollutant emissions to assess the air quality effects associated with construction activities under the Build Alternative.

4 EXISTING CONDITIONS

Air quality is defined by the concentration of pollutants in relation to their impact on human health. Concentrations of air pollutants are determined by the rate and location of pollutant emissions released by pollution sources, and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, and sunlight. Therefore, ambient air quality conditions within the local air basin are influenced by such natural factors as topography, meteorology, and climate, in addition to the amount of air pollutant emissions released by existing air pollutant sources.

4.1 GENERAL CLIMATIC CONDITIONS

Climate, topography, and meteorology influence regional and local ambient air quality. Southern California is characterized as a semiarid climate, although it contains three distinct zones of rainfall that coincide with the coast, mountain, and desert. The proposed Project is located within the SCAB. The SCAB is bounded by the Pacific Ocean to the west, the San Gabriel Mountains, San Bernardino Mountains, and San Jacinto Mountains to the north and east, and the San Diego County line to the south.

The topography and climate of Southern California combine to make the SCAB an area of high air-pollution potential. A warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cooler surface layer, which traps the pollutants near the ground. Light winds can further limit ventilation. Additionally, abundant sunlight triggers the photochemical reactions that produce O_3 and the majority of PM (SCAQMD 2017).

The meteorological monitoring station at ONT has climatological data (1991 through 2020 monthly normal) tabulated by National Centers for Environmental Information (2022). The mean daily temperature ranges from 55.2 degrees Fahrenheit (°F) in December to 80.1°F in August. Precipitation peaks between December and March, while it is infrequent during the rest of the year, especially during summer months. The monthly variability of temperature and precipitation for ONT is shown in Table 4.

Table 4: Summary of General Climatic Conditions at Ontario International Airport

Month	Mean Maximum Temperature (°F)	Mean Minimum Temperature (°F)	Mean Daily Temperature (°F)	Mean Precipitation (inches)
January	67.7	44.6	56.1	2.57
February	68.1	46.2	57.1	3.07
March	71.7	48.7	60.2	1.64
April	75.7	51.1	63.4	0.76
May	79.8	55.6	67.7	0.30
June	86.4	60.0	73.2	0.02
July	93.8	64.7	79.2	0.05
August	94.9	65.2	80.1	0.03
September	91.3	63.8	77.6	0.10
October	82.6	57.1	69.8	0.41
November	74.7	49.0	61.9	0.80
December	66.9	43.6	55.2	1.89
Annual	**79.5 (average)**	**54.1 (average)**	**66.8 (average)**	**11.64 (total)**

Source: National Centers for Environmental Information 2022

4.2 EXISTING AIR QUALITY AND ATTAINMENT STATUS

4.2.1 Attainment Status

Both EPA and CARB use ambient air quality monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. An “attainment” designation for an area signifies that pollutant concentrations did not exceed the established standard. In most cases, areas designated or re-designated as attainment (i.e., an area that was previously in nonattainment but now attains the standard) must develop and implement maintenance plans. These areas are designated as maintenance areas and are currently under a maintenance plan to ensure continued compliance with the standard.

In contrast to attainment, a “nonattainment” designation indicates that a pollutant concentration has exceeded the established standard. Nonattainment may differ in severity. To identify the severity of the problem and the extent of planning and actions required to meet the standard, nonattainment areas are assigned a classification that is commensurate with the severity of their air quality problem (e.g., moderate, serious, severe, extreme).

Finally, an unclassified designation indicates that insufficient data exist to determine attainment or nonattainment. In addition, the California designations include a subcategory of nonattainment-transitional, which is given to nonattainment areas that are progressing and nearing attainment.

As shown in Table 5, the SCAB is designated as an attainment area for all criteria air pollutants except O_3, PM_{10}, and $PM_{2.5}$ under CAAQS. San Bernardino County is designated as attainment, or maintenance, for all criteria pollutants except O_3, PM_{10}, and $PM_{2.5}$ under NAAQS.

Table 5: CAAQS/NAAQS Attainment Status

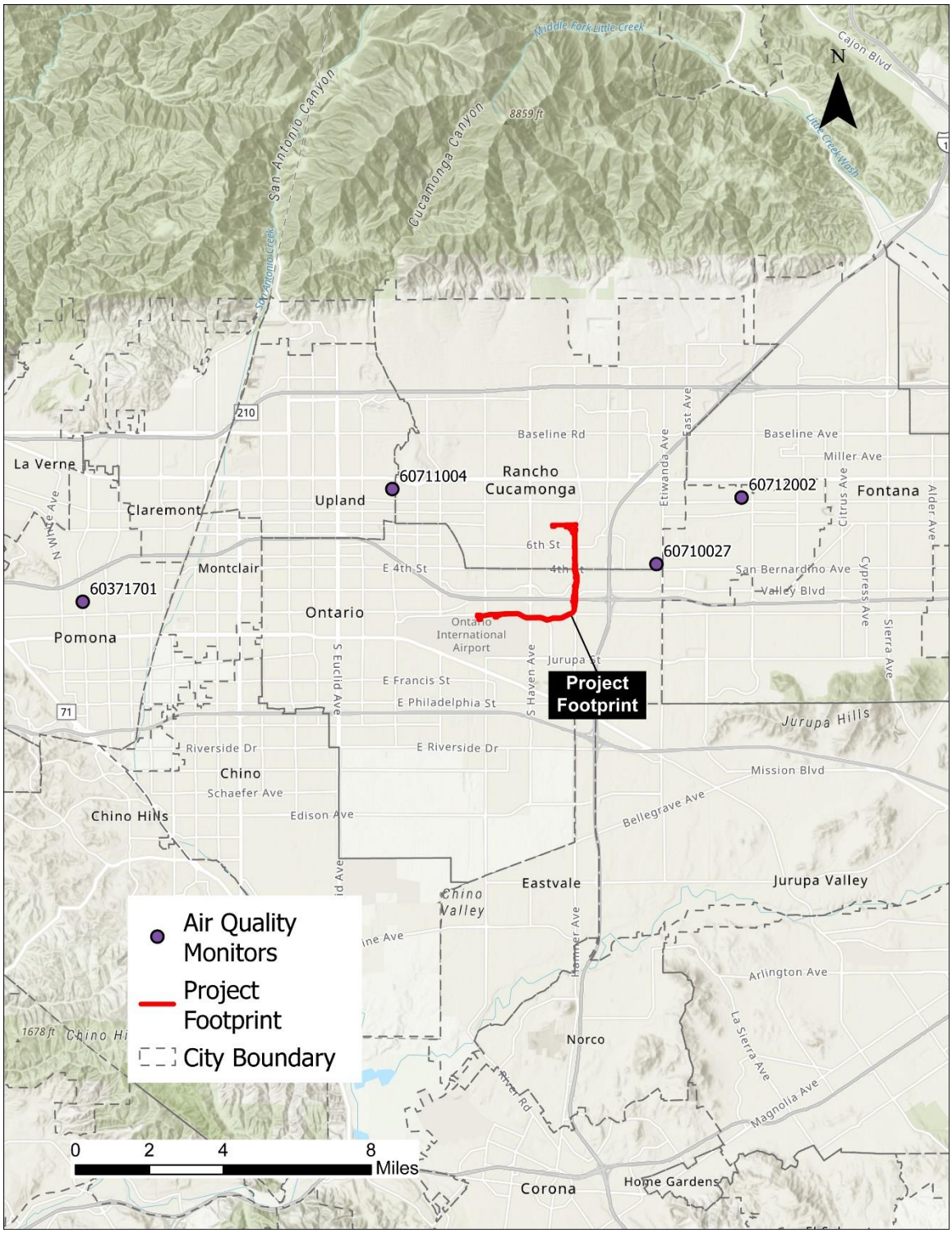
Criteria Pollutant	Averaging Time	CAAQS Designation (SCAB)[1]	NAAQS Designation (San Bernardino County)[2]
O_3	1-Hour	Nonattainment	—
O_3	8-Hour	Nonattainment	Nonattainment (Severe)
PM_{10}	24-hour	Nonattainment	Nonattainment (Moderate)
PM_{10}	Annual	Nonattainment	—
$PM_{2.5}$	24-Hour	Nonattainment	Nonattainment (Serious)
$PM_{2.5}$	Annual	—	Nonattainment (Serious)
CO	1-Hour	Attainment	Attainment (Maintenance)
CO	8-Hour	—	—
NO_2	1-Hour	Attainment	Unclassifiable/Attainment
NO_2	Annual	—	Attainment
SO_2	1-Hour	—	Unclassifiable/Attainment
SO_2	24-Hour	—	Unclassifiable/Attainment
SO_2	Annual Arithmetic Mean	—	Unclassifiable/Attainment
Pb	30-Day Average	Attainment	—
Pb	Rolling 3-Month Average 24 Hour	—	Unclassifiable/Attainment
Sulfates	24-Hour	Attainment	—
Hydrogen Sulfides	1-Hour	Attainment	—
Vinyl Chloride	24-Hour	Attainment	—

[1] SCAQMD 2016
[2] EPA 2024a Air Quality Monitoring Stations

SCAQMD is responsible for enforcing the rules and regulations protecting air quality in the SCAB. Ambient air pollutant concentrations in the SCAB are measured at air quality monitoring stations operated by CARB and SCAQMD. As shown in Figure 3, the closest active air quality monitoring stations to the proposed Project are the following:

- Pomona, Air Quality System (AQS) Site Identification (ID) 06-037-1701. Located: 924 North Garey Avenue, Pomona;
- Upland, AQS Site ID 06-071-1004. Located: 1350 San Bernardino Road, Upland;

Figure 3: Air Monitoring Station Locations



Source: EPA 2024b

- Fontana, AQS Site ID 06-071-2002. Located: 14360 Arrow Boulevard, Fontana; and
- Ontario Route 60–Near Road, AQS Site ID 06-071-0027. Located: 2330 South Castle Harbour Place, Ontario.

The most recent monitor values (for 2019 through 2021) for these monitoring stations were taken from the EPA's Air Quality Database (EPA 2024b) and are presented in Table 6.

As shown in Table 6, monitoring stations closest to the proposed Project were showing compliance with CO, NO2, and SO2 NAAQS and CAAQS standards. Exceedances were measured for O3, PM2.5 and PM10 (CAAQS only).

Table 6: Air Quality Monitoring Concentrations

Pollutant	Averaging Period	Standard	Monitoring Station	Design Concentration (2019-2021)	Exceed Standard?
CO	1-hour	NAAQS: 35 ppm CAAQS: 20 ppm	Pomona, ID 06-037-1701	2.1 ppm	No
CO	1-hour	NAAQS: 35 ppm CAAQS: 20 ppm	Upland, ID 06-071-1004	1.6 ppm	No
CO	1-hour	NAAQS: 35 ppm CAAQS: 20 ppm	Fontana, ID 06-071-2002	2.2 ppm	No
CO	8-hour	NAAQS: 9 ppm CAAQS: 9 ppm	Pomona, ID 06-037-1701	1.4 ppm	No
CO	8-hour	NAAQS: 9 ppm CAAQS: 9 ppm	Upland, ID 06-071-1004	1.2 ppm	No
CO	8-hour	NAAQS: 9 ppm CAAQS: 9 ppm	Fontana, ID 06-071-2002	1.2 ppm	No
NO_2	1-hour	NAAQS: 100 ppb CAAQS: 180 ppb	Pomona, ID 06-037-1701	58 ppb	No
NO_2	1-hour	NAAQS: 100 ppb CAAQS: 180 ppb	Ontario Route 60–Near Road, ID 06-071-0027	75 ppb	No
NO_2	1-hour	NAAQS: 100 ppb CAAQS: 180 ppb	Upland, ID 06-071-1004	47 ppb	No
NO_2	1-hour	NAAQS: 100 ppb CAAQS: 180 ppb	Fontana, ID 06-071-2002	59 ppb	No
NO_2	Annual	NAAQS: 53 ppb CAAQS: 30 ppb	Pomona, ID 06-037-1701	18 ppb	No
NO_2	Annual	NAAQS: 53 ppb CAAQS: 30 ppb	Ontario Route 60–Near Road, ID 06-071-0027	30 ppb	No (but at CAAQS)
NO_2	Annual	NAAQS: 53 ppb CAAQS: 30 ppb	Upland, ID 06-071-1004	15 ppb	No

Pollutant	Averaging Period	Standard	Monitoring Station	Design Concentration (2019-2021)	Exceed Standard?
NO_2	Annual	NAAQS: 53 ppb CAAQS: 30 ppb	Fontana, ID 06-071-2002	19 ppb	No
O_3	8-hour	NAAQS – 0.070 ppm (2015) CAAQS: 0.070 ppm	Pomona, ID 06-037-1701	0.090 ppm	Yes
O_3	8-hour	NAAQS – 0.070 ppm (2015) CAAQS: 0.070 ppm	Upland, ID 06-071-1004	0.103 ppm	Yes
SO_2	1-hour	NAAQS: 75 ppb CAAQS: 250 ppb	Fontana, ID 06-071-2002	2 ppb	No
SO_2	24-hour	CAAQS: 0.04 ppm	Fontana, ID 06-071-2002	0.001 ppm	No
$PM_{2.5}$	24-hour	NAAQS: 35 µg/m^3	Ontario Route 60–Near Road, ID 06-071-0027	41 µg/m^3	Yes
			Fontana, ID 06-071-2002	37 µg/m^3	Yes
$PM_{2.5}$	Annual	NAAQS: 12 µg/m^3 CAAQS: 12 µg/m^3	Ontario Route 60–Near Road, ID 06-071-0027	14.2 µg/m^3	Yes
$PM_{2.5}$	Annual	NAAQS: 12 µg/m^3 CAAQS: 12 µg/m^3	Fontana, ID 06-071-2002	12.1 µg/m^3	Yes
PM_{10}	24-hour	NAAQS: 150 µg/m^3 CAAQS: 50 µg/m^3	Upland, ID 06-071-1004	117 µg/m^3	No for NAAQS Yes for CAAQS
PM_{10}	24-hour	NAAQS: 150 µg/m^3 CAAQS: 50 µg/m^3	Fontana, ID 06-071-2002	83 µg/m^3	No for NAAQS Yes for CAAQS
PM_{10}	Annual	CAAQS: 20 µg/m^3	Upland, ID 06-071-1004	33 µg/m^3	Yes
PM_{10}	Annual	CAAQS: 20 µg/m^3	Fontana, ID 06-071-2002	37 µg/m^3	Yes

Source: EPA 2024b

5 IMPACT EVALUATION

5.1 IMPACT EVALUATION UNDER NEPA

5.1.1 No Build Alternative

5.1.1.1 Construction Impacts

The No Build Alternative would not involve any construction activities and would not result in construction in a new direct electrically powered, on-demand fixed transit guideway connection from the Cucamonga Metrolink Station to ONT. The No Build Alternative would not involve construction-related temporary adverse impacts on air quality. However, the No Build Alternative would not contribute to improving emissions and as such would not result in air quality improvements.

5.1.1.2 Operational Impacts

The No Build Alternative would not result in a net decrease in GHG emissions associated with the proposed Project because the GHG-emitting vehicles driving the last portion of their route would not be replaced with electric shuttles between the Cucamonga Metrolink Station and ONT. Combustion emissions is linked to VMT; higher VMT leads to more emissions. The regional VMT difference between the No Build Alternative and Build Alternative is presented in Table 7, and shows an increase in VMT with the No Build Alternative.

Table 7: San Bernardino County Wide Net Change in Operational VMT

Year	Existing VMT	No Project Alternative VMT	Build Alternative VMT	VMT Difference between Build Alternative and No Project Alternative
2016	330,113,226	---	---	---
2031	---	376,199,889	376,178,116	-21,773
2051	---	437,648,772	437,603,538	-45,234

Source: SBCTA 2024

5.1.2 Build Alternative

5.1.2.1 Construction Impacts

This section discusses the environmental impacts of the Build Alternative in accordance with NEPA and the CAA, with a focus on temporary construction emissions, regional operational emissions, and TCR. The Build Alternative does not require a PM hot spot analysis because it would involve operation of electrically powered vehicles in an underground tunnel. It is also considered an exempt project with respect to potential mobile-source air toxics per the FHWA guideline and does not require an air toxic analysis. Construction Impacts

Construction of the Build Alternative would result in PM_{10}, $PM_{2.5}$, NO_X, and VOC emissions from the diesel exhaust associated with operation of construction equipment and construction worker vehicles that generate exhaust emissions from fuel combustion. Construction equipment would include the following: excavators, backhoess, cranes, concrete trucks, haul trucks, muck trucks, a wheel loader, Foamplant, cooling towers, a tunnel fan grout plant, segment cars, flatcars, a piling rig, a drill rig, a wheel loader, a compressor, and a ventilation fan. Overall construction of the Build Alternative would last approximately 56 months, with Project elements varying in their specific construction duration.

Fugitive dust emissions would be generated from earth disturbance during site grading for aboveground features, as well as from construction vehicles operating on dirt roadways within or adjacent to construction sites. Additionally, worker automobiles, trucks, and various non-road vehicles (e.g., construction equipment) would emit NO_X and VOC emissions.

Construction is usually of short duration and produces temporary air quality effects. However, the effects of construction vehicle and equipment emissions from large-scale construction occurring over many years (typically beyond over 5 years) at a specific local site could cause adverse air quality effects that may require construction scenario modeling to quantitatively analyze the long-term air quality effects. Since the construction would last for 56 months that also include several months with no air emissions to be generated during contract procurement phase at the beginning and testing phase at the end of construction, the hot-spot concentration modeling is not required.

However, temporary on-road vehicle and off-road equipment emissions associated with the new stations, shaft, and tunnel construction (employing a TBM) were estimated and summarized in Table 8 using the CARB EMFAC2021 and OFFROAD 2021 emissions databases. Table 8 shows the maximum annual construction emissions by tons over the full construction period. These maximum annual emissions were compared with the general conformity rule-established nonattainment or maintenance pollutant emission de minimis thresholds that are applicable to San Bernardino County where the proposed Project is located. For San Bernardino County, the de minimis thresholds for each nonattainment or maintenance pollutant under the status summarized in Table 5 were used to determine whether the maximum annual

construction emissions are considered de minimis and result in minimal potential air quality impacts. As depicted in Table 8, all applicable de minimis thresholds would not be exceeded.

Table 8: Maximum Construction Annual Emissions (ton/year)

Construction Area	NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_x
Cucamonga Metrolink Station and TBM Retrieval	2.67.8	514.2	0.61.7	3.18.7	0.39	0.025
Vent Shaft Design Option	1.73.0	12.67	0.24	2.03.4	0.23	0.012
ONT Terminal 4 Station	1.43.0	36.0	0.47	1.73.5	0.23	0.012
ONT Terminal 2 Station	1.94.3	11.89	01.3	2.35.2	0.35	0.013
Maximum Annual Emissions from Build Alternative Construction	**7.618.1**	**11.534.9**	**1.44.1**	**9.120.8**	**0.92.0**	**0.0512**
General Conformity Rule De Minimis Threshold	25	100	70	100	25	N/A
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**N/A**

Source: AECOM 2024
Note: N/A: not applicable

5.1.2.2 Operational Impacts

Implementation of the Build Alternative would result in a net decrease in GHG emissions compared to the No Build Alternative, as the Build Alternative would replace a portion of the GHG-emitting vehicles driving the last portion of their route with electric shuttles between the Cucamonga Metrolink Station and ONT. The Build Alternative aims to encourage a shift from single-occupancy vehicles using the surrounding road network to travel to and from ONT to the use of mass transit, thereby supporting regional air quality and global climate change goals to reduce mobile-source emissions. The Build Alternative under the operational condition would result in a net air quality benefit, as a reduction in VMT would reduce combustion emissions, as the use of the proposed electric mass transit option replaces combustion vehicle miles with no meaningful effects on traffic volumes or vehicle mix. In combination with a reduction of VMT within the study area, as shown in Table 7, the proposed Project would result in a net reduction of local and/or regional level emissions. Therefore, the proposed Project would result in a beneficial effect on local and/or regional level emissions.

5.1.2.3 Clean Air Act Transportation Conformity Rule

5.1.2.3.1 Regional Conformity

CAA TCR transportation conformity is enforced at both the regional level and the project level. On a regional level, the Build Alternative, TIP ID: 20192720, is currently included in the 2023 FSTIP. Therefore, a separate regional-level emissions analysis for the nonattainment pollutants of NO_X and VOC (O_3 precursors), PM_{10}, and $PM_{2.5}$ is not required. Furthermore, based on the reduction in VMT, as shown in Table 9, the Build Alternative would result in a net air quality benefit, as reduced VMT results in reduced combustion emissions on a regional level. Consequently, the Build Alternative is in compliance with the transportation conformity rule requirements on the regional level.

5.1.2.3.2 Project-Level Conformity

On a project level because the Build Alternative construction is unlikely to extend beyond 5 years at an individual site, potential air quality impacts from construction are considered temporary. In order to determine whether the Build Alternative would potentially cause substantial effect of CO during operation, traffic impact during the 2031 opening year and 2051 design years at a total of six intersections within the study area were analyzed in terms of level of service (LOS), as shown in Table 9 and Table 10, respectively (SBCTA 2024). Among these six intersections, two intersections are along off-airport roadways where sensitive receptors are in close proximity and four on-airport intersections along Airport Drive with no sensitive receptors around. Traffic conditions would be improved at all four on-airport intersections under the Build Alternative. While sensitive receptors are present at two off-airport intersections (Milliken Avenue/Azusa Court and Milliken Avenue/7th Street), and these two intersections would experience LOS B conditions during the 2031 opening year and 2051 design year, no CO Hot-Spot Analysis is warranted per the 40 CFR Section 93.123. Therefore, the Build Alternative would not result in any potential CO concerns and would be in compliance with the transportation conformity rule requirements on a local level.

Table 9: Opening Year (2031) Traffic Conditions at Analyzed Intersections

Intersections	No Project Alternative A.M. – P.M. LOS	Build Alternative A.M. – P.M. LOS	LOS Change from No Build Alternative and Build Alternative	Delay Change in Second from No Build Alternative to Build Alternative
East Terminal Way/Airport Drive [West]	D-E	C-E	Improved	-2.4
Archibald Avenue - Terminal Way/Airport Drive	F-F	E-F	Improved	-4.9 - -7.8
East Terminal Way/Airport Drive [East]	C-C	C-C	Same	0 - -10.3
Rental Car Road/Airport Drive	C-C	C-C	Same	-0.1 - -1.1
Milliken Avenue/Azusa Court	B-B	B-B	Same	0 - 0.1
Milliken Avenue/7th Street	B-B	B-B	Same	No change

Source: SBCTA 2024

Table 10: Opening Year (2051) Traffic Conditions at Analyzed Intersections

Intersections	No Project Alternative A.M. – P.M. LOS	Build Alternative A.M. – P.M. LOS	LOS Change from No Project Alternative and Project Alternative	Delay in Second Change From No Project Alternative to Project Alternative
East Terminal Way/Airport Drive [West]	D-F	D-E	Improved	-1.2 - -8.0
Archibald Avenue - Terminal Way/Airport Drive	F-F	F-F	Same	-0.2 - -4.6
East Terminal Way/Airport Drive [East]	F-C	F-C	Same	-0.3 - -1.5
Rental Car Road/Airport Drive	C-C	C-C	Same	-0.3 - -1.4
Off-airport Milliken Off-airport Azusa Court	C-B	C-B	Same	0 - 0.1
Milliken Avenue/7th Street	B-C	B-C	Same	0.1

Source: SBCTA 2024

6 MITIGATION MEASURES AND NEPA SUMMARY

6.1 MITIGATION MEASURES, AVOIDANCE, AND/OR MINIMIZATION

The following mitigation measure (MM) for dust control shall be implemented to further reduce potential impacts for PM_{10} and $PM_{2.5}$ fugitive emissions associated with the Build Alternative.

MM-AQ-1 Implement Basic Construction Emission Control Practices

MM-AQ-1: The following construction measures to limit and reduce air emissions from the construction sites will be implemented:

(A) Control fugitive dust as required by South Coast Air Quality Management District Rule 403 and enforced by South Coast Air Quality Management District staff.

(B) Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.

(C) All haul trucks transporting soil, sand, or other loose material off site shall be covered.

(D) Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.

(E) Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.

(F) Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).

(G) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. In addition, building pads shall be laid as soon as possible after grading, unless seeding or soil binders are used.

(H) Idling times shall be minimized either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes (as required by California airborne toxics control measure Title 13, Section 2485 of the California Code of Regulations). Provide clear signage that posts this requirement for workers at the entrances to the site.

(I) Provide current certificate(s) of compliance for California Air Resources Board's In-Use Off-Road Diesel-Fueled Fleets Regulation (California Code of Regulations, Title 13, sections 2449 and 2449.1).

(J) Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition prior to operation.

6.2 NEPA SUMMARY

6.2.1 No Build Alternative

With compliance with the CAA TCR, existing GHG regulations, and CAFE standards requirements, the No Build Alternative would have no adverse effects.

6.2.2 Build Alternative

6.2.2.1 Clean Air Act Transportation Conformity Rule

Since construction is unlikely to extend beyond 5 years at an individual site, potential air quality impacts from construction activities are considered temporary, and a construction-related hot-spot analysis is not warranted under the transportation conformity rule requirement. The operation of the Build Alternative would result in a net air quality benefit, as reduced vehicle miles travelled results in reduced combustion emissions. With improved roadway traffic congestion within the study area, no localized hot-spot analysis is warranted, having minimal localized effects during operation. Therefore, construction and operation of the Build Alternative would meet the transportation conformity rule requirements and have no adverse effects.

6.2.2.2 MSATs

The Build Alternative would result in a net reduction of VMT along the corridor, as the use of proposed electric mass transit option replaces combustion vehicle miles with no meaningful effects on traffic volumes or vehicle mix. Therefore, the Build Alternative is considered an exempt project with respect to potential mobile source air toxins effects and would not result in a potential substantial effect for localized MSATs. Therefore, the Build Alternative would have no adverse effects.

6.2.2.3 Project Emissions

According to 40 CFR Section 93.123(c)(5), hot-spot analysis is not warranted for air quality impacts because construction-related activities would not last longer than 5 years at any individual site. However, the total construction emissions were estimated for NEPA disclosure purposes and would have minimal effects given the temporary nature of these emissions. Because the Build Alternative would not result in a net increase of local or regional emissions, the Build Alternative would result have no adverse effects.

7 REFERENCES

California Air Resources Board. 2016. Ambient Air Quality Standards. Available at: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf. Accessed March 13, 2024.

California Department of Transportation (Caltrans). 2022. 2023 Federal Statewide Transportation Improvement Program (FSTIP). Available at: https://dot.ca.gov/-/media/dot-media/programs/financial-programming/documents/2023-fstip-final-a11y.pdf. Accessed March 13, 2024.

California Emissions Estimator Model (CalEEMod). 2021a. User's Guide for CalEEMod Version 2020.4.0. May. Appendix A – Calculation Details for CalEEMod.

California Emissions Estimator Model (CalEEMod). 2021b. User's Guide for CalEEMod Version 2020.4.0. June. Appendix D – Default Data Tables.

California Environmental Quality Act (CEQA). 2024. 2024 CEQA Statute and Guidelines. Appendix G – Environmental Checklist Form. Available at: https://www.califaep.org/docs/2024_CEQA_Statute_and_Guidelines_Handbook.pdf. Accessed December 2022.

EPA. 2024a. Greenbook. California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Available at: https://www3.epa.gov/airquality/greenbook/anayo_ca.html. Accessed March 13, 2024.

EPA. 2024b. Air Data: Air Quality Data Collected at Outdoor Monitors Across the US. Available at: https://www.epa.gov/outdoor-air-quality-data. Accessed March 13, 2024.

Federal Highway Administration (FHWA). 2016. Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents. October. Available at: https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/. Accessed March 13, 2024.

HNTB. 2022. Air Quality Exercise – Conceptual Construction Support, prepared (September 7, 2022).

National Centers for Environmental Information. 2022. US Climate Normals Quick Access. Available at: https://www.ncei.noaa.gov/access/us-climate-normals/. Accessed August 2022.

San Bernardino Country Transportation (SBCTA). 2024. SBCTA Ontario International Airport Connector Project, Draft Environmental Impact Report.

Southern California Association of Governments (SCAG). 2020a. 2020–2045 Connect SoCal. Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176 (accessed June 2022).

South Coast Air Quality Management District (SCAQMD). 2008. Final Localized Significance Thresholds. June 2003, Revised July 2008. Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2. Accessed August 2022.

South Coast Air Quality Management District 2016. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. September. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=14. Accessed August 2022.

South Coast Air Quality Management District. 2017. Final 2016 Air Quality Management Plan. March. Available at: https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15. Accessed August 2022.

South Coast Air Quality Management District. 2022. Final 2022 Air Quality Management Plan. December 2, 2022. Available at: https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=16. Accessed April 2024).

South Coast Air Quality Management District. 2023. South Coast AQMD Air Quality Significance Thresholds. Available at: https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25, Accessed April 2024.

Western Governors' Association. 2006. WRAP Fugitive Dust Handbook. Prepared for Western Governors' Association by Countess Environmental. September.

All sites combined (tons/month)

Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.42	0.63	0.64	0.65	0.68	0.67	0.49	0.51
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.86	0.87	0.87	0.87	0.87	0.87	1.08	1.08
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.10	0.11	0.11	0.11	0.11	0.11	0.12	0.13
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.50	0.76	0.77	0.78	0.82	0.83	0.57	0.57
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04	0.08	0.08	0.08	0.09	0.09	0.04	0.05
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Equipment	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60	Max Value	Max Month
NO_X	0.60	0.70	0.81	0.82	0.82	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.00	0.17	0.33	0.32	0.52	0.74	0.61	1.23	1.21	1.19	0.61	0.52	0	0	0	0	1.23	M52
PM_{10}	1.08	1.09	1.09	1.09	1.09	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.00	0.43	0.86	0.86	0.87	1.30	0.87	1.53	1.53	1.52	1.50	1.49	0	0	0	0	1.53	M52
$PM_{2.5}$	0.13	0.13	0.14	0.13	0.13	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.05	0.10	0.10	0.11	0.16	0.11	0.19	0.19	0.19	0.17	0.16	0	0	0	0	0.19	M52
CO	0.69	0.85	0.97	0.97	0.97	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.00	0.18	0.35	0.34	0.54	0.79	0.65	1.38	1.36	1.35	0.69	0.58	0	0	0	0	1.38	M52
VOC	0.06	0.09	0.10	0.10	0.10	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.01	0.03	0.02	0.05	0.08	0.08	0.14	0.14	0.14	0.05	0.03	0	0	0	0	0.14	M52
SO_X	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0	0	0	0	0.01	M52

All sites combined (lbs/day)

Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	49	50	50	53	52	38	39
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66.66	67.5	67.56	67.62	67.75	67.7	83.38	83.47
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.79	8.565	8.619	8.672	8.791	8.749	9.604	9.69
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38.5	58.8	59.61	60.43	63.84	64.25	43.86	44.53
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.412	5.963	6.08	6.197	6.652	6.718	3.405	3.532
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.23	0.283	0.287	0.292	0.299	0.297	0.302	0.307

Equipment	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60	Max Value	Max Month
NO_X	47	54	63	64	64	19	19	19	19	19	19	19	19	19	0	13	26	25	41	57	47	95	94	92	47	41	0	0	0	0	95.18	M52
PM_{10}	83.8	84.14	84.46	84.23	84.23	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	0	33.16	66.317	66.292	67.103	100.54	67.534	118.32	118.23	118.13	116.18	115.86	0	0	0	0	118.32	M52
$PM_{2.5}$	9.988	10.3	10.6	10.39	10.39	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	0	3.737	7.4738	7.4506	8.1968	12.193	8.5935	14.985	14.893	14.802	13.016	12.718	0	0	0	0	14.98	M52
CO	53.44	65.97	75.41	75.09	75.09	22	22	22	22	22	22	22	22	22	0	13.65	27.303	26.19	41.688	61.008	50.744	106.96	105.8	104.64	53.641	45.023	0	0	0	0	106.96	M52
VOC	4.84	6.842	7.76	7.379	7.379	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	0	0.998	1.9963	1.9339	4.2526	6.4891	5.837	11.093	10.872	10.651	3.6132	2.6682	0	0	0	0	11.09	M52
SO_X	0.341	0.372	0.403	0.421	0.421	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0	0.098	0.1951	0.1935	0.2411	0.354	0.2625	0.5736	0.5707	0.5679	0.3989	0.3765	0	0	0	0	0.57	M52

Rancho Cucamonga Metrolink Station and TBM Retrieval (lbs/day)

Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	12	13	14	16	16	13	13
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33.03	33.14	33.2	33.26	33.39	33.34	33.17	33.17
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.615	3.723	3.777	3.83	3.95	3.908	3.746	3.746
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11.29	13.48	14.3	15.12	18.53	18.93	15.93	15.93
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.705	0.978	1.095	1.212	1.667	1.733	1.342	1.342
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.093	0.097	0.102	0.107	0.114	0.112	0.103	0.103

Equipment	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60	Max Value	Max Month
NO_X	18	23	21	19	19	19	19	19	19	19	19	19	19	19	0	13	13	12	28	28	28	28	28	28	11	10	0	0	0	0	27.72	M49
PM_{10}	33.39	33.61	33.48	33.35	33.35	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	0	33.16	33.159	33.133	33.944	33.944	33.944	33.944	33.944	33.944	33.012	32.961	0	0	0	0	33.94	M49
$PM_{2.5}$	3.947	4.148	4.029	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	0	3.737	3.7369	3.7137	4.4599	4.4599	4.4599	4.4599	4.4599	4.4599	3.602	3.5548	0	0	0	0	4.46	M49
CO	22.36	28.79	25.37	21.96	21.96	22	22	22	22	22	22	22	22	22	0	13.65	13.651	12.539	28.037	28.037	28.037	28.037	28.037	28.037	12.997	11.049	0	0	0	0	28.79	M32
VOC	2.226	3.109	2.654	2.198	2.198	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	0	0.998	0.9982	0.9358	3.2544	3.2544	3.2544	3.2544	3.2544	3.2544	0.823	0.6269	0	0	0	0	3.25	M49
SO_X	0.126	0.15	0.142	0.135	0.135	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0	0.098	0.0976	0.0959	0.1436	0.1436	0.1436	0.1436	0.1436	0.1436	0.1	0.0943	0	0	0	0	0.15	M32

Vent Shaft (lbs/day)

Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	14
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17.07	17.16
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.134	2.22
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.45	15.12
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.084	1.212
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.102	0.107

Equipment	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60	Max Value	Max Month
NO_X	14	15	25	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25	25	13	11	0	0	0	0	25.43	M33
PM_{10}	17.15	17.14	17.59	17.59	17.59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17.59	17.59	17.59	17.106	16.958	0	0	0	0	17.59	M33
$PM_{2.5}$	2.21	2.2	2.616	2.616	2.616	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.616	2.616	2.616	2.1708	2.0342	0	0	0	0	2.62	M33
CO	15.96	16.8	29.65	29.65	29.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29.654	29.654	29.654	12.738	10.919	0	0	0	0	29.65	M33
VOC	1.402	1.593	2.966	2.966	2.966	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.9662	2.9662	2.9662	1.0215	0.7261	0	0	0	0	2.97	M33
SO_X	0.108	0.109	0.147	0.147	0.147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1469	0.1469	0.1469	0.096	0.0923	0	0	0	0	0.15	M33

Ontario Airport T4 Station (lbs/day)

Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33.14	33.14
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.723	3.723
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.48	13.48
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.978	0.978
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.097	0.097

Equipment	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60	Max Value	Max Month
NO_X	14	16	16	19	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19	23	21	19	12	10	0	0	0	0	22.60	M52
PM_{10}	33.26	33.39	33.39	33.3	33.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33.59	33.59	33.494	33.395	33.296	33.033	32.971	0	0	0	0	33.59	M50
$PM_{2.5}$	3.83	3.951	3.951	3.863	3.863	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.1336	4.1336	4.0458	3.9544	3.8629	3.6214	3.5645	0	0	0	0	4.13	M50
CO	15.12	20.38	20.38	23.47	23.47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22.707	22.707	25.797	24.635	23.473	13.953	11.527	0	0	0	0	25.80	M52
VOC	1.212	2.14	2.14	2.215	2.215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.5825	2.5825	2.6576	2.4363	2.2151	0.8844	0.6576	0	0	0	0	2.66	M52
SO_X	0.107	0.113	0.113	0.139	0.139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.119	0.119	0.1444	0.1415	0.1387	0.1014	0.095	0	0	0	0	0.14	M52

Ontario Airport T2 Station (lbs/day)

Equipment	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	36	36	36	36	36	0	0
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33.63	34.36	34.36	34.36	34.36	34.36	0	0
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.175	4.842	4.842	4.842	4.842	4.842	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27.21	45.31	45.31	45.31	45.31	45.31	0	0
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.708	4.985	4.985	4.985	4.985	4.985	0	0
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.137	0.185	0.185	0.185	0.185	0.185	0	0

Equipment	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60	Max Value	Max Month
NO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	13	10	0	19	19	19	12	10	0	0	0	0	36.24	M24
PM_{10}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33.159	33.159	33.159	33.009	0	33.296	33.296	33.296	33.033	32.971	0	0	0	0	34.36	M24
$PM_{2.5}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.7369	3.7369	3.7369	3.599	0	3.8629	3.8629	3.8629	3.6214	3.5645	0	0	0	0	4.84	M24
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.651	13.651	13.651	10.263	0	23.473	23.473	23.473	13.953	11.527	0	0	0	0	45.31	M24
VOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9982	0.9982	0.9982	0.6521	0	2.2151	2.2151	2.2151	0.8844	0.6576	0	0	0	0	4.99	M24
SO_X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0976	0.0976	0.0976	0.0914	0	0.1387	0.1387	0.1387	0.1014	0.095	0	0	0	0	0.19	M24

Regional Emission Threshold

Pollutant	(lbs/day)
NO_X	100
PM_{10}	150
$PM_{2.5}$	55
CO	550
VOC	75
SO_X	150

Ontario International Airport Connector Project

ONTCONNECTOR

APPENDIX I: CULTURAL RESOURCES IDENTIFICATION AND ELIGIBILITY ASSESSMENT TECHNICAL REPORT (APPENDICES)

October 2024

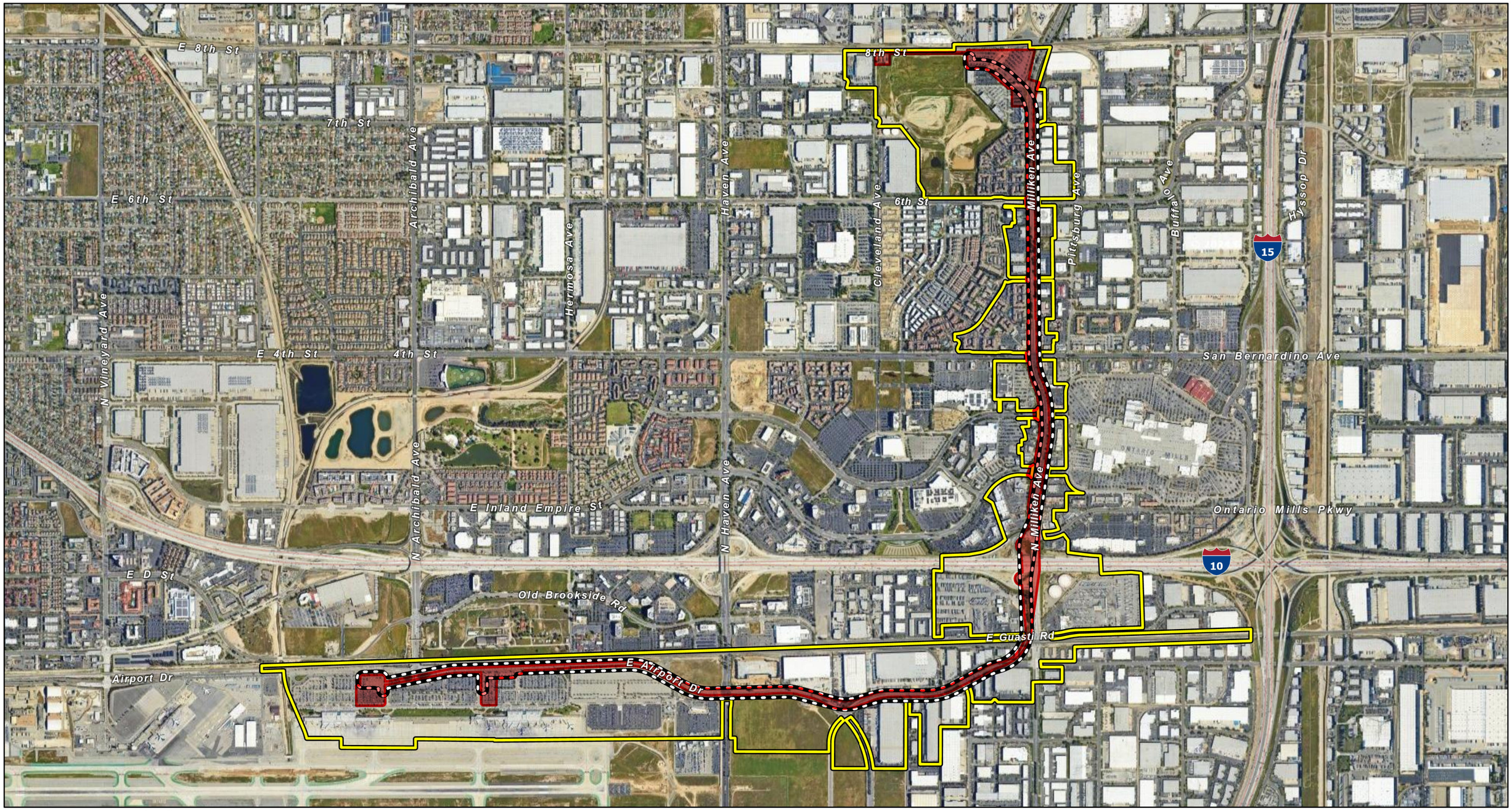
sbcta

Prepared for:

San Bernardino County Transportation Authority
1170 West Third Street, Second Floor
San Bernardino, California 92410-1715

APPENDIX A

AREAS OF PHYSICAL EFFECTS



SOURCE: Google Maps (2023); AECOM (2024)

I:\A\AEM2201\GIS\Pro\Emerging Technology Tunnel to Ontario International Airport\ONT Connector Project.aprx (9/4/2024)

Appendix B - CONFIDENTIAL RECORDS SEARCH RESULTS

CONFIDENTIAL – NOT FOR PUBLIC REVIEW

Appendix C - PROJECT CORRESPONDENCE

INTERESTED PARTIES CONSULTATION RECORD

Interested Parties Consultation for the Proposed: Ontario International Airport Connector Project (AEM2201)
Date designated groups/individuals were contacted: 5/29/24 via certified mail, those marked with an asterisk were sent an email in addition to certified letter

Groups Contacted	Date LSA contacted Tribes	Date of follow-ups	Date and Results of Responses
Ms. Sara Mercado Historic Sites Casa de Rancho Cucamonga Historical Society, San Bernardino County Museum 2024 Orange Tree Lane Redlands, CA 92374	5/29/24	N/A	
Mr. Bruce McCarthy Casa de Rancho Cucamonga Historical Society, San Bernardino County Museum 8810 Hemlock Street Rancho Cucamonga, CA 91730	5/29/24*	6/12/24; 6/26/24	
Mr. Bob Warren President Cooper Regional History Museum 217 East A St Upland, CA 91786	5/29/24*	6/12/24; 6/26/24	
Ms. Marsha Banks Curator Etiwanda Historical Society P.O. Box 363 Etiwanda, CA 91739	5/29/24*	6/12/24; 6/26/24	

Ms. Petrina Delman President Ontario Heritage P.O. Box 1 Ontario, CA 91762	5/29/24*	6/12/24; 6/26/24	
Ms. Luana Hernandez President Historical Preservation Association of Rancho Cucamonga P.O. Box 9543 Alta Loma, CA 91701-8473	5/29/24	6/12/24; 6/26/24	
Mr. Nick Cataldo President San Bernardino Historical & Pioneer Society, San Bernardino History and Railroad Museum P.O. Box 875 San Bernardino, CA 92402	5/29/24*	6/12/24; 6/26/24	
Mr. Scott Inman President and Director Southern Pacific Railroad History Center 1475 Purson Lane Lafayette, CA 94549	5/29/24*	6/12/24; 6/26/24	
Mr. David Coscia President Southern Pacific Historical & Technical Society 1525 Howard Access Road, Suite E Upland, CA 91786	5/29/24	6/12/24	**6/13/24:** Response received via email from David Coscia, President of Southern Pacific Historical & Technical Society stating the following: We have no questions or concerns. ***Please see attached email PDF.***

Appendix D - NATIVE AMERICAN CONSULATION ASSISTANCE

SECTION 106 NATIVE AMERICAN CONSULTATION ASSISTANCE RECORD
ONTARIO INTERNATIONAL AIRPORT CONNECTOR PROJECT (AEM2201)

Date LSA Requested Sacred Lands File Search: May 24, 2022
Date Native American Heritage Commission Replied: June 27, 2022
Results of Sacred Lands File Search: Negative
Date designated groups/individuals were contacted: 5/29/24 via certified mail, those marked with an asterisk were sent an email in addition to certified letter

Groups Contacted	Date LSA contacted Tribes	Date of follow-ups	Date and Results of Responses
Mr. Reid Milanovich Chairperson Agua Caliente Band of Cahuilla Indians 5401 Dinah Shore Drive Palm Springs, CA 92264	5/29/24*	N/A	**5/30/24:** Response received via email from Luz Salazar, Cultural Resource Analysis stating the following: A records check of the Tribal Historic Preservation Office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts. ***Please see attached email PDF.***
Ms. Patricia Garcia-Plotkin, Director Agua Caliente Band of Cahuilla Indians 5401 Dinah Shore Drive Palm Springs, CA 92264	5/29/24*	N/A	
Mr. Andrew Salas Chairperson Gabrieleno Band of Mission Indians - Kizh Nation P.O. Box 393 Covina, CA 91723	5/29/24*	N/A	**5/30/24:** Response received via emailed letter from Chairman Andrew Salas stating the following: Thank you for your letter dated May 29, 2024 regarding Section 106 consultation. The above proposed project location is within our Ancestral Tribal Territory; therefore, our Tribal Government requests to schedule a consultation with you as the lead agency, to discuss the project and the surrounding area in further detail. Please contact us at your earliest convenience to schedule a consultation. ***Please see attached letter PDF.*** **10/01/2024:** Consultation meeting occurred with the Tribe, FTA, SBCTA, and consultant staff. Discussed in depth project overview and construction/excavation timeline. The Tribe expressed interested in locations the project alignment passed through Holocene deposits as they may have unknown tribal cultural/archaeological resources. Chairman Salas questioned if the Sacred Lands File was negative because his monitors have been involved in recent activities in the region where historic bottles were found. Matt Teutimez (Tribe) discussed the hydrology and hydrogeology of the region and discussed the potential for resources to be discovered in the project area. KC Kelly (FTA) thanked Chairman Salas and Mr. Teutimez for their input. KC asked that given the probability of resources occurring in the project area, does the tribe have a specific request? Mr. Teutimez indicated they will provide language by the end of the week. ***Please see attached meeting minutes.***
Mr. Anthony Morales Chairperson Gabrieleno/Tongva San Gabriel Band of Mission Indians P.O. Box 693 San Gabriel, CA 91778	5/29/24*	6/12/24	

Mr. Charles Alvarez Tribal Chairman Gabrielino-Tongva Tribe 23454 Vanowen Street West Hills, CA 91307	5/29/24*	6/12/24; 6/26/24	
Ms. Sandonne Goad Chairperson Gabrielino /Tongva Nation 106 1/2 Judge John Aiso St., #231 Los Angeles, CA 90012	5/29/24*	6/12/24; 6/26/24	
Mr. Robert Dorame Chairperson Gabrielino Tongva Indians of California Tribal Council P.O. Box 490 Bellflower, CA 90707	5/29/24*	N/A	**5/29/24:** Response received via email from Christina Conley, Tribal Consultant and Administrator, stating the following: We have no comment. ***Please see attached email PDF.***
Ms. Christina Conley Tribal Consultant and Administrator Gabrielino Tongva Indians of California Tribal Council P.O. Box 941078 Simi Valley, CA 93094	5/29/24*	N/A	
Mr. Robert Martin Chairperson Morongo Band of Mission Indians 12700 Pumarra Road Banning, CA 92220	5/29/24*	6/12/24; 6/26/24	
Ms. Ann Brierty Tribal Historic Preservation Officer Morongo Band of Mission Indians 12700 Pumarra Road Banning, CA 92220	5/29/24*	6/12/24; 6/26/24	
Mr. Manfred Scott Acting Chairman Quechan Tribe of the Fort Yuma Reservation P.O. Box 1899 Yuma, AZ 85366	5/29/24*	6/12/24; 6/26/24	
Ms. Jill McCormick Historic Preservation Officer Quechan Tribe of the Fort Yuma Reservation P.O. Box 1899 Yuma, AZ 85366	5/29/24*	6/12/24; 6/26/24	
Ms. Jessica Mauck Director of Cultural Resources San Manuel Band of Mission Indians 26569 Community Center Drive Highland, CA 92346	5/29/24*	6/12/24	**6/13/24:** Response received via email from Kristen Tuosto, Tribal Archaeologist stating the following: Due to the nature and location of the proposed project, YSMN respectfully requests the following for review upon availability: · Cultural report · Geotechnical report (if required for the project) · Project plans showing the depth of proposed disturbance ***Please see attached email PDF.*** **9/06/24:** Consultation meeting occurred with the Tribe, FTA, SBCTA, and consultant staff. Discussed in depth project overview and construction/excavation timeline. The Tribe expressed interested in locations the project alignment passed through Holocene deposits as they may have unknown tribal cultural/archaeological resources. The Tribe requested to review the Cultural Report, Geotech report, and project plans. The requested materials were provided to the tribe on September 26, 2024, and the Tribe responded with a request to incorporate specific processes related to discovery of human remains and/or pre-contact cultural resources be incorporated into the project conditions. The requested language has been incorporated into

			Section 6 Conclusions and Recommendations. ***Please see attached meeting minutes.***
Ms. Lovina Redner Tribal Chair Santa Rosa Band of Cahuilla Indians P.O. Box 391820 Anza, CA 92539	5/29/24*	6/12/24; 6/26/24	
Mr. Mark Cochrane Co-Chairperson Serrano Nation of Mission Indians P. O. Box 343 Patton, CA 92369	5/29/24*	6/12/24; 6/26/24	
Mr. Wayne Walker Co-Chairperson Serrano Nation of Mission Indians P. O. Box 343 Patton, CA 92369	5/29/24*	6/12/24; 6/26/24	
Mr. Isaiah Vivanco Chairperson Soboba Band of Luiseno Indians P. O. Box 487 San Jacinto, CA 92581	5/29/24*	6/12/24; 6/26/24	
Mr. Joseph Ontiveros Cultural Resource Department Soboba Band of Luiseno Indians P. O. Box 487 San Jacinto, CA 92581	5/29/24*	6/12/24; 6/26/24	

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: SBCTA Ontario Tunnel Project

County: San Bernardino County

USGS Quadrangle Name: *Guasti, Calif.*

Township: 1 South **Range:** **Section(s):** R 6 West/Sec 7, 18, 19 R 7 West/Sec 12, 13, 24, 25, 26, 27

Company/Firm/Agency: LSA

Street Address: 285 South Street, Suite P

City: San Luis Obispo, CA **Zip:** 93401

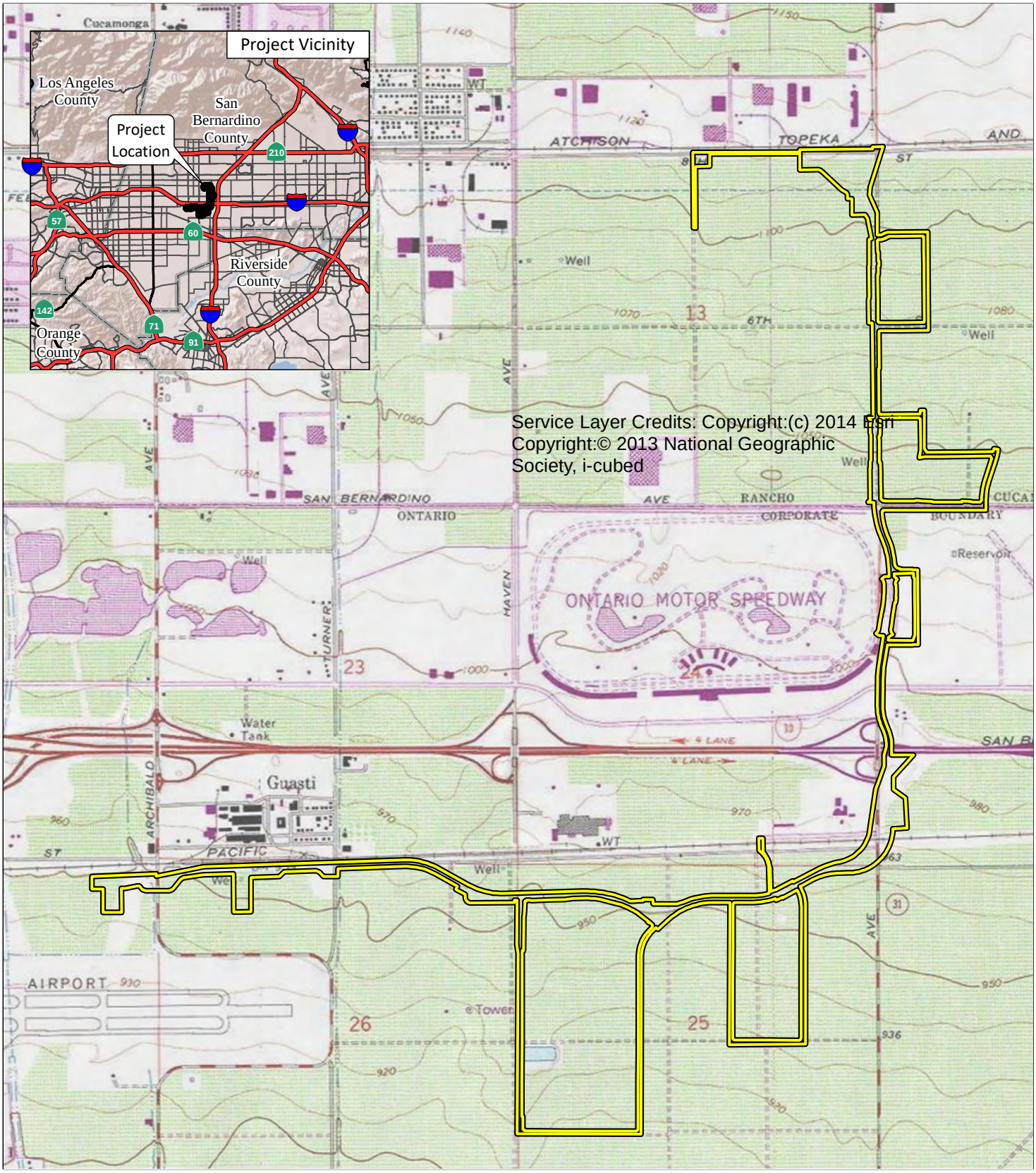
Phone: 805-801-4533

Fax:

Email: kerrie.collison@lsa.net

Project Description:

The San Bernardino County Transportation Authority (SBCTA), in cooperation with the Federal Transit Administration (FTA), proposes to construct a 4.4-mile-long tunnel connecting the Rancho Cucamonga Metrolink Station and terminals 2 and 4 at the Ontario Airport. Tunnel boring would occur up to 60 feet below the ground surface. During operation, electric vehicles would transport passengers between the Metrolink Station and Ontario Airport.



LSA

LEGEND

Project Location

FIGURE 1

N

0 1000 2000

FEET

Emerging Technology Tunnel to Ontario International Airport

Project Location

SOURCE: USGS 7.5' Quad - *Guasti, CA* (1981)

I:\AEM2201\GIS\MXD\Cultural\ProjectLocation_USGS.mxd (5/23/2022)

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

June 27, 2022

Kerrie Collison
LSA

Via Email to: kerrie.collison@lsa.net

Re: SBCTA Ontario Tunnel Project, San Bernardino County

Dear Ms. Collison:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Bernardino County
6/27/2022

Agua Caliente Band of Cahuilla Indians
Reid Milanovich, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919
laviles@aguacaliente.net

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Christina Conley, Tribal Consultant and Administrator
P.O. Box 941078 — Gabrielino
Simi Valley, CA, 93094
Phone: (626) 407 - 8761
christina.marsden@alumni.usc.edu

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Morongo Band of Mission Indians
Ann Brierty, THPO
12700 Pumarra Road — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed SBCTA Ontario Tunnel Project, San Bernardino County.

Native American Heritage Commission
Native American Contact List
San Bernardino County
6/27/2022

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

San Manuel Band of Mission Indians
Jessica Mauck, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
Jessica.Mauck@sanmanuel-nsn.gov

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487 — Cahuilla, Luiseno
San Jacinto, CA, 92581
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla, Luiseno
San Jacinto, CA, 92581
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed SBCTA Ontario Tunnel Project, San Bernardino County.

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Reid Milanovich
Chairperson
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, CA 92264

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Mr. Milanovich,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

Overview of the Proposed Project

The proposed Project would include the construction of a 4.2-mile-long tunnel connecting the Cucamonga Metrolink Station and ONT. The Project includes the construction of three passenger stations, a maintenance facility, and one access and ventilation shaft. The underground tunnel (24-foot inner diameter bi-directional tunnel) would begin at the Cucamonga Metrolink Station and travel south under Milliken Avenue, crossing beneath 6th Street, 4th Street, Interstate 10 (I-10), and the Union Pacific Railroad, before traveling west beneath East Airport Drive. It would connect to Terminals 2 and 4 at ONT, as illustrated in Enclosure #2 (Project Location Map). Tunnel boring would occur up to approximately 70 feet below the ground surface. Passenger stations would be constructed at a height of approximately 40 feet. Although partial property acquisitions and easements are required, no business or residential relocations are anticipated.

During operation, autonomous electric vehicles would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. Adjacent to the Cucamonga Metrolink Station would be a maintenance facility to support operations, provide autonomous electric vehicle storage, and provide employee amenities and parking. Two vent shaft design options are being considered. One vent shaft option would be located west of Milliken Avenue within the westbound I-10 off-ramp right-of-way and one vent shaft option would be located west of Milliken Avenue within the eastbound I-10 on-ramp right-of-way. Ultimately, only one of the proposed ventilation shaft design options would be selected and constructed to provide a means of emergency passenger egress and first responder access. The final location of the ventilation shaft would be selected after the public review period of the NEPA environmental assessment.

Request for Information

If you have any information or concern regarding potential impacts on precontact sites, sacred sites, and/or traditional cultural properties that would be relevant to this Project, please contact us. If you are not the designated representative for such consultation, please let us know.

If you have any questions or need additional information, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Ms. Patricia Garcia-Plotkin
Director
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, CA 92264

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Ms. Garcia-Plotkin,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

Overview of the Proposed Project

The proposed Project would include the construction of a 4.2-mile-long tunnel connecting the Cucamonga Metrolink Station and ONT. The Project includes the construction of three passenger stations, a maintenance facility, and one access and ventilation shaft. The underground tunnel (24-foot inner diameter bi-directional tunnel) would begin at the Cucamonga Metrolink Station and travel south under Milliken Avenue, crossing beneath 6th Street, 4th Street, Interstate 10 (I-10), and the Union Pacific Railroad, before traveling west beneath East Airport Drive. It would connect to Terminals 2 and 4 at ONT, as illustrated in Enclosure #2 (Project Location Map). Tunnel boring would occur up to approximately 70 feet below the ground surface. Passenger stations would be constructed at a height of approximately 40 feet. Although partial property acquisitions and easements are required, no business or residential relocations are anticipated.

During operation, autonomous electric vehicles would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. Adjacent to the Cucamonga Metrolink Station would be a maintenance facility to support operations, provide autonomous electric vehicle storage, and provide employee amenities and parking. Two vent shaft design options are being considered. One vent shaft option would be located west of Milliken Avenue within the westbound I-10 off-ramp right-of-way and one vent shaft option would be located west of Milliken Avenue within the eastbound I-10 on-ramp right-of-way. Ultimately, only one of the proposed ventilation shaft design options would be selected and constructed to provide a means of emergency passenger egress and first responder access. The final location of the ventilation shaft would be selected after the public review period of the NEPA environmental assessment.

Request for Information

If you have any information or concern regarding potential impacts on precontact sites, sacred sites, and/or traditional cultural properties that would be relevant to this Project, please contact us. If you are not the designated representative for such consultation, please let us know.

If you have any questions or need additional information, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From: THPO Consulting
To: Jaimi Starr
Subject: RE: Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, May 29, 2024 4:51:00 PM
Attachments: image001.png

Greetings,

A records check of the Tribal Historic Preservation Office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts.

Best Regards,

Luz Salazar
Cultural Resources Analyst
lsalazar@aguacaliente.net
C: (760) 423-3148 | D: (760) 883-1137
5401 Dinah Shore Drive, Palm Springs, CA 92264

From: Jaimi Starr <Jaimi.Starr@lsa.net>
Sent: Wednesday, May 29, 2024 4:35 PM
To: THPO Consulting <ACBCI-THPO@aguacaliente.net>
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

Attached please find the letter dated 5/29/24 regarding the Ontario International Airport Connector Project. A hard copy of this letter has also been sent via certified mail (USPS) to the address provided by the NAHC and/or the Federal Transit Administration (FTA) and the San Bernardino County Transportation Authority (SBCTA). If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Andrew Salas
Chairperson
Gabrieleno Band of Mission Indians - Kizh Nation
P.O. Box 393
Covina, CA 91723

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Mr. Salas,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

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Sincerely,

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Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

GABRIELENO BAND OF MISSION INDIANS - KIZH NATION
Historically known as The Gabrielino Tribal Council - San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

Section 106

Project Name: Ontario Airport Connector Project

Dear Kathleen Kelly,

Thank you for your letter dated May 29, 2024 regarding Section 106 consultation. The

Tribal Government requests to schedule a consultation with you as the lead agency, to discuss the project and the surrounding area in further detail.

Please contact us at your earliest convenience to schedule a consultation.

Thank you for your time,

Andrew Salas, Chairman
Gabrieleno Band of Mission Indians – Kizh Nation
1(844)390-0787

SBCTA No. 21-1002452

ONT CONNECTOR PROJECT

Meeting Minutes

Date & Time: October 1, 2024 at 3:00 PM – 4:00 PM PST
Location: Online – MS Teams Meeting
Purpose: Section 106 Consultation Meeting with Gabrieleno Band of Mission Indians - Kizh Nation

FTA			SBCTA		
☒	Kathleen Kelly	FTA	☒	Victor Lopez	SBCTA - PM
Gabrieleno Band of Mission Indians - Kizh Nation			☒	Ivan Gonzalez	SBCTA/Environmental (AECOM)
☒	Chairperson Andrew Salas	Kizh Nation	☒	Amanda Durgen	LSA
☒	Matthew Teutimez	Kizh Nation	☒	Rory Goodwin	LSA
☒	Sophia Pina	Kizh Nation			

Agenda Topics

1. Introductions

- FTA, Kizh Nation, SBCTA, AECOM, and LSA.

2. Project Overview

- Victor Lopez (SBCTA) provided an overview of the ONT Connector in Inland Empire/San Bernardino County, showing connectivity to West Valley Connector, Metrolink San Bernardino Line, Brightline West, and Ontario International Airport.
- Proposed Project: Cucamonga Station is proposed in the north and two passenger stations are proposed at the south end at ONT. The proposed Project would include a 4.2-mile tunnel alignment up to 70 feet below ground surface under Milliken Avenue, crossing under I-10, with one selected vent shaft at the Caltrans interchange, and along Airport Drive to ONT where the alignment would surface to connect to the at-grade stations at Terminal 4 and Terminal 2.
- The Cucamonga Station would include a boarding area for autonomous vehicles and excavation for building improvements. A maintenance and storage facility would be built adjacent to the Cucamonga Station.
- Ground disturbances would occur at the station termini and light maintenance facility and vent shaft. At the station locations the TBM would be launched/retrieved with boring occurring between the termini.
- Construction duration (56 months)
- Excavation would be required to launch the tunnel boring machine (TBM). Muck would be

	hauled offsite, and the contractor would fit the tunnel with infrastructure. • Photos were provided of the simulated Cucamonga Station; example TBM; example cut-and-cover construction; and an example of bored tunnel.
3.	Consultation Request • Victor noted that FTA received the 5/30 consultation request letter from Chairman Salas.
4.	Information Request and Preliminary Findings • FTA is seeking information from Gabrieleno Band of Mission Indians - Kizh Nation (Kizh Nation) related to sensitive areas. • A records search was negative and field surveys identified no resources.
5.	Discussion • Chairman Salas questioned if the Sacred Lands File was negative because his monitors have been involved in recent activities in the region where historic bottles were found. • Chairman Salas asked what the consultants on phone have found in regards to tribal resources through the investigation. Rory Goodwin (LSA) noted that geologically there is Holocene-age sediment in portions of the project area that could contain resources. • Chairman Salas provided a detailed oral history of the tribe. • Matt Teutimez discussed the hydrology and hydrogeology of the region and discussed the potential for resources to be discovered in the project area. • KC Kelly (FTA) thanked Chairman Salas and Mr. Teutimez for their input. KC asked that given the probability of resources occurring in the project area, does the tribe have a specific request? Mr. Teutimez indicated they will provide language by the end of the week. • KC noted that should we need to meet again, we can coordinate more phone calls.

From:	Whisman, Rusty (FTA)
To:	Victor Lopez
Cc:	Nguyen, Mary (FTA); Kelly, Kathleen (FTA); Albright, Brian (Volpe); Perry, Leslie (Volpe); Gonzalez, Ivan; Amanda Durgen; Rory Goodwin
Subject:	FW: Ontario International Airport Connector Project: Section 106 Consultation with FTA/Gabrieleno Band of Mission Indians - Kizh Nation
Date:	Wednesday, October 2, 2024 12:22:50 PM
Attachments:	Ontario International Airport Connector Peroject_ Mitigation Measures .pdf

Hi Victor,

Please see the attached requested avoidance/mitigation measures recommended by the Gabrieleno Band of Mission Indians - Kizh Nation.

Thank you.

Rusty
Rusty Whisman
Senior Transportation Program Specialist
Federal Transit Administration, Region 9
Southern California Office
888 South Figueroa Street, Suite 440
Los Angeles, CA 90017-5467
office: 213.202.3956
email: rusty.whisman@dot.gov
www.transit.dot.gov
Please note that I will be out of the office September 27 – October 4.

From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: Wednesday, October 2, 2024 12:13 PM
To: Whisman, Rusty (FTA) <russell.whisman@dot.gov>
Subject: Re: Ontario International Airport Connector Project: Section 106 Consultation with FTA/Gabrieleno Band of Mission Indians - Kizh Nation

Hello Rusty

Here is the requested language below. If you have any questions feel free to contact us.

Thank you

Brandy Salas
Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393

Covina, CA 91723
Office: 844-390-0787
website: www.gabrielenoindians.org

The region where Gabrieleño culture thrived for more than eight centuries encompassed most of Los Angeles County, more than half of Orange County and portions of Riverside and San Bernardino counties. It was the labor of the Gabrieleño who built the missions, ranchos and the pueblos of Los Angeles. They were trained in the trades, and they did the construction and maintenance, as well as the farming and managing of herds of livestock. "The Gabrieleño are the ones who did all this work, and they really are the foundation of the early economy of the Los Angeles area " . "That's a contribution that Los Angeles has not recognized--the fact that in its early decades, without the Gabrieleño, the community simply would not have survived."

On Mon, Sep 9, 2024 at 9:56 AM Whisman, Rusty (FTA) <russell.whisman@dot.gov> wrote:

> Hi there,
>
> Yes – here it is. Thanks.
>
> Rusty
> **Rusty Whisman**
> **Senior Transportation Program Specialist**
> Federal Transit Administration, Region 9
> Southern California Office
> 888 South Figueroa Street, Suite 440
> Los Angeles, CA 90017-5467
> office: 213.202.3956
> email: rusty.whisman@dot.gov
> www.transit.dot.gov
>
> ---
>
> **From:** Gabrieleno Administration <admin@gabrielenoindians.org>
> **Sent:** Monday, September 9, 2024 9:53 AM
> **To:** Whisman, Rusty (FTA) <russell.whisman@dot.gov>
> **Subject:** Re: Ontario International Airport Connector Project: Section 106 Consultation with FTA/Gabrieleno Band of Mission Indians - Kizh Nation
>
> **CAUTION:** This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.
>
> Hello Rusty

Can you please provide the project letter?

Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
Office: 844-390-0787
website: www.gabrielenoindians.org

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On Mon, Sep 9, 2024 at 9:13 AM Whisman, Rusty (FTA) <russell.whisman@dot.gov> wrote:

> Hi all,
>
> Please join this call to discuss the Ontario International Airport Connector Project.
>
> Agenda:
>
> 1. Introductions
> 2. Project Overview
> 3. Discussion
>
> Please feel free to forward this invitation to anyone else who may be attending.
>
> Thank you.
>
> Rusty
> **Rusty Whisman**
> **Senior Transportation Program Specialist**
> Federal Transit Administration, Region 9
> Los Angeles Office

888 South Figueroa Street, Suite 440
Los Angeles, CA 90017-5467
office: 213.202.3956
email: rusty.whisman@dot.gov
www.transit.dot.gov

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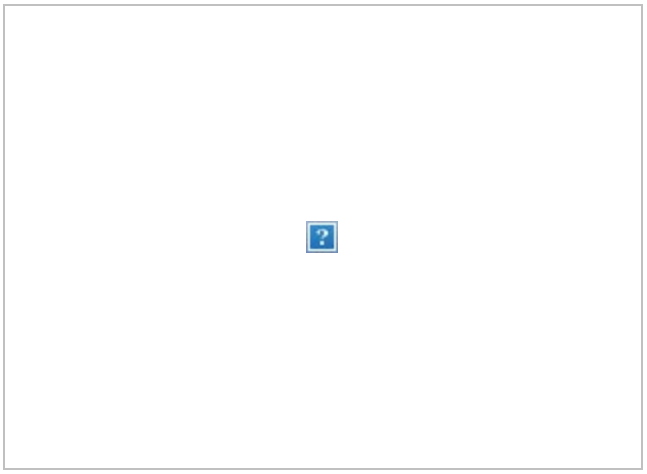
Find a local number

Phone conference ID: 607 838 340#

For organizers: Meeting options | Reset dial-in PIN



The United States Department of Transportation

Org help

GABRIELENO BAND OF MISSION INDIANS – KIZH NATION - PROPOSED TCR MITIGATION MEASURES

TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

A. The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.
B. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.
C. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the Tribe.
D. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.

TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)

A. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh monitor and/or Kizh archaeologist. The Kizh will recover and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the

Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes.

TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects

A. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute.
B. If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed.
C. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).
D. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods.
E. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

PLEASE NOTE THE FOLLOWING:

Any/all revisions to the Kizh's proposed TCR mitigations set forth above must be requested in writing, and not more than ten (30) calendar days from the date that we consulted on the subject Project so that we can conclude consultation. Requested revisions shall be delivered to the Kizh via email at admin@gabrielenoindians.org, and in a Word document, redline format. Please include as the email subject: "REQUEST FOR MITIGATION REVISIONS," and identify the project name and location/address. If revisions are not requested within 10 calendar days of consultation, the Kizh's proposed mitigations are presumed accepted as proposed (i.e., as set forth above). The laws preserving the confidentiality of Native

The laws preserving the confidentiality of Native
American documents and records prohibits the inclusion of any information about the location of Native American artifacts, sites, sacred lands, or any other information that is exempt from public disclosure pursuant to the Public Records Act. (Cal. Code Regs. § 15120(d) Rocklin (2011) 197 Cal.App.4th 200, at p. 220. Please be advised that these protective mitigation measures are property of the KIZH Nation Tribal government and no other entity or Tribal government nor should they be utilized for any other Tribal government or entity and are protected under the AB52 confidentiality act

Thank you for your anticipated cooperation.

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Anthony Morales
Chairperson
Gabrieleno/Tongva San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Mr. Morales,

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Sincerely,

CHARLENE LEE LORENZO
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Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

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2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From: Jaimi Starr
To: "GTTribalcouncil@aol.com"
Cc: "rusty.whisman@dot.gov"; "kathleen.kelly@dot.gov"; "vlopez@gosbcta.com"
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 12, 2024 12:53:00 PM

Good afternoon,

I am following up with you regarding the email and letter sent to you on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:39 PM
To: GTTribalcouncil@aol.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

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Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
To: GTTribalcouncil@aol.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: 2nd Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 26, 2024 1:21:00 PM

Good afternoon,

This 2nd follow up email is being sent to you regarding the email and letter sent on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, June 12, 2024 12:54 PM
To: 'GTTribalcouncil@aol.com' <GTTribalcouncil@aol.com>
Cc: 'rusty.whisman@dot.gov' <rusty.whisman@dot.gov>; 'kathleen.kelly@dot.gov' <kathleen.kelly@dot.gov>; 'vlopez@gosbcta.com' <vlopez@gosbcta.com>
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Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

Attached please find the letter dated 5/29/24 regarding the Ontario International Airport Connector Project. A hard copy of this letter has also been sent via certified mail (USPS) to the address provided by the NAHC and/or the Federal Transit Administration (FTA) and the San Bernardino County Transportation Authority (SBCTA). If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Charles Alvarez
Tribal Chairman
Gabrielino-Tongva Tribe
23454 Vanowen Street
West Hills, CA 91307

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Mr. Alvarez,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

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Request for Information

If you have any information or concern regarding potential impacts on precontact sites, sacred sites, and/or traditional cultural properties that would be relevant to this Project, please contact us. If you are not the designated representative for such consultation, please let us know.

If you have any questions or need additional information, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From: Jaimi Starr
To: roadkingcharles@aol.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 12, 2024 12:58:00 PM

Good afternoon,

I am following up with you regarding the email and letter sent to you on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:47 PM
To: roadkingcharles@aol.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

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To: roadkingcharles@aol.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: 2nd Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 26, 2024 1:19:00 PM

Good afternoon,

This 2nd follow up email is being sent to you regarding the email and letter sent on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

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805-242-4039 Direct

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Sent: Wednesday, June 12, 2024 12:58 PM
To: roadkingcharles@aol.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106

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Jaimi Starr | Office Manager
805-242-4039 Direct

U.S. Department of Transportation
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American Samoa,
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888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Ms. Sandonne Goad
Chairperson
Gabrielino /Tongva Nation
106 1/2 Judge John Aiso St., #231
Los Angeles, CA 90012

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Ms. Goad,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

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Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From:	Jaimi Starr
To:	sgoad gabrielino-tongva.com
Cc:	rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc:	DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject:	RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date:	Wednesday, June 12, 2024 12:56:00 PM

Good afternoon,

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Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:41 PM
To: sgoad gabrielino-tongva.com <sgoad@gabrielino-tongva.com>
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

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Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: 2nd Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 26, 2024 1:20:00 PM

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Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Robert Dorame
Chairperson
Gabrielino Tongva Indians of California Tribal Council
P.O. Box 490
Bellflower, CA 90707

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Mr. Dorame,

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Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

U.S. Department of Transportation
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888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Ms. Christina Conley
Tribal Consultant and Administrator
Gabrielino Tongva Indians of California Tribal Council
P.O. Box 941078
Simi Valley, CA 93094

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Ms. Conley,

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Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From: Christina Marsden Conley
To: Jaimi Starr
Subject: Re: Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, May 29, 2024 6:11:43 PM
Attachments: GTIOC.png

We have no comment
tehoovet taamet
C H R I S T I N A C O N L E Y
•Tribal Cultural Resource Administrator Under Tribal Chair, Robert Dorame
•Catalina Tribal Coalition
•California Coalition of State Tribes, Executive Board
•HAZWOPER Certified
https://file.lacounty.gov/SDSInter/lac/1137966_AREPORTONHARMSCountyofLosAngeles.pdf

_____

G A B R I E L I N O T O N G V A I N D I A N S O F C A L I F O R N I A
The Gabrielino Tongva Indians of California tribe is traditionally and culturally recognized in the State of California Bill AJR96 as the aboriginal tribe to encompass the entire Los Angeles Basin area to Laguna Beach, extending to the Channel Islands of Santa Catalina, San Nicholas and San Clemente Islands

> On May 29, 2024, at 4:42 PM, Jaimi Starr <Jaimi.Starr@lsa.net> wrote:
>
> Good afternoon,
>
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Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

<SBCTA_ONTConnector Gabrielino_Tongva Council Consultant Conley.pdf>

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Robert Martin
Chairperson
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

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Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

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To:	Ann Brierty
Cc:	rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc:	DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject:	RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date:	Wednesday, June 12, 2024 12:58:00 PM

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Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:48 PM
To: Ann Brierty <abrierty@morongo-nsn.gov>
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
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Subject: RE: 2nd Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 26, 2024 1:18:00 PM

Good afternoon,

This 2nd follow up email is being sent to you regarding the email and letter sent on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, June 12, 2024 12:59 PM
To: Ann Brierty <abrierty@morongo-nsn.gov>
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

I am following up with you regarding the email and letter sent to you on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:48 PM
To: Ann Brierty <abrierty@morongo-nsn.gov>
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

Attached please find the letter dated 5/29/24 regarding the Ontario International Airport Connector Project. A hard copy of this letter has also been sent via certified mail (USPS) to the

address provided by the NAHC and/or the Federal Transit Administration (FTA) and the San Bernardino County Transportation Authority (SBCTA). If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Ms. Ann Brierty
Tribal Historic Preservation Officer
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Ms. Brierty,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

Overview of the Proposed Project

The proposed Project would include the construction of a 4.2-mile-long tunnel connecting the Cucamonga Metrolink Station and ONT. The Project includes the construction of three passenger stations, a maintenance facility, and one access and ventilation shaft. The underground tunnel (24-foot inner diameter bi-directional tunnel) would begin at the Cucamonga Metrolink Station and travel south under Milliken Avenue, crossing beneath 6th Street, 4th Street, Interstate 10 (I-10), and the Union Pacific Railroad, before traveling west beneath East Airport Drive. It would connect to Terminals 2 and 4 at ONT, as illustrated in Enclosure #2 (Project Location Map). Tunnel boring would occur up to approximately 70 feet below the ground surface. Passenger stations would be constructed at a height of approximately 40 feet. Although partial property acquisitions and easements are required, no business or residential relocations are anticipated.

During operation, autonomous electric vehicles would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. Adjacent to the Cucamonga Metrolink Station would be a maintenance facility to support operations, provide autonomous electric vehicle storage, and provide employee amenities and parking. Two vent shaft design options are being considered. One vent shaft option would be located west of Milliken Avenue within the westbound I-10 off-ramp right-of-way and one vent shaft option would be located west of Milliken Avenue within the eastbound I-10 on-ramp right-of-way. Ultimately, only one of the proposed ventilation shaft design options would be selected and constructed to provide a means of emergency passenger egress and first responder access. The final location of the ventilation shaft would be selected after the public review period of the NEPA environmental assessment.

Request for Information

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Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From:	Jaimi Starr
To:	Ann Brierty
Cc:	rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc:	DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject:	RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date:	Wednesday, June 12, 2024 12:59:00 PM

Good afternoon,

I am following up with you regarding the email and letter sent to you on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:50 PM
To: Ann Brierty <abrierty@morongo-nsn.gov>
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

Attached please find the letter dated 5/29/24 regarding the Ontario International Airport Connector Project. A hard copy of this letter has also been sent via certified mail (USPS) to the address provided by the NAHC and/or the Federal Transit Administration (FTA) and the San Bernardino County Transportation Authority (SBCTA). If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
To: Ann Brierty
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: 2nd Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 26, 2024 1:17:00 PM

Good afternoon,

This 2nd follow up email is being sent to you regarding the email and letter sent on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, June 12, 2024 1:00 PM
To: Ann Brierty <abrierty@morongo-nsn.gov>
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106

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Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:50 PM
To: Ann Brierty <abrierty@morongo-nsn.gov>
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

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Connector Project. A hard copy of this letter has also been sent via certified mail (USPS) to the address provided by the NAHC and/or the Federal Transit Administration (FTA) and the San Bernardino County Transportation Authority (SBCTA). If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Manfred Scott
Acting Chairman
Quechan Tribe of the Fort Yuma Reservation
P.O. Box 1899
Yuma, AZ 85366

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Mr. Scott,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

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During operation, autonomous electric vehicles would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. Adjacent to the Cucamonga Metrolink Station would be a maintenance facility to support operations, provide autonomous electric vehicle storage, and provide employee amenities and parking. Two vent shaft design options are being considered. One vent shaft option would be located west of Milliken Avenue within the westbound I-10 off-ramp right-of-way and one vent shaft option would be located west of Milliken Avenue within the eastbound I-10 on-ramp right-of-way. Ultimately, only one of the proposed ventilation shaft design options would be selected and constructed to provide a means of emergency passenger egress and first responder access. The final location of the ventilation shaft would be selected after the public review period of the NEPA environmental assessment.

Request for Information

If you have any information or concern regarding potential impacts on precontact sites, sacred sites, and/or traditional cultural properties that would be relevant to this Project, please contact us. If you are not the designated representative for such consultation, please let us know.

If you have any questions or need additional information, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From: Jaimi Starr
To: scottmanfred@yahoo.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 12, 2024 1:00:00 PM

Good afternoon,

I am following up with you regarding the email and letter sent to you on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:52 PM
To: scottmanfred@yahoo.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

Attached please find the letter dated 5/29/24 regarding the Ontario International Airport Connector Project. A hard copy of this letter has also been sent via certified mail (USPS) to the address provided by the NAHC and/or the Federal Transit Administration (FTA) and the San Bernardino County Transportation Authority (SBCTA). If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
To: scottmanfred@yahoo.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: 2nd Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 26, 2024 1:16:00 PM

Good afternoon,

This 2nd follow up email is being sent to you regarding the email and letter sent on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, June 12, 2024 1:01 PM
To: scottmanfred@yahoo.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106

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805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:52 PM
To: scottmanfred@yahoo.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

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Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Ms. Jill McCormick
Historic Preservation Officer
Quechan Tribe of the Fort Yuma Reservation
P.O. Box 1899
Yuma, AZ 85366

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Ms. McCormick,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

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Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From:	Jaimi Starr
To:	historicpreservation@quechantribe.com
Cc:	rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc:	DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject:	RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date:	Wednesday, June 12, 2024 1:01:00 PM

Good afternoon,

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Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:54 PM
To: historicpreservation@quechantribe.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

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Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
To: historicpreservation@quechantribe.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: 2nd Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 26, 2024 1:15:00 PM

Good afternoon,

This 2nd follow up email is being sent to you regarding the email and letter sent on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, June 12, 2024 1:02 PM
To: historicpreservation@quechantribe.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106

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805-242-4039 Direct

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Sent: Wednesday, May 29, 2024 4:54 PM
To: historicpreservation@quechantribe.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

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Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Ms. Jessica Mauck
Director of Cultural Resources
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA 92346

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Ms. Mauck,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

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Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From: Jaimi Starr
To: Jessica.Mauck@sanmanuelnsn.gov
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 12, 2024 1:02:00 PM

Good afternoon,

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Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:55 PM
To: Jessica.Mauck@sanmanuelnsn.gov
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

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Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

From:	Victor Lopez
To:	Jaimi Starr
Cc:	James Santos; DeRosa, David; Gonzalez, Ivan
Subject:	FW: Section 106: Ontario International Airport Connector Project, Federal Transit Administration [FED-FTA-2024-1]
Date:	Thursday, June 13, 2024 3:24:02 PM
Attachments:	~WRD0001.jpg image001.png

See below for request. Info to be added to tracking list.

Victor Lopez, PE
Director of Transit and Rail Programs
1170 West Third Street, 2nd Floor
San Bernardino, CA 92410
909.884.8276 | Office
909.889.8611 x118 | Direct

From: Kelly, Kathleen (FTA) <kathleen.kelly@dot.gov>
Sent: Thursday, June 13, 2024 12:51 PM
To: Victor Lopez <vlopez@gosbcta.com>
Cc: Hernandez, Nicholas (FTA) <nicholas.hernandez@dot.gov>; Whisman, Rusty (FTA) <russell.whisman@dot.gov>; Perry, Leslie (Volpe) <leslie.perry@dot.gov>
Subject: FW: Section 106: Ontario International Airport Connector Project, Federal Transit Administration [FED-FTA-2024-1]

Good afternoon Victor,

Please see Kristen's email below. If you have any questions, please let us know. I responded and told her that we would be in contact to get the tribe the information.

Thank you,
KC Kelly

Kathleen C. Kelly *(she/her)*
Environmental Protection Specialist
U.S. DOT|Federal Transit Administration
Region IX|888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
Office Phone: 415.734.9469

From: Kristen Tuosto <Kristen.Tuosto@sanmanuel-nsn.gov>
Sent: Thursday, June 13, 2024 11:52 AM
To: Kelly, Kathleen (FTA) <kathleen.kelly@dot.gov>

Subject: Section 106: Ontario International Airport Connector Project, Federal Transit Administration [FED-FTA-2024-1]

Dear Kathleen,

Thank you for contacting the Yuhaaviatam of San Manuel Nation (formerly the San Manuel Band of Mission Indians) regarding the above referenced project. YSMN appreciates the opportunity to review the project documentation, which was received by our Cultural Resources Management Department on June 4, 2024, pursuant to Section 106 of the National Historic Preservation Act (NHPA). The proposed project area exists within Serrano ancestral territory and, therefore, is of interest to the Tribe.

Due to the nature and location of the proposed project, YSMN respectfully requests the following for review upon availability:

- Cultural report
- Geotechnical report (if required for the project)
- Project plans showing the depth of proposed disturbance

The provision of this information will assist Yuhaaviatam of San Manuel Nation in ascertaining how the Tribe will assume consulting party status and participate, moving forward, in project review and implementation. Please note that if this information cannot be provided within the Tribe's 30-day response window, the Tribe automatically elects to be a consulting party. If you should have any questions with regard to this matter, please do not hesitate to contact me at your convenience, as I will be your Point of Contact (POC) for YSMN with respect to this project.

Once again, the Yuhaaviatam of San Manuel Nation appreciates the opportunity to comment on the proposed project.

Regards,
Kristen

Kristen Tuosto
Tribal Archaeologist
Kristen.Tuosto@sanmanuel-nsn.gov
O:(909) 864-8933 x 50-3421
M:(909) 725-1357
26569 Community Center Dr Highland, California 92346

SBCTA No. 21-1002452

ONT CONNECTOR PROJECT

Meeting Minutes

Date & Time: **September 6, 2024 at 1:00 PM – 2:00 PM PST**
Location: **Online – MS Teams Meeting**
Purpose: **Section 106 Consultation Meeting with Yuhaaviatam of San Manuel Nation**

FTA			SBCTA		
☒	Rusty Whisman	FTA - PM	☒	Victor Lopez	SBCTA - PM
☒	Brian Albright	FTA-Volpe	☒	Ivan Gonzalez	SBCTA/Environmental (AECOM)
Yuhaaviatam of San Manuel Nation			☒	Amanda Durgen	LSA
☒	Kristen Tuosto	YSMN	☒	Rory Goodwin	LSA
OMNITRANS					
☒	Maurice Mansion	OmniTrans			

Agenda Topics

1.	Introductions • FTA, YSMN, SBCTA, OMNITRANS, HNTB and AECOM
2.	Project Overview • Victor provided an overview of the ONT Connector in Inland Empire/San Bernardino County, showing connectivity to West Valley Connector, Metrolink San Bernardino Line, Brightline West, Ontario International Airport. • Proposed Project: Cucamonga Station is proposed in the north, two passenger stations are proposed at the south end at ONT. The project includes a 4.2-mile tunnel under Milliken Avenue, crossing under I-10 with one selected vent shaft at the Caltrans interchange, and tunnel alignment along Airport Drive to the Terminal Stations. • The Cucamonga Station would include a maintenance facility, boarding area for autonomous vehicles, and excavation for building improvements. • Project features would be underground from the Cucamonga Station until the proposed vent shaft at the Caltrans interchange. • The tunnel alignment continues along Airport Drive and transitions to an at-grade alignment at the Terminal Stations (ONT). • Construction (56 months) • Excavation to launch the TBM, muck is hauled offsite, contractor would fit the tunnel with infrastructure.

	• Photos were provided of the simulated Cucamonga Station; example TBM; example cut-and-cover construction; and an example of bored tunnel.
3.	Consultation Request • Rusty noted that FTA received 5/29/24 consultation request letter, which requested the cultural report, geotechnical report, and project plans. FTA is formulating a response and is expected to provide the response in the next week.
4.	Information Request and Preliminary Findings • FTA is seeking information from YSMN related to sensitive areas, couple of receiving pits, deep excavation (70 feet), records search was negative, field surveys identified no resources.
5.	Discussion • Kristen noted that YSMN's concern is that there will be a slow decline to reach the tunnel depth. Soil composition (Holocene deposits may have tribal cultural/archaeological resources). • Victor said the descent would be consistent with typical roadway grades. • Brian clarified that YSMN was interested in where excavation would potentially encounter resource-containing soils (Holocene). • Rusty asked if Kristen was aware of resources in this area. Kristen indicated YSMN is not aware of resources in this immediate area, but in the general area, there may be a village area within a 5-mile radius. Concern for inadvertent discovery of village. Satellite sites are possible. • Rusty noted that if resources are discovered, FTA would contact the tribes/SHPO. • Minutes by end of next week. • Kristen will provide a written response after review of the requested materials.

From:	Whisman, Rusty (FTA)
To:	Kristen Tuosto
Cc:	Kelly, Kathleen (FTA); Victor Lopez
Subject:	RE: Section 106: Ontario International Airport Connector Project, Federal Transit Administration [FED-FTA-2024-1]
Attachments:	ONT Connector_YSMN Meeting Minutes_09062024_Draft.docx

Good evening Kristen,

Thank you for the response, and I hope the Line Fire is fully contained soon and everyone is out of harm's way. We appreciate your recommendations for language to be included as commitments within the project environmental document and other project documents, and FTA and SBCTA will take these recommendations into consideration.

As for your initial request to review project documents, we have uploaded the following items to Dropbox:

1. Cultural resources records search results. The project team is still in the process of revising the cultural resources study and it is not yet ready to share. A summary of consultation with Yuhaaviatam of San Manuel Nation will be reflected once finalized.
2. A working draft of the geotechnical data report. No substantial changes to this document are anticipated prior to public circulation of the Environmental Assessment for the project.
3. Project plans showing the proposed depths of disturbance

[redacted]

I've also attached the minutes from our meeting on September 6 for your records. Please let us know if you have any comments or suggested revisions.

Thank you.

Rusty
Rusty Whisman
Senior Transportation Program Specialist
Federal Transit Administration, Region 9
Southern California Office
888 South Figueroa Street, Suite 440
Los Angeles, CA 90017-5467
office: 213.202.3956
email: rusty.whisman@dot.gov
www.transit.dot.gov
Please note that I will be out of the office September 27 – October 4.

From: Kristen Tuosto <Kristen.Tuosto@sanmanuel-nsn.gov>
Sent: Thursday, September 26, 2024 9:47 AM

To: Whisman, Rusty (FTA) <russell.whisman@dot.gov>
Cc: Kelly, Kathleen (FTA) <kathleen.kelly@dot.gov>; Victor Lopez <vlopez@gosbcta.com>
Subject: RE: Section 106: Ontario International Airport Connector Project, Federal Transit Administration [FED-FTA-2024-1]

Hello Rusty,

I meant to send this email a couple of weeks ago, but the Line Fire threw me off my game. I am sorry about the delay. Thank you and your team for meeting with me.

YSMN requests that the following language, or some variation thereof, be made a part of the project conditions/COAs/NTP:

1. If human remains or funerary objects are encountered during any activities associated with the project, work within a 100-foot buffer of the find shall cease, and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.

2. In the event that any pre-contact cultural resources are discovered during project activities, all work within a 60-foot buffer shall cease, and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, Yuhaaviatam of San Manuel Nation will be contacted if any such find occurs and be provided information and permitted/invited to perform a site visit when the archaeologist makes his/her assessment, in order to provide Tribal input. The archaeologist shall complete an isolate/site record for the find and submit this document to the Lead Agency for dissemination to the Yuhaaviatam of San Manuel Nation.

3. If eligible pre-contact resources are discovered, and avoidance cannot be ensured, an SOI-qualified archaeologist shall be retained to develop a cultural resources Treatment Plan and a Discovery and Monitoring Plan. Drafts of which shall be provided to Yuhaaviatam of San Manuel Nation for review and comment. The Lead Agency or designated POC shall, in good faith, consult with Yuhaaviatam of San Manuel Nation on the disposition and treatment of any artifacts or other cultural materials encountered during the project.

Note: Yuhaaviatam of San Manuel Nation realizes that there may be additional tribes claiming cultural affiliation to the area; however, Yuhaaviatam of San Manuel Nation can only speak for itself. The Tribe has no objection if the agency, developer, and/or archaeologist wishes to consult with other tribes in addition to YSMN and if the Lead

Agency wishes to revise the conditions to recognize additional tribes.

This communication concludes YSMN's input on this project, at this time, and no additional consultation pursuant to Section 106 of the NHPA is required unless there is an unanticipated discovery of cultural resources during project implementation. If you should have any further questions regarding this matter, please do not hesitate to contact me at your convenience, as I will be your Point of Contact (POC) for YSMN with respect to this project.

Regards,
Kristen

From: Whisman, Rusty (FTA) <russell.whisman@dot.gov>
Sent: Thursday, August 29, 2024 8:42 AM
To: Kristen Tuosto <Kristen.Tuosto@sanmanuel-nsn.gov>
Cc: Kelly, Kathleen (FTA) <kathleen.kelly@dot.gov>; Victor Lopez <vlopez@gosbcta.com>
Subject: RE: Section 106: Ontario International Airport Connector Project, Federal Transit Administration [FED-FTA-2024-1]

Hi Kristen,

Thanks for providing your availability. I will follow up with the team and send over a meeting invitation.

Rusty
Rusty Whisman
Senior Transportation Program Specialist
Federal Transit Administration, Region 9
Southern California Office
888 South Figueroa Street, Suite 440
Los Angeles, CA 90017-5467
office: 213.202.3956
email: rusty.whisman@dot.gov
www.transit.dot.gov

From: Kristen Tuosto <Kristen.Tuosto@sanmanuel-nsn.gov>
Sent: Thursday, August 29, 2024 8:38 AM
To: Whisman, Rusty (FTA) <russell.whisman@dot.gov>
Cc: Kelly, Kathleen (FTA) <kathleen.kelly@dot.gov>; Victor Lopez <vlopez@gosbcta.com>
Subject: RE: Section 106: Ontario International Airport Connector Project, Federal Transit Administration [FED-FTA-2024-1]

Hello Rusty,

I would be happy to meet in early September; I am available Tuesday, 9/3, after 11 a.m., Wednesday, 9/4, after 10 a.m., and Friday, 9/6, between 1 PM and 4PM.

Please let me know if any of these dates work for you.

Best,
Kristen

From: Whisman, Rusty (FTA) <russell.whisman@dot.gov>
Sent: Wednesday, August 28, 2024 4:53 PM
To: Kristen Tuosto <Kristen.Tuosto@sanmanuel-nsn.gov>
Cc: Kelly, Kathleen (FTA) <kathleen.kelly@dot.gov>; Victor Lopez <vlopez@gosbcta.com>
Subject: RE: Section 106: Ontario International Airport Connector Project, Federal Transit Administration [FED-FTA-2024-1]

Good afternoon Kristen,

Thank you for your response, and apologies for our delay in responding. We will follow up shortly regarding the requested information, but we wanted to acknowledge receipt of your email and that the Yuhaaviatam of San Manuel Nation will be considered a consulting party under Section 106 for the Ontario International Airport Connector Project.

I am happy to schedule a meeting with you and the project team in early September to provide an overview and hear any initial questions, comments, or concerns you might have about the project.

Thank you.

Rusty
Rusty Whisman
Senior Transportation Program Specialist
Federal Transit Administration, Region 9
Southern California Office
888 South Figueroa Street, Suite 440
Los Angeles, CA 90017-5467
office: 213.202.3956
email: rusty.whisman@dot.gov
www.transit.dot.gov

From: Kristen Tuosto <Kristen.Tuosto@sanmanuel-nsn.gov>
Sent: Thursday, June 13, 2024 11:52 AM
To: Kelly, Kathleen (FTA) <kathleen.kelly@dot.gov>
Subject: Section 106: Ontario International Airport Connector Project, Federal Transit Administration [FED-FTA-2024-1]

Dear Kathleen,

Thank you for contacting the Yuhaaviatam of San Manuel Nation (formerly the San Manuel Band of Mission Indians) regarding the above referenced project. YSMN appreciates the opportunity to review the project documentation, which was received by our Cultural Resources Management Department on June 4, 2024, pursuant to Section 106 of the National Historic Preservation Act (NHPA). The proposed project area exists within Serrano ancestral territory and, therefore, is of interest to the Tribe.

Due to the nature and location of the proposed project, YSMN respectfully requests the following for review upon availability:

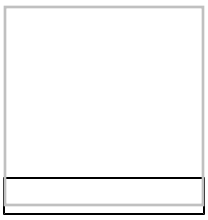
- Cultural report
- Geotechnical report (if required for the project)
- Project plans showing the depth of proposed disturbance

The provision of this information will assist Yuhaaviatam of San Manuel Nation in ascertaining how the Tribe will assume consulting party status and participate, moving forward, in project review and implementation. Please note that if this information cannot be provided within the Tribe's 30-day response window, the Tribe automatically elects to be a consulting party. If you should have any questions with regard to this matter, please do not hesitate to contact me at your convenience, as I will be your Point of Contact (POC) for YSMN with respect to this project.

Once again, the Yuhaaviatam of San Manuel Nation appreciates the opportunity to comment on the proposed project.

Regards,
Kristen

Kristen Tuosto
Tribal Archaeologist
Kristen.Tuosto@sanmanuel-nsn.gov
O:(909) 864-8933 x 50-3421
M:(909) 725-1357
26569 Community Center Dr Highland, California 92346



U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
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Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Ms. Lovina Redner
Tribal Chair
Santa Rosa Band of Cahuilla Indians
P.O. Box 391820
Anza, CA 92539

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Ms. Redner,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

Overview of the Proposed Project

The proposed Project would include the construction of a 4.2-mile-long tunnel connecting the Cucamonga Metrolink Station and ONT. The Project includes the construction of three passenger stations, a maintenance facility, and one access and ventilation shaft. The underground tunnel (24-foot inner diameter bi-directional tunnel) would begin at the Cucamonga Metrolink Station and travel south under Milliken Avenue, crossing beneath 6th Street, 4th Street, Interstate 10 (I-10), and the Union Pacific Railroad, before traveling west beneath East Airport Drive. It would connect to Terminals 2 and 4 at ONT, as illustrated in Enclosure #2 (Project Location Map). Tunnel boring would occur up to approximately 70 feet below the ground surface. Passenger stations would be constructed at a height of approximately 40 feet. Although partial property acquisitions and easements are required, no business or residential relocations are anticipated.

During operation, autonomous electric vehicles would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. Adjacent to the Cucamonga Metrolink Station would be a maintenance facility to support operations, provide autonomous electric vehicle storage, and provide employee amenities and parking. Two vent shaft design options are being considered. One vent shaft option would be located west of Milliken Avenue within the westbound I-10 off-ramp right-of-way and one vent shaft option would be located west of Milliken Avenue within the eastbound I-10 on-ramp right-of-way. Ultimately, only one of the proposed ventilation shaft design options would be selected and constructed to provide a means of emergency passenger egress and first responder access. The final location of the ventilation shaft would be selected after the public review period of the NEPA environmental assessment.

Request for Information

If you have any information or concern regarding potential impacts on precontact sites, sacred sites, and/or traditional cultural properties that would be relevant to this Project, please contact us. If you are not the designated representative for such consultation, please let us know.

If you have any questions or need additional information, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From: Jaimi Starr
To: lsaul@santarosa-nsn.gov
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 12, 2024 1:02:00 PM

Good afternoon,

I am following up with you regarding the email and letter sent to you on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:57 PM
To: lsaul@santarosa-nsn.gov
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

Attached please find the letter dated 5/29/24 regarding the Ontario International Airport Connector Project. A hard copy of this letter has also been sent via certified mail (USPS) to the address provided by the NAHC and/or the Federal Transit Administration (FTA) and the San Bernardino County Transportation Authority (SBCTA). If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
To: lsaul@santarosa-nsn.gov
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: 2nd Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 26, 2024 1:14:00 PM

Good afternoon,

This 2nd follow up email is being sent to you regarding the email and letter sent on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, June 12, 2024 1:03 PM
To: lsaul@santarosa-nsn.gov
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

I am following up with you regarding the email and letter sent to you on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 4:57 PM
To: lsaul@santarosa-nsn.gov
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

Attached please find the letter dated 5/29/24 regarding the Ontario International Airport

Connector Project. A hard copy of this letter has also been sent via certified mail (USPS) to the address provided by the NAHC and/or the Federal Transit Administration (FTA) and the San Bernardino County Transportation Authority (SBCTA). If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Mark Cochrane
Co-Chairperson
Serrano Nation of Mission Indians
P. O. Box 343
Patton, CA 92369

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Mr. Cochrane,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

Overview of the Proposed Project

The proposed Project would include the construction of a 4.2-mile-long tunnel connecting the Cucamonga Metrolink Station and ONT. The Project includes the construction of three passenger stations, a maintenance facility, and one access and ventilation shaft. The underground tunnel (24-foot inner diameter bi-directional tunnel) would begin at the Cucamonga Metrolink Station and travel south under Milliken Avenue, crossing beneath 6th Street, 4th Street, Interstate 10 (I-10), and the Union Pacific Railroad, before traveling west beneath East Airport Drive. It would connect to Terminals 2 and 4 at ONT, as illustrated in Enclosure #2 (Project Location Map). Tunnel boring would occur up to approximately 70 feet below the ground surface. Passenger stations would be constructed at a height of approximately 40 feet. Although partial property acquisitions and easements are required, no business or residential relocations are anticipated.

During operation, autonomous electric vehicles would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. Adjacent to the Cucamonga Metrolink Station would be a maintenance facility to support operations, provide autonomous electric vehicle storage, and provide employee amenities and parking. Two vent shaft design options are being considered. One vent shaft option would be located west of Milliken Avenue within the westbound I-10 off-ramp right-of-way and one vent shaft option would be located west of Milliken Avenue within the eastbound I-10 on-ramp right-of-way. Ultimately, only one of the proposed ventilation shaft design options would be selected and constructed to provide a means of emergency passenger egress and first responder access. The final location of the ventilation shaft would be selected after the public review period of the NEPA environmental assessment.

Request for Information

If you have any information or concern regarding potential impacts on precontact sites, sacred sites, and/or traditional cultural properties that would be relevant to this Project, please contact us. If you are not the designated representative for such consultation, please let us know.

If you have any questions or need additional information, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
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888 South Figueroa Street
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Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Wayne Walker
Co-Chairperson
Serrano Nation of Mission Indians
P. O. Box 343
Patton, CA 92369

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Mr. Walker,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

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Request for Information

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If you have any questions or need additional information, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From: Jaimi Starr
To: serranonation1@gmail.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 12, 2024 1:04:00 PM

Good afternoon,

I am following up with you regarding the email and letter sent to you on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 5:00 PM
To: serranonation1@gmail.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

Good afternoon,

Attached please find the letter dated 5/29/24 regarding the Ontario International Airport Connector Project. A hard copy of this letter has also been sent via certified mail (USPS) to the address provided by the NAHC and/or the Federal Transit Administration (FTA) and the San Bernardino County Transportation Authority (SBCTA). If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
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Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc: DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject: RE: 2nd Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date: Wednesday, June 26, 2024 1:10:00 PM

Good afternoon,

This 2nd follow up email is being sent you regarding the email and letter sent on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

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Sent: Wednesday, June 12, 2024 1:05 PM
To: serranonation1@gmail.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106

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To: serranonation1@gmail.com
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

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Connector Project. A hard copy of this letter has also been sent via certified mail (USPS) to the address provided by the NAHC and/or the Federal Transit Administration (FTA) and the San Bernardino County Transportation Authority (SBCTA). If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Isaiah Vivanco
Chairperson
Soboba Band of Luiseno Indians
P. O. Box 487
San Jacinto, CA 92581

RE: Section 106 Tribal Consultation for the Ontario International Airport Connector Project

Dear Mr. Vivanco,

The Federal Transit Administration (FTA), in coordination with the San Bernardino County Transportation Authority (SBCTA), is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed Ontario International Airport (ONT) Connector Project (Project) located in the cities of Rancho Cucamonga and Ontario in San Bernardino County as shown in Enclosure #1 (Regional Location Map). The Project is a federal undertaking. The FTA is the lead federal agency. Pursuant to 36 FTA Part 800.2 (c)(4) and (c)(5), we are contacting both Native American tribes and interested parties to help identify precontact sites, sacred sites, and/or traditional cultural properties within the Project Area. You have been identified as a Native American tribe or interested party with interest or knowledge of the Project Area.

Overview of the Proposed Project

The proposed Project would include the construction of a 4.2-mile-long tunnel connecting the Cucamonga Metrolink Station and ONT. The Project includes the construction of three passenger stations, a maintenance facility, and one access and ventilation shaft. The underground tunnel (24-foot inner diameter bi-directional tunnel) would begin at the Cucamonga Metrolink Station and travel south under Milliken Avenue, crossing beneath 6th Street, 4th Street, Interstate 10 (I-10), and the Union Pacific Railroad, before traveling west beneath East Airport Drive. It would connect to Terminals 2 and 4 at ONT, as illustrated in Enclosure #2 (Project Location Map). Tunnel boring would occur up to approximately 70 feet below the ground surface. Passenger stations would be constructed at a height of approximately 40 feet. Although partial property acquisitions and easements are required, no business or residential relocations are anticipated.

During operation, autonomous electric vehicles would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. Adjacent to the Cucamonga Metrolink Station would be a maintenance facility to support operations, provide autonomous electric vehicle storage, and provide employee amenities and parking. Two vent shaft design options are being considered. One vent shaft option would be located west of Milliken Avenue within the westbound I-10 off-ramp right-of-way and one vent shaft option would be located west of Milliken Avenue within the eastbound I-10 on-ramp right-of-way. Ultimately, only one of the proposed ventilation shaft design options would be selected and constructed to provide a means of emergency passenger egress and first responder access. The final location of the ventilation shaft would be selected after the public review period of the NEPA environmental assessment.

Request for Information

If you have any information or concern regarding potential impacts on precontact sites, sacred sites, and/or traditional cultural properties that would be relevant to this Project, please contact us. If you are not the designated representative for such consultation, please let us know.

If you have any questions or need additional information, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

U.S. Department of Transportation
Federal Transit Administration

REGION IX
Arizona, California,
Hawaii, Nevada, Guam,
American Samoa,
Northern Mariana Islands

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

May 29, 2024

Mr. Joseph Ontiveros
Cultural Resource Department
Soboba Band of Luiseno Indians
P. O. Box 487
San Jacinto, CA 92581

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Sincerely,

CHARLENE LEE LORENZO
Digitally signed by CHARLENE LEE LORENZO
Date: 2024.05.23 09:31:05 -07'00'

For Ray Tellis
Regional Administrator

Enclosures:
1. Regional Location Map
2. Project Location Map
3. Proposed Area of Potential Effects (APE) Map

From:	Jaimi Starr
To:	Joseph Ontiveros; Jessica Valdez
Cc:	rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Bcc:	DeRosa, David; Guzman, Jaime; Gonzalez, Ivan; James Santos; Amanda Durgen
Subject:	RE: Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date:	Wednesday, June 12, 2024 1:05:00 PM

Good afternoon,

I am following up with you regarding the email and letter sent to you on 5/29/2024. If you have any questions or concerns, feel free to call or email Ms. Kathleen Kelly, Environmental Protection Specialist, at (415) 734-9469 or kathleen.kelly@dot.gov.

Thank you,

Jaimi Starr | Office Manager
805-242-4039 Direct

From: Jaimi Starr
Sent: Wednesday, May 29, 2024 5:02 PM
To: Joseph Ontiveros <jontiveros@soboba-nsn.gov>; Jessica Valdez <jvaldez@soboba-nsn.gov>
Cc: rusty.whisman@dot.gov; kathleen.kelly@dot.gov; vlopez@gosbcta.com
Subject: Ontario International Airport Connector Project - Native American Consultation Section 106

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Respectfully,

Jaimi Starr | Office Manager
805-242-4039 Direct

From:	Jaimi Starr
To:	"Joseph Ontiveros"; "Jessica Valdez"
Cc:	"rusty.whisman@dot.gov"; "kathleen.kelly@dot.gov"; "vlopez@gosbcta.com"
Bcc:	"DeRosa, David"; "Guzman, Jaime"; "Gonzalez, Ivan"; "James Santos"; Amanda Durgen
Subject:	RE: 2nd Follow Up - Ontario International Airport Connector Project - Native American Consultation Section 106
Date:	Wednesday, June 26, 2024 1:09:00 PM

Good afternoon,

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805-242-4039 Direct

Appendix E - DEPARTMENT OF PARKS AND RECREATION (DPR) 523 FORMS

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 36-006847
HRI #
Trinomial
NRHP Status Code 6Y/6Z
Other Listings
Review Code Reviewer Date

Resource Name or #: ATSF RR (Segment)

P1. Other Identifier: APE Map Reference No. 1

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Bernardino **and** (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** *Guasti, CA* **Date:** 1981 **T**1S; **R**7W; **Section:** 12; S.B.**B.M.**

c. Address: **City:** Rancho Cucamonga **Zip:**

d. UTM: Zone: 11; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #): Assessor Parcel Numbers (APNs) 020914314 and 020914321. This is an approximately 1,300 foot-long (0.25 mile) segment of the railroad adjacent to the modern Cucamonga Metrolink Station.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This approximately 1,300-foot-long (0.25-mile) railroad segment is oriented east-west and dates to the mid-1880s. The segment begins approximately 200 feet west of the modern Cucamonga Metrolink Station (2011) property line and extends east almost to the station's eastern boundary. The segment includes two sets of parallel tracks and a spur. The spur comes from the northwest, joins the northern track for a short distance, and curves northeast west of the northern platform. The spur appears to have wooden ties, although some are either missing or buried by sand. The northern tracks have wooden ties to the point where the spur travels to the northeast. From that point east, along the northern platform, the ties are concrete. East of the northern platform, the ties appear to be wood. The southern track has concrete ties. The setting is dominated by modern development that includes the Metrolink Station and related parking, large light manufacturing buildings, and a substation on the south, as well as large light manufacturing buildings to the north, east, and west beyond the segment.

***P3b. Resource Attributes:** (List attributes and codes) AH7 Railroad Grade

***P4. Resources Present:** ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

See Continuation Sheet

P5b. Description of Photo: (View, date, accession #) View west from the west end of the southern Metrolink platform (9/30/22)

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1880s

***P7. Owner and Address:**

***P8. Recorded by:** (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

***P9. Date Recorded:**
9/30/2022

***P10. Survey Type:** (Describe)
Intensive-level Section 106 and CEQA compliance

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Ontario International Airport (ONT) Connector Project Cultural Resources Identification and Eligibility Assessment, 2024. Prepared by LSA.

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # 36-006847
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6Y/6Z
*Resource Name or # (Assigned by recorder) ATSF RR (Segment)

B1. Historic Name:
B2. Common Name:
B3. Original Use: Railroad **B4. Present Use:** Railroad
***B5. Architectural Style:** NA
***B6. Construction History:** (Construction date, alterations, and date of alterations)
Circa 1880
***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**
***B8. Related Features:** Cucamonga Metrolink Station (2011).
B9a. Architect: **b. Builder:**
***B10. Significance: Theme:** Transportation **Area:** City of Rancho Cucamonga
Period of Significance: circa 1880-1972 **Property Type:** Railroad **Applicable Criteria:** NA
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

This approximately 1,300 foot-long (0.25 mile) segment of the ATSF railroad does not appear to meet the criteria for listing in the National Register of Historic Places (National Register) or California Register of Historical Resources (California Register) either individually or as a contributor to the railroad as a whole. It is not a historic property under Section 106 or a historical resource as defined by the California Environmental Quality Act (CEQA). *See Continuation Sheet*

Historic Context. Please refer to the related report (see P11 on page 1).

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

B13. Remarks:

***B14. Evaluator:** Casey Tibbet, M.A., LSA Associates, Inc., 1500 Iowa Avenue, Suite 200, Riverside, CA 92507

***Date of Evaluation:** November 2022

(Sketch Map with north arrow required.)

Refer to Location Map

(This space reserved for official comments.)

*Required information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # 36-006847
HRI #
Trinomial

Page 3 of 4 *__Resource Name or #__: (Assigned by recorder) ATSF RR (Segment)
*Recorded by LSA Associates, Inc. *Date: November 2022 X Continuation Update

P5a. Photo (continued from page 1)

View east from the western end of the southern Metrolink Station platform (9/30/22).

View east from the eastern end of the southern Metrolink Station platform (9/30/22).

See Continuation Sheet

***B10. Significance** (continued from page 2)
This railroad segment is being evaluated for historic significance under the National Register and California Register criteria. Because the two sets of criteria are so similar, they have been grouped together to avoid redundancy.

National Register Criterion A: *Associated with events that have made a significant contribution to the broad patterns of our history.*
California Register Criterion 1: *Associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage.*

Railroads have made a significant contribution to the broad patterns of our history and cultural heritage, but this segment does not appear to be associated with any specific historically significant events. Because the tracks themselves have been modernized and the setting is now dominated by the modern Metrolink station, as well as other modern construction, this segment has impaired integrity of feeling, setting, materials, and workmanship and does not convey a strong association with any historic period. Therefore, it is not eligible for listing in the National Register as an individual railroad segment. In addition, because it is a modern segment, it does not convey an association with any historic period or contribute to the historic fabric of the railroad as a whole. It is not significant under these criteria.

National Register Criterion B*: Associated with the lives of persons significant in our past.*
California Register Criterion 2*: Associated with the lives of persons important in our past.*

The railroad as a whole is associated with persons important in history, but this segment is modern and is not associated with those people This segment is not significant under these criteria.

National Register Criterion C*: Embodies the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction.*

California Register Criterion 3*: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.*
This segment of the railroad retains typical characteristics of a type (i.e. a railroad). However, it has been modernized and does not embody the distinctive characteristics of a period or a historical method of construction. No indication was found that this segment is the work of a master and it does not possess high artistic values. Because the segment is modern it would not contribute to a potentially significant and distinguishable entity, such as a historic district. It is not significant under these criteria.

National Register Criterion D and California Register Criterion 4*: Has yielded, or may be likely to yield, information important in prehistory or history.*

Railroads are well documented, and this segment is modern. Therefore, if cannot yield new historical information regarding the historical construction or design of railroads. It is not significant under these criteria.

State of California - Resource Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # 36-006847
HRI #
Trinomial

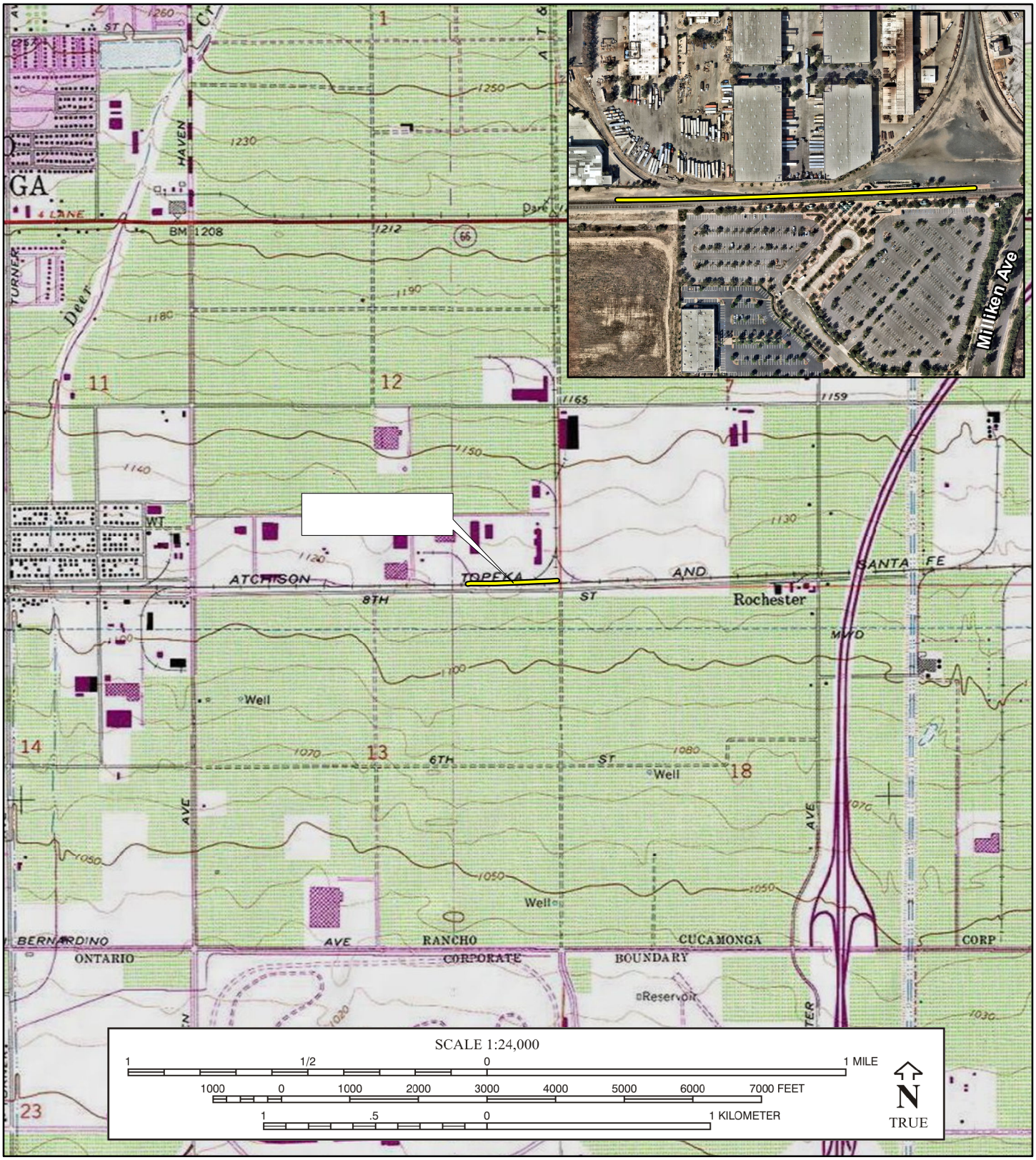
Page 5 of 5

*Resource Name or ATSF RR (Segment)

*Map Name: USGS 7.5' Quad, Guasti; Nearmap

*Scale: 1:24000

*Date of Map: 1981; 2022



I:\AEM2201\GIS\MXD\Cultural\DPRlocation_No_36_006847.mxd (11/15/2022)

DPR 523J (1/95)

***Required Information**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Y/6Z
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 5 Resource Name or #: 4265 East Guasti Road

P1. Other Identifier: APE Map Reference No, 2; Travel Centers of America; Ontario West Travel Center

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Bernardino **and** (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** *Guasti, CA* **Date:** 1981 **T**1S; **R**7W; **Section:** 24; S.B.**B.M.**

c. Address: 4265 East Guasti Road **City:** Ontario **Zip:** 91761

d. UTM: Zone: 11; _____mE/ _____mN (G.P.S.)

e. Other Locational Data: Assessor Parcel Number (APN) 021021215; northwest corner of East Guasti Road and Milliken Avenue

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This property includes two fuel station canopies, a one- and two-story commercial building, a modern concrete block truck service building, a modern metal trailer service building, and related parking lots. The commercial building has multiple suites and includes three restaurants and offices. It is irregular in plan and surmounted by a multi-level flat roof with no eaves. The exterior walls are painted concrete, painted concrete block, stucco, and faux stone. There are metal screens on the roof and the majority of the windows visible from the parking areas are typical aluminum-framed storefronts with fixed glass. There appear to be some wood-framed double-hung windows in the west elevation of the second-story portion of the building. The building has been extensively altered and, with the exception of a small part of the second story, has a completely modern appearance. In addition, the facility has been expanded with the addition of modern buildings and additional parking lots. The overall condition is good, but the integrity is low.

***P3b. Resource Attributes:** (List attributes and codes) HP6-1-3 story commercial property

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

See Continuation Sheet

P5b. Description of Photo: (View, date, accession #) Top: overview of commercial building and fuel station canopies (view north 9/30/22). Bottom: commercial building (view northwest, 9/30/22)

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1969 (County of San Bernardino n.d.)

***P7. Owner and Address:**
Unknown

***P8. Recorded by:** (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

***P9. Date Recorded:** 9/30/22

***P10. Survey Type:** (Describe)
Intensive-level Section 106 and CEQA compliance

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Ontario International Airport (ONT) Connector Project Cultural Resources Identification and Eligibility Assessment, 2024. Prepared by LSA.

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Y/6Z

***Resource Name or #** (Assigned by recorder) 4265 East Guasti Road

B1. Historic Name:

B2. Common Name: Travel Centers of American Ontario West

B3. Original Use: Truck stop **B4. Present Use:** Truck stop

***B5. Architectural Style:** Vernacular (altered)

***B6. Construction History:** (Construction date, alterations, and date of alterations) No original building permits were found for this property; however, according to the County of San Bernardino Property Information Management System Internet Site, the building was constructed in 1969 (County of San Bernardino). Following are relevant permits (City of Ontario var.).

2000 Permit issued for a tenant improvement, including new entry doors.
2001 Permits issued for grading and storm drain for new building, replacement of sign on pole, and installation of two parking lot pole lights.
2002 Permits issued to construct a 15' X 40' detached shade structure (smokers canopy) and install 10 illuminated signs, reface 2 signs, awnings, and neon outline.
2003 Permit issued to install 131-square-foot parking booth, site work asphalt, and restriping.
2006 Permits for a 320-square-foot equipment building, electrification system, overhead trusses and electric (Rows A, B, C, D), freestanding aluminum canopy (10' X 32'), replacement of steel-roof structure and fill in a portion of the existing wall opening, and 3,960 square-foot truck service bay.

See Continuation Sheet

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** _____ **Original Location:** _____

***B8. Related Features:**

B9a. Architect: None found. **b. Builder:** None found.

***B10. Significance: Theme:** NA **Area:** City of Ontario

Period of Significance: 1969 **Property Type:** Commercial **Applicable Criteria:** NA

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

This 1969 truck stop, which includes a recently remodeled commercial building, two free-standing fuel station canopies, a concrete block truck service building, a modern metal building for servicing trucks, and parking areas, does not appear to meet the criteria for listing in the National Register of Historic Places (National Register) or California Register for Historical Resources (California Register). It is not a "historic property" pursuant to Section 106 or a "historical resource" for purposes of the California Environmental Quality Act (CEQA). *See Continuation Sheet*

Historic Context. Please refer to the related report for a detailed historic context (see P11 on page 1).

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

City of Ontario
Var. Building permits provided by the City of Ontario in October 2022.

County of San Bernardino
n.d. Property Information Management System Internet Site. Accessed in September 2022 at: http://www.sbcounty.gov/assessor/pims/(S(tx1ez2nojmyewpsgcptztrg1))/PIMSINTERFACE.ASPX

B13. Remarks:

***B14. Evaluator:** Casey Tibbet, M.A., LSA Associates, Inc., 1500 Iowa Avenue, Suite 200, Riverside, CA 92507

***Date of Evaluation:** November 2022

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

Refer to Location Map

P5a. Photo (continued from page 1)

Commercial building, view northeast 9/30/22.

Overview showing fuel station canopies and a part of the commercial building, view northwest 9/30/22.

***B6. Construction History:** (continued from page 2)

2008 Permit for upgrades to fuel dispensing station and 6' tall CMU enclosure.
2010 Permits to relocate monument sign, expand driveway and adjacent paving, and install three light poles.
2012 Permit for an equipment addition as part of tenant improvement for Taco Bell.
2016 Permits issued for installation of one 275-gallon and one 500-gallon bulk oil aboveground storage tank and to reface canopy and signage.
2021 Permit issued to reface canopy and install two sets of illuminated channel letters for "TA."
2022 Permit for a new metal building for trailer repair shop with fencing to create outdoor storage.

***B10. Significance:** (continued from page 2)
This property is being evaluated for historical significance under the criteria for listing in the National Register and California Register. Since the two sets of criteria are so similar, they have been grouped together to avoid redundancy.

National Register Criterion A: *Associated with events that have made a significant contribution to the broad patterns of our history.*
California Register Criterion 1: *Associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage.*

This property dates to 1969, and as a truck stop located just south of Interstate 10, is associated with the construction of the interstate highway system, which generally began in 1956 and was completed in 1992. However, the alterations to and expansion of the facility have resulted in a completely modern appearance that does not convey an association with the historic period. Therefore, it is not significant under these criteria either individually or as a contributing element to a historic district should a district be identified.

See Continuation Sheet

***B10. Significance:** (continued from page 3)
***National Register Criterion B**: Associated with the lives of persons significant in our past.*
***California Register Criterion 2**: Associated with the lives of persons important in our past.*

No information was found for the historic-period owners of this property. However, even if the property was associated with noteworthy persons in history, the extensive alterations and expansion of the facility have significantly impaired its ability to be a good representation of the work of such persons. It is not significant under these criteria.

***National Register Criterion C**: Embodies the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction.*
***California Register Criterion 3**: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.*

This nondescript, altered property does not embody the distinctive characteristics of an architectural style, type, period, or method of construction. No evidence was found that it is the work of a master, and it does not possess high artistic values. It is not part of a distinguishable entity with the potential to be identified as a historic district. It is not significant under these criteria.

***National Register Criterion D and California Register Criterion 4**: Has yielded, or may be likely to yield, information important in prehistory or history.*

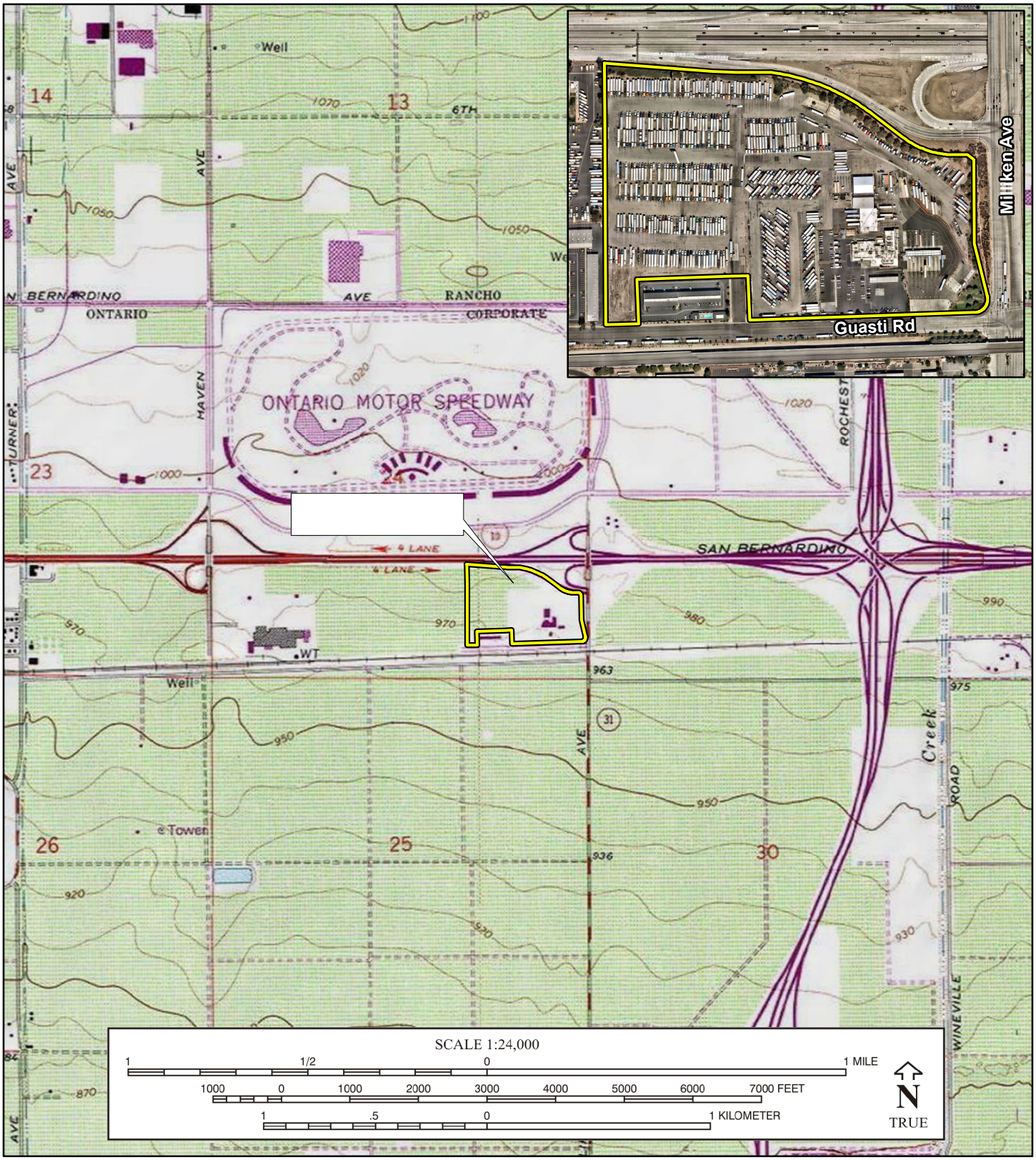
This property was constructed in 1969 using common methods and materials. It is unlikely to have the potential to yield any new or important historical information. It is not significant under these criteria.

State of California - Resource Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

*Resource Name or 4265 East Guasti Road

*Map Name: USGS 7.5' Quad, Guasti; Nearmap *Scale: 1:24000 *Date of Map: 1981; 2022



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DPR 523J (1/95)

***Required Information**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 36-010330
HRI #
Trinomial
NRHP Status Code 6Y/6Z
Other Listings
Review Code Reviewer Date

Page 1 of 6 Resource Name or #: SPRR (Segment)

P1. Other Identifier: APE Map Reference No. 3

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Bernardino **and** (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** *Guasti, CA* **Date:** 1981 **T**1S; **R**7W; **Sections:** 19, 23, 24, 26, and 27; S.B.**B.M.**

c. Address: **City:** Ontario **Zip:**

d. UTM: Zone: 11; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel#): Assessor Parcel Numbers (APNs) 011337102, 021120114, 021055105, 021021202, and 023804217

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This approximately 3.25-mile-long railroad segment is oriented east-west and the alignment dates to circa 1880. It extends roughly from Hellman Road (south of the tracks) east nearly to Interstate (I) 15. Beginning at the west end of the segment, there is one set of tracks with concrete ties. Just past Archibald Avenue, the tracks split to the south, and from that point heading east, there are two sets of parallel tracks until the southern tracks join the northern tracks near the East Guasti Road cul-de-sac. From this point, there is an approximately 1.15-mile-long segment that is part of a modern grade separation over Milliken Avenue and other streets. This segment is flanked by concrete walls and the tracks are not visible from ground level. However, based on aerial photographs, this segment has a single track with concrete ties and short spurs at the west and east ends. Near the east end of the segment, just west of I-15, the track splits to the south, once again creating two parallel tracks. The setting is completely modern and includes I-15, numerous commercial and manufacturing buildings, restaurants, a truck stop, Ontario International Airport, Cucamonga Channel, and a few undeveloped parcels.

***P3b. Resource Attributes:** (List attributes and codes) AH7 Railroad Grade

***P4. Resources Present:** ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

See Continuation Sheet

P5b. Description of Photo: (View, date, accession #) Modern grade separation at Milliken and Guasti, view southeast (9/30/22)

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
Circa 1880

***P7. Owner and Address:**
Southern Pacific Transportation Company/Southern Pacific Railway Company

***P8. Recorded by:** (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

***P9. Date Recorded:** 9/30/22

***P10. Survey Type:** (Describe) Intensive-level Section 106 and CEQA compliance

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Ontario International Airport (ONT) Connector Project Cultural Resources Identification and Eligibility Assessment, 2024. Prepared by LSA.

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6Y/6Z

*Resource Name or # (Assigned by recorder) SPRR (Segment)

B1. Historic Name:

B2. Common Name:

B3. Original Use: Railroad **B4. Present Use:** Railroad

***B5. Architectural Style:** NA

***B6. Construction History:** (Construction date, alterations, and date of alterations)
Circa 1880

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**

***B8. Related Features:**

B9a. Architect: **b. Builder:**

***B10. Significance: Theme:** Transportation **Area:** City of Ontario
Period of Significance: circa 1880-1972 **Property Type:** Railroad **Applicable Criteria:** NA
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

This approximately 3.25-mile-long segment of the SPRR does not appear to meet the criteria for listing in the National Register of Historic Places (National Register) or California Register of Historical Resources (California Register) either individually or as a contributor to the railroad as a whole. It is not a historic property under Section 106 or a historical resource as defined by the California Environmental Quality Act (CEQA). *See Continuation Sheet*

Historic Context. Please refer to the related report (see P11 on page 1).

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

B13. Remarks:

***B14. Evaluator:** Casey Tibbet, M.A., LSA Associates, Inc., 1500 Iowa Avenue, Suite 200, Riverside, CA 92507

***Date of Evaluation:**

(Sketch Map with north arrow required.)

Refer to Location Map

(This space reserved for official comments.)

*Required information

P5a. Photo (continued from page 2)

SPRR tracks looking east toward I-15 from a point approximately 1,900 feet east of Milliken Avenue, just east of the wall along the north side of the tracks (9/30/22).

Wall associated with the modern grade separation along the north side of the SPRR tracks approximately 1,900 feet east of Milliken Avenue. Taken facing west-southwest (9/30/22).

Wall associated with the modern grade separation along the north side of the SPRR tracks south of Guasti Road near Milliken Avenue. View southwest (9/30/22).

West end of wall associated with the modern grade separation on the north side of the SPRR tracks. Taken from the Guasti Road cul-de-sac approximately 500 feet west of N. Ponderosa Avenue. View east (9/30/22).

See Continuation Sheet

P5a. Photo (continued from page 3)

SPRR tracks looking west from the Guasti Road cul-de-sac (9/30/22).

SPRR tracks taken facing east toward Haven Avenue from a point approximately 1,100 feet west of Haven Avenue (9/30/22).

SPRR tracks taken facing west from a point approximately 1,100 feet west of Haven Avenue (9/30/22). Ontario International Airport is located to the south (left side of photo).

SPRR track facing east from a point approximately 2,500 feet west of Archibald Avenue (9/30/22). Ontario International Airport is to the south (right side of photo).

***B10. Significance:** (continued from page 2)
This railroad segment is being evaluated for historic significance under the National Register and California Register criteria. Because the two sets of criteria are so similar, they have been grouped together to avoid redundancy.

National Register Criterion A: *Associated with events that have made a significant contribution to the broad patterns of our history.*
California Register Criterion 1: *Associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage.*

Railroads have made a significant contribution to the broad patterns of our history, but this segment does not appear to be associated with any specific historically significant events. This segment has compromised integrity primarily because of the approximately 1.15-mile-long modern grade separation and concrete ties. In addition, the setting is now dominated by modern development. All of this has impaired the integrity of feeling, setting, materials, design, and workmanship. As a result, the segment does (*see Continuation Sheet*)

***B10. Significance:** (continued from page 4)
not convey a strong association with any historic period and is not eligible for listing in the National Register as an individual railroad segment. In addition, due to its compromised integrity, it does not contribute to the historic fabric of the railroad as a whole. It is not significant under these criteria.

National Register Criterion B*: Associated with the lives of persons significant in our past.*
California Register Criterion 2*: Associated with the lives of persons important in our past.*

The railroad as a whole is associated with the lives of persons significant in our past, but this segment does not appear to be more closely associated with those people than any other part of the railroad. In addition, because of the alterations to this segment and its setting, it no longer conveys as strong association with the past, including those people. This segment is not significant under these criteria.

National Register Criterion C*: Embodies the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction.*
California Register Criterion 3*: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.*

The integrity of this segment of the railroad has been compromised primarily by an approximately 1.5-mile-long modern grade separation. In addition, many of the ties are concrete and the setting is now dominated by modern development. This highly altered segment is not a good representation of the historic-period railroad. The tracks do not appear to be the work of a master and they do not possess high artistic values. Because the integrity of the segment is compromised, it would not contribute to a potentially significant and distinguishable entity, such as a historic district. It is not significant under these criteria.

National Register Criterion D and California Register Criterion 4*: Has yielded, or may be likely to yield, information important in prehistory or history.*

Railroads are well documented, and this segment, which has been extensively altered and modernized, is not likely to yield new historical information regarding the construction or design of railroads. It is not significant under these criteria.

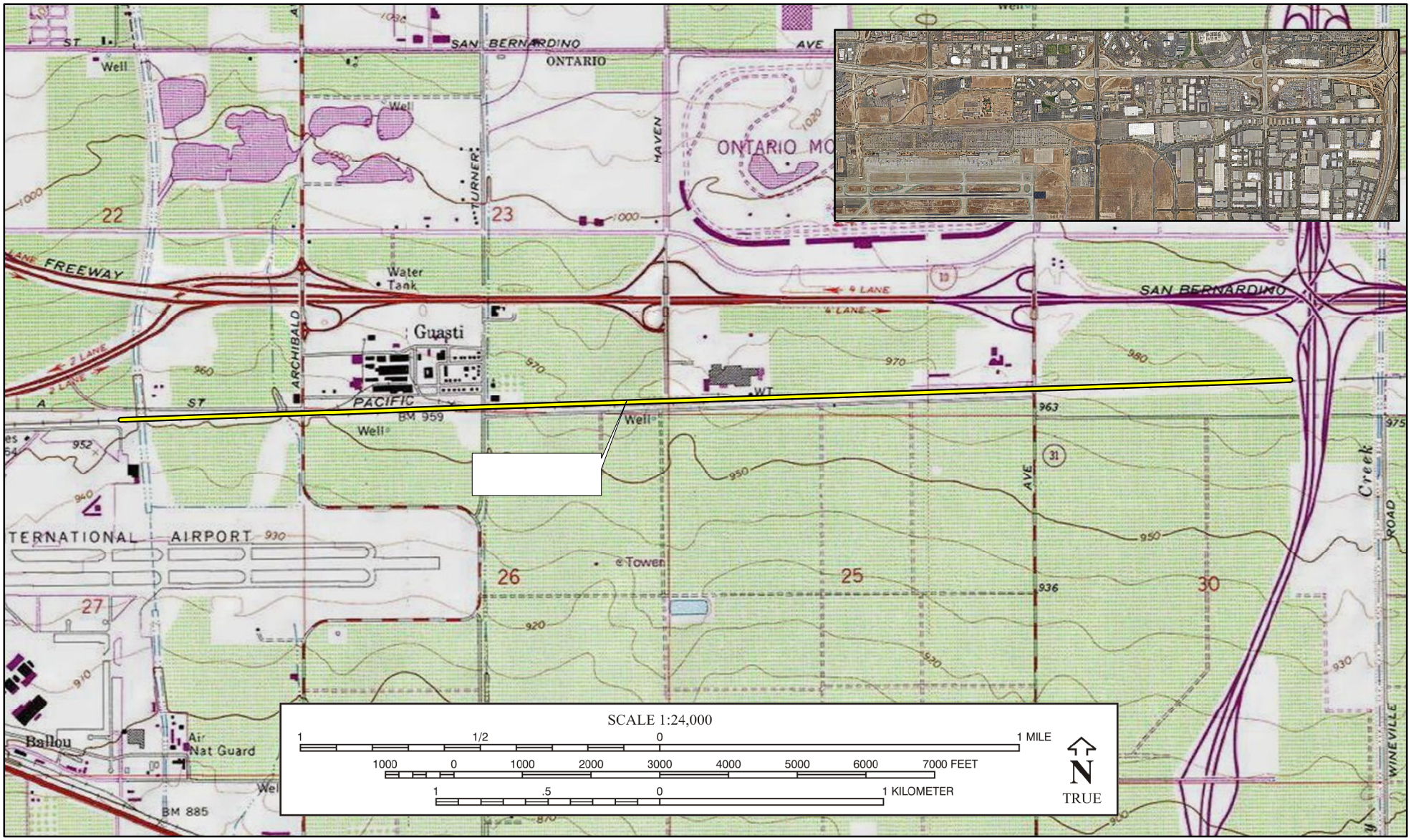
State of California - Resource Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # 36-010330
HRI #
Trinomial

*Resource Name or SPRR (Segment)

*Map Name: USGS 7.5' Quad, Guasti; Nearmap

*Scale: 1:24000 *Date of Map: 1981; 2022



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DPR 523J (1/95)

***Required Information**

Appendix F:
Construction Resources Monitoring and Treatment Plan (CRMTP)

Ontario International Airport Connector Project

ONTCONNECTOR

CULTURAL RESOURCES MONITORING AND TREATMENT PLAN

October 2024

Submitted to:
U.S. Department of Transportation
Federal Transit Administration, Region IX
888 South Figueroa Street, Suite 440
Los Angeles, CA 90017

Prepared by:

San Bernardino County Transportation Authority (SBCTA)
1170 W. Third St., Second Floor
San Bernardino, CA 92410-1715

TABLE OF CONTENTS

FIGURES

TABLES

ACRONYMS AND ABBREVIATIONS

A&P	Atlantic and Pacific Railroad
ACHP	Advisory Council on Historic Preservation
AMA	Archaeological Monitoring Area
APE	Area of Potential Effects
AT&SF	Atchison, Topeka and Santa Fe
BERD	Built Environment Resources Directory
CAA	Civil Aeronautics Authority
CFR	Code of Federal Regulations
CRMTP	Cultural Resources Monitoring and Treatment Plan
DPR	Department of Parks and Recreation
ESA	Environmentally Sensitive Area
FTA	Federal Transit Administration
GPS	Global Positioning System
HAZWOPER	Hazardous Waste Operations and Emergency Response
I-10	Interstate 10
IVC	Italian Vineyard Company
MLD	Most Likely Descendant
NAGPRA	National American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
ONT	Ontario International Airport
OSHA	Occupational Safety and Health Administration
PI	Principal Investigator
Project	Ontario International Airport Connector Project
SBCTA	San Bernardino County Transportation Authority
SCCIC	South Central Coastal Information Center
SHPO	State Historic Preservation Officer
SOI	Secretary of the Interior
SPRR	Southern Pacific Railroad
TBM	tunnel boring machine
UPRR	Union Pacific Railroad
WEAP	Worker's Environmental Awareness Program
WPA	Works Progress Administration

1 INTRODUCTION

This Cultural Resources Monitoring and Treatment Plan (Plan; CRMTP) has been prepared to guide the protocol for cultural resource monitoring and cultural resources treatment during construction activities associated with the Ontario International Airport (ONT) Connector Project (Project), proposed by the San Bernardino County Transportation Authority (SBCTA). This Project includes federal financial assistance through the U.S. Department of Transportation Federal Transit Administration (FTA). As such, the Project is a federal undertaking pursuant to 36 Code of Federal Regulations Part 800.16(y). The FTA is the Lead Agency under the National Environmental Policy Act (NEPA).

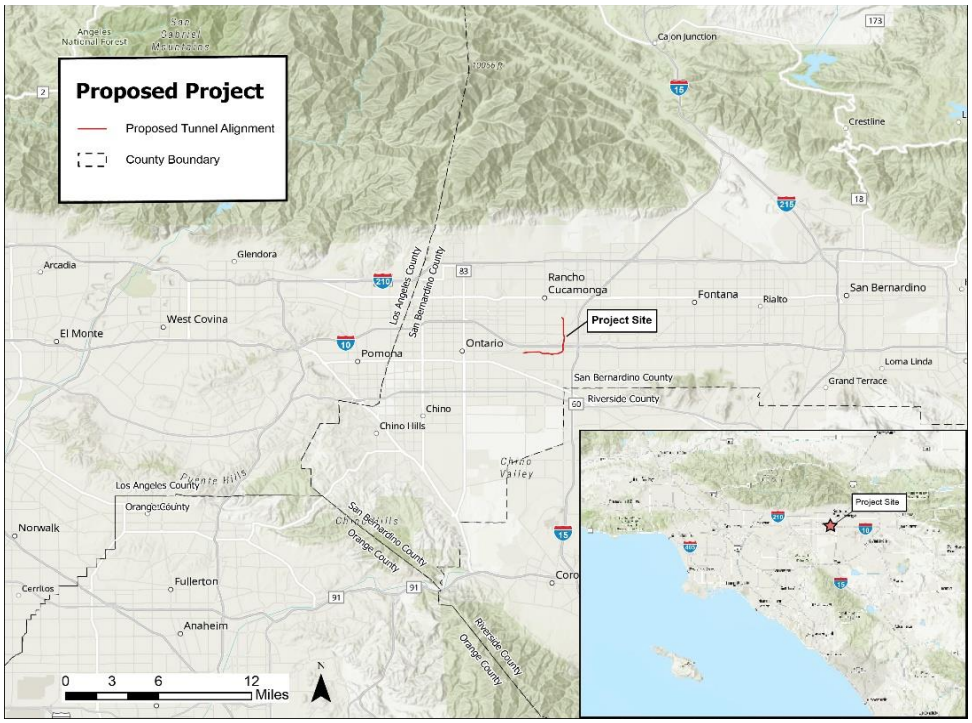
FTA, in cooperation with SBCTA, have prepared this to assure compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (36 CFR Part 800), and provides a framework for cultural resources monitoring, discovery, evaluation and assessment of adverse effects, and treatment protocols for cultural resources that may be found within the Project's Area of Potential Effects (APE) during the construction phase of the Project.

1.1 PROJECT LOCATION AND DESCRIPTION

The Project would construct a 4.2-mile-long transit service tunnel directly connecting the SCRRA Cucamonga Metrolink Station to ONT (Figures 1 and 2). The proposed Project would expand access options to ONT by providing a direct transportation connection from the Cucamonga Metrolink Station to ONT.

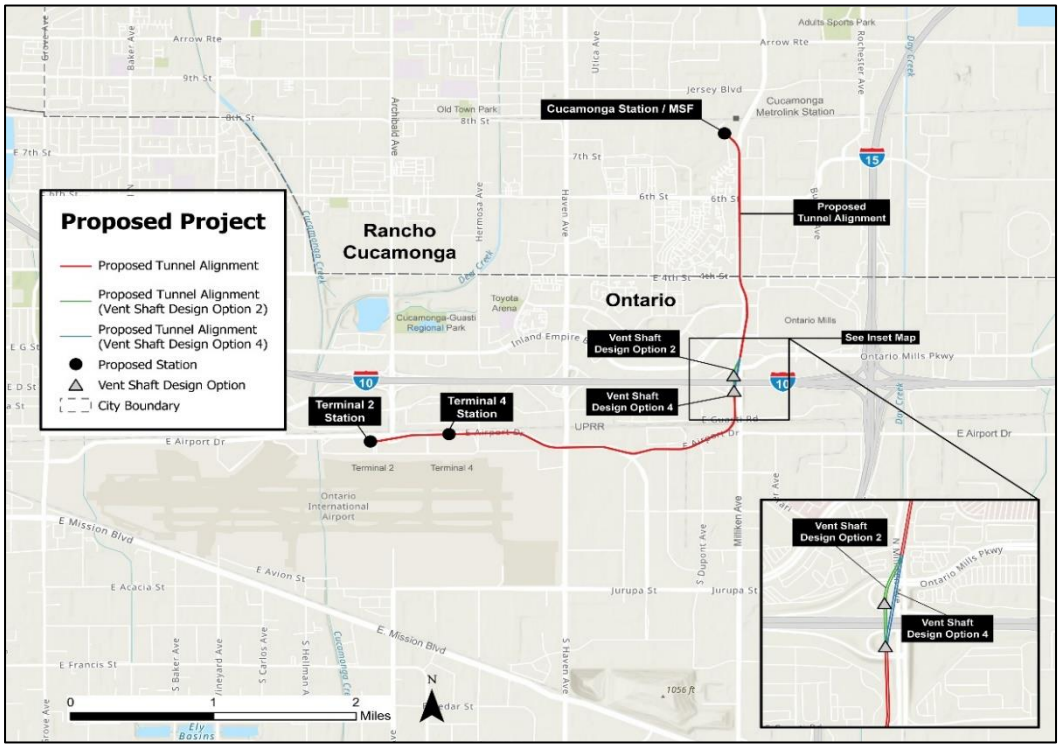
The proposed Project consists of three key components: stations, a tunnel, and ventilation shafts. The proposed Project includes the Cucamonga Metrolink Station, ONT, and the 4.2-mile-long footprint of the underground tunnel that generally travels south along Milliken Avenue and crosses beneath 6th Street in the City of Rancho Cucamonga, as well as Fourth Street, Interstate 10 (I-10), and the Union Pacific Railroad (UPRR) in the City of Ontario before traveling west beneath East Airport Drive to connect the Cucamonga Metrolink Station to ONT.

Figure 1: Regional Location Map



Source: AECOM 2024

Figure 2: Proposed Project/Build Alternative Site



Source: AECOM 2024

Stations

The proposed Project includes three passenger stations (Figure 2). One station would serve the Cucamonga Metrolink Station, and two stations would serve ONT within the existing parking lots located across from Terminals 2 and 4. The proposed stations would be connected to the bored tunnel via a cut-and-cover structure and an at-grade guideway. A construction staging area would be required at each of the three proposed Project stations.

Tunnel

The proposed Project would construct a single tunnel (24-foot inner diameter bi-directional tunnel) between the Cucamonga Metrolink Station and ONT (Figure 2). The depth of the tunnel is estimated to be approximately 70 feet below the ground surface.

A tunnel boring machine (TBM) would be launched from either the existing ONT parking lot near Terminal 2 or the Cucamonga Metrolink Station to construct the tunnel (the TBM launch and retrieval sites are the cut-and-cover locations at the existing ONT Terminal 2 parking lot and the Cucamonga Metrolink Station – Figure 3). Vehicle ramps connecting to the tunnel would be constructed via direct excavation as well. Haul trucks would remove excavated material from the launch site.

Utility relocations are not anticipated for the construction of the proposed tunnel. However, at the proposed maintenance facility at the proposed Rancho Cucamonga Station, overhead Southern California Edison lines would need to be relocated underground and horizontally. The remainder of the utility relocations would be associated with the emergency access shaft.

Ventilation Shafts

Two Vent Shaft Design Options with different access points are being considered for the proposed Project (Figure 2). The Mid-Tunnel Ventilation & Egress Facility will consist of both underground and above-ground structures. The underground shaft will extend to the tunnel level, and the surface structure will consist of a one-story structure above ground. One ventilation shaft would be constructed along the tunnel alignment.

Purpose and Need

The purpose of the proposed Project is to expand access options to ONT by providing a direct transportation connection from Cucamonga Metrolink Station to ONT. This new connection would increase mobility and connectivity for transit patrons, improve access to existing transportation services, provide a connection to future Brightline West service to/from ONT, and support the use of clean, emerging technology for transit opportunities between Cucamonga Metrolink Station and ONT. More specifically, the proposed Project's objectives are as follows:

- Expand access options to ONT by providing a convenient and direct transit connection between ONT and the Cucamonga Metrolink Station;
- Reduce roadway congestion by encouraging a mode shift to transit from single-occupancy vehicles and provide reliable trips to and from ONT; and
- Support the use of clean emerging technology opportunities between the Cucamonga Metrolink Station and ONT.

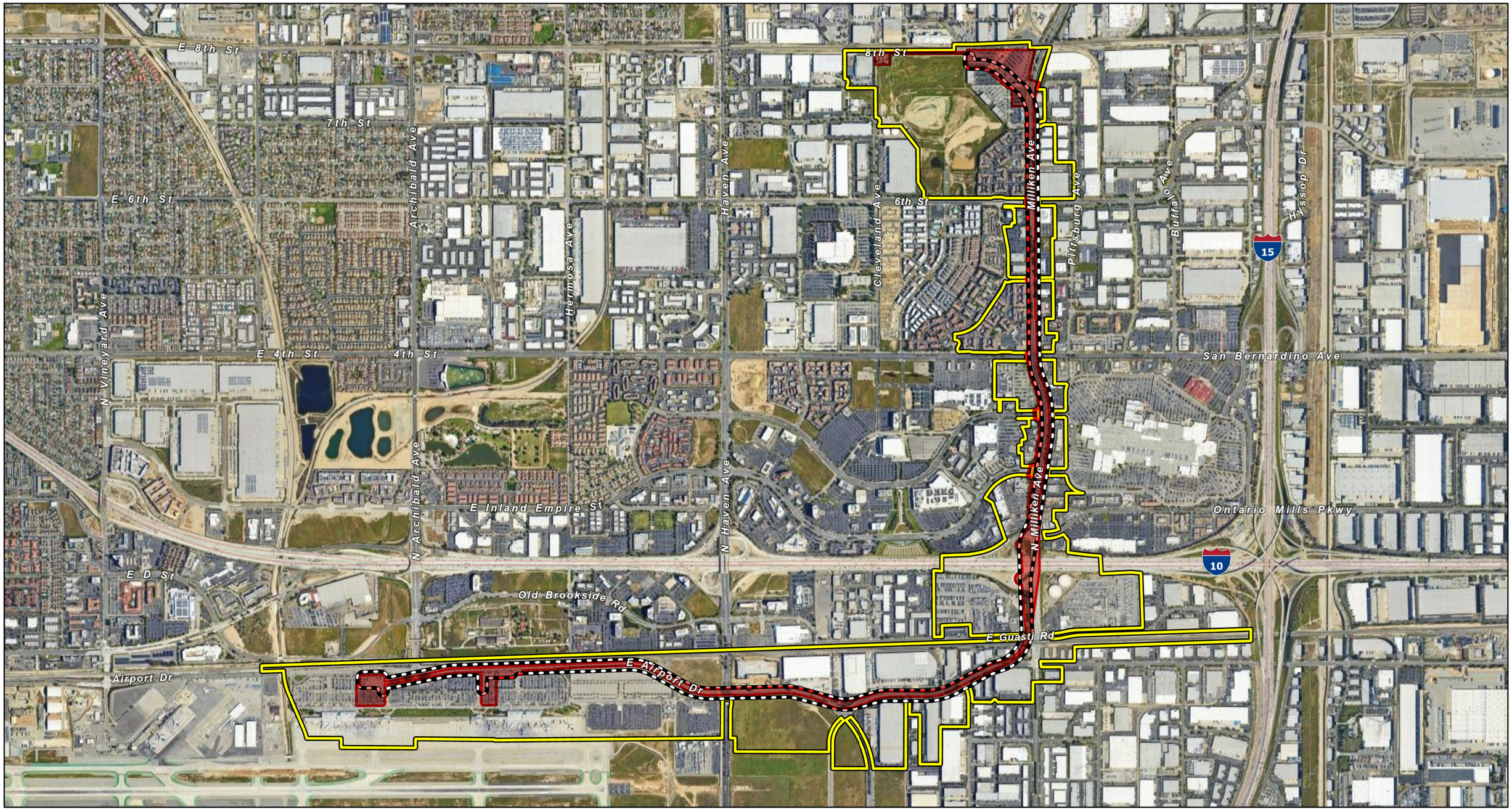
The proposed Project need includes:

- Lack of direct transit connection coinciding with Metrolink trains and peak airport arrival and departure schedules;
- Roadway congestion affecting trip reliability and causing traffic delays;
- High number of vehicle miles traveled resulting from ONT travelers and lack of a direct transit connection; and
- Increasing greenhouse gas emissions within communities surrounding ONT from vehicle travel to and from ONT.

1.1.1 Area of Potential Effects

The Area of Potential Effects (APE; Figure 3) is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist [36 CFR Part 800.16(d)]. The APE was delineated to include all areas that may be directly or indirectly affected by the construction and operation of the proposed Project. Direct effects occur as a result of the undertaking with no intervening cause and include ground disturbance as well as visual, auditory, atmospheric, and vibrational effects. Indirect effects are reasonably foreseeable effects that occur later in time or farther removed in distance. In most areas, the depth of ground disturbance is expected to be approximately 70 feet.

Based on studies prepared for the proposed Project, vibration associated with boring for the tunnel is anticipated to be detectable to fragile buildings a maximum of 80 feet from the tunneling activities; this area has been depicted as the "potential vibration zone" on the APE map. While most of the proposed Project would be underground, the proposed stations will be a maximum of 40 feet in height. This height was taken into consideration when identifying the potential for visual effects. At the request of the FTA, properties where there are potential effects have been included in their entirety regardless of whether the proposed Project has the potential to affect the entire property. The surface area within the APE that may be subject to physical effects was surveyed for archaeological resources and the entire APE was surveyed for built environment cultural resources. The FTA submitted the APE to interested parties on May 29, 2024, and the State Historic Preservation Officer (SHPO) on June 10, 2024, for review and concurrence pursuant to Section 106 of the NHPA.



SOURCE: Google Maps (2023); AECOM (2024)

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1.2 PROPOSED CONSTRUCTION ACTIVITIES

Implementation of the Project will require activities such as site preparation and grading, utility relocations and associated trenching, pile drilling, installation of new track and building construction for the maintenance and storage facility, and installation of stormwater best management practices.

Cut-and-cover activities involve the excavation of a shallow underground guideway from the existing street surface. Four cut-and-cover sites would occur at each proposed station and at the vent shaft site. During the construction phase, the cut-and-cover sites at Cucamonga Metrolink Station and Terminal 2 at ONT would be used as the TBM launching and receiving pits.

As noted in Section 1.1, the proposed Project includes three passenger stations. A construction staging area would be required at each of the three proposed Project stations and the access shaft.

2 CULTURAL CONTEXT OF THE APE

In October 2024, LSA conducted a study and developed a report, Ontario International Airport (ONT) Connector Project Cultural Resources Identification and Eligibility Assessment. A summary of the methods and results of the report is summarized below:

Prehistory

Chronologies of prehistoric cultural change in Southern California have been attempted numerous times, and no single description is universally accepted, as the various chronologies are based primarily on material developments identified by researchers familiar with sites in a particular region, and variation exists essentially due to the differences in those items found at the sites (Moratto 2004). Small differences occur over time and space, which combine to form patterns that are variously interpreted.

Currently, two primary regional culture chronology syntheses are commonly referenced in the archaeological literature. The first, Wallace (1955), describes four cultural horizons or time periods: Horizon I – Early Man (9000–6000 BC, Horizon II – Milling Stone Assemblages (6000–3000 BC), Horizon III— Intermediate Cultures (3000 BC – AD 500), and Horizon IV – Late Prehistoric Cultures (AD 500–historic contact). This chronology was refined (Wallace 1978) using absolute chronological dates obtained after 1955.

The second cultural chronology (Warren 1968) is based broadly on Southern California prehistoric cultures and was also revised (Warren 1984; Warren and Crabtree 1986). Warren's (1984) chronology includes five periods in prehistory: Lake Mojave (7000–5000 BC), Pinto (5000–2000 BC), Gypsum (2000 BC–AD 500), Saratoga Springs (AD 500–1200), and Protohistoric (AD 1200–historic contact). Changes in settlement pattern and subsistence focus are viewed as cultural adaptations to a changing environment, which begins with gradual environmental warming in the late Pleistocene; continues with the desiccation of the desert lakes, followed by a brief return to pluvial conditions; and concludes with a general warming and drying trend, with periodic reversals that continue to the present (Warren and Crabtree 1986).

Ethnography

The proposed Project area is within the traditional cultural territories of the Gabrielino (Kroeber 1925; Heizer 1968). Tribal territories were somewhat fluid and changed over time. The first written accounts of the Gabrielino are attributed to the mission fathers, and later documentation was by Johnston (1962), Blackburn (1962–1963), Hudson (1971), and others.

The territory of the Gabrielino included portions of Los Angeles, Orange, and San Bernardino counties during ethnohistoric times, and also extended inland into northwestern Riverside County (Kroeber 1925;

Heizer 1968). It encompassed an extremely diverse environment that included coastal beaches, lagoons and marshes, inland river valleys, foothills, and mountains (Bean and Smith 1978).

The Gabrielino caught and collected seasonally available food resources and led a semi-sedentary lifestyle, living in permanent communities along inland watercourses and coastal estuaries. Individuals from these villages took advantage of the varied resources available. Seasonally, as foods became available, native groups moved to temporary camps to collect plant foods such as acorns, buckwheat, chía, berries, and fruits, and to conduct communal rabbit and deer hunts. They also established seasonal camps along the coast and near bays and estuaries to gather shellfish and hunt waterfowl (Hudson 1971).

The Gabrielino lived in small communities, which were the focus of family life. Patrilineally linked, extended families occupied each village (Kroeber 1925; Bean and Smith 1978). Both clans and villages were apparently exogamous, marrying individuals from outside the clan or village (Heizer 1968). Gabrielino villages were politically independent and were administered by a chief, who inherited his position from his father. Shamans guided religious and medical activities, while group hunting or fishing was supervised by individual male specialists (Bean and Smith 1978).

The nearest historically known Gabrielino community was *Tooypinga,* located approximately 9 miles west of the ASA (McCawley 1996).

History of Rancho Cucamonga Settlement

For the bulk of the Spanish and Mexican periods (1769–1848) in California history, the entire San Bernardino Valley, including the present-day Rancho Cucamonga and Ontario areas, was considered part of the land holdings of Mission San Gabriel. In the 1830s and 1840s, during secularization of the mission system, the Mexican authorities in Alta California made a number of large land grants of former mission properties in the valley. Among them was the Cucamonga Rancho, which was granted to Tiburcio Tapia in 1839 and included the proposed Project APE. That same year, Tapia built an adobe house on Red Hill, which is a small hill located more than 3 miles northwest of the proposed Project APE (Beattie and Beattie 1951:143). Until Tapia's death in 1845, the rancho was used primarily as a stock range with cattle, sheep, and horses, but it also included a small vineyard (parts of which were later incorporated into the Thomas Vineyard Company Winery) and other agricultural crops (Beattie and Beattie 1951:143).

In 1854, 6 years after California became part of the United States (1848), Lieutenant A.W. Whipple, who was in the area looking for a suitable railroad route, noted that the Prudhomme house (formerly Tapia's house) was visible on a grassy knoll with cultivated fields and vineyards below it (Beattie and Beattie 1951:147). In 1858, John Rains purchased the Cucamonga Rancho and "planted a new vineyard of 150,000 vines," which was laid out in 10-acre lots with roads between them (Beattie and Beattie 1951:148). Within a short time, Rains found himself in debt, and in 1862, he was ambushed and murdered (Beattie and Beattie 1951). Upon his death, his wife inherited the property.

Around 1870, some of the western lands of the rancho, along with water rights, were obtained by the Cucamonga Land Company (Ingersoll 1904:615). The company sold the land (with water) in 10-acre to 80-acre parcels (Ingersoll 1904:615)). Around the same time, the Cucamonga Homestead Association was organized with the Hellman brothers as the principal stockholders (Ingersoll 1904:615)). The association divided the land into 10-acre and 20-acre tracts, and in 1870, about 20 of the lots were sold and around 50 acres were irrigated (Ingersoll 1904:616). Around the same time, "the Cucamonga Vineyard Company was formed by the owners of the Rancho, to irrigate the old vineyard property" (Ingersoll 1904:616.).

In the 1880s, a small commercial core sprang up along Archibald Avenue about 2 miles northwest of the proposed Project APE (Snow and McGee 2009). The area was called Cucamonga and was connected to the Santa Fe Railway and North Town (south of Cucamonga) primarily by Archibald Avenue. With the exceptions of ONT, the small community of Guasti, the railroads, and a few wells, as late as 1966, the proposed Project APE and surrounding area largely remained undeveloped except perhaps as agricultural land (United States Geological Survey [USGS] 1966). By 1973, the only major new development in and around the APE was Ontario Motor Speedway, which was bounded by Milliken Avenue on the east, I-10 on the south, Haven Avenue on the west, and San Bernardino Avenue (now 4th Street) on the north (USGS 1972). In 1977, 59 percent of the people who voted approved combining the three communities of Cucamonga, Etiwanda, and Alta Loma. As a result, Rancho Cucamonga officially became a city (*Daily Report* 1981). Since then, Rancho Cucamonga has continued to be one of the fastest-growing cities in the Inland Empire, with the proposed Project APE and surrounding area transitioning from agricultural lands to suburban development beginning in the 1980s.

History of Ontario Settlement

Except where noted, the following is excerpted and condensed from the *Ontario International Airport Historic Context Statement* prepared for the City of Ontario by ASM Affiliates (ASM Affiliates 2017:15-21).

The area that became the City of Ontario was part of the Mission San Gabriel holdings during the Spanish Period and the Cucamonga Rancho during the Mexican Period. It was eventually acquired by a group of Los Angeles investors who experimented with a variety of commercial crops before settling on selling 10-acre plots suitable for farming. From the 1870s to the end of World War II (WWII), land in this area was dominated by agriculture, including vineyards, citrus, and other crops, as well as dairy farms.

The Ontario Model Colony was founded in 1882 by Canadian brothers George, William, and Charles Chaffey. The Chaffey brothers set up an irrigation system that channeled water from the canyons of Mount San Antonio (also known as Mt. Baldy) to the tillable land. They set aside 1 square mile for the town site and reserved half of the land for an agricultural college (Chaffey College), selling the rest parcel by parcel. Between 1882 and 1889, several major companies were established, including Armstrong Nurseries, C.C. Graber Olive Company, and Hotpoint, which became General Electric. The City of Ontario incorporated in 1891, and by 1910, it had a post office, a library, and a busy downtown.

In the 1920s, the largest business was a forerunner of Sunkist Growers, Inc., a subsidiary of the California Fruit Growers Exchange. Sunkist remained Ontario's largest employer through the 1950s. By 1957, a third of the local labor force worked in the manufacturing sector at companies including the massive Kaiser Steel plant and Lockheed. Like most of California, Ontario's population soared in the post-WWII period, and soon, most of the citrus groves and vineyards were replaced with residential development, schools, shopping centers, and other suburban amenities. By the late 1950s, Ontario began to expand to accommodate the growing population that more than doubled between 1951 and 1960.

Guasti

In 1901, Italian immigrant Secondo Guasti, purchased 4,000 acres of land in South Cucamonga. This land located between present day Interstate 10 and the 60 Freeway, became home to Guasti's *Italian Vineyard Company* (IVC) where he began construction on the winery and houses for the workers. By 1910, the town of South Cucamonga was changed to Guasti. The IVC was more than just a vineyard, but was considered an *educational institution,* and *"an example that can be followed by others"* in a 1922 edition of the *Colton Daily Courier* (Clucas, 1979:221). Guasti developed a village on this plot of land by establishing living quarters, firehouse, post office, a school for the children of the town, and successful dairy and swine departments (Straight, 2012). In its prime, the IVC employed 350 to 400 men during the season and annual payroll for the company in 1922 was $220,000 (Clucas, 1979). In 1924 after establishing his company town, he decided to begin construction of a church, similar to the Italian church in Asti where he was born. The church is still in operation and known as the San Secondo d'Asti Catholic Church.

In 1932, following the death of Secondo Guasti Jr., the IVC faced difficult times due to the changing of administration. During the prohibition era, the IVC merged with other wineries to form Fruit Industries. Near the end of the prohibition era, the IVC severed ties with Fruit Industries, but two of its original buildings continued to operate under the name Fruit Industries. In 1945, Garret & Company purchased the IVC of Guasti (Clucas, 1979:74). In the mid-20th century, Guasti was annexed into the City of Ontario.

Ontario International Airport

In 1923, a local flying club landed an airplane on a dirt field between South San Antonio and South Mountain avenues and the UPRR and SPRR tracks, approximately 3 miles east of the APE and ONT (ASM Affiliates 2017:17). These early flying enthusiasts named the strip Latimer Field after a nearby orange packing facility. In 1929, the City purchased 30 acres 3 miles east of Latimer Field and began development of a full-fledged airport at the southwest corner of today's ONT. The new airport was known as Ontario Municipal Airport. The new airfield's first hangar and a 1,200-by 700-foot-long runway were built in 1936 by Carl von Darnell and his partners, who leased the land from the City and operated a flight school. In 1939, Arthur C. Nelson operated the flight school, which was subsidized through a program offered by the Civil Aeronautics Authority (CAA), a federal agency tasked with training military pilots in anticipation of war with Germany.

In 1940, the City expanded the flying field, leasing 405 acres of nearby Ballou Ranch, which it annexed along with several neighboring parcels the following year. This was done in consultation with the CAA and the Works Progress Administration (WPA) and approved by President Roosevelt under WPA Application No. 50223. In 1942, the WPA began extensive improvements, including construction of two concrete runways, drainage structures, roadways, lighting, water supply and storage facilities, and lengthening and narrowing the original dirt runway. In May 1942, the United States Army Air Corps (now the Air Force) acquired most of the facility for wartime use. In full operation, the military facility included approximately 875 acres, about 350 of which were owned by the Army. At the end of the war, the California Air National Guard established a training facility on 30 acres at the airport and was responsible for further expansion of runways through 1966.

In 1945, the City of Ontario began development of a master plan that included the airport as a major element. At that time, Ontario Municipal Airport was the only airfield in Southern California capable of accommodating large, heavy aircraft and was already used for transporting cargo to Asia; in recognition of this, the federal government designated the airport as an official international port of entry in 1946. In 1949, the Ontario Chamber of Commerce began actively promoting Ontario as an ideal spot for industrial development, citing the presence of a major airport, railroads, and highways; the airport's designation as an international port; and the availability of land.

The postwar years brought an expansion to accommodate increased passenger traffic as well as industry-leading aviation/aerospace companies. Some of the 1950s improvements included: a new two-story terminal (1950), a control tower (1953), a new terminal replacing the original (late 1950s), and runway expansions. In 1957, the City of Ontario set aside 2,000 acres of land adjacent to the airport for the Ontario Planned Industrial Park, located south of East Mission Boulevard (outside the APE). By 1960, 640 acres of improved land, including paved streets, curbs, sewers, and water, were in place, and a master plan for the industrial park was being developed.

In 1967, ONT became a part of Los Angeles' regional airport system (LA/Ontario International n.d.). In the 1970s, the facility added 300 acres and expanded the terminal by 22,500 square feet (ASM Affiliates 2017). In the 1980s, a new runway was built that could accommodate wide-body jets, the airport was transferred from the City of Ontario to the City of Los Angeles, and a new air traffic control tower was built. In the 1990s, a $270-million terminal expansion project was completed, and a new ground transportation center housing six on-airport car rental brands opened (ASM Affiliates 2017.). In the 2000s, the facility continued to expand, although passenger volume dropped from 6.9 million in 2004 to 3.9 million in 2014 (ASM Affiliates 2017.). In 2016, the City of Ontario regained control of ONT, ending an almost 50-year partnership (Wilson 2018).

Portions of ONT are included in the proposed Project APE. These areas consist of parking lots, a car rental building, two terminal buildings, and portions of the apron adjacent to the terminals, all of which were built after 1994 (Historicaerials.com var.)

Railroads

Prior to the invention of railroads and steam-powered locomotives, goods and people were transported primarily by horses or mules. Consequently, the travel speed and load weight were fairly limited, as were the distances most people were willing to travel. When the first passenger train began operating in 1807 in England, it represented not only a tremendous advancement in transportation and technology but also new opportunities for commerce, settlement, and wealth (Houk 2008). Within 5 years, the first commercially successful steam locomotives began operating on the Middleton Railway in England, but it was not until the mid- to late 1820s that railroads began to be constructed in the United States, facilitating westward expansion and social change (Houk 2008).

As industrialization resulted in more people living and working in urbanized areas, cities became overcrowded and polluted. After the 1830s, railroads made large tracts of land outside the cities accessible, and those who could afford to soon moved away from the cities and commuted to work by train (Tibbet 2005). As the railroads expanded, towns sprang up along the railroad routes. These towns followed the boom-and-bust cycles of the railroads and appeared across the nation mainly between 1850 and 1910 (van Ophem 2003). Some were established by the railroads as part of their strategy to populate and control the territories along their lines, while others had more organic beginnings (van Ophem 2003). True railroad towns such as Fresno were established by the railroad to promote and control business, and a regular spacing of stations helped discourage independent promoters from developing businesses in the intervening areas (van Ophem 2003). In some cases, when an established town would not give the railroad what it wanted, the railroad would simply build another town. For the most part, the towns that developed along the railroads had the reputation for being the home of rough characters, bad behavior, and unimaginative architecture. However, many of the towns managed to attract a steady stream of people looking for opportunity and a fresh start. Some, such as Tacoma, Fresno, Cheyenne, Billings, and Albuquerque, even grew into successful cities, while others remained small and relatively depressed and still others disappeared completely.

By 1840, the railroad system in the United States had expanded enough that a line to the Pacific Ocean was being seriously considered. Originally, Oregon was the destination because it was unclaimed territory and did not have the geographic obstacles that California has (namely, the Sierra Nevada) (Robertson 1998:5). However, when gold was discovered in California, priorities shifted, and in 1850, California became the nation's 31st state. In 1862, President Lincoln signed the Pacific Railway Act, which authorized construction of the first transcontinental railroad (Houk 2008). In May 1869, that railroad was completed

when the Central Pacific Railroad joined the UPRR at Promontory, Utah. As a result, throngs of land speculators and investors flooded Southern California.

The Central Pacific Railroad was financed by Collis P. Huntington, Charles Crocker, Mark Hopkins, and Leland Stanford, the so-called Big Four. In 1868, the Big Four purchased the SPRR, which had been founded in 1865 by a group of businessmen led by Timothy Phelps (American Public University n.d.). The two railroads merged in 1870, and SPRR tracks soon sprawled across Southern California, followed shortly by tracks all across the country (American Public University n.d.). From its inception, the SPRR encouraged the development of small family farms on its lands (Orsi 2005). In the 1860s through the mid-1870s, the SPRR published simple flyers advertising its lands (Orsi 2005). These promotional endeavors increased in the late 1870s and into the 1880s with the publication of detailed brochures that often included maps and were the precursors to the elaborate advertising for which the railroad would become famous (Orsi 2005). These concentrated marketing efforts greatly enhanced the role the SPRR played in the settlement and development of numerous communities along its routes. In some places, such as Modesto, Turlock, Tulare, Delano, and Colton, the SPRR was involved in the development of hotels, hospitals, churches, schools, and parks and aggressively promoted settlement (Orsi 2005:109 and 111).

Realizing the importance of rail service, in 1874, the small City of San Bernardino began a campaign to entice the SPRR to build its tracks east through San Bernardino (Yetzer 1983a). However, negotiations came to a standstill when the SPRR asked for a subsidy from the city and a guarantee that at least $100,000 in railroad bonds would be purchased without guaranteeing that the railroad would come through San Bernardino (Yetzer 1983a). The city balked at this, and as was its practice, the SPRR shifted its attention to another nearby area where it could establish or help establish a town that would then be in its debt, if not completely under its control.

Thus, in 1874, the SPRR entered into an agreement with the Slover Mountain Colony Association, constructed its line through the association's lands, and established its regional headquarters, a freight depot, and a rail yard. In return, the new town was named Colton after David D. Colton, entrepreneur and SPRR Vice President. The rail yard, which was located between La Cadena Drive and Mount Vernon Avenue, became the primary source of economic development as the largest employer in Colton (Caltrans 2015:26). Over the years, the rail yard included numerous tracks, a round house, freight and passenger depots, the Colton tower, a section house, a bunk house, a store, an office, a paint house, a paint shed, a welding shop, a mechanic shop, a machine shop, a large ice storage building, a stock corral, an oil sump, a turntable, a switch shanty, and several other sheds and repair/rebuild facilities (Sanborn Fire Insurance Map 1928). There were also commercial enterprises such as the United Citrus Grower's building, the Universal Milling Company building, and the American Railway Express Company building in the immediate vicinity (Signor 1990:78 and 79).

In the 1950s, several buildings were removed to accommodate construction of the freeway north of the depot (Historicaerials.com var.). In 1973, a new, "fully automated, computerized West Colton" rail yard was opened near the intersection of I-10 and South Riverside Avenue, to the west of the original yard, and by 1980, the freeway had been widened to its current configuration (Historicaerials.com var.; Gordon 1985:1). Construction of both of these facilities (I-10 and the West Colton rail yard) resulted in the demise of rail yard buildings, as well as further degradation of the original setting. In 2003, the West Colton yard was reportedly the largest rail yard in Southern California, with more than 1,500 rail cars coming through on a typical day (Streeter and Landsberg 2004). Over the years, many of the tracks through the original rail yard were removed or realigned, and almost all of the buildings and other rail yard features have been demolished. Today, the rail yard no longer looks anything like it did during its period of significance.

In the 1880s, the SPRR served the Southwest, including El Paso, Texas, and extended into northern Oregon (American-rails.com 2007–2010). During this period, at least in the Riverside-San Bernardino area, the SPRR had a virtual monopoly and charged exorbitant rates for freight. In the early 1880s, this made construction of the California Southern Railroad's proposed track from San Diego through Colton to San Bernardino an attractive alternative.

California Southern Railroad, an AT&SF subsidiary, was incorporated in 1880 with the intention of constructing a railroad from San Diego through Fallbrook and Temecula to San Bernardino and then over Cajon Pass to a junction with the Atlantic and Pacific Railroad (A&P), which was grading a line west along the 35th parallel to the Colorado River from points east (Robinson 2005). The A&P had an agreement with two other railroad companies, the St. Louis and San Francisco Railroad (known as the Frisco Line) and the AT&SF, to build all the way to the Pacific Ocean. In 1883, the A&P bridged the Colorado River to Needles, where it was temporarily stopped by the SPRR, which wanted to maintain a monopoly in California (Robinson 2005). To solidify its position, the SPRR quickly constructed a branch rail line from Mojave eastward to Needles (Robinson 2005:245).

Meanwhile, California Southern Railroad opened from National City to Colton on August 21, 1882, and regular service began giving San Diego an outlet to the east and to San Francisco (Ingersoll 1904:260). However, it took over a year for the tracks to be completed to San Bernardino, as SPRR "had interposed every possible obstacle—legal and material—to the advent of its rival" (Ingersoll 1904:260). In July 1883, California Southern Railroad engineer Fred T. Perris acquired the necessary track to build the crossing, but when it was delivered to National City, SPRR officials hired the sheriff there to seize it. The *San Diego Sun* later reported that while Deputy Sheriff Bradt napped at the hotel, California Southern Railroad organized a group of men to take the track and put it on a train bound for Colton (Ingersoll 1904:261). On August 9, 1883, "in the face of a danger signal held aloft by Mr. Victor, Superintendent of the California Southern Railroad," the SPRR parked an engine on the tracks in an effort to block construction of the crossing (*Los Angeles Times* 1883). One source reported that the engines were "guarded by Walter Earp [Virgil Walter Earp], one of the notorious Earp boys, who is well armed and is furnished with his meals" (*The Press and*

Horticulturalist 1883). Earp helped secure the crossing for SPRR until Robert W. Waterman (future California Governor), Sherriff Burkhart, and a posse of deputized men delivered a court order stating that California Southern Railroad had the right to cross the tracks (Cataldo 2006). A month later, "on September 13, 1883 the first California Southern train … rolled across the Southern Pacific tracks from San Diego and arrived in San Bernardino" (Cataldo 2006). It was at this time that the Colton Tower was constructed to direct traffic at the crossing. An 1895 map shows the Colton Tower located at the southeast corner of the crossing, and a 1947 news article noted that it was the "only heavy duty tower on the Los Angeles Division that still is manually operated, having the old man-sized levers and long rods running to the switches and signals" (Union Pacific Railroad 1895; Baxter 1947). It has since been removed.

Severe flooding occurred in the winter of 1883–1884, and several washouts occurred along the California Southern Railroad line, especially in the Temecula area (Ingersoll 1904:261). Repair work was completed, and in November 1885, the line was completed to Barstow and the transcontinental connection (with the A&P) was made (Ingersoll 1904:261). In the boom years of 1886–1887, numerous feeder lines were built in Southern California, most of which were owned by AT&SF (Ingersoll 1904:261). In 1889, California Southern Railroad was sold and consolidated with AT&SF (Robertson 1998:94). In 1893, the "loop," which became known as the "kite-shaped track," was completed through the San Bernardino Valley (Ingersoll 1904:266). This track connected Los Angeles with the San Gabriel and San Bernardino Valleys and boasted that nothing was seen twice. The small segment of the California Southern/AT&SF track (APE Map Reference No. 1) in the proposed Project APE appears to have been utilized as part of this route. Research did not find any indication that Cucamonga was a stop on the route.

Throughout the early part of the 20th century, the SPRR continued to grow, and by the 1950s, it owned and/or operated 15,000 miles of track, predominantly in the Southwest. Among its many achievements are three main lines that remain important arteries today: "the *Overland Route* (San Francisco to the Midwest), the *Golden State Route* (the Southwest to Kansas City), and the *Sunset Route* (the Pacific Coast to the Gulf Coast). In addition, SPRR had numerous famous passenger trains bedecked in its celebrated 'Daylight' livery of bright red and orange (with black and white trim)…" (American-rails.com 2007–2010). Despite the railroad's success, in the 1970s, SPRR suffered, and in the late 1980s, AT&SF attempted to merge with it but was blocked by the Federal Department of Transportation (Duke 1995). Instead, it was purchased by the Denver and Rio Grande Western, which made the unusual decision to keep the SPRR name (American-rails.com 2007–2010). In 1996, SPRR merged with the smaller UPRR, a move that proved difficult for UPRR as it was not equipped to manage the increased operations (American-rails.com 2007-2010). However, by the end of the 1990s, UPRR was once again running smoothly (American-rails.com 2007-2010). In 1995, Burlington Northern Railway merged with AT&SF.

2.1 PREVIOUS CULTURAL RESOURCES STUDIES AND CONSULTATION RESULTS

In October 2024, LSA conducted a study and developed a report, Ontario International Airport (ONT) Connector Project Cultural Resources Identification and Eligibility Assessment. A summary of the methods and results of the report is summarized below:

Data from the South Central Coastal Information Center (SCCIC) indicate that 52 cultural resource studies were previously conducted within 1 mile of the areas of physical effect, 8 of which included portions of it (SB-03586, SB-04138, SB-04139; SB-05809, SB-06516, SB-06787, SB-06818, and SB-07756; see records search results in Appendix B). Although no archaeological resources are documented within the ASA, a segment of a historical built environment resource (a railroad route, 36-010330) is documented within the ASA. An additional 48 resources, including archaeological sites (a multi-component site [i.e., with both prehistoric and historic-period components], historic-period ranch ruins, a refuse scatter, and remnant landscaping) and many built environment resources (historic districts, ranch complexes, residences, aviation buildings, a segment of railroad, and a power transmission line), were recorded within 1 mile. The nearest prehistoric resource (an isolated artifact that is part of site 36-026315) is approximately 1,330 meters (0.82 mile) northwest, and the nearest historic-period resource is a historic period built environment district (Guasti Winery District, 36-36-015469/36-015471/36-015990/36-016279, see below) on the north side of the railroad route that transects the APE.

36-015990 (includes 36-36-015469, 36-015471 and 36-015279) Guasti Winery District

This resource adjacent to the APE is the built environment remnants of a winery and the associated buildings of a “company town” constructed from 1901 into the mid-1920s by Italian immigrant Secundo Guasti and his family. The district is listed as eligible for the National Register in the BERD. Due to the age of the district and former extent of its expansive associated vineyards (7,000 acres), there is potential for related archeological resources beyond the district boundary within the southern portion of the APE (in and around the airport).

Native American Consultation is ongoing; a letter documenting post-report tribal responses and conclusion of consultation will be sent to SHPO. Follow-up email correspondence was sent to interested parties and tribes in June 2024. FTA received responses from the Agua Caliente Band of Cahuilla Indians that the Project area is not located within the Tribe’s Traditional Use Area. The Gabrielino Tongva Indians of California Tribal Council indicated that they had no comment. FTA received requests for consultation from the San Manuel Band of Mission Indians and the Gabrieleno Band of Mission Indians - Kizh Nation. FTA met with San Manuel Band of Mission Indians on September 6, 2024. During the September 6, 2024 meeting, the San Manuel Band of Mission Indians expressed interest in locations the project alignment passed through Holocene deposits and requested to review the Cultural Report, Geotechnical Report, and project plans. The requested materials were provided to the Tribe on September 26, 2024, and the Tribe

responded with a request to incorporate specific processes related to discovery of human remains and/or pre-contact cultural resources be incorporated into the project conditions.

FTA met with the Gabrieleno Band of Mission Indians – Kizh Nation on October 1, 2024. During the consultation meeting, the Tribe provided a detailed oral history of the Tribe and discussed the hydrology and hydrogeology of the region and the potential for resources to be discovered in the project area. On October 2, 2024, the Tribe provided recommended measures, which have been considered during the preparation of Sections 3.4 through 3.6.

2.1.1 Cultural Resources within the APE

Field surveys of the properties within the APE resulted in the identification and evaluation of three historic-period built environment resources that have not been previously evaluated. These include an approximately 1,300-foot-long (0.25-mile) segment of the former AT&SF (36-006847; APE Map Reference Number 1), a commercial complex at 4265 East Guasti Road (APE Map Reference Number 2), and an approximately 3.25-mile-long segment of the former SPRR (36-010330; APE Map Reference Number 3).

2.1.1.1 Atchison, Topeka and Santa Fe segment (36-006847; APE Map Reference Number 1)

Not Eligible for the NRHP

This approximately 1,300-foot-long (0.25-mile) railroad segment is oriented east-west and located at the north end of the APE. The alignment dates to the mid-1880s. The setting is dominated by modern development that includes the Metrolink station and related parking, large light manufacturing buildings, and a substation on the south, as well as large light manufacturing buildings to the north, east, and west beyond the APE.

2.1.1.2 4265 East Guasti Road (APE Map Reference Number 2)

Not Eligible for the NRHP

Research indicates this property was developed in 1969 and has since sustained a number of additions and alterations. The property is on the northwest corner of South Milliken Avenue and East Guasti Road and has a completely modern appearance.

2.1.1.3 Southern Pacific Railroad Segment (36-010330; APE Map Reference Number 3)

Not Eligible for the NRHP

This approximately 3.25-mile-long railroad segment is oriented east-west and located near the southern end of the APE. The alignment dates to circa 1880. It extends roughly from Hellman Road (south of the tracks) east nearly to I-15. The setting is completely modern and includes I-15, numerous commercial and

manufacturing buildings, restaurants, a truck stop, ONT, Cucamonga Channel, and a few undeveloped parcels.

2.2 ARCHAEOLOGICAL SENSITIVITY

In October 2024, LSA conducted a study and developed a report, Ontario International Airport (ONT) Connector Project Cultural Resources Identification and Eligibility Assessment. A summary of the methods and results of the report is summarized below:

The Project has the potential to affect previously unrecorded cultural resources. Many prehistoric and ethnographic archaeological sites, including some possessing human remains, have been recorded near the APE, and there is a high potential for encountering previously unrecorded cultural resources during ground-disturbing activities associated with the Project. Also, more than half of the responding Native American contacts noted the sensitivity of the APE regarding Native American resources and recommended archaeological or Native American monitoring.

LSA recommends that the following tasks be performed to identify cultural resources in the Project area; to avoid, lessen, or mitigate the Project-related effects to cultural resources; and to satisfy the requirements of Section 106 of NHPA and NEPA:

- Archaeological monitoring. Archaeological monitoring of all ground-disturbing construction activities in areas determined to contain native soils or soils with undisturbed components to them (the vent shaft locations and cut-and-cover areas) is recommended because of the potential for previously unrecorded archaeological or Native American (Tribal Cultural) resources in the Project's APE.
- Native American monitoring. Both of the consulting Native American contacts expressed concern regarding the Project's APE in relation to the known village sites. Native American monitoring is recommended for all ground-disturbing construction activities where there is the likelihood of encountering buried artifacts or sites of Native American affiliation.

3 MONITORING AND TREATMENT PROGRAM

The following sections have been developed for implementation during construction of the Project.

3.1 PURPOSE OF PLAN

This Plan has been prepared to provide a process and discovery protocol to follow in the event of post-review discoveries during construction of the Project so that appropriate measures to resolve potential adverse effects to cultural resources within the APE are followed.

3.2 ROLES AND RESPONSIBILITIES

The FTA, as the federal lead agency for the Project, is responsible for ensuring the implementation of this Plan for the purposes of Section 106. SBCTA is the agency carrying out the Project and is responsible for compliance with the environmental conditions/mitigation measures associated with the Project. SBCTA will provide information to the FTA for ongoing Section 106 oversight and consultation obligations. As the federal lead agency, it is FTA's responsibility to ensure that SBCTA fulfill the actions of the Plan.

No more than 30 days prior to the start of construction, a letter of verification will be prepared by SBCTA's Manager of Environmental Compliance and filed with the FTA stating that a cultural resources consultant has been contracted to provide cultural resources services for the construction of the Project, as outlined in this Plan. The letter will identify the Secretary of the Interior (SOI)-qualified Archaeological Principal Investigator (PI) for the Project and the names and affiliation of all persons involved in the archaeological monitoring program and will provide information regarding the responsibilities of all parties included in the letter.

Roles and responsibilities for construction activities are summarized in Section 3 below.

3.2.1 Personnel Qualifications

All archaeological fieldwork conducted shall be under the direction of a SOI-qualified Archaeological Principal Investigator (PI). The Archaeological PI shall have, at a minimum:

- A Master's degree in anthropology, archaeology, historic archaeology, or a closely related field;
- At least 10 years of professional archaeological management experience, with at least 3 of those years conducting fieldwork in California; and
- At least 3 years of experience in a decision-making capacity on cultural resources projects, with at least 1 of those years in California, and the appropriate training and experience to knowledgably make recommendations regarding the significance of cultural resources according to NRHP criteria.

The archaeological monitor(s) shall have, at a minimum:

- A Bachelor's degree in anthropology, archaeology, or a closely related field; and
- At least 1 year of archaeological construction monitoring experience in California.

SBCTA will coordinate the provision of a Native American monitor for the Project, whom are traditionally and culturally affiliated with the consulting_ tribe(s). SBCTA will secure Native American monitoring as part of the Request for Bids for the construction management team supporting the Project, which typically begins approximately 6-8 months prior to construction. The Native American monitor(s) will be procured through the Request for Bids and must possess the desired knowledge, skills, abilities, and experience established by NAHC's Guidelines for Native American Monitors; however, tribal officials are ultimately responsible for vetting the qualifications of the tribal monitors whom they choose to represent their tribe (NAHC 2005). SBCTA will provide to the FTA the qualifications of the selected firm and/or individuals prior to construction.

3.3 PRIOR TO START OF CONSTRUCTION

3.3.1 Health and Safety Plan

The project shall have a mandatory Health and Safety Plan prepared prior to the start of construction. The Archaeological PI shall review the project's Health and Safety Plan with the archaeological and Native American monitor(s) and coordinate their attendance in the project construction safety meetings. Safety equipment must be worn by archaeological and Native American monitors at all times while on the Project site. This includes high visibility vests with reflective material, hard toe shoes, hard hats, and protective eyewear. The monitors shall maintain Occupational Safety and Health Administration (OSHA) standards of protective safety. If deep trenching is required for the Project, the monitors shall not access any deep trenches unless the trench walls have been prepared using OSHA standards of safety, including shoring or excavation techniques of sloping or benching the sidewalls. Work near heavy equipment shall be conducted as close to the excavations as can be accomplished while ensuring the safety of the monitors. As necessary, the grading equipment shall be diverted to allow inspection by the monitors.

If applicable, individuals involved in the monitoring program must have completed the 40-hour HAZWOPER training with certification documentation (Hazardous Waste Operations and Emergency Response; 29 CFR 1910.120).

3.3.2 Preconstruction Meeting

The PI, Native American monitor(s), and archaeological monitor(s), will attend any grading/excavation-related pre-construction meetings to make comments and/or suggestions concerning the archaeological monitoring program with the Construction Manager and/or Contractor and provide Cultural Resources Awareness and Sensitivity Training.

3.3.3 Worker's Environmental Awareness Program Training

Prior to initiating ground-disturbing activities, all construction contractors and supervisory personnel engaged in ground-disturbing activities shall complete a Worker's Environmental Awareness Program (WEAP) Training. The PI, Native American monitor(s), and archaeological monitor(s) will conduct the training. The training will provide an overview of applicable State and Federal cultural resource regulations including 36 CFR Part 800, an overview of cultural resources that may be potentially found within the APE, roles and responsibilities of the PI, Native American monitor(s), and archaeological monitor(s), and the appropriate stop-work procedures to follow in the event cultural resources or human remains are uncovered during ground-disturbing activities. The general procedures to follow in the event of an unanticipated discovery are identified during project construction and are described in further detail in the remainder of this chapter and in Table 1. The training also will be required of any personnel newly assigned to work on the Project. Documentation of attendance and completion of the training will be obtained and kept for SBCTA and FTA records.

3.4 MONITORING PROCEDURES

The archaeological monitor(s) and Native American monitor(s) will be onsite to conduct cultural resources monitoring during all ground-disturbing activities within the Archaeological Monitoring Area (AMA) throughout the construction phase of the project and must abide by this Plan. The AMA is defined as follows: all earth-disturbing activities except for those in disturbed developed areas or where bedrock is encountered or in deeply buried areas that exceed the depth of expected cultural deposits.

Prior to ground-disturbing activities, SBCTA will provide the construction contractors, Resident Engineer, supervisory personnel, as well as the PI, Native American monitor(s), and archaeological monitor(s) with a copy of the mapped AMA areas. No construction activities will occur within the designated AMAs absent an archaeological and Native American monitor, as required by this Plan.

In addition, a Native American monitor(s) will be present during all earthmoving activities except for those involving disturbed developed areas within the project boundary.

During monitoring, the archaeological monitor(s) and Native American monitor(s) will examine sediments disturbed during earthmoving activities. If determined necessary by the monitors, sediments will be screened for potential cultural resources, and, if necessary, construction may be temporarily halted during excavation to examine sidewalls. The archaeological monitor(s) will document field activity on daily monitoring logs. The PI may submit a detailed letter to SBCTA during construction requesting a modification to the monitoring program when, in coordination with the Native American monitor, field conditions are determined to consist of modern disturbances post-dating the previous grading/trenching activities, contain the presence of fossil formations, or when native soils are encountered that nullify the potential for cultural resources to be present.

3.4.1 Discovery Protocol

The discovery notification process and consultation protocols are summarized in Table 1, N*otification and Consultation Protocols for Discoveries*, and are detailed below.

In the event of an unanticipated cultural resource(s) discovery, the archaeological monitor(s) will have the authority to temporarily halt or divert ground-disturbing activities in the area of discovery, including a minimum of a 60-foot buffer (Environmentally Sensitive Area [ESA]), to ensure avoidance and protection of the discovery. The Native American monitor(s) will coordinate with the archeological monitor(s) for temporary work stoppage. Depending on the discovery characteristics or features present, the ESA may be expanded as determined appropriate by the archaeological monitor(s) in coordination with the Native American monitor(s) to avoid effects to the resource until the discovery notification and response protocols can be carried out. The archaeological monitor(s) will immediately notify the PI (unless the monitor is the PI) of the discovery. Construction work, including ground disturbance activities, may continue in accordance with this Plan outside of the area of discovery and established ESA.

Following notification of the discovery from the archaeological monitor(s), the PI will notify SBCTA immediately (on the day of discovery) of the discovery, and within 24 hours or less will provide an email with photos of the discovery in context (if possible) and a map of the feature indicating its location within the APE. SBCTA will then notify the FTA of the discoveries, who will notify the SHPO and the Advisory Council on Historic Preservation (ACHP) within two working days of the discovery in accordance with 36 CFR § 800.13(b)(3). The FTA will also notify and consult with the appropriate Native American Tribe(s) regarding the identification, evaluation of the significance, assessment of potential adverse effects, and any proposed treatment to that resource. The notification will include photos of the discovery in context (if possible) and a map of the feature indicating its location within the APE. Additionally, a brief determination and assessment of adverse effects resulting from construction and future construction will be included, as well as any recommended treatment/resolution methods that may be applicable.

Any discoveries will be stored in a locked area/safe within a secure facility while in SBCTA's custody until after consultation occurs and the best course of action is identified. Following discovery, only qualified cultural resource specialists, Native American monitor(s) and representatives, or federal agency representatives associated with the project may handle resources, in accordance with all regulations.

Upon the identification of a discovery and the establishment of an ESA, the PI and Native American monitor(s) (in the case of Native American resources), will conduct a preliminary eligibility assessment of the resource according to all NRHP criteria. In order to be eligible for the NRHP, a property must meet the criteria for evaluation in at least one area of significance as defined by Secretary of the Interior Standards for Evaluation (36 CFR Part 60).

The initial assessment will include a count and density analysis of encountered cultural material within the discovery area. In addition, the presence and count of all prehistoric and diagnostic historic-era artifacts will be noted. After the initial assessment of significance is completed, the PI will also assess the integrity of the discovery, which is the resource's ability to convey its significance through the presence/absence of its character defining elements/attributes. Character defining elements/attributes may vary among resource types and how they contribute is contingent on the resource's significance Native American consultation will be conducted to assess how the discovery could contain cultural, religious, and/or data potential to Native American Tribes. The Archaeologist(s) will also analyze how the discovery may have the ability to address questions related to prehistory and history. The PI will provide clarification regarding discovered materials and will determine if extended Phase I and Phase II archaeological testing and evaluation of the discovery shall be carried out.

Based on the cultural context of the APE, the results of past cultural resources work that has occurred within the same block that the undertaking is situated within, and the archaeological sensitivity assessment and the 'predictive model' of the potential resource and feature types that could likely be identified subsurface within the APE, the types of discoveries are divided into two categories, presented below.

Table 1. Notification and Consultation Protocols For Discoveries

Action	Archaeological Monitor(s) and Native American Monitor(s)	Construction Contractor	Archaeological PI	SBCTA/FTA	SHPO
Initial Response/ Notification of Discovery	Temporarily halts or diverts ground-disturbing activities near find. Notifies PI of find and construction contractor of potential work disruption. In coordination with PI, establishes avoidance area around the discovery as an ESA with a minimum of a 60-foot buffer from the discovery. Depending on the discovery characteristics or features present, the ESA may be expanded as determined appropriate by the archaeological monitor(s) in coordination with the Native American monitor(s) to ensure no effects occur to the discovery until the discovery notification and response protocols can be carried out.	If potential discovery is observed by construction contractor when no monitor is present, work is halted in the area of the discovery and a 60-foot radius and redirected to an area at least 60-ft away from the discovery; and the SBCTA PM and the PI are promptly alerted.	Inspects new discovery and notifies SBCTA within 24 hours. Notification to SBCTA will include an email with photos of the discovery in context (if possible) and a map of the feature indicating its location within the APE. Determines if the discovery is an isolated find, sparsely distributed artifacts, or a clearly disturbed/redeposited historic-era debris scatter. In the case of potentially NRHP-eligible historic properties, proceeds with the Discovery Protocol. This will include the preparation (within five days) of a brief Find Report of the discovery that will include a preliminary assessment of NRHP eligibility, assessment of effects, and recommendations for appropriate treatment. If discovery is determined to be an isolated find, sparsely distributed non-diagnostic artifacts, or a clearly disturbed/redeposited historic-era debris scatter, directs archaeological monitor(s) to document the discovery and record on the Daily Monitoring Log. Once such discoveries have been documented by the monitors, notifies construction contractor that construction may resume.	SBCTA notifies the FTA of discovery. FTA notifies the SHPO and the ACHP within two working days of the discovery. In the case of Native American resource discoveries, the FTA will also notify Native American Tribe(s).	SHPO, ACHP, and Native American Tribe(s) have 48 hours to respond to FTA's notification and formal request to consult.
Human Remains Discovered	Immediately notify construction contractor and PI of the discovery. Construction activities halted within 100 feet of the discovery and area secured with ESA. ESA shall include the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains.	Gives instruction to construction crew to re-direct all work away from the location of the discovery and 100-foot ESA until a determination can be made by the County Coroner concerning the provenience of the remains. Enforces ESA buffer.	Immediately notifies the SBCTA of discovery. Notify Medical Examiner after consultation with SBCTA either in person or via telephone. Ensures protocols are being followed.	SBCTA notifies the FTA on the same day of the discovery. If remains are determined by Coroner to be Native American, SBCTA in coordination with FTA consults with NAHC who will identify the Most Likely Descendent (MLD). The SBCTA in coordination with FTA consults with MLD. If the discovery of human remains or associated funerary items occur, FTA will report the discovery to Native American Tribe(s) within 24 hours. Prior to	

Action	Archaeological Monitor(s) and Native American Monitor(s)	Construction Contractor	Archaeological PI	SBCTA/FTA	SHPO
				excavation of the discovery, Native American Tribe(s) must consent in writing by providing a written authorization for the excavation under NAGPRA. The FTA will provide a courtesy notification to the SHPO of the human remains discovery. This notification will include information as to whether the human remains are an isolated discovery or whether they are associated with a broader archaeological context.	
Suspend Work Order	Monitors maintenance of ESA and AMAs.	Gives instruction to construction crew to re-direct all work away from the location of the ESA. Maintains and enforces ESA.	Ensures adequate ESA is established and maintained.	Stop Work Order is issued through the SBCTA PM.	
Evaluate Significance and Assess Effects	Assists PI with evaluation of find, as needed.	Assists with the maintenance of the ESA.	In the case of potentially NRHP-eligible historic properties, completes resource evaluation and assessment of effects in consultation with Native American monitor(s) (in the case of Native American resources) and provides documentation and treatment recommendations to the SBCTA in the form of a brief Find Report that will include preliminary recommendation on the discovery's NRHP eligibility, assessment of effects, and recommendations for appropriate treatment. Prepares Treatment Plan if needed.	SBCTA provides recommendations to the FTA and results of consultation efforts included in the Finds Report. In the case of Native American resource discoveries, the FTA will consult with Native American Tribe(s). In the case of potential NRHP-eligible historic properties, the FTA consults with the SHPO and ACHP on NRHP eligibility, assessment of effects, and appropriate treatment resolution within two working days of the discovery. The SBCTA, the FTA, and the SHPO review and approve treatment plan.	Reviews submitted documentation and provides formal determination on NRHP eligibility, assessment of effects, and treatment plan.
Mitigate Effect	Assists PI as needed.	Maintains ESA.	If undiscovered resource is NRHP eligible and effects cannot be avoided, prepares and implements Treatment Plan. Mitigation Report is prepared and submitted to SBCTA.	SBCTA submits Mitigation Report to the FTA on mitigation results. The FTA reviews report and submits to the Native American Tribe(s), the SHPO, and the ACHP and continues consultation.	Reviews submitted documentation.

Action	Archaeological Monitor(s) and Native American Monitor(s)	Construction Contractor	Archaeological PI	SBCTA/FTA	SHPO
Resume Work	Removes ESA upon authorization from PI.	SBCTA will issue NTP to construction contractor and PI when work may resume at site.	Upon notification from SBCTA, authorizes removal of ESA.	The FTA informs SBCTA when it may issue NTP to construction contractor.	

PI = Principal Investigator; ESA = Environmentally Sensitive Area; PM = Project Manager; SHPO = State Historic Preservation Officer; ACHP = Advisory Council on Historic Preservation; NTP = Notice to Proceed; FTA = Federal Transit Administration; NRHP = National Register of Historic Places

3.4.1.1 Isolated Finds, Sparsely Distributed Artifacts, or Redeposited Historic-Era Debris Scatters

As directed in Section 3.4.1 above, the significance of all identified discoveries will be established via a preliminary assessment of NRHP eligibility of the resource. For this Plan, "isolated finds", "sparsely distributed non-diagnostic artifacts", or "clearly disturbed historic-era debris scatters lacking integrity" are to include the resulting non-significant discoveries that are less than three artifacts (where any artifact broken into pieces is counted as a single item) within a 100-square-foot area, redeposited material (i.e., not in situ) without human remains, and sparsely distributed artifact scatters without any temporally diagnostic items.

For discoveries assessed by the PI to consist of isolates, sparsely distributed non-diagnostic artifacts, or redeposited historic-era debris scatters, where the preliminary assessment indicates that the resource is not an NRHP-eligible historic property, the discovery will be documented in the field by collecting a Global Positioning System (GPS) point, photographed, and recorded onto the Daily Monitoring Log. All prehistoric artifacts will be collected, and in the case of historic material, all diagnostic historic-era items will be collected for cataloging and inclusion in the Final Monitoring Report. Once such discoveries have been documented and recovered by the monitors, construction may resume.

Upon the discovery of isolated finds, sparsely distributed non-diagnostic artifacts, or clearly disturbed/redeposited historic-era debris scatters, work in this area will be temporarily halted to perform further subsurface archaeological exploratory work to confirm the significance of the discovery. Additionally, the PI will notify SBCTA within 24 hours or less by email with photos of all discoveries in context (if possible) and a map of the feature indicating its location within the APE, as noted above. In the case of disturbed/redeposited historic-era debris scatters, the PI will also include the results of the integrity assessment in the email.

SBCTA will provide the FTA notification of the discovery within two working days of the discovery. In the case of Native American resource discoveries, the FTA will notify the Native American Tribe(s). For those discoveries determined to be disturbed historic-era debris scatters with no integrity, the FTA will provide the SHPO and the Advisory Council on Historic Preservation (ACHP) a copy of the email notification that the PI prepared with the results of the integrity assessment.

3.4.1.2 Potential NRHP-Eligible Discoveries

In the case of the discovery of an in-situ archaeological feature(s) or intact (or potentially intact) deposits with more than three diagnostic artifacts within a 100-square-foot area, an initial estimate of the density and quantity of cultural material within the discovery area will be recorded by the PI for the preparation of an assessment recommendation. In-situ archaeological feature(s) may include refuse-filled trash pits, privy vaults and wells. Any prehistoric and diagnostic historic-era artifacts observed within the discovery will be recorded. As noted above in Section 3.4.1, the PI will notify SBCTA immediately (on the day of discovery) of any in-situ archaeological feature(s) or intact (or potentially intact) deposits. SBCTA will

immediately notify the FTA, and the FTA will notify the SHPO and ACHP within two working days of the discovery. In the case of Native American resource discoveries, the FTA will also notify the Native American Tribe(s).

For all discoveries that are not categorized as isolated finds, sparsely distributed non-diagnostic artifacts, or clearly disturbed/redeposited historic-era debris scatters, as defined above, the PI will prepare a brief Find Report for the discovery. The Find Report will include a preliminary assessment of NRHP eligibility, assessment of potential adverse effects, and recommendations for appropriate treatment. For in-situ archaeological feature(s) or intact deposits, archival research such as a review of the discovery location against Sanborn maps for historic-era discoveries, or an analysis of temporally diagnostic items, may be conducted by the PI for inclusion in the brief Find Report. The Find Report will also include photos of the discoveries in context (if possible) and a map of the feature indicating its location within the APE. All potential NRHP-eligible historic properties identified during the implementation of the undertaking will be evaluated for significance against all National Register criteria and include an adequate assessment of archaeological integrity.

The PI will submit the Find Report to SBCTA within five days of the discovery. SBCTA will provide the Find Report to the FTA, who will make a determination of eligibility and further assess potential adverse effects. The FTA will consult with the SHPO and all other Consulting Parties, including the ACHP, to seek comment on the assessment and eligibility determination, as well as provide resolution on the proposed treatment for any discoveries determined to be NRHP-eligible historic properties.

In the case of Native American resources, the FTA will also consult with the Native American Tribe(s) on the identification, evaluation of significance, and potential treatment of Native American resources. The results of these consultation efforts will be included in FTA's Find Report.

If the assessment indicates that the resource is a potential historic property but can be avoided by project construction activities, the FTA may assume eligibility to the NRHP, and avoidance will be recommended in consultation with SBCTA, Native American Tribe(s) (in the case of Native American resources), the SHPO, and the ACHP. SBCTA will inform the FTA, the SHPO, the ACHP, and Native American Tribe(s) (in the case of Native American resources) of the proposed avoidance and protective measures to be undertaken for the resource.

If the assessment recommendation by the PI indicates that the discovery is not eligible for the NRHP, the FTA will consult with the SHPO and Consulting Parties, including the ACHP and the Native American Tribe(s), in the case of Native American resources, to comment on the eligibility determination. For discoveries determined not to be eligible for listing in the NRHP by the FTA, the PI will submit notification to SBCTA indicating the discovery was documented in the field by collecting a Global Positioning System (GPS) point, photographed, and recorded onto the Daily Monitoring Log.

All prehistoric artifacts will be collected, and in the case of historic material, all diagnostic historic-era items will be collected for cataloging and inclusion in the Final Monitoring Report. Once such discoveries have been documented and recovered by the monitors, construction may resume.

Any artifacts will be stored in a locked area/safe within a secure facility while in SBCTA's custody until after consultation occurs and the best course of action is identified. Following discovery, only qualified cultural resource specialists, Native American monitor(s) and representatives, or federal agency representatives associated with the project may handle resources, in accordance with all regulations.

3.4.2 Treatment Plan for Historic Properties

If a discovery is determined by the FTA to be a NRHP-eligible historic property and avoidance by project construction activities is not feasible, a Treatment Plan shall be prepared by the PI. The Treatment Plan and any developed treatment and mitigation measures must be approved by SBCTA and the FTA prior to the commencement of the Treatment Plan. In the case of potential NRHP-eligible historic properties, the FTA will consult with the SHPO and ACHP on NRHP eligibility, assessment of effects, and appropriate treatment. In the case of a Native American (prehistoric) potential NRHP-eligible historic property, the FTA will also consult with Native American Tribe(s) on the proposed treatment measures.

Treatment of an in-situ archaeological feature(s) or intact deposits will include the excavation of the resource in stratigraphic levels with the soil passed through 1/8-inch wire screen to retrieve artifacts. Standard archaeological procedures of mapping and recordation of features, as well as the collection, bagging, and labeling of artifactual material will be followed. Artifacts will be washed and rough-sorted by material types. For cataloging, the artifacts will be identified and quantified by the minimum number of individual items represented. Item classification will be organized by functional activity groups. For each object identified, the activity group, material, item, type, product, technology, pattern, identification marks, manufacturer, origin, date, size, quantity, weight, references, and any necessary additional comments will be recorded. The detection of functional activity profiles, consumer profiles, economic index values, and identification of ethnic cultural traits will be analyzed through research design developed as part of the Treatment Plan.

All on-site measures in the Treatment Plan must be completed, and results of the on-site treatment measures be provided in a brief Mitigation Report prepared by the PI and submitted to SBCTA. SBCTA will submit the Mitigation Report to the FTA, who will review the report to ensure that all on-site measures in the Treatment Plan have been completed and will provide a copy of the report to the SHPO and the ACHP. In the case of Native American resources, a copy of the report will also be provided to the Native American Tribe(s). All parties will be given 30 days to provide comment on the

Mitigation Report. Once all parties have been consulted on the completion of on-site treatment measures, the recommendation for construction to resume will be made and the Mitigation Report would be revised, and responses to comments received will be documented, prior to submittal to the SHPO for review. After

approval from the SHPO is received, FTA will notify SBCTA, and SBCTA will authorize the PI to release the area of avoidance (ESA) to construction activity. Construction, including ground-disturbing activities, can then immediately resume. Post-field analysis including laboratory cataloguing, artifact analysis, and special studies, as outlined in the Treatment Plan, will continue off-site, and the final results of all treatment measures will be included in the Final Monitoring Report. Treatment and curation of recovered resources and cultural artifacts is further addressed in section 3.6 below.

If human remains are involved, the protocol in Section 3.5 will be followed. No soil shall be exported off-site until a determination can be made regarding the significance of the resource, specifically in the case Native American resources.

3.5 DISCOVERY OF HUMAN REMAINS

In the event that human remains are encountered during construction, potentially destructive activities within 100 feet of the discovery will be stopped, and the procedures set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken.

The Archaeological Monitor(s) shall immediately notify the PI, who will notify SBCTA. The PI shall notify the Medical Examiner after consultation with SBCTA either in person or via telephone. SBCTA will notify the FTA on the same day of the discovery. The FTA will notify the SHPO, ACHP, and Native American Tribe(s) within two working days of discovery to provide notification of potential human remains being observed during the implementation of the undertaking. The information provided will also indicate whether, and if so, how it was determined that the Native American human remains were an isolated find or constituents of a larger archaeological context.

Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the County Coroner concerning the provenience of the remains. The Coroner, in consultation with the PI, resource agencies as required, SBCTA, and FTA, shall determine the need for a field examination to determine the provenience.

If the remains are determined to be Native American, the Coroner shall notify the NAHC. By law, only the Coroner can make this call. The NAHC will identify the person or persons determined to be the Most Likely Descendent (MLD) and will contact them or provide contact information. FTA, SBCTA, and the PI shall coordinate with the MLD for additional consultation. Treatment of the remains and all subsequent actions will be completed per the California Public Resources Code (Sec. 5097.98), State Health and Safety Code (Sec. 7050.5), and this Plan.

If the discovery of human remains or associated funerary items occur, additional consultation under the National American Graves Protection and Repatriation Act (NAGPRA) will be required (43 CFR 10). The FTA will report the discovery to affiliated Native American Tribe(s) within 24 hours and must receive a response by the appropriate official of the Native American Tribe(s) no later than three days after

receiving written documentation of the discovery. Additionally, the FTA will provide a courtesy notification to the SHPO to inform them of the consultation under NAGPRA. Before excavation of the discovery occurs, the Native American Tribe(s) must consent in writing by providing a written authorization for the excavation. Once the human remains or associated funerary items are removed, disposition of the items to the affiliated Native American Tribe(s) will occur.

If there is no request for formal consultation from the affiliated Native American Tribe(s), SBCTA and the FTA will compile an itemized list of any human remains or associated funerary objects discovered and will include this list in a written notification to potential affiliated Native American Tribe(s) and NAGPRA Project Manager within 30 days of identification of a new consulting party based on new information or no later than 2 years after the addition of a Tribal entity to the list of federally recognized Native American Tribes. FTA must complete or update the inventory within two years after acquiring possession or control of the resources, required under 43 CFR 10.10(d) and submit a notice of inventory completion under 43 CFR 10.10(e) within six months of completing the inventory for publication in the Federal Register.

3.6 POST CONSTRUCTION REQUIREMENTS

All cultural resources discovered during monitoring will be documented on appropriate California Department of Parks and Recreation (DPR) 523-series forms. The DPR 523 form(s) will be completed and submitted to the SCCIC for assignment of a permanent Primary (and, if applicable, Trinomial) number.

All diagnostic cultural artifacts recovered during the Monitoring Program and implementation of Treatment Plan(s), if completed, will be cleaned, catalogued, and analyzed to identify function and chronology as they relate to the history of the area.

Post construction, a Monitoring Report will be prepared for the project. The Draft Monitoring Report (even if negative) will be prepared, in accordance with the Secretary of the Interior's Standards for Archaeological Documentation (National Park Service 1983) and will be consistent with Archaeological Resources Management Reports: Recommended Contents and Format Guidelines (California Office of Historic Preservation 1990), that describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) and submitted to SBCTA and FTA for review within 60 days following the completion of monitoring. FTA will review and provide comments on the draft report within 30 days of receipt. If a Treatment Plan shall be implemented, the methods and results of all archaeological efforts and treatment measures undertaken as part of the Treatment Plan will be included in the Monitoring Report.

A review of the Monitoring Report will be conducted by SBCTA, Native American Tribe(s) and the FTA for a 30-day review and comment period. Once comments are provided and resolved, a final version of the Monitoring Report will be provided to SBCTA, the FTA, the SHPO, Native American Tribe(s), the SCCIC, and the ACHP for their permanent records.

All diagnostic recovered historic-period archaeological material collected during monitoring will be permanently curated with an appropriate institution. Unless otherwise specified in a treatment agreement between SBCTA, the FTA, and the Native American Tribe(s), artifacts or other cultural material associated with Native American resources will also be permanently curated with an appropriate institution. The preparation and curation of the collection will be completed according to standards set forth in "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR Part 79, September 12, 1990).

4 LIST OF CONTACTS

A list of contacts for the undertaking is provided in Table 2, *Contact Information*.

Table 2. Contact Information

ORGANIZATION	CONTACT	TITLE/ROLE	EMAIL	PHONE NUMBER
FTA	Rusty Whisman	Senior Transportation Program Specialist	rusty.whisman@dot.gov	213.202.3956
SBCTA	Victor Lopez	Director of Transit and Rail Programs	vlopez@gosbcta.com	909.884.8276
Construction Team	TBD	Construction Manager and/or Contractor		
Archaeological Consultant	Principal Investigator			
Archaeological Consultant	Monitoring Coordinator			
Archaeological Consultant	Archaeological Monitor(s)			

5 REFERENCES

American Public University. n.d. Southern Pacific Railroad. Accessed online in June 2010 at: http://www.u-s-history.com/pages/h1817.html.

American-rails.com. 2007–2010. The Espee, The Friendly Southern Pacific. Accessed online in June 2010 at: http://www.american-rails.com/southern-pacific.html.

ASM Affiliates. 2017. *Ontario International Airport Historic Context Statement.* Accessed online in November 2022 at: https://www.ontarioca.gov/sites/default/files/Ontario-Files/Planning/Historic_Preservation/Historic%20Contexts/ONT%20Historic%20Context.pdf.

Baxter, Tom. 1947. "Los Angeles Division, AT&SF, 487 miles of main and branch lines cross high mountains, arid deserts; serve agricultural and industrial districts of West Coast." In *Trains*. June. Article on file in the vertical files in the Norman F. Feldheym Library, Arda Haenszel California Room.

Bean, Lowell John, and Charles R. Smith. 1978. Gabrielino. In *California,* edited by R.F. Heizer, pp. 538–549. Handbook of North American Indians, Vol. 8, W.C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Beattie, George, and Helen Beattie. 1951. *Heritage of the Valley, San Bernardino's First Century.* Biobooks, Oakland, California.

Blackburn, Thomas C. 1962–1963. *Ethnohistoric Descriptions of Gabrielino Material Culture.* Annual Reports of the University of California Archaeological Survey 5: 1–50.

California Department of Transportation (Caltrans). 2015. *Historic Resources Evaluation Report for the Interstate 10 Corridor Project, San Bernardino and Los Angeles Counties, California* (07-LA-10 P.M., 44.9/48.3; 08-SBD-10 P.M., 0.0/R37.0) EA 0c2500. Accessed online on July 19, 2024, at: https://www.gosbcta.com/wp-content/uploads/2019/09/I-10-CP-HRER-April2015.pdf.

Cataldo, Nicholas. 2006. *The Earp Clan: the Southern California Years.* Black Roads Press, San Bernardino.

Clucas, Donald L. 1979 "Guasti." In: In: Light Over the Mountain: A History of Rancho Cucamonga. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Daily Report. 1981. "Yester Year Dates to Remember." May 24.

Duke, Donald. 1995. *Santa Fe: The Railroad Gateway to the American West,* Vol. 1. Golden West Books.

Gordon, Larry. 1985. "Economy, Modernization Quiet Rail Yard." *Los Angeles Times*, October 31. Page 1.

Heizer, Robert F. 1968. The Indians of Los Angeles County. *Hugo Reid's Letters of 1852.* Southwest Museum Papers 21. Los Angeles, California.

HistoricAerials.com. 2022. Various aerial photographs including the Project area from 1897 to 1980.

_____. Various. Accessed online at http://www.historicaerials.com/default.aspx.

Houk, Randy. 2008. Railroad History, Important Milestones in English and American Railway Development. Accessed online in June 2010 at http://www.sdrm.org/history/timeline/.

Hudson, D. Travis. 1971. Proto-Gabrielino Patterns of Territorial Organization in Southern Coastal California. *Pacific Coast Archaeological Society Quarterly* 7(2):49–76.

Ingersoll, L.A. 1904. Ingersoll's Century Annals of San Bernardino County 1769 to 1904. Ingersoll, Los Angeles, California.

Johnston, Bernice E. 1962. California's Gabrielino Indians. Frederick Webb Hodge Anniversary Publication Fund 8. Los Angeles: Southwest Museum.

Kroeber, A.L. 1925. *Handbook of the Indians of California.* Bulletin No. 78, Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

LA/Ontario International. n.d. History of LA/Ontario International Airport. Accessed online in November 2022 at: https://www.flyontario.com/sites/default/files/history-fact-sheets.pdf.

McCawley, William. 1996. *The First Angelinos: The Gabrielino Indians of Los Angeles.* Banning and Novato: Malki Museum Press and Ballena Press.

Moratto, Michael J. 2004. *California Archaeology.* Orlando, Florida: Academic Press. Originally published 1984.

Orsi, R.J. 2005. *Sunset Limited: The Southern Pacific Railroad and the Development of the American West, 1850-1930.*

Robertson, Donald B. 1998. *Encyclopedia of Western Railroad History,* Volume IV, California. Caxton Printers, Ltd., Caldwell, Idaho.

Robinson, John W. 2005. *Gateways to Southern California: Indian Footpaths, Horse Trails, Wagon Roads, Railroads, and Highways.* Big Santa Anita Historical Society, USA.

Sanborn Fire Insurance Maps. 1928. Accessed online through the Los Angeles Public Library at: http://www.lapl.org/.

Signor, John. 1990. *Beaumont Hill, Southern Pacific's Southern California Gateway.* Golden West Books, San Marino, CA.

Snow, Jenna, and Kathryn McGee. 2009. Department of Parks and Recreation (DPR) forms for the Cucamonga Neighborhood Character Area. On file at the City of Rancho Cucamonga Planning Department.

Straight, Susan. 2012. "Spirits of Guasti." *Boom,* Vol. 2 No. 4.

Streeter, Kurt, and Mitchell Landsberg. 2004. "A Future Tied to the Tracks." *Los Angeles Times,* August 22. Accessed online on November 9, 2010, at: http://www.trainorders.com/discussion/read.php?1,606400.

The Press and Horticulturist. 1883. "Railroad War, C.S.R.R. vs. S.P.R.R." August 11, page 2. On file at the University of California, Riverside, Rivera Library.

Tibbet, Casey. 2005. Suburban Residential Growth in Riverside, California, 1886 to 1960. Unpublished Master's thesis on file at the University of California, Riverside, History Department.

Union Pacific Railroad. 1895. Map of the Southern Pacific Railroad through Colton. Obtained from John Bromley, Director of Historic Programs, Union Pacific Railroad.

United States Geological Survey (USGS). 1972. *Guasti, California* 7.5-minute topographic quadrangle map. *Guasti, California* 7.5-minute topographic quadrangle map.

_____. 1980. Guasti, California 7.5-minute topographic quadrangle map.

van Ophem, Marieke. 2003. *The Iron Horse: the impact of the railroads on 19th century American society, 16/30 (IV) Colonizing the West: Railroad Towns.* Accessed online in June 2010 at: http://www.let.rug.nl/usa/E/ironhorse/ironhorse16.htm.

Wallace, William J. 1955. A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11(3):214–230.

_____. 1978. Post-Pleistocene Archaeology. In *California,* edited by R. Heizer, pp. 550–563. Handbook of North American Indians, Vol. 8. W.C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Warren, Claude N. 1968. Cultural Tradition and Ecological Adaptation on the Southern California Coast. *Eastern New Mexico University Contributions in Anthropology 1(3).* Portales.

_____. 1984. The Desert Region. In *California Archaeology,* by M. Moratto, with contributions by D.A. Fredrickson, C. Raven, and C.N. Warren, pp. 339–430. Academic Press, Orlando, Florida.

Warren, Claude N., and Robert H. Crabtree. 1986. Prehistory of the Southwestern Area. In W.L. D'Azevedo ed., *Handbook of the North American Indians,* Vol. 11, Great Basin, pp. 183–193. Washington, D.C.: Smithsonian Institution.

Wilson, Benet. 2018. The Evolution of Ontario International Airport. In *Aviation Pros*. April 5. Accessed online in November 2022 at: https://www.aviationpros.com/airports/article/12383988/the-evolution-of-ontario-international-airport.

Yetzer, Carl. 1983a. "San Diego Rail Line Almost Didn't Make It to San Bernardino." *San Bernardino Sun*, September 12.

_____. 1983b. "Fight over Railroads Led to Colton's Birth." *San Bernardino Sun*, September 11.

Ontario International Airport Connector Project

ONTCONNECTOR

APPENDIX I
CULTURAL RESOURCES IDENTIFICATION AND ELIGIBILITY ASSESSMENT

October 2024

Prepared for:

sbcta

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MANAGEMENT SUMMARY

This Cultural Resources Assessment was prepared for the San Bernardino County Transportation Authority (SBCTA) Ontario International Airport (ONT) Connector Project (Project), located in the cities of Ontario and Rancho Cucamonga, San Bernardino County, California. SBCTA, in cooperation with the Federal Transit Administration (FTA), proposes to construct a 4.2-mile-long transit service tunnel directly connecting the Southern California Regional Rail Authority (SCRRA) Cucamonga Metrolink Station ONT. The proposed Project would expand access options to ONT by providing a direct transportation connection from the Cucamonga Metrolink Station to ONT. The proposed Project is subject to federal and State environmental review requirements pursuant to Section 106 of the National Historic Preservation Act (NHPA), the National Environmental Policy Act (NEPA), and California Environmental Quality Act (CEQA). FTA is the lead agency for NHPA and NEPA, while SBCTA is the lead agency under CEQA. Partner agencies include the Ontario International Airport Authority, Omnitrans, the City of Ontario, and the City of Rancho Cucamonga.

This assessment included a records search, archival research, historic outreach, field surveys, built environment evaluations, and preparation of this report. The purpose of the study is to identify and evaluate cultural resources within the Area of Potential Effects (APE) in compliance with Section 106 of the NHPA and CEQA. As part of this process, an Archaeological Study Area (ASA) was defined within the APE that encompassed the maximum extent of Project-related ground disturbance.

During the built environment field survey, three historic-period (pre-1981) resources were identified in the APE and evaluated. These resources are an approximately 1,300-foot-long (0.25-mile) segment of the former Atchison, Topeka and Santa Fe Railway (AT&SF) (36-006847; APE Map Reference Number 1), a commercial complex at 4265 East Guasti Road (APE Map Reference Number 2), and an approximately 3.25-mile-long segment of the former Southern Pacific Railroad (SPRR) (36-010330; APE Map Reference Number 3). The two railroads date to the 1800s and the commercial complex dates to 1969. None of the identified resources meet the criteria for listing in the National Register of Historic Places or the California Register of Historical Resources. They are not “historic properties” pursuant to Section 106 or “historical resources” as defined by CEQA. No archaeological resources were identified within the APE.

Therefore, the Project will result in *No Historic Properties Affected* (Section 106). No further cultural resources investigation are recommended unless proposed development plans undergo such changes as to include areas not covered by this study. However, due to the proximity of both prehistoric and historic archaeological resources (revealed in records search results) and the presence of Holocene soils at shallower depths, there is some potential for impacts to unknown archaeological resources within the APE. Accordingly, it is recommended that a program of limited/focused archaeological monitoring be implemented.

Please note that standard regulatory compliance measures regarding buried cultural resources are required in conformance with Section 15064.5(e) of the *CEQA Guidelines*, Public Resources Code (PRC) Section 5097.98, and State Health and Safety Code Section 7050.5.

If buried cultural materials are encountered during earthmoving operations associated with the proposed Project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

In the event human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD will have the opportunity to offer recommendations for the disposition of the remains.

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ACRONYMS AND ABBREVIATIONS

A&P	Atlantic and Pacific Railroad
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
AD	Anno Domini
AMA	Archaeological Monitoring Area
APE	Area of Potential Effects
ASA	Archaeological Study Area
AT&SF	Atchison, Topeka and Santa Fe
BC	before Christ
BERD	Built Environment Resources Directory
CAA	Civil Aeronautics Authority
California Register	California Register of Historical Resources
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CRMTP	Cultural Resources Management and Treatment Plan
FTA	Federal Transit Administration
I-10	Interstate 10
MLD	Most Likely Descendant
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
ONT	Ontario International Airport
PRC	Public Resources Code
SBCTA	San Bernardino County Transportation Authority
SCCIC	South Central Coastal Information Center
SCRRA	Southern California Regional Rail Authority
SHPO	State Historic Preservation Officer
SLF	Sacred Lands File
SMCA	Slover Mountain Colony Association
SPRR	Southern Pacific Railroad
TBM	tunnel boring machine
UPRR	Union Pacific Railroad
USGS	United States Geological Survey
WPA	Works Progress Administration
WWII	World War II

1 INTRODUCTION

It is anticipated that the Ontario International Airport (ONT) Connector Project (Project) will require federal funding and that the Federal Transit Administration (FTA) will serve as the lead federal agency for the Project. Accordingly, the Project is being treated as an undertaking subject to Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations 36 CFR Part 800 (Section 106). As required under Section 106, this assessment was conducted to identify any "historic properties" within the Area of Potential Effects (APE). "Historic properties" are "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register" (36 Code of Federal Regulations [CFR] Part 800.16[l][1]). In order to identify and evaluate such properties, a historical/archaeological resources records search was conducted, historical background research and historic outreach were completed, and intensive-level field surveys were conducted. This work was completed by or completed under the supervision of personnel who meet the Secretary of the Interior's Professional Qualification Standards in the fields of archaeology and architectural history (Ivan Strudwick, RPA and Casey Tibbet, MA respectively).

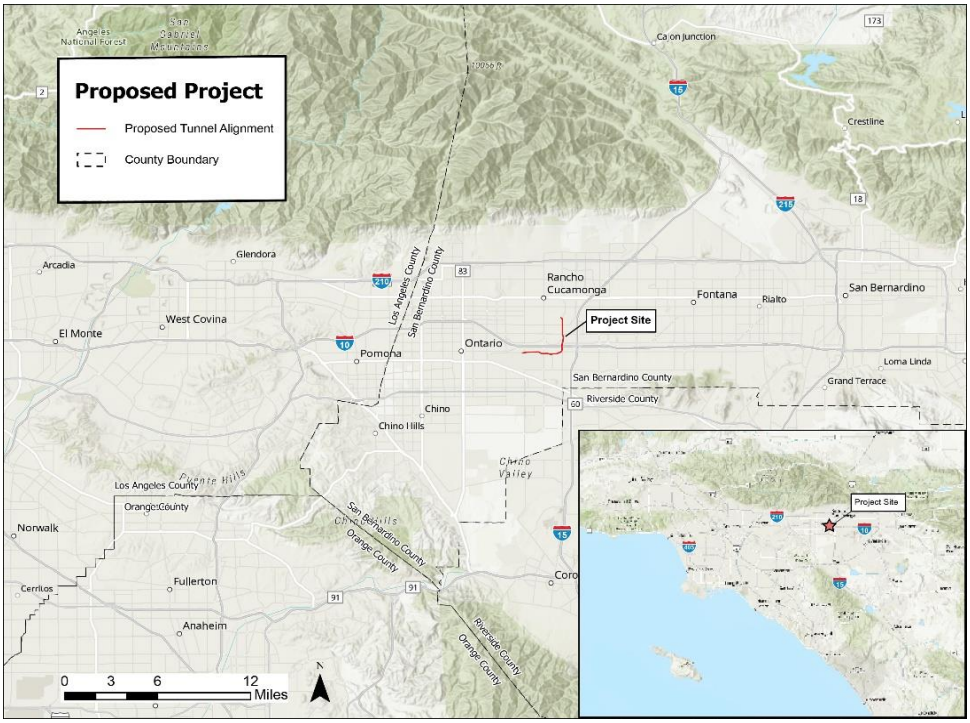
This report also provides SBCTA, which is the lead agency under the CEQA, with the necessary information and analysis to determine, as mandated by CEQA, whether any "historical resources" exist in the proposed Project APE. The criteria for determining the significance of impacts to historical resources are based on Section 15064.5 of the CEQA Guidelines and Guidelines for the Nomination of Properties to the California Register of Historical Resources (California Register). Properties eligible for listing in the California Register and subject to review under CEQA are those meeting the criteria for listing in the California Register or the National Register of Historic Places (National Register), or designation under a local ordinance. The undertaking is described below.

1.1 DESCRIPTION OF UNDERTAKING

The SBCTA, in cooperation with the FTA, proposes to construct a 4.2-mile-long transit service tunnel directly connecting the SCRRA Cucamonga Metrolink Station to ONT (Figures 1 and 2). The proposed Project would expand access options to ONT by providing a direct transportation connection from the Cucamonga Metrolink Station to ONT.

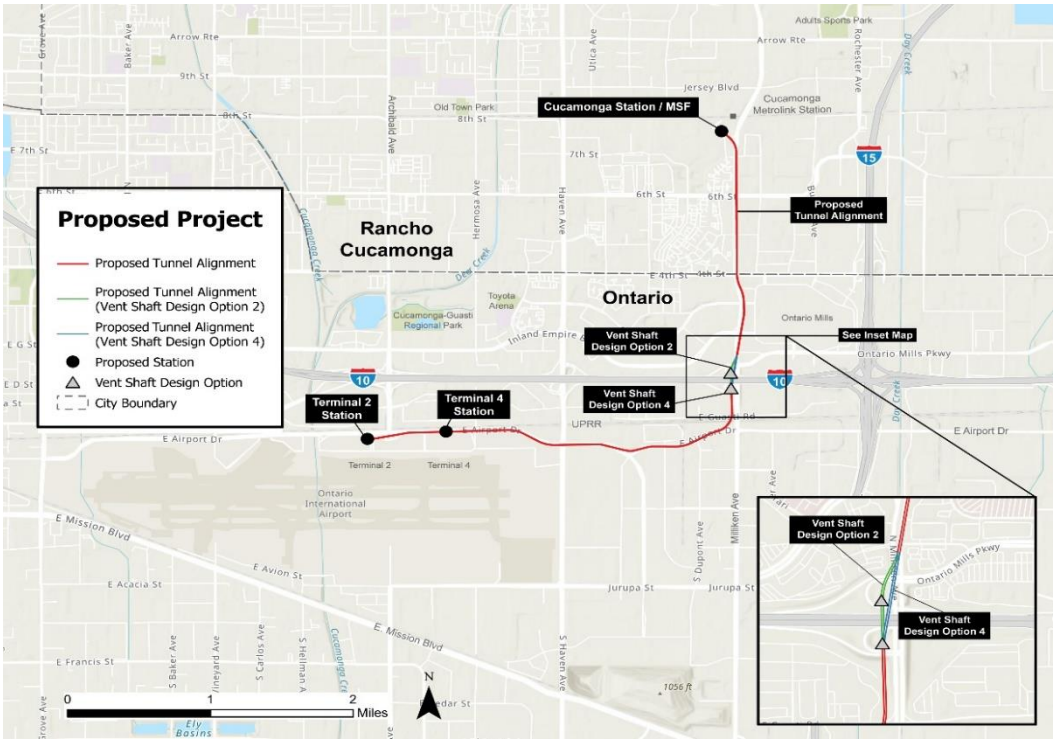
The proposed Project consists of three key components: stations, a tunnel, and ventilation shafts. The proposed Project includes the Cucamonga Metrolink Station, ONT, and the 4.2-mile-long footprint of the underground tunnel that generally travels south along Milliken Avenue and crosses beneath 6th Street in the City of Rancho Cucamonga, as well as Fourth Street, Interstate 10 (I-10), and the Union Pacific Railroad (UPRR) in the City of Ontario before traveling west beneath East Airport Drive to connect the Cucamonga Metrolink Station to ONT.

Figure 1: Regional Location Map



Source: AECOM 2024

Figure 2: Proposed Project/Build Alternative Site



Source: AECOM 2024

1.1.1 Stations

The proposed Project includes three passenger stations (Figure 2). One station would serve the Cucamonga Metrolink Station, and two stations would serve ONT within the existing parking lots located across from Terminals 2 and 4. The proposed stations would be connected to the bored tunnel via a cut-and-cover structure and an at-grade guideway. A construction staging area would be required at each of the three proposed Project stations.

1.1.2 Tunnel

The proposed Project would construct a single tunnel (24-foot inner diameter bi-directional tunnel) between the Cucamonga Metrolink Station and ONT (Figure 2). The depth of the tunnel is estimated to be approximately 70 feet below the ground surface.

A tunnel boring machine (TBM) would be launched from either the existing ONT parking lot near Terminal 2 or the Cucamonga Metrolink Station to construct the tunnel (the TBM launch and retrieval sites are the cut-and-cover locations at the existing ONT Terminal 2 parking lot and the Cucamonga Metrolink Station – Figure 3). Vehicle ramps connecting to the tunnel would be constructed via direct excavation as well. Haul trucks would remove excavated material from the launch site.

Utility relocations are not anticipated for the construction of the proposed tunnel. However, at the proposed maintenance facility at the proposed Rancho Cucamonga Station, overhead Southern California Edison lines would need to be relocated underground and horizontally. The remainder of the utility relocations would be associated with the emergency access shaft.

1.1.3 Ventilation Shafts

Two Vent Shaft Design Options with different access points are being considered for the proposed Project (Figure 2). The Mid-Tunnel Ventilation & Egress Facility will consist of both underground and above-ground structures. The underground shaft will extend to the tunnel level, and the surface structure will consist of a one-story structure above ground. One ventilation shaft would be constructed along the tunnel alignment.

1.2 AREA OF POTENTIAL EFFECTS

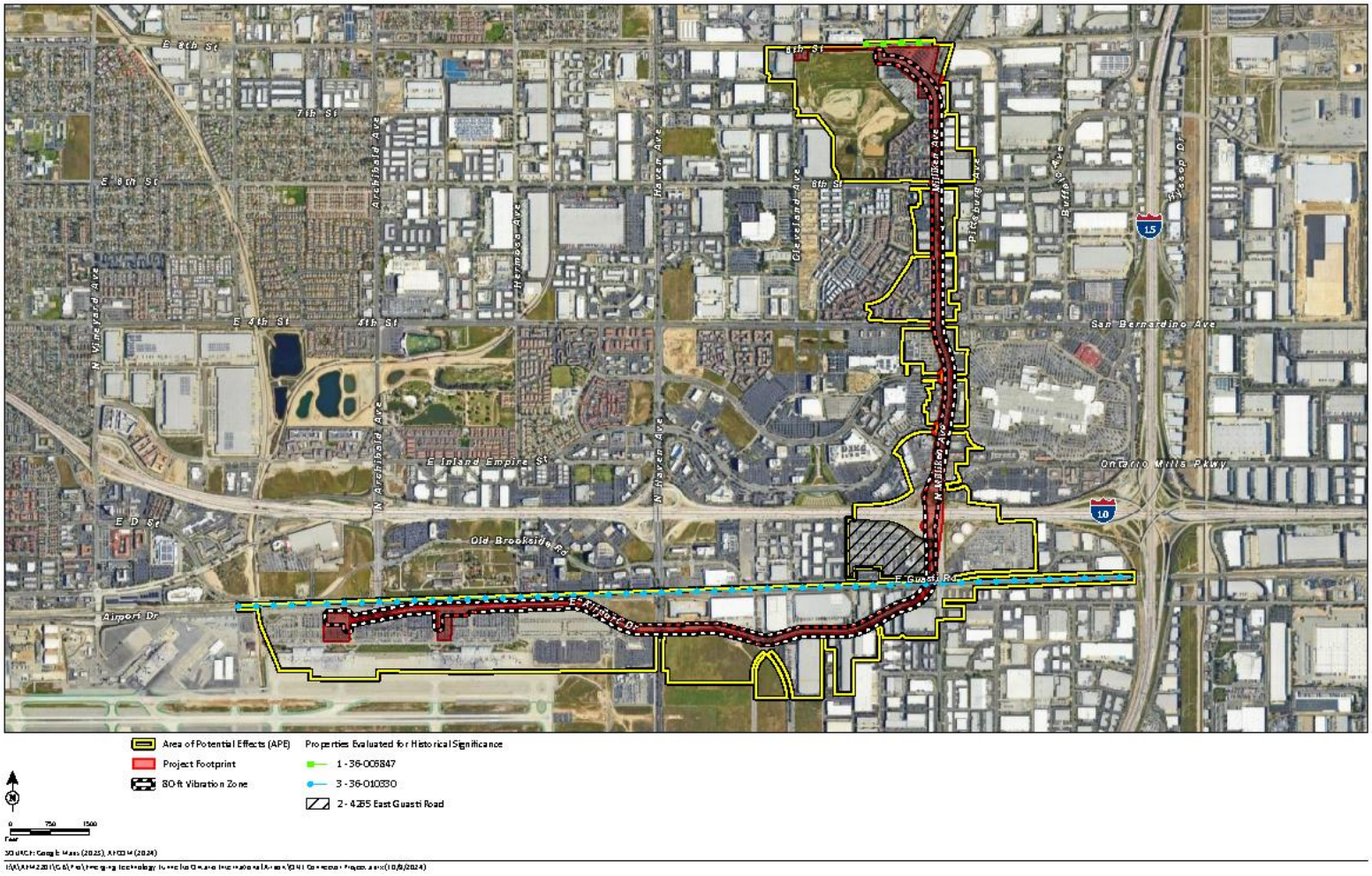
The Area of Potential Effects (APE), as defined in 36 CFR Part 800.16(d), is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.” The APE consists of the area where the Project has the potential to cause effects on historic properties.

Typically, a resource must be 50 years of age or older to be considered for listing in the National Register. However, to account for the time lag between the completion of the environmental review process and the beginning of construction, a 45-year threshold is being used for this Project.

The APE was delineated to include all areas that may be directly or indirectly affected by the construction and operation of the proposed Project (Figure 3). Direct effects occur as a result of the undertaking with no intervening cause and include ground disturbance as well as visual, auditory, atmospheric, and vibrational effects. Indirect effects are reasonably foreseeable effects that occur later in time or farther removed in distance. In most areas, the depth of ground disturbance is expected to be approximately 70 feet.

Based on studies prepared for the proposed Project, vibration associated with boring for the tunnel is anticipated to be detectable to fragile buildings a maximum of 80 feet from the tunneling activities; this area has been depicted as the "potential vibration zone" on the APE map. While most of the proposed Project would be underground, the proposed stations will be a maximum of 40 feet in height. This height was taken into consideration when identifying the potential for visual effects. At the request of the FTA, properties where effects may occur have been included in their entirety regardless of whether the proposed Project has the potential to affect the entire property. The surface area within the APE that may be subject to physical effects was surveyed for archaeological resources and the entire APE was surveyed for built environment cultural resources. The FTA submitted the APE to interested parties on May 29, 2024, and the State Historic Preservation Officer (SHPO) on June 10, 2024, for review and concurrence pursuant to Section 106 of the NHPA.

Figure 3: APE Map



2 SETTING

2.1 NATURAL

2.1.1 Climate and Watershed

The proposed Project region is characterized by a temperate climate with dry, hot summers and moderate winters. Rainfall ranges from 12 to 16 inches annually (Beck and Haase 1974). Precipitation usually occurs in the form of winter rain, with warm monsoonal showers in the summer. Deer Creek (now channelized) and an unnamed drainage transect the APE. Cucamonga Creek (also channelized) is approximately 0.25 mile to the west.

2.1.2 Biology

At an average elevation of 1,030 feet, the APE is within the Lower Sonoran Life Zone of California (Schoenherr 1992), which ranges from below sea level to 3,500 feet in elevation. Virtually all the natural vegetation has been removed from the proposed Project by development, but a few pioneer species such as mustard, telegraph weed, and Russian thistle, along with seasonal grasses, were observed in the easement portion of the ASA (see the Archaeological Field Survey discussion in the Results section, below). Extensive fauna are known locally, including many endemic species of rodents, reptiles, birds, and insects.

2.1.3 Geology

The APE is located at the northern end of the Peninsular Ranges Geomorphic Province, a 900-mile-long northwest-southeast-trending structural block that extends from the Transverse Ranges to the tip of Baja California and includes the Los Angeles Basin (California Geological Survey 2002; Norris and Webb 1976). The province is approximately 225 miles wide, extending from the Colorado Desert in the east across the continental shelf to the Southern Channel Islands (Santa Barbara, San Nicolas, Santa Catalina, and San Clemente) in the west (Sharp 1976). This region is characterized by a series of mountain ranges separated by northwest-trending valleys subparallel to faults branching from the San Andreas Fault. The geology of this province is similar to that of the Sierra Nevada, with numerous rock outcroppings useful to the Native Americans for resource milling, shelter, and ceremonial art.

Geologic mapping by Morton and Miller (2006) indicates the project site contains Holocene to late Pleistocene (less than 126,000 years ago) Quaternary Young Eolian (Qye) Deposits. These deposits consist of silt and medium- to fine-grained sand that was deposited by wind activity (Morton and Miller, 2006). Additionally, the project site contains modern Artificial Fill (Qaf) that was placed during the development of the area. The geotechnical report indicates the presence of Qye Deposits at depths of up to 10 feet throughout the APE, even below the Qaf sediments which range from 3 to 6.5 feet deep (Leighton Consulting 2021).

2.2 CULTURAL

2.2.1 Prehistory

Chronologies of prehistoric cultural change in Southern California have been attempted numerous times, and no single description is universally accepted, as the various chronologies are based primarily on material developments identified by researchers familiar with sites in a particular region, and variation exists essentially due to the differences in those items found at the sites (Moratto 2004). Small differences occur over time and space, which combine to form patterns that are variously interpreted.

Currently, two primary regional culture chronology syntheses are commonly referenced in the archaeological literature. The first, Wallace (1955), describes four cultural horizons or time periods: Horizon I – Early Man (9000–6000 BC, Horizon II – Milling Stone Assemblages (6000–3000 BC), Horizon III— Intermediate Cultures (3000 BC – AD 500), and Horizon IV – Late Prehistoric Cultures (AD 500–historic contact). This chronology was refined (Wallace 1978) using absolute chronological dates obtained after 1955.

The second cultural chronology (Warren 1968) is based broadly on Southern California prehistoric cultures and was also revised (Warren 1984; Warren and Crabtree 1986). Warren's (1984) chronology includes five periods in prehistory: Lake Mojave (7000–5000 BC), Pinto (5000–2000 BC), Gypsum (2000 BC–AD 500), Saratoga Springs (AD 500–1200), and Protohistoric (AD 1200–historic contact). Changes in settlement pattern and subsistence focus are viewed as cultural adaptations to a changing environment, which begins with gradual environmental warming in the late Pleistocene; continues with the desiccation of the desert lakes, followed by a brief return to pluvial conditions; and concludes with a general warming and drying trend, with periodic reversals that continue to the present (Warren and Crabtree 1986).

2.2.2 Ethnography

The proposed Project area is within the traditional cultural territories of the Gabrielino (Kroeber 1925; Heizer 1968). Tribal territories were somewhat fluid and changed over time. The first written accounts of the Gabrielino are attributed to the mission fathers, and later documentation was by Johnston (1962), Blackburn (1962–1963), Hudson (1971), and others.

The territory of the Gabrielino included portions of Los Angeles, Orange, and San Bernardino counties during ethnohistoric times, and also extended inland into northwestern Riverside County (Kroeber 1925; Heizer 1968). It encompassed an extremely diverse environment that included coastal beaches, lagoons and marshes, inland river valleys, foothills, and mountains (Bean and Smith 1978).

The Gabrielino caught and collected seasonally available food resources and led a semi-sedentary lifestyle, living in permanent communities along inland watercourses and coastal estuaries. Individuals from these villages took advantage of the varied resources available. Seasonally, as foods became available, native groups moved to temporary camps to collect plant foods such as acorns, buckwheat, chía, berries, and

fruits, and to conduct communal rabbit and deer hunts. They also established seasonal camps along the coast and near bays and estuaries to gather shellfish and hunt waterfowl (Hudson 1971).

The Gabrielino lived in small communities, which were the focus of family life. Patrilineally linked, extended families occupied each village (Kroeber 1925; Bean and Smith 1978). Both clans and villages were apparently exogamous, marrying individuals from outside the clan or village (Heizer 1968). Gabrielino villages were politically independent and were administered by a chief, who inherited his position from his father. Shamans guided religious and medical activities, while group hunting or fishing was supervised by individual male specialists (Bean and Smith 1978).

The nearest historically known Gabrielino community was *Tooypinga,* located approximately 9 miles west of the ASA (McCawley 1996).

2.2.3 History

2.2.3.1 Settlement

2.2.3.1.1 Rancho Cucamonga

For the bulk of the Spanish and Mexican periods (1769–1848) in California history, the entire San Bernardino Valley, including the present-day Rancho Cucamonga and Ontario areas, was considered part of the land holdings of Mission San Gabriel. In the 1830s and 1840s, during secularization of the mission system, the Mexican authorities in Alta California made a number of large land grants of former mission properties in the valley. Among them was the Cucamonga Rancho, which was granted to Tiburcio Tapia in 1839 and included the proposed Project APE. That same year, Tapia built an adobe house on Red Hill, which is a small hill located more than 3 miles northwest of the proposed Project APE (Beattie and Beattie 1951:143). Until Tapia's death in 1845, the rancho was used primarily as a stock range with cattle, sheep, and horses, but it also included a small vineyard (parts of which were later incorporated into the Thomas Vineyard Company Winery) and other agricultural crops (Beattie and Beattie 1951:143).

In 1854, 6 years after California became part of the United States (1848), Lieutenant A.W. Whipple, who was in the area looking for a suitable railroad route, noted that the Prudhomme house (formerly Tapia's house) was visible on a grassy knoll with cultivated fields and vineyards below it (Beattie and Beattie 1951:147). In 1858, John Rains purchased the Cucamonga Rancho and "planted a new vineyard of 150,000 vines," which was laid out in 10-acre lots with roads between them (Beattie and Beattie 1951:148). Within a short time, Rains found himself in debt, and in 1862, he was ambushed and murdered (Beattie and Beattie 1951). Upon his death, his wife inherited the property.

Around 1870, some of the western lands of the rancho, along with water rights, were obtained by the Cucamonga Land Company (Ingersoll 1904:615). The company sold the land (with water) in 10-acre to 80-acre parcels (Ingersoll 1904:615)). Around the same time, the Cucamonga Homestead Association was organized with the Hellman brothers as the principal stockholders (Ingersoll 1904:615)). The association

divided the land into 10-acre and 20-acre tracts, and in 1870, about 20 of the lots were sold and around 50 acres were irrigated (Ingersoll 1904:616). Around the same time, "the Cucamonga Vineyard Company was formed by the owners of the Rancho, to irrigate the old vineyard property" (Ingersoll 1904:616.).

In the 1880s, a small commercial core sprang up along Archibald Avenue about 2 miles northwest of the proposed Project APE (Snow and McGee 2009). The area was called Cucamonga and was connected to the Santa Fe Railway and North Town (south of Cucamonga) primarily by Archibald Avenue. With the exceptions of ONT, the small community of Guasti, the railroads, and a few wells, as late as 1966, the proposed Project APE and surrounding area largely remained undeveloped except perhaps as agricultural land (United States Geological Survey [USGS] 1966). By 1973, the only major new development in and around the APE was Ontario Motor Speedway, which was bounded by Milliken Avenue on the east, I-10 on the south, Haven Avenue on the west, and San Bernardino Avenue (now 4th Street) on the north (USGS 1972). In 1977, 59 percent of the people who voted approved combining the three communities of Cucamonga, Etiwanda, and Alta Loma. As a result, Rancho Cucamonga officially became a city (*Daily Report* 1981). Since then, Rancho Cucamonga has continued to be one of the fastest-growing cities in the Inland Empire, with the proposed Project APE and surrounding area transitioning from agricultural lands to suburban development beginning in the 1980s.

2.2.3.1.2 Ontario

Except where noted, the following is excerpted and condensed from the *Ontario International Airport Historic Context Statement* prepared for the City of Ontario by ASM Affiliates (ASM Affiliates 2017:15-21).

The area that became the City of Ontario was part of the Mission San Gabriel holdings during the Spanish Period and the Cucamonga Rancho during the Mexican Period. It was eventually acquired by a group of Los Angeles investors who experimented with a variety of commercial crops before settling on selling 10-acre plots suitable for farming. From the 1870s to the end of World War II (WWII), land in this area was dominated by agriculture, including vineyards, citrus, and other crops, as well as dairy farms.

The Ontario Model Colony was founded in 1882 by Canadian brothers George, William, and Charles Chaffey. The Chaffey brothers set up an irrigation system that channeled water from the canyons of Mount San Antonio (also known as Mt. Baldy) to the tillable land. They set aside 1 square mile for the town site and reserved half of the land for an agricultural college (Chaffey College), selling the rest parcel by parcel. Between 1882 and 1889, several major companies were established, including Armstrong Nurseries, C.C. Graber Olive Company, and Hotpoint, which became General Electric. The City of Ontario incorporated in 1891, and by 1910, it had a post office, a library, and a busy downtown.

In the 1920s, the largest business was a forerunner of Sunkist Growers, Inc., a subsidiary of the California Fruit Growers Exchange. Sunkist remained Ontario's largest employer through the 1950s. By 1957, a third of the local labor force worked in the manufacturing sector at companies including the massive Kaiser Steel plant and Lockheed. Like most of California, Ontario's population soared in the post-WWII period,

and soon, most of the citrus groves and vineyards were replaced with residential development, schools, shopping centers, and other suburban amenities. By the late 1950s, Ontario began to expand to accommodate the growing population that more than doubled between 1951 and 1960.

2.2.3.2 Guasti

In 1901, Italian immigrant Secondo Guasti, purchased 4,000 acres of land in South Cucamonga. This land located between present day Interstate 10 and the 60 Freeway, became home to Guasti's *Italian Vineyard Company* (IVC) where he began construction on the winery and houses for the workers. By 1910, the town of South Cucamonga was changed to Guasti. The IVC was more than just a vineyard, but was considered an *educational institution,* and *"an example that can be followed by others"* in a 1922 edition of the *Colton Daily Courier* (Clucas, 1979:221). Guasti developed a village on this plot of land by establishing living quarters, firehouse, post office, a school for the children of the town, and successful dairy and swine departments (Straight, 2012). In its prime, the IVC employed 350 to 400 men during the season and annual payroll for the company in 1922 was $220,000 (Clucas, 1979). In 1924 after establishing his company town, he decided to begin construction of a church, similar to the Italian church in Asti where he was born. The church is still in operation and known as the San Secondo d'Asti Catholic Church.

In 1932, following the death of Secondo Guasti Jr., the IVC faced difficult times due to the changing of administration. During the prohibition era, the IVC merged with other wineries to form Fruit Industries. Near the end of the prohibition era, the IVC severed ties with Fruit Industries, but two of its original buildings continued to operate under the name Fruit Industries. In 1945, Garret & Company purchased the IVC of Guasti (Clucas, 1979:74). In the mid-20th century, Guasti was annexed into the City of Ontario.

2.2.3.3 Ontario International Airport

In 1923, a local flying club landed an airplane on a dirt field between South San Antonio and South Mountain avenues and the UPRR and SPRR tracks, approximately 3 miles east of the APE and ONT (ASM Affiliates 2017:17). These early flying enthusiasts named the strip Latimer Field after a nearby orange packing facility. In 1929, the city purchased 30 acres 3 miles east of Latimer Field and began development of a full-fledged airport at the southwest corner of today's ONT. The new airport was known as Ontario Municipal Airport. The new airfield's first hangar and a 1,200-by 700-foot-long runway were built in 1936 by Carl von Darnell and his partners, who leased the land from the city and operated a flight school. In 1939, Arthur C. Nelson operated the flight school, which was subsidized through a program offered by the Civil Aeronautics Authority (CAA), a federal agency tasked with training military pilots in anticipation of war with Germany.

In 1940, the city expanded the flying field, leasing 405 acres of nearby Ballou Ranch, which it annexed along with several neighboring parcels the following year. This was done in consultation with the CAA and the Works Progress Administration (WPA) and approved by President Roosevelt under WPA Application No. 50223. In 1942, the WPA began extensive improvements, including construction of two concrete

runways, drainage structures, roadways, lighting, water supply and storage facilities, and lengthening and narrowing the original dirt runway. In May 1942, the United States Army Air Corps (now the Air Force) acquired most of the facility for wartime use. In full operation, the military facility included approximately 875 acres, about 350 of which were owned by the Army. At the end of the war, the California Air National Guard established a training facility on 30 acres at the airport and was responsible for further expansion of runways through 1966.

In 1945, the City of Ontario began development of a master plan that included the airport as a major element. At that time, Ontario Municipal Airport was the only airfield in Southern California capable of accommodating large, heavy aircraft and was already used for transporting cargo to Asia; in recognition of this, the federal government designated the airport as an official international port of entry in 1946. In 1949, the Ontario Chamber of Commerce began actively promoting Ontario as an ideal spot for industrial development, citing the presence of a major airport, railroads, and highways; the airport's designation as an international port; and the availability of land.

The postwar years brought an expansion to accommodate increased passenger traffic as well as industry-leading aviation/aerospace companies. Some of the 1950s improvements included: a new two-story terminal (1950), a control tower (1953), a new terminal replacing the original (late 1950s), and runway expansions. In 1957, the City of Ontario set aside 2,000 acres of land adjacent to the airport for the Ontario Planned Industrial Park, located south of East Mission Boulevard (outside the APE). By 1960, 640 acres of improved land, including paved streets, curbs, sewers, and water, were in place, and a master plan for the industrial park was being developed.

In 1967, ONT became a part of Los Angeles' regional airport system (LA/Ontario International n.d.). In the 1970s, the facility added 300 acres and expanded the terminal by 22,500 square feet (ASM Affiliates 2017). In the 1980s, a new runway was built that could accommodate wide-body jets, the airport was transferred from the City of Ontario to the City of Los Angeles, and a new air traffic control tower was built. In the 1990s, a $270-million terminal expansion project was completed, and a new ground transportation center housing six on-airport car rental brands opened (ASM Affiliates 2017.). In the 2000s, the facility continued to expand, although passenger volume dropped from 6.9 million in 2004 to 3.9 million in 2014 (ASM Affiliates 2017.). In 2016, the City of Ontario regained control of ONT, ending an almost 50-year partnership (Wilson 2018).

Portions of ONT are included in the proposed Project APE. These areas consist of parking lots, a car rental building, two terminal buildings, and portions of the apron adjacent to the terminals, all of which were built after 1994 (Historicaerials.com var.)

2.2.3.4 Railroads

Prior to the invention of railroads and steam-powered locomotives, goods and people were transported primarily by horses or mules. Consequently, the travel speed and load weight were fairly limited, as were

the distances most people were willing to travel. When the first passenger train began operating in 1807 in England, it represented not only a tremendous advancement in transportation and technology but also new opportunities for commerce, settlement, and wealth (Houk 2008). Within 5 years, the first commercially successful steam locomotives began operating on the Middleton Railway in England, but it was not until the mid- to late 1820s that railroads began to be constructed in the United States, facilitating westward expansion and social change (Houk 2008).

As industrialization resulted in more people living and working in urbanized areas, cities became overcrowded and polluted. After the 1830s, railroads made large tracts of land outside the cities accessible, and those who could afford to soon moved away from the cities and commuted to work by train (Tibbet 2005). As the railroads expanded, towns sprang up along the railroad routes. These towns followed the boom-and-bust cycles of the railroads and appeared across the nation mainly between 1850 and 1910 (van Ophem 2003). Some were established by the railroads as part of their strategy to populate and control the territories along their lines, while others had more organic beginnings (van Ophem 2003). True railroad towns such as Fresno were established by the railroad to promote and control business, and a regular spacing of stations helped discourage independent promoters from developing businesses in the intervening areas (van Ophem 2003). In some cases, when an established town would not give the railroad what it wanted, the railroad would simply build another town. For the most part, the towns that developed along the railroads had the reputation for being the home of rough characters, bad behavior, and unimaginative architecture. However, many of the towns managed to attract a steady stream of people looking for opportunity and a fresh start. Some, such as Tacoma, Fresno, Cheyenne, Billings, and Albuquerque, even grew into successful cities, while others remained small and relatively depressed and still others disappeared completely.

By 1840, the railroad system in the United States had expanded enough that a line to the Pacific Ocean was being seriously considered. Originally, Oregon was the destination because it was unclaimed territory and did not have the geographic obstacles that California has (namely, the Sierra Nevada) (Robertson 1998:5). However, when gold was discovered in California, priorities shifted, and in 1850, California became the nation's 31st state. In 1862, President Lincoln signed the Pacific Railway Act, which authorized construction of the first transcontinental railroad (Houk 2008). In May 1869, that railroad was completed when the Central Pacific Railroad joined the UPRR at Promontory, Utah. As a result, throngs of land speculators and investors flooded Southern California.

The Central Pacific Railroad was financed by Collis P. Huntington, Charles Crocker, Mark Hopkins, and Leland Stanford, the so-called Big Four. In 1868, the Big Four purchased the SPRR, which had been founded in 1865 by a group of businessmen led by Timothy Phelps (American Public University n.d.). The two railroads merged in 1870, and SPRR tracks soon sprawled across Southern California, followed shortly by tracks all across the country (American Public University n.d.). From its inception, the SPRR encouraged the development of small family farms on its lands (Orsi 2005). In the 1860s through the mid-1870s, the

SPRR published simple flyers advertising its lands (Orsi 2005) . These promotional endeavors increased in the late 1870s and into the 1880s with the publication of detailed brochures that often included maps and were the precursors to the elaborate advertising for which the railroad would become famous (Orsi 2005). These concentrated marketing efforts greatly enhanced the role the SPRR played in the settlement and development of numerous communities along its routes. In some places, such as Modesto, Turlock, Tulare, Delano, and Colton, the SPRR was involved in the development of hotels, hospitals, churches, schools, and parks and aggressively promoted settlement (Orsi 2005:109 and 111).

Realizing the importance of rail service, in 1874, the small City of San Bernardino began a campaign to entice the SPRR to build its tracks east through San Bernardino (Yetzer 1983a). However, negotiations came to a standstill when the SPRR asked for a subsidy from the city and a guarantee that at least $100,000 in railroad bonds would be purchased without guaranteeing that the railroad would come through San Bernardino (Yetzer 1983a). The city balked at this, and as was its practice, the SPRR shifted its attention to another nearby area where it could establish or help establish a town that would then be in its debt, if not completely under its control.

Thus, in 1874, the SPRR entered into an agreement with the Slover Mountain Colony Association, constructed its line through the association's lands, and established its regional headquarters, a freight depot, and a rail yard. In return, the new town was named Colton after David D. Colton, entrepreneur and SPRR Vice President. The rail yard, which was located between La Cadena Drive and Mount Vernon Avenue, became the primary source of economic development as the largest employer in Colton (Caltrans 2015:26). Over the years, the rail yard included numerous tracks, a round house, freight and passenger depots, the Colton tower, a section house, a bunk house, a store, an office, a paint house, a paint shed, a welding shop, a mechanic shop, a machine shop, a large ice storage building, a stock corral, an oil sump, a turntable, a switch shanty, and several other sheds and repair/rebuild facilities (Sanborn Fire Insurance Map 1928). There were also commercial enterprises such as the United Citrus Grower's building, the Universal Milling Company building, and the American Railway Express Company building in the immediate vicinity (Signor 1990:78 and 79).

In the 1950s, several buildings were removed to accommodate construction of the freeway north of the depot (Historicaerials.com var.). In 1973, a new, "fully automated, computerized West Colton" rail yard was opened near the intersection of I-10 and South Riverside Avenue, to the west of the original yard, and by 1980, the freeway had been widened to its current configuration (Historicaerials.com var.; Gordon 1985:1). Construction of both of these facilities (I-10 and the West Colton rail yard) resulted in the demise of rail yard buildings, as well as further degradation of the original setting. In 2003, the West Colton yard was reportedly the largest rail yard in Southern California, with more than 1,500 rail cars coming through on a typical day (Streeter and Landsberg 2004). Over the years, many of the tracks through the original rail yard were removed or realigned, and almost all of the buildings and other rail yard features have been demolished. Today, the rail yard no longer looks anything like it did during its period of significance.

In the 1880s, the SPRR served the Southwest, including El Paso, Texas, and extended into northern Oregon (American-rails.com 2007–2010). During this period, at least in the Riverside-San Bernardino area, the SPRR had a virtual monopoly and charged exorbitant rates for freight. In the early 1880s, this made construction of the California Southern Railroad's proposed track from San Diego through Colton to San Bernardino an attractive alternative.

California Southern Railroad, an AT&SF subsidiary, was incorporated in 1880 with the intention of constructing a railroad from San Diego through Fallbrook and Temecula to San Bernardino and then over Cajon Pass to a junction with the Atlantic and Pacific Railroad (A&P), which was grading a line west along the 35th parallel to the Colorado River from points east (Robinson 2005). The A&P had an agreement with two other railroad companies, the St. Louis and San Francisco Railroad (known as the Frisco Line) and the AT&SF, to build all the way to the Pacific Ocean. In 1883, the A&P bridged the Colorado River to Needles, where it was temporarily stopped by the SPRR, which wanted to maintain a monopoly in California (Robinson 2005). To solidify its position, the SPRR quickly constructed a branch rail line from Mojave eastward to Needles (Robinson 2005:245).

Meanwhile, California Southern Railroad opened from National City to Colton on August 21, 1882, and regular service began giving San Diego an outlet to the east and to San Francisco (Ingersoll 1904:260). However, it took over a year for the tracks to be completed to San Bernardino, as SPRR "had interposed every possible obstacle—legal and material—to the advent of its rival" (Ingersoll 1904:260). In July 1883, California Southern Railroad engineer Fred T. Perris acquired the necessary track to build the crossing, but when it was delivered to National City, SPRR officials hired the sheriff there to seize it. The *San Diego Sun* later reported that while Deputy Sheriff Bradt napped at the hotel, California Southern Railroad organized a group of men to take the track and put it on a train bound for Colton (Ingersoll 1904:261). On August 9, 1883, "in the face of a danger signal held aloft by Mr. Victor, Superintendent of the California Southern Railroad," the SPRR parked an engine on the tracks in an effort to block construction of the crossing (*Los Angeles Times* 1883). One source reported that the engines were "guarded by Walter Earp [Virgil Walter Earp], one of the notorious Earp boys, who is well armed and is furnished with his meals" (*The Press and Horticulturalist* 1883). Earp helped secure the crossing for SPRR until Robert W. Waterman (future California Governor), Sherriff Burkhart, and a posse of deputized men delivered a court order stating that California Southern Railroad had the right to cross the tracks (Cataldo 2006). A month later, "on September 13, 1883 the first California Southern train … rolled across the Southern Pacific tracks from San Diego and arrived in San Bernardino" (Cataldo 2006). It was at this time that the Colton Tower was constructed to direct traffic at the crossing. An 1895 map shows the Colton Tower located at the southeast corner of the crossing, and a 1947 news article noted that it was the "only heavy duty tower on the Los Angeles Division that still is manually operated, having the old man-sized levers and long rods running to the switches and signals" (Union Pacific Railroad 1895; Baxter 1947). It has since been removed.

Severe flooding occurred in the winter of 1883–1884, and several washouts occurred along the California Southern Railroad line, especially in the Temecula area (Ingersoll 1904:261). Repair work was completed, and in November 1885, the line was completed to Barstow and the transcontinental connection (with the A&P) was made (Ingersoll 1904:261). In the boom years of 1886–1887, numerous feeder lines were built in Southern California, most of which were owned by AT&SF (Ingersoll 1904:261). In 1889, California Southern Railroad was sold and consolidated with AT&SF (Robertson 1998:94). In 1893, the "loop," which became known as the "kite-shaped track," was completed through the San Bernardino Valley (Ingersoll 1904:266). This track connected Los Angeles with the San Gabriel and San Bernardino Valleys and boasted that nothing was seen twice. The small segment of the California Southern/AT&SF track (APE Map Reference No. 1) in the proposed Project APE appears to have been utilized as part of this route. Research did not find any indication that Cucamonga was a stop on the route.

Throughout the early part of the 20th century, the SPRR continued to grow, and by the 1950s, it owned and/or operated 15,000 miles of track, predominantly in the Southwest. Among its many achievements are three main lines that remain important arteries today: "the *Overland Route* (San Francisco to the Midwest), the *Golden State Route* (the Southwest to Kansas City), and the *Sunset Route* (the Pacific Coast to the Gulf Coast). In addition, SPRR had numerous famous passenger trains bedecked in its celebrated 'Daylight' livery of bright red and orange (with black and white trim)…" (American-rails.com 2007–2010). Despite the railroad's success, in the 1970s, SPRR suffered, and in the late 1980s, AT&SF attempted to merge with it but was blocked by the Federal Department of Transportation (Duke 1995). Instead, it was purchased by the Denver and Rio Grande Western, which made the unusual decision to keep the SPRR name (American-rails.com 2007–2010). In 1996, SPRR merged with the smaller UPRR, a move that proved difficult for UPRR as it was not equipped to manage the increased operations (American-rails.com 2007-2010). However, by the end of the 1990s, UPRR was once again running smoothly (American-rails.com 2007-2010). In 1995, Burlington Northern Railway merged with AT&SF.

3 METHODS

3.1 RESEARCH DESIGN

As required under Section 106, this assessment was conducted to identify any "historic properties" within the Area of Potential Effects (APE). "Historic properties" are "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register."

The elements and goal of an archaeological assessment are typically a record search, limited research, and a surface survey intended to determine the presence/absence of cultural resources per CEQA guidelines. In the event of positive results (cultural resource[s] is/are identified), depending on the nature of the resource(s), further investigation may be recommended. For this proposed Project, areas of physical effect (shown in Appendix A) were defined within the APE for the archaeological study (Appendix A).

3.2 RECORDS SEARCH

On July 29, 2022, the cultural resources records search was conducted at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. The records search included a review of all recorded historic and prehistoric archaeological sites within 1 mile of the areas of physical effect, as well as a review of relevant cultural resource reports. Appendix B contains the records search results.

3.3 ARCHIVAL RESEARCH

As part of the pre-field research, background research for the APE was conducted using published literature in local and regional history, online resources regarding the history and development of the area, the California Department of Transportation (Caltrans) historic bridge inventories, and historic aerial photographs and maps of the proposed Project vicinity. Once resources requiring evaluation were identified, additional research was conducted to develop relevant historic contexts and property-specific chronologies.

A desktop review of historic USGS topographic (topo) maps and historic aerials was completed by LSA Senior Archaeologist Riordan Goodwin in September 2022 (HistoricAerials.com 2022; USGS various). With the exception of the railroad noted above (36-010330), maps and aerial photographs from 1901 through 1973 did not show structures, improvements, or infrastructure (other than the roads) within the ASA (HistoricAerials.com 2022). The Built Environment Resources Directory (BERD) was also reviewed and indicated that the Guasti Winery Historic District (36-36-015469/36-015471/36-015990/36-016279) adjacent to the southwestern portion of the APE is eligible for the National Register (3S).

3.4 HISTORIC OUTREACH

Beginning May 29, 2024, outreach to identify interested parties was conducted by the FTA. This consisted of emailing various groups and organizations and soliciting input regarding historic-period resources in and around the APE.

A list of the outreach contacts is provided below, and an administrative record regarding the outreach can be found in Appendix C, Project Correspondence.

- Ontario Heritage
- Etiwanda Historical Society
- Casa de Rancho Cucamonga Historical Society
- Historical Preservation Association of Rancho Cucamonga
- Cooper Regional History Museum
- San Bernardino History and Railroad Museum
- Southern Pacific Historical & Technical Society
- Southern Pacific Railroad History Center

3.5 NATIVE AMERICAN CONSULTATION

3.5.1 Section 106

A Sacred Lands File (SLF) search and Section 106 tribal consultation list were requested from the NAHC on May 24, 2022. Results of the SLF search were obtained on June 27, 2022. The NAHC determined that there were no known Native American Traditional Cultural Resources within the immediate proposed Project area. However, the NAHC requested that 18 individuals representing area Native American tribal groups be contacted to request additional information about sensitive Native American resources in the proposed Project vicinity. FTA contacted the 18 individuals representing the 12 following groups designated by the NAHC via email on May 29, 2024, and also via certified mail.

- Agua Caliente Band of Cahuilla Indians
- Gabrieleno Band of Mission Indians - Kizh Nation
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrielino-Tongva Tribe
- Gabrielino/Tongva Nation
- Gabrielino Tongva Indians of California Tribal Council

- Morongo Band of Mission Indians
- Quechan Tribe of the Fort Yuma Reservation
- Yuhaaviatam of San Manuel Nation (YSMN)
- Santa Rosa Band of Cahuilla Indians
- Serrano Nation of Mission Indians
- Soboba Band of Luiseno Indians

Please see the Results section below, and Appendix D for the consultation record and associated documents.

3.5.2 Assembly Bill 52

An SLF search and Assembly Bill (AB) 52 tribal consultation list were requested from the NAHC on May 27, 2022. Results of the SLF search were obtained on June 29, 2022. The NAHC determined that there were no known Native American cultural resources within the immediate proposed Project area. The NAHC requested that 18 individuals representing area Native American tribal groups be contacted to request additional information about sensitive Native American resources in the proposed Project vicinity. Outreach letters were sent to each of the Native American contacts by SBCTA on July 7, 2022 (Please see Appendix D for a results summary of initial outreach).

3.6 ARCHAEOLOGICAL FIELD SURVEY

On September 16, 2022, LSA archaeologist Aaron McCann surveyed the APE, beginning at the Cucamonga Metrolink Station at the north end of the survey area and ending at ONT in the south. The majority of the APE is paved/developed/landscaped and, with the exception of the easement at the north end adjacent to the west side of the Cucamonga Metrolink Station and a small section along Airport Drive, was surveyed from a vehicle.

3.7 ARCHITECTURAL SURVEY

Intensive-level, pedestrian surveys of built environment resources in the APE were conducted on September 30, 2022, by Casey Tibbet, architectural historian, and Dennis Lehner, field crew/photographer. Resources surveyed included the segments of the two railroads in the APE and the property at 4265 East Guasti Road in Ontario, which features a group of modern and historic-period buildings and structures associated with a truck stop. During the survey, digital photographs were taken of the railroads and their general settings, as well as the exteriors of the buildings at 4265 East Guasti Road. Detailed notations were made regarding the current conditions, integrity levels, physical characteristics, and settings of the resources.

The field team began at the north end of the APE at the Cucamonga Metrolink Station. Photographs were taken of the train tracks from the platforms on the north and south sides of the tracks looking east and west. Notations were made about the tracks, related features, and the setting. The team then proceeded south along Milliken Avenue to the property at 4265 East Guasti Road, where they walked the property, photographing all of the buildings and structures and making notes regarding their characteristics. The team also walked to the intersection of Milliken Avenue and Guasti Road and photographed the railroad bridge from the north side of the intersection. Photographs were also taken looking southwest at the wall along the elevated tracks on the south side of East Guasti Road. The field team drove west along East Guasti Road to a cul-de-sac and took photographs of the tracks looking east and west. Notations were also made regarding the tracks, related features, and the setting. The team then drove east, across Milliken Avenue, to the east end of Guasti Road, taking photographs of the railroad from various locations, before proceeding south on Milliken Avenue and west on East Airport Drive. Additional photographs were taken of the railroad at a vantage point approximately 950 feet west of South Haven Avenue before proceeding north on North Archibald Avenue and west on East Guasti Road to the Cucamonga Channel, nearly 0.5 mile west of Archibald Avenue. From that location, they walked to the southwest end of the APE, photographed the tracks in both directions, and made notations regarding their features and setting.

4 RESULTS

4.1 RECORDS SEARCH

Data from the SCCIC indicate that 52 cultural resource studies were previously conducted within 1 mile of the areas of physical effect, 8 of which included portions of it (SB-03586, SB-04138, SB-04139; SB-05809, SB-06516, SB-06787, SB-06818, and SB-07756; see records search results in Appendix B). Although no archaeological resources are documented within the ASA, a segment of a historical built environment resource (a railroad route, 36-010330) is documented within the ASA. An additional 48 resources, including archaeological sites (a multi-component site [i.e., with both prehistoric and historic-period components], historic-period ranch ruins, a refuse scatter, and remnant landscaping) and many built environment resources (historic districts, ranch complexes, residences, aviation buildings, a segment of railroad, and a power transmission line), were recorded within 1 mile (Table A). The nearest prehistoric resource (an isolated artifact that is part of site 36-026315) is approximately 1,330 meters (0.82 mile) northwest, and the nearest historic-period resource is a historic-period built environment district (Guasti Winery District, 36-36-015469/36-015471/36-015990/36-016279, see below) on the north side of the railroad route that transects the APE (see below and records search results in Appendix B).

Primary #	Trinomial	Site Description
36-001963	CA-SBR-1963H	Historic-period standing ruins, water conveyance feature, and remnant landscaping; Collins Ranch site, 1880s–1930s
36-001964	CA-SBR-1964H	Historic-period standing ruins, trace refuse, and remnant agricultural crops and landscaping trees; Hamilton Ranch site, c.1880s
36-006847	CA-SBR-6847H	Historic-period railroad route; Santa Fe Railroad, c. 1880s
36-008857	CA-SBR-8857H	Historic-period power transmission lines, 1930s–1960s
36-010330	CA-SBR-10330H	Historic-period railroad route; Southern Pacific Railroad, c. 1880s
36-011276	CA-SBR-11276H	Historic-period refuse scatter, 1880s–1910s
36-011277	CA-SBR-11277H	Historic-period railroad spur, c. 1900s
36-011278	CA-SBR-11278H	10489 8th Steet, 1920 residence
36-011279	CA-SBR-11279H	10483 8th Steet, 1948 residence
36-011280	CA-SBR-11280H	10463 8th Steet, 1948 residence
36-011281	CA-SBR-11281H	8812 Haven Avenue, Cucamonga Pioneer Winery District, c. 1905/1936/1950
36-012630		Terminal One, ONT, 1959–1977
36-015469/36-015471/ 36-015990/36-016279		Guasti Winery Historic District and related Guasti Mansion, 1900–1946
36-016249		12274 Turner Avenue, historic-period building complex (Ballou Ranch), 1905
36-016440		Historic-period building complex—Milliken Ranch, c. 1891
36-026315	CA-RIV-16708H	Multi-component resource, including historic-period vineyard site, water conveyance feature, and isolated prehistoric artifacts
36-031377		Historic-period water conveyance feature (no age provided)
36-033067	CA-RIV-33067H	Historic-period remnant landscaping (trees) of 1930s agricultural complex Romolo Winery)
36-033949		Historic-period aircraft hangar at ONT, 1942–1975
36-033950		Historic-period crash truck building at ONT, 1953
36-033951		Historic-period administration building at ONT, 1949/1966
36-033952		Historic-period warehouse at ONT, 1949
36-033953		Historic-period vehicle maintenance shop building at ONT, 1949

Primary #	Trinomial	Site Description
36-033954		Historic-period hazardous storage building at ONT, 1955
36-033955		Historic-period supply building at ONT, 1956
36-033956		Historic-period shop/storage building at ONT, 1962
36-033957		Historic-period munitions building at ONT, 1957
36-033958		Historic-period dining hall building at ONT, 1962
36-033959		Historic-period training building at ONT, 1966
36-033960		Historic-period motor pool building at ONT, 1966
36-033961		Historic-period maintenance shop building at ONT, 1942
36-033962		Historic-period GE ancillary buildings at ONT, 1955
36-033963		Historic-period GE Hangar 3 and ancillary buildings at ONT, pre-1948
36-033964		Historic-period GE Hangar 4 and ancillary buildings at ONT, pre-1948
36-033965		Historic-period GE Hangar 7 at ONT, 1955
36-033966		Historic-period GE engine test cell area at ONT, 1956
36-033967		Historic-period GE storage hangars at ONT, 1955
36-033968		Historic-period Aerojet-General Hangar at ONT, 1955
36-033970		Historic-period Lockheed Building 3 at ONT, 1952
36-033971		Historic-period Lockheed Building 5 at ONT, 1955
36-033979		Historic-period Lockheed Hangar 2 at ONT, 1952
36-033980		Historic-period Lockheed Hangar 4 at ONT, 1953
36-033981		Historic-period Lockheed Hangar 6 at ONT, 1955
36-033983		Historic-period Air Control Tower and ancillary buildings at ONT, pre-1953
36-033984		Historic-period Baggage Claim B building at ONT, 1959
36-033984		Historic-period Federal Aviation Administration Flight Services building at ONT, 1965

36-015990 (includes 36-36-015469, 36-015471 and 36-015279) Guasti Winery District This resource adjacent to the APE is the built environment remnants of a winery and the associated buildings of a "company town" constructed from 1901 into the mid-1920s by Italian immigrant Secundo Guasti and his family. The district is listed as eligible for the National Register in the BERD. Due to the age of the district and former extent of its expansive associated vineyards (7,000 acres), there is potential for related archeological resources beyond the district boundary within the southern portion of the APE (in and around the airport).

4.2 HISTORIC OUTREACH

The Southern Pacific Historical & Technical Society responded that it had no information or concerns. No other responses have been received to date.

4.3 NATIVE AMERICAN CONSULTATION

4.3.1 Section 106

Please see Appendix D, Native American Consultation Assistance, for an administrative record/ documentation of tribal responses/consultation to date. Consultation is ongoing; a letter documenting post-report tribal responses and conclusion of consultation will be sent to SHPO. Follow-up email correspondence was sent to interested parties and tribes in June 2024. FTA received responses from the

Agua Caliente Band of Cahuilla Indians that the Project area is not located within the Tribe's Traditional Use Area. The Gabrielino Tongva Indians of California Tribal Council indicated that they had no comment. FTA received requests for consultation from the San Manuel Band of Mission Indians and the Gabrieleno Band of Mission Indians - Kizh Nation. FTA met with San Manuel Band of Mission Indians on September 6, 2024. During the September 6, 2024 meeting, the San Manuel Band of Mission Indians expressed interest in locations the project alignment passed through Holocene deposits and requested to review the Cultural Report, Geotechnical Report, and project plans. The requested materials were provided to the Tribe on September 26, 2024, and the Tribe responded with a request to incorporate specific processes related to discovery of human remains and/or pre-contact cultural resources be incorporated into the project conditions. The requested language has been incorporated into Section 6 Conclusions and Recommendations.

FTA met with the Gabrieleno Band of Mission Indians – Kizh Nation on October 1, 2024. During the consultation meeting, the Tribe provided a detailed oral history of the Tribe and discussed the hydrology and hydrogeology of the region and the potential for resources to be discovered in the project area. On October 2, 2024, the Tribe provided recommended measures, which have been considered during the preparation of the project's Cultural Resources Management and Treatment Plan [CRMTP] (Appendix F of the Cultural Resources Identification and Evaluation Assessment Report).

4.3.2 Assembly Bill 52

Please see Appendix D for an administrative record/documentation of tribal responses/consultation to date. Consultation by SBTCA with the tribes is ongoing.

4.4 ARCHAEOLOGICAL FIELD SURVEY

The majority of the survey area has been intensively developed and the ground surface is almost completely obscured by pavement and buildings, so overall surface visibility was exceptionally poor (see Figures 4 through 7). The easement west of the Metrolink station was inaccessible, but the area consists of an approximately 5- to 10-foot-tall artificial berm, extending the length of the property, indicating the easement has been highly disturbed and there is no need for additional survey. The second area of exposed soil along Airport Drive was previously graded, with a row of bushes running along the road. Visibility of the area along Airport Drive was approximately 70 percent, with some surface obscured by grass and weeds. Sediment was light brown, clayey silt with some gravel, indicating that it was artificial fill. The final area of exposed soil were the interiors of the freeway ramp loops around the proposed vent shaft locations – these are artificial (graded/landscaped) surfaces partially obscured by xeric vegetation (Figure 8 and Figure 9). No archaeological resources were identified in the areas of physical effect.

Figure 4: View facing north toward the proposed Cucamonga Station.

Figure 5: View facing southeast toward the proposed cut-and-cover location from the parking lot cul-de-sac.

Figure 6: View facing west toward proposed cut-and-cover location in ONT Terminal 4 parking lot.

Figure 7: View facing southwest toward proposed cut-and-cover location in ONT Terminal 2 parking lot.

Figure 8: View facing southwest toward proposed vent shaft Design Option 2 location.

Figure 9: View facing west toward the proposed vent shaft Design Option 4 location.

4.5 ARCHITECTURAL SURVEY

The APE is located in a suburban environment characterized by commercial, multifamily residential, and light manufacturing uses, as well as ONT, two railroads, and the Ontario Mills shopping mall. Field surveys of the properties within the APE resulted in the identification and evaluation of three historic-period built environment resources that have not been previously evaluated. These include an approximately 1,300-foot-long (0.25-mile) segment of the former AT&SF (36-006847; APE Map Reference Number 1), a commercial complex at 4265 East Guasti Road (APE Map Reference Number 2), and an approximately 3.25-mile-long segment of the former SPRR (36-010330; APE Map Reference Number 3). The two railroads date to the 1800s; these resources are documented in Appendix E.

4.5.1 Atchison, Topeka and Santa Fe segment (36-006847; APE Map Reference Number 1)

This approximately 1,300-foot-long (0.25-mile) railroad segment is oriented east-west and located at the north end of the APE. The alignment dates to the mid-1880s. The segment begins approximately 200 feet west of the Cucamonga Metrolink Station property line and extends east almost to the station's eastern boundary. Figure 10 depicts the railroad segment from the western end of the southern Cucamonga Metrolink Station platform. The Metrolink station is modern. Within the APE, there are two sets of parallel tracks and a spur. The spur enters the APE from the northwest, joins the northern track for a short distance, and curves northeast before exiting the APE west of the northern platform. The spur appears to have wooden ties, although some are either missing or buried by sand. The northern tracks have wooden ties to the point where the spur travels to the northeast. From that point east, along the northern platform, the ties are concrete. East of the northern platform the ties appear to be wood. The southern track has concrete ties. The setting is dominated by modern development that includes the Metrolink station and related parking, large light manufacturing buildings, and a substation on the south, as well as large light manufacturing buildings to the north, east, and west beyond the APE.

4.5.2 4265 East Guasti Road (APE Map Reference Number 2)

Research indicates this property was developed in 1969 and has since sustained a number of additions and alterations. The property is on the northwest corner of South Milliken Avenue and East Guasti Road and has a completely modern appearance. Figure 11 depicts the northwest view of the property. It includes two large, freestanding pump island canopies (one for semi-trucks and one for passenger vehicles); a one- and two-story, multi-tenant commercial building occupied primarily by restaurants (Taco Bell, Pizza Hut, and Country Pride); a freestanding truck service building with six bays; a freestanding metal building with four bays; and a very small, park-like area at the southeastern corner of the property. The remainder of the property is used for parking.

Figure 10: Atchison, Topeka and Santa Fe Segment (View East from the Western End of the Southern Metrolink Station Platform [9/30/22])

Figure 11: 4265 East Guasti Road (View Northwest [9/30/22])

4.5.3 Southern Pacific Railroad Segment (36-010330; APE Map Reference Number 3)

This approximately 3.25-mile-long railroad segment is oriented east-west and located near the southern end of the APE. The alignment dates to circa 1880. It extends roughly from Hellman Road (south of the tracks) east nearly to I-15. Figure 12 depicts the railroad segment at Milliken Avenue and Guasti Road. Beginning at the west end of the APE, there is one set of tracks with concrete ties. Just past Archibald Avenue, the tracks split to the south, and from that point heading east, there are two sets of parallel tracks until the southern tracks join the northern tracks near the East Guasti Road cul-de-sac. From this point, there is an approximately 1.15-mile-long segment that is part of a modern grade separation over Milliken Avenue and other streets. This segment is flanked by concrete walls, and the tracks are not visible from ground level. However, based on aerial photographs, this segment has a single track with concrete ties and short spurs at the west and east ends. Near the east end of the segment, just west of I-15, the track splits to the south, once again creating two parallel tracks. The setting is completely modern and includes I-15, numerous commercial and manufacturing buildings, restaurants, a truck stop, ONT, Cucamonga Channel, and a few undeveloped parcels.

Figure 12: Southern Pacific Railroad Modern Grade Separation at Milliken Avenue and Guasti Road (View Southeast [9/30/22])

5 ELIGIBILITY EVALUATION

Based on the research results discussed above, the following section presents National Register eligibility evaluations for the three historic-period built environment resources identified in the APE and conclusions on whether they constitute "historic properties" as defined by Section 106. The three resources have also been evaluated for eligibility for listing in the California Register in compliance with CEQA.

5.1 REGULATORY FRAMEWORK

5.1.1 National Historic Preservation Act

The principal federal law addressing historic properties is the NHPA, as amended (54 United States Code 300101 et seq.), and its implementing regulations (36 CFR Part 800). Section 106 requires a federal agency with jurisdiction over a proposed federal action (referred to as an "undertaking" under the NHPA) to take into account the effects of the undertaking on historic properties and to provide the ACHP an opportunity to comment on the undertaking. The term "historic properties" refers to "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register" (36 CFR Part 800.16(l)(1)). The implementing regulations (36 CFR Part 800) describe the process for identifying and evaluating historic properties, assessing the potential adverse effects of federal undertakings on historic properties, and seeking to develop measures to avoid, minimize, or mitigate adverse effects. The Section 106 process does not require the preservation of historic properties; instead, it is a procedural requirement mandating that federal agencies take into account effects to historic properties from an undertaking prior to approval.

The steps of the Section 106 process are accomplished through consultation with the SHPO, federally recognized Native American tribes, local governments, and other interested parties. The goal of consultation is to identify potentially affected historic properties, assess effects to such properties, and seek ways to avoid, minimize, or mitigate any adverse effects on such properties. The agency also must provide an opportunity for public involvement (36 CFR 800.1(a)). Consultation with Native American tribes regarding issues related to Section 106 and other authorities (such as NEPA and Executive Order [EO] No. 13007) must recognize the government-to-government relationship between the federal government and Native American tribes as set forth in EO 13175, 65 Federal Register 87249 (November 9, 2000), and the Presidential Memorandum of November 5, 2009.

5.1.2 National Register of Historic Places

The National Register was established by the NHPA as "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (36 CFR 60.2) (United States Department of the Interior 2002). The National Register recognizes a broad range of cultural resources that are significant at the national, State, and local levels and can include districts,

buildings, structures, objects, prehistoric archaeological sites, historic-period archaeological sites, traditional cultural properties, and cultural landscapes. As noted above, a resource that is listed in or eligible for listing in the National Register is considered a "historic property" under Section 106 of the NHPA.

To be eligible for listing in the National Register, a property must be significant in American history, architecture, archaeology, engineering, or culture. Properties of potential significance must meet one or more of the following four established criteria:

A. Are associated with events that have made a significant contribution to the broad patterns of our history;

B. Are associated with the lives of persons significant in our past;

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance" (United States Department of the Interior 2002). The National Register recognizes seven qualities that, in various combinations, define integrity. The seven qualities that define integrity are integrity of location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of specific aspects of integrity is paramount for a property to convey its significance.

Ordinarily religious properties, moved properties, birthplaces or graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years are not considered eligible for the National Register unless they meet one of the Criteria Considerations (A–G), in addition to meeting at least one of the four significance criteria and possessing integrity (United States Department of the Interior 2002).

5.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA (PRC Chapter 2.6, Section 21083.2 and California Code of Regulations [CCR] Title 145, Chapter 3, Article 5, Section 15064.5) calls for the evaluation and recordation of historical resources. The criteria for determining the significance of impacts to historical resources are based on Section 15064.5 of the CEQA Guidelines and Guidelines for the Nomination of Properties to the California Register. Properties eligible for listing in the California Register and subject to review under CEQA are those meeting the criteria for listing in the California Register or the National Register, or designation under a local ordinance.

5.2.1 California Register of Historical Resources

The California Register criteria are based on National Register criteria. For a property to be eligible for inclusion in the California Register, one or more of the following criteria must be met:

1. It is associated with the events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

2. It is associated with the lives of persons important to local, California, or national history;

3. It embodies the distinctive characteristics of a type, period, region, or method or construction, or represents the work of a master, or possesses high artistic values; and/or

4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time has passed since a resource's period of significance to "obtain a scholarly perspective on the events or individuals associated with the resource." Fifty years is used as a general estimate of time needed to develop the perspective to understand the resource's significance (CCR 4852 [d][2]).

The California Register also requires that a resource possess integrity, which is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance" (California Office of Historic Preservation 1999:2). To retain integrity, a resource should have its original location, design, setting, materials, workmanship, feeling, and association. Which of these factors is most important depends on the particular criterion under which the resource is considered eligible for listing (California Office of Historic Preservation 1999).

5.3 EVALUATION

Although the National Register and California Register criteria are similar, for clarity they are addressed separately.

National Register Criterion A: *Associated with events that have made a significant contribution to the broad patterns of our history.*

Atchison, Topeka and Santa Fe Segment (36-006847; APE Map Reference Number 1). Railroads have made a significant contribution to the broad patterns of our history, but this segment does not appear to be associated with any specific events that have made a significant contribution to the broad patterns of our history. Because the tracks themselves have been modernized and the setting is now dominated by the modern Metrolink station, as well as other modern construction, this segment has impaired integrity of feeling, setting, materials, and workmanship and does not convey a strong association with any historic period. Therefore, it is not eligible for listing in the National Register as an individual railroad segment. In

addition, because it is a modern segment, it does not contribute to the historic fabric of the railroad as a whole. It is not significant under this criterion.

4265 East Guasti Road (APE Map Reference Number 2). This property dates to 1969, and as a truck stop located just south of I-10, is associated with the construction of the interstate highway system, which generally began in 1956 and was completed in 1992. However, the alterations to and expansion of the facility, including extensive exterior remodeling, new exterior doors, additions of a canopy, shade structures, awnings, and signs, have resulted in a completely modern appearance that does not convey an association with the any historic period. Therefore, it is not eligible for listing in the National Register either individually or as a contributing element to a National Register-eligible historic district. It is not significant under this criterion.

Southern Pacific Railroad Segment (36-010330; APE Map Reference Number 3). Railroads have made a significant contribution to the broad patterns of our history, but this segment does not appear to be associated with any specific historically significant events. This segment has compromised integrity primarily because of the approximately 1.15-mile-long modern grade separation and concrete ties. In addition, the setting is now dominated by modern development. All of this has impaired the integrity of feeling, setting, materials, design, and workmanship. As a result, the segment does not convey a strong association with any historic period and is not eligible for listing in the National Register as an individual railroad segment. In addition, due to its compromised integrity, it does not contribute to the historic fabric of the railroad as a whole. It is not significant under this criterion.

California Register Criterion 1: *Associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage.*

Atchison, Topeka and Santa Fe Segment (36-006847; APE Map Reference Number 1). Railroads have made significant contributions to the broad patterns of California's history and cultural heritage, but this segment does not appear to be associated with any specific historically significant events. Because the tracks themselves have been modernized and the setting is now dominated by the modern Metrolink station, as well as other modern construction, this segment has impaired integrity of feeling, setting, materials, and workmanship and does not convey a strong association with any historic period. Therefore, it is not eligible for listing in the California Register as an individual railroad segment. In addition, because it is a modern segment, it does not contribute to the historic fabric of the railroad as a whole. It is not significant under this criterion.

4265 East Guasti Road (APE Map Reference Number 2). This property dates to 1969, and as a truck stop located just south of I-10, is associated with the construction of the interstate highway system, which generally began in 1956 and was completed in 1992. However, the alterations to and expansion of the facility have resulted in a completely modern appearance that does not convey an association with the

any historic period. Therefore, it is not eligible for listing in the National Register either individually or as a contributing element to a National Register-eligible historic district. It is not significant under this criterion.

Southern Pacific Railroad Segment (36-010330; APE Map Reference Number 3). Railroads as a whole played an important role in the history of California, but this segment does not appear to be associated with any specific historically significant events. This segment has compromised integrity primarily because of the approximately 1.15-mile-long modern grade separation and concrete ties. In addition, the setting is now dominated by modern development. All of this has impaired the integrity of feeling, setting, materials, design, and workmanship. The segment does not convey a strong association with any historic period. Therefore, it is not eligible for listing in the California Register as an individual railroad segment. In addition, because of its compromised integrity, it does not contribute to the historic fabric of the railroad as a whole. It is not significant under this criterion.

National Register Criterion B: *Associated with the lives of persons significant in our past.*

Atchison, Topeka and Santa Fe Segment (36-006847; APE Map Reference Number 1). The railroad as a whole is associated with the lives of persons significant in our past, but this segment is modern and is not associated with those people. This segment is not significant under this criterion.

4265 East Guasti Road (APE Map Reference Number 2). No information was found for the historic-period owners of this property. However, even if the property was associated with noteworthy persons in history, the extensive alterations and expansion of the facility have significantly impaired its ability to be a good representation of the work of such persons. It is not significant under this criterion.

Southern Pacific Railroad Segment (36-010330; APE Map Reference Number 3). The railroad as a whole is associated with the lives of persons significant in our past, but this segment does not appear to be more closely associated with those people than any other part of the railroad. In addition, because of the alterations to this segment and its setting, it no longer conveys as strong association with the past, including those people. This segment is not significant under this criterion.

California Register Criterion 2*: Associated with the lives of persons important in our past.*

Atchison, Topeka and Santa Fe Segment (36-006847; APE Map Reference Number 1). The railroad as a whole is associated with persons important in our past, but this segment is modern and has no associations with those people. This segment is not significant under this criterion.

4265 East Guasti Road (APE Map Reference Number 2). No information was found for the historic-period owners of this property. However, even if the property was associated with noteworthy persons in history,

the extensive alterations and expansion of the facility have significantly impaired its ability to be a good representation of the work of such persons. Therefore, it is not significant under these criteria.

Southern Pacific Railroad Segment (36-010330; APE Map Reference Number 3). The railroad as a whole is associated with persons important in our past, but this segment does not appear to be more closely associated with those people than any other part of the railroad. In addition, because of the alterations to this segment and its setting, it no longer conveys as strong association with the past, including those people. It is not significant under this criterion.

National Register Criterion C*: Embodies the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction.*

Atchison, Topeka and Santa Fe Segment (36-006847; APE Map Reference Number 1). This segment of the railroad retains typical characteristics of a type (i.e. a railroad). However, it has been modernized and does not embody the distinctive characteristics of a period or a historical method of construction. No indication was found that this segment is the work of a master, and it does not possess high artistic values. Because the segment is modern it would not contribute to a potentially significant and distinguishable entity, such as a historic district. This segment is not significant under this criterion.

4265 East Guasti Road (APE Map Reference Number 2). This nondescript, altered property does not embody the distinctive characteristics of a type, period, or method of construction. No evidence was found that it is the work of a master, and it does not possess high artistic values. It is not part of a significant and distinguishable entity such as a historic district. It is not significant under this criterion.

Southern Pacific Railroad Segment (36-010330; APE Map Reference Number 3). The integrity of this segment of the railroad has been compromised primarily by an approximately 1.5-mile-long modern grade separation. In addition, many of the ties are concrete and the setting is now dominated by modern development. This highly altered segment is not a good representation of the historic-period railroad. The tracks do not appear to be the work of a master, and they do not possess high artistic values. Because the integrity of the segment is compromised, it would not contribute to a potentially significant and distinguishable entity, such as a historic district. It is not significant under this criterion.

California Register Criterion 3*: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.*

Atchison, Topeka and Santa Fe Segment (36-006847; APE Map Reference Number 1).

This segment of the railroad retains typical characteristics of a type (i.e. a railroad). However, it has been modernized and does not embody the distinctive characteristics of a period or a historical method of construction. No indication was found that this segment is the work of an important creative individual. The segment does not possess high artistic values. It is not significant under this criterion.

4265 East Guasti Road (APE Map Reference Number 2). This nondescript, altered property does not embody the distinctive characteristics of type, period, or method of construction. No evidence was found that it is the work of an important creative individual, and it does not possess high artistic values. It is not significant under this criterion.

Southern Pacific Railroad Segment (36-010330; APE Map Reference Number 3). The integrity of this segment of the railroad has been compromised primarily by an approximately 1.5-mile-long modern grade separation. In addition, many of the ties are concrete and the setting is now dominated by modern development. This highly altered segment is not a good representation of the historic-period railroad. The tracks do not appear to be the work of an important creative individual, and they do not possess high artistic values. It is not significant under this criterion.

National Register Criterion D*: Has yielded, or may be likely to yield, information important in prehistory or history.*

Atchison, Topeka and Santa Fe Segment (36-006847; APE Map Reference Number 1). Railroads are well documented, and this segment is modern. Therefore, it cannot yield new information regarding the historical construction or design of railroads. It is not significant under this criterion.

4265 East Guasti Road (APE Map Reference Number 2). This property was constructed in 1969 using common methods and materials. It is unlikely to have the potential to yield any new or important historical information. Therefore, it is not significant under this criterion.

Southern Pacific Railroad Segment (36-010330; APE Map Reference Number 3). Railroads are well documented, and this segment, which has been extensively altered and modernized, is not likely to yield new historical information regarding the construction or design of railroads. It is not significant under this criterion.

California Register Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.

Atchison, Topeka and Santa Fe Segment (36-006847; APE Map Reference Number 1). Railroads are well documented, and this segment is modern. Therefore, it cannot yield new information regarding the historical construction or design of railroads. It is not significant under this criterion.

4265 East Guasti Road (APE Map Reference Number 2). This property was constructed in 1969 using common methods and materials. It is unlikely to have the potential to yield any new or important historical information. Therefore, it is not significant under this criterion.

Southern Pacific Railroad Segment (36-010330; APE Map Reference Number 3). Railroads are well documented, and this segment, which has been extensively altered and modernized, is not likely to yield new historical information regarding the construction or design of railroads. It is not significant under this criterion.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 NHPA

As required under Section 106 of the National Historic Preservation Act, this assessment was conducted to identify any "historic properties" within the Area of Potential Effects (APE). "Historic properties" are "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register" (36 Code of Federal Regulations [CFR] Part 800.16[l][1]). Three historic-period built environment resources were identified and evaluated in the APE: two railroad segments and a truck stop. None meets the criteria for listing in the National Register. Although archaeological resources are not anticipated to be found at depths of the TBM (70 feet below ground surface), limited excavations from shallower depths (cut-and-cover and non-TBM tunneling activities) are required and there is some potential for resources in Holocene-age soils, which are present at up to 10 feet in depth. Although no archaeological historic properties have been identified in the APE, limited archaeological construction monitoring is recommended in areas where Holocene soils may be encountered. CRMTP is provided in Appendix F. A finding of No Historic Properties Affected is recommended.

6.2 CEQA

Three historic-period built environment resources were identified and evaluated in the APE: two railroad segments and a truck stop. None meets the criteria for listing in the National Register or the California Register. For CEQA, there would be no impact regarding built environmental resources. However, despite the negative survey results and severe disturbance (urban development), due to the proximity of both prehistoric and historic resources and there is some potential for subsurface resources within the proposed Project APE. Although archaeological resources are not anticipated to be found at depths of the TBM (70 feet below ground surface), excavations from shallower depths are required (cut-and-cover and non-TBM tunneling activities) and there is some potential for resources in Holocene-age soils which are present up to 10 feet in depth. The potential impact to unknown archaeological resources but can be mitigated by limited/focused archaeological monitoring. Therefore, the proposed Project would result in less than significant impacts to archaeological resources with this mitigation (monitoring).

6.3 STANDARD CONDITIONS

The following standard conditions related to archaeological materials, human remains, and tribal cultural resources apply:

- In the event that archaeological materials are encountered during construction, all construction work shall be halted within a 60-foot buffer and a qualified archaeologist consulted to determine the appropriate treatment of the discovery (CCR Title 14, Chapter 3, Section 15064.5(f)). Section 106 requires FTA to notify SHPO and the consulting parties within 48 hours, and the requirements of 36 CFR 800.13 will be followed.

- In the event human remains/funerary objects are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur within a 100-foot buffer until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately. San Bernardino County Transportation Authority will notify the Federal Transit Administration on the same day of the discovery. The Federal Transit Administration will notify the State Office of Historic Preservation, Advisory Council on Historic Preservation, and Native American Tribe(s) within two working days of discovery to provide notification of potential human remains being observed during the implementation of the undertaking. If the remains are determined to be Native American, the County Coroner will notify the NAHC, which will determine and notify an MLD. With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD will have the opportunity to offer recommendations for the disposition of the remains.

- Areas found during construction to contain significant tribal cultural resources shall be examined by a qualified consulting archaeologist or historian for appropriate protection and preservation. If evidence of potential tribal cultural resources is observed, construction near the resources shall cease, the appropriate Native American tribal groups shall be consulted, and, in coordination with the appropriate Native American tribal groups, a qualified archaeologist or historian shall determine whether the resource uncovered during construction is a tribal cultural resource as defined under Public Resources Code Section 21074. The appropriate Native American tribal groups shall be contacted in the event of any pre-contact and/or historic-era cultural resources discovered during project implementation; and will be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment.

  Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to San Bernardino County Transportation Authority and the Federal Transit Administration for dissemination to the appropriate Native American tribal groups. San Bernardino County Transportation Authority and the Federal Transit Administration shall, in good faith, consult with the appropriate Native American tribal groups.

  Monitoring Procedures

  The archaeological monitor(s) and Native American monitor(s) will be onsite to conduct cultural resources monitoring during all ground-disturbing activities within the Archaeological Monitoring Area (AMA) throughout the construction phase of the project and must abide by the CRMTP. The AMA is defined as follows: all earth-disturbing activities except for those in disturbed developed

areas or where bedrock is encountered or in deeply buried areas that exceed the depth of expected cultural deposits.

Prior to ground-disturbing activities, SBCTA will provide the construction contractors, Resident Engineer, supervisory personnel, as well as the Principal Investigator, Native American monitor(s), and archaeological monitor(s) with a copy of the mapped AMA areas. No construction activities will occur within the designated AMAs absent an archaeological and Native American monitor, as required by the CRMTP.

In addition, a Native American monitor(s) will be present during all earthmoving activities except for those involving disturbed developed areas within the project boundary.

During monitoring, the archaeological monitor(s) and Native American monitor(s) will examine sediments disturbed during earthmoving activities. If determined necessary by the monitors, sediments will be screened for potential cultural resources, and, if necessary, construction may be temporarily halted during excavation to examine sidewalls. The archaeological monitor(s) will document field activity on daily monitoring logs. The Principal Investigator may submit a detailed letter to SBCTA during construction requesting a modification to the monitoring program when, in coordination with the Native American monitor, field conditions are determined to consist of modern disturbances post-dating the previous grading/trenching activities, contain the presence of fossil formations, or when native soils are encountered that nullify the potential for cultural resources to be present.

7 REFERENCES

American Public University. n.d. Southern Pacific Railroad. Accessed online in June 2010 at: http://www.u-s-history.com/pages/h1817.html.

American-rails.com. 2007–2010. The Espee, The Friendly Southern Pacific. Accessed online in June 2010 at: http://www.american-rails.com/southern-pacific.html.

ASM Affiliates. 2017. *Ontario International Airport Historic Context Statement.* Accessed online in November 2022 at: https://www.ontarioca.gov/sites/default/files/Ontario-Files/Planning/Historic_Preservation/Historic%20Contexts/ONT%20Historic%20Context.pdf.

Baxter, Tom. 1947. "Los Angeles Division, AT&SF, 487 miles of main and branch lines cross high mountains, arid deserts; serve agricultural and industrial districts of West Coast." In *Trains*. June. Article on file in the vertical files in the Norman F. Feldheym Library, Arda Haenszel California Room.

Bean, Lowell John, and Charles R. Smith. 1978. Gabrielino. In *California,* edited by R.F. Heizer, pp. 538–549. Handbook of North American Indians, Vol. 8, W.C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Beattie, George, and Helen Beattie. 1951. *Heritage of the Valley, San Bernardino's First Century.* Biobooks, Oakland, California.

Beck, Warren A., and Ynez D. Haase. 1974. *Historical Atlas of California.* Oklahoma City: University of Oklahoma Press.

Blackburn, Thomas C. 1962–1963. *Ethnohistoric Descriptions of Gabrielino Material Culture.* Annual Reports of the University of California Archaeological Survey 5: 1–50.

California Department of Transportation (Caltrans). 2015. *Historic Resources Evaluation Report for the Interstate 10 Corridor Project, San Bernardino and Los Angeles Counties, California* (07-LA-10 P.M., 44.9/48.3; 08-SBD-10 P.M., 0.0/R37.0) EA 0c2500. Accessed online on July 19, 2024, at: https://www.gosbcta.com/wp-content/uploads/2019/09/I-10-CP-HRER-April2015.pdf.

California Geological Survey. 2002. California Geomorphic Provinces. California Geologic Survey Note 36. California Department of Conservation.

California Office of Historic Preservation (OHP). 2022. Preservation Laws, Codes & Regulations. Accessed online at: https://ohp.parks.ca.gov/?page_id=1077.

Cataldo, Nicholas. 2006. *The Earp Clan: the Southern California Years.* Black Roads Press, San Bernardino.

City of Ontario. 2022. Facts & History. Accessed online at: https://www.ontarioca.gov/FactsAndHistory.

Clucas, Donald L. 1979 “Guasti.” In: In: Light Over the Mountain: A History of Rancho Cucamonga. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Daily Report. 1981. “Yester Year Dates to Remember.” May 24.

Daly, Pamela, M.S. 2015. *Draft Historic Resource Technical Report for the Chollas Creek Multi-Use Path to Bayshore Bikeway Project, San Diego, California.* Accessed online in October 2022 at: https://www.sandiego.gov/sites/default/files/160225DraftFinalHistoricResourceTech Report.pdf.

Duke, Donald. 1995. *Santa Fe: The Railroad Gateway to the American West,* Vol. 1. Golden West Books.

Gordon, Larry. 1985. “Economy, Modernization Quiet Rail Yard.” *Los Angeles Times*, October 31. Page 1.

Heizer, Robert F. 1968. The Indians of Los Angeles County. *Hugo Reid’s Letters of 1852.* Southwest Museum Papers 21. Los Angeles, California.

HistoricAerials.com. 2022. Various aerial photographs including the Project area from 1897 to 1980.

_____. Various. Accessed online at http://www.historicaerials.com/default.aspx.

Houk, Randy. 2008. Railroad History, Important Milestones in English and American Railway Development. Accessed online in June 2010 at http://www.sdrm.org/history/timeline/.

Hudson, D. Travis. 1971. Proto-Gabrielino Patterns of Territorial Organization in Southern Coastal California. *Pacific Coast Archaeological Society Quarterly* 7(2):49–76.

Ingersoll, L.A. 1904. Ingersoll’s Century Annals of San Bernardino County 1769 to 1904. Ingersoll, Los Angeles, California.

Johnston, Bernice E. 1962. California’s Gabrielino Indians. Frederick Webb Hodge Anniversary Publication Fund 8. Los Angeles: Southwest Museum.

Kroeber, A.L. 1925. *Handbook of the Indians of California.* Bulletin No. 78, Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

LA/Ontario International. n.d. History of LA/Ontario International Airport. Accessed online in November 2022 at: https://www.flyontario.com/sites/default/files/history-fact-sheets.pdf.

Leighton Consulting, Inc. 2021. Geotechnical Exploration Data Report, San Bernardino County Transportation Authority (SBCTA) Emerging Technology Tunnel to Ontario International Airport (ONT), Rancho Cucamonga and Ontario, California, SBCTA Contract No. 21-1002452. May 10.

Los Angeles Times. 1883. "A Railroad War, the S.P.R.R. Bars the Progress of the C.S.R.R. at Colton." August 10. Page 1.

McCawley, William. 1996. *The First Angelinos: The Gabrielino Indians of Los Angeles.* Banning and Novato: Malki Museum Press and Ballena Press.

Moratto, Michael J. 2004. *California Archaeology.* Orlando, Florida: Academic Press. Originally published 1984.

Morton, Douglas, and Fred K. Miller. 2006. Geologic Map of the San Bernardino and Santa Ana 30' x 60' Quadrangles, California. Version 1.0. Digital Preparation by Pamela M. Cossette and Kelly R. Bovard. Prepared by the United States Geologic Survey in cooperation with the California Division of Mines and Geology. Open File Report 2006−1217. Map Scale 1:100,000.

Norris, R.M., and R.W. Webb. 1976. *Geology of California.* John Wiley and Sons, Inc., Santa Barbara.

Ontario International Airport Authority. 2019. *Strategic Assessment Ontario International Airport Final Report.*

_____. 2022. Ontario International Airport Calendar May YTD. Accessed online at: https://www.flyontario.com/sites/default/files/ont_airport_statistics_-_may_2022.pdf.

Orsi, R.J. 2005. *Sunset Limited: The Southern Pacific Railroad and the Development of the American West, 1850-1930.*

Robertson, Donald B. 1998. *Encyclopedia of Western Railroad History,* Volume IV, California. Caxton Printers, Ltd., Caldwell, Idaho.

Robinson, John W. 2005. *Gateways to Southern California: Indian Footpaths, Horse Trails, Wagon Roads, Railroads, and Highways.* Big Santa Anita Historical Society, USA.

San Bernardino Associated Governments. 2014. *Ontario Airport Rail Access Study.*

San Bernardino County Sun. 1977. Thursday, November 10, 1977.

San Bernardino County Transportation Authority (SBCTA). 2024. *Historic Resources Evaluation Report.* April.

Sanborn Fire Insurance Maps. 1928. Accessed online through the Los Angeles Public Library at: http://www.lapl.org/.

Schoenherr, Allan A. 1992. *A Natural History of California.* University of California Press, Berkeley and Los Angeles.

Sharp, R.P. 1976. *Geology: Field Guide to Southern California.* Kendall/Hunt Publishing Company, Second Edition: 181.

Signor, John. 1990. *Beaumont Hill, Southern Pacific's Southern California Gateway.* Golden West Books, San Marino, CA.

Snow, Jenna, and Kathryn McGee. 2009. Department of Parks and Recreation (DPR) forms for the Cucamonga Neighborhood Character Area. On file at the City of Rancho Cucamonga Planning Department.

Southern Pacific Historical & Technical Society. n.d. SP History. Accessed online in July 2024 at: https://sphts.org/sp-history/.

Straight, Susan. 2012. "Spirits of Guasti." *Boom,* Vol. 2 No. 4.

Streeter, Kurt, and Mitchell Landsberg. 2004. "A Future Tied to the Tracks." *Los Angeles Times,* August 22. Accessed online on November 9, 2010, at: http://www.trainorders.com/discussion/read.php?1,606400.

The Press and Horticulturist. 1883. "Railroad War, C.S.R.R. vs. S.P.R.R." August 11, page 2. On file at the University of California, Riverside, Rivera Library.

Tibbet, Casey. 2005. Suburban Residential Growth in Riverside, California, 1886 to 1960. Unpublished Master's thesis on file at the University of California, Riverside, History Department.

Union Pacific Railroad. 1895. Map of the Southern Pacific Railroad through Colton. Obtained from John Bromley, Director of Historic Programs, Union Pacific Railroad.

United States Geological Survey (USGS). 1972. *Guasti, California* 7.5-minute topographic quadrangle map. *Guasti, California* 7.5-minute topographic quadrangle map.

_____. 1980. Guasti, California 7.5-minute topographic quadrangle map.

van Ophem, Marieke. 2003. *The Iron Horse: the impact of the railroads on 19th century American society, 16/30 (IV) Colonizing the West: Railroad Towns.* Accessed online in June 2010 at: http://www.let.rug.nl/usa/E/ironhorse/ironhorse16.htm.

Wallace, William J. 1955. A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11(3):214–230.

_____. 1978. Post-Pleistocene Archaeology. In *California,* edited by R. Heizer, pp. 550–563. Handbook of North American Indians, Vol. 8. W.C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Warren, Claude N. 1968. Cultural Tradition and Ecological Adaptation on the Southern California Coast. *Eastern New Mexico University Contributions in Anthropology 1(3).* Portales.

_____. 1984. The Desert Region. In *California Archaeology,* by M. Moratto, with contributions by D.A. Fredrickson, C. Raven, and C.N. Warren, pp. 339–430. Academic Press, Orlando, Florida.

Warren, Claude N., and Robert H. Crabtree. 1986. Prehistory of the Southwestern Area. In W.L. D'Azevedo ed., *Handbook of the North American Indians,* Vol. 11, Great Basin, pp. 183–193. Washington, D.C.: Smithsonian Institution.

Wilson, Benet. 2018. The Evolution of Ontario International Airport. In *Aviation Pros*. April 5. Accessed online in November 2022 at: https://www.aviationpros.com/airports/article/12383988/the-evolution-of-ontario-international-airport.

Yetzer, Carl. 1983a. "San Diego Rail Line Almost Didn't Make It to San Bernardino." *San Bernardino Sun*, September 12.

_____. 1983b. "Fight over Railroads Led to Colton's Birth." *San Bernardino Sun*, September 11.

Ontario International Airport Connector Project

ONTCONNECTOR

APPENDIX J

NOISE AND VIBRATION TECHNICAL REPORT

October 2024

Prepared by:

sbcta

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ACRONYMS AND ABBREVIATIONS

%	percent
ALUCP	Ontario International Airport Land Use Compatibility Plan
a.m.	ante meridiem
AUF	acoustic usage factor
Caltrans	California Department of Transportation
CEQ	Council on Environmental Quality
CNEL	community noise equivalent level
D	distance between the operating equipment and the noise-sensitive receptor location
dB	decibels
dBA	A-weight decibels
D_{ref}	reference distance for the $L_{max(ref)}$
EIR	Environmental Impact Report
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GBN	ground-borne noise
GBV	ground-borne vibration
General Plan	County of San Bernardino Countywide Plan
hr	hour
Hz	Hertz (cycles per second)
in/sec	inches per second
kHz	kilohertz
$L_{Aeq(h)}$	1-hour A-weighted equivalent sound level
L_{dn}	day-night noise level
L_{eq}	equivalent sound level
L_{eq} (h)	equivalent sound level over a 1-hour period
L_{eq-day}	daytime equivalent sound level
$L_{eq-equip}$	equivalent sound level for equipment
$L_{eq-night}$	nighttime equivalent sound level
L_{max}	maximum sound level
$L_{max(ref)}$	maximum sound level measured at the reference distance
LT	long-term
L_v	vibration level
L_v, VdB	vibration velocity level
L_w	sound power level

MEP	mechanical, electrical, and plumbing
mph	miles per hour
MSF	Maintenance and Storage Facility
N	number of similar pieces of equipment operating in the same area
NA	Not Applicable
NEPA	National Environmental Protection Act
ONT	Ontario International Airport
ONT-IAC	Ontario International Airport – Inter Agency Collaborative
p.m.	post meridiem
PPV	peak particle velocity
Project	Ontario International Airport Connector Project
RCNM	Roadway Construction Noise Model
RMS	root mean square
ROW	right-of-way
S	estimated noise reduction shielding value between that source and noise-sensitive receptor, in dBA
SANBAG	San Bernardino Associated Governments
SBCTA	San Bernardino County Transportation Authority
SCAG	Southern California Association of Governments
SPL	sound pressure level
ST	short-term
TBM	Tunnel Boring Machine
TNM	Traffic Noise Model
USC	United States Code
VdB	vibration velocity level
µPa	micro-Pascals

1 INTRODUCTION

San Bernardino County Transportation Authority (SBCTA) is proposing the Ontario International Airport (ONT) Connector Project (Project) in the City of Ontario and the City of Rancho Cucamonga. The purpose of this technical report is to describe the existing noise and vibration setting, applicable regulations, methodology for the analysis, and potential impacts from construction and operation of the proposed Project/Build Alternative and the No Project/No Build Alternative. The information contained in this technical report will be used to support the environmental review process pursuant to the National Environmental Policy Act (NEPA).

1.1 NO BUILD ALTERNATIVE

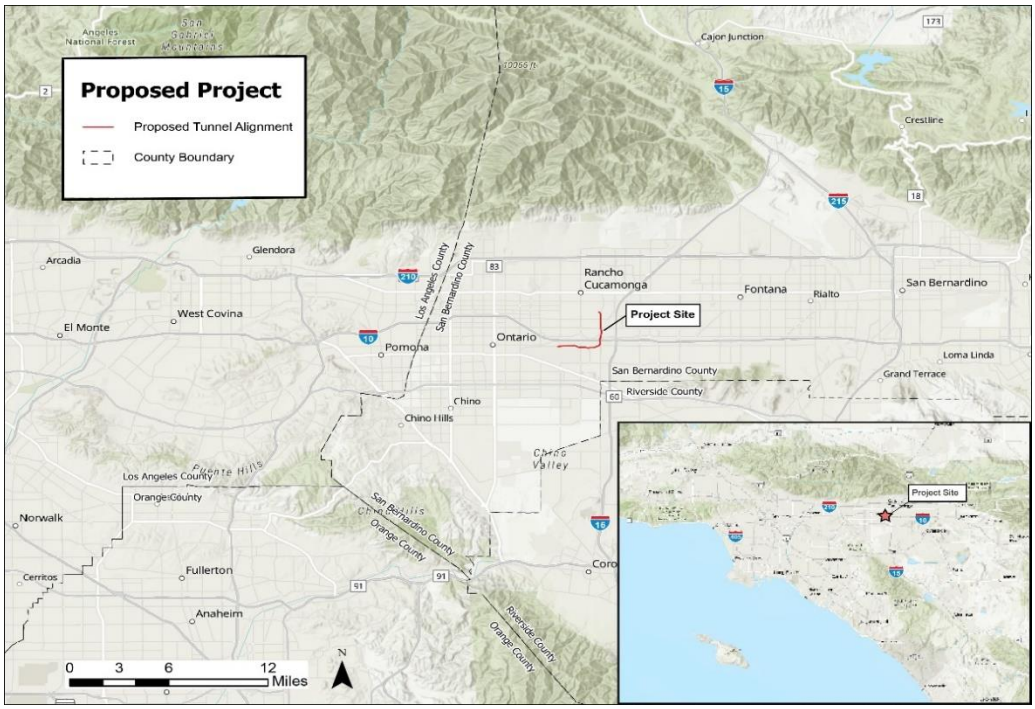
The No Build Alternative would not result in a new direct electrically powered, on-demand fixed transit guideway connection from the Cucamonga Metrolink Station to ONT. Existing roads, highways, and transit services, such as Omnitrans' ONT Connect or Route 380, would be the primary transportation options for access to ONT. Some highway improvements may be undertaken by other agencies as part of separate planned projects, which would take place with either the No Build or Build Alternative associated with this project.

1.2 BUILD ALTERNATIVE

The Build Alternative includes a 4.2-mile tunnel alignment, three passenger stations, a maintenance and storage facility (MSF), and an access and ventilation shaft in the cities of Rancho Cucamonga and Ontario within the County of San Bernardino (see Figure 1 and Figure 2). The Build Alternative would include autonomous electric vehicles that would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. The Build Alternative would provide a peak one-way passenger throughput of approximately a minimum of 100 per hour. Operations would be managed by Omnitrans, with on-demand service provided daily from 4:00 a.m. to 11:30 p.m., including weekends and holidays.

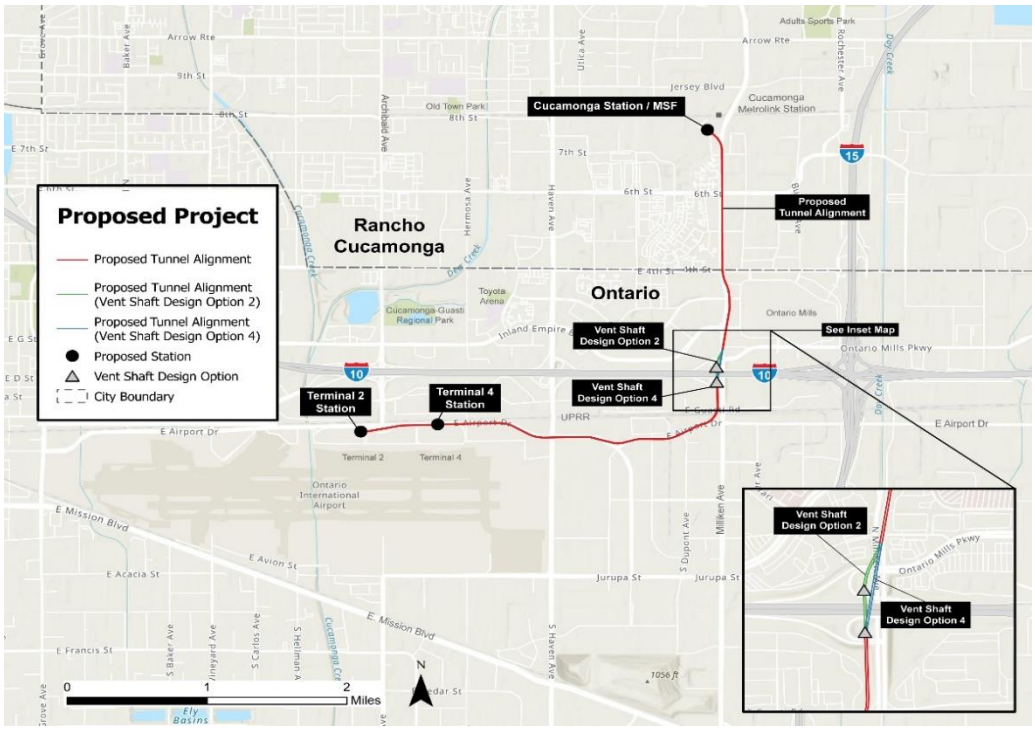
Overall construction of the Build Alternative would last approximately 56 months, with project elements varying in their specific construction duration (see Table 1). Construction is projected to start in 2025 and is anticipated to be completed in 2031.

Figure 1: Regional Location Map



Source: AECOM 2024

Figure 2: Build Alternative Site



Source: AECOM 2024

Table 1: Typical Sequencing of Transit Construction Activities

Activity	Location of Construction Activities	Typical Duration (Total Months)	Description
Utility Relocation	At Grade	7-14	Relocate utilities from temporary and permanent elements related to the construction and/or operation of the Project.
Construction Staging Laydown Yard	At Grade	3-6	Prepare existing lots to store construction equipment and materials, including the Tunnel Boring Machine (TBM), office space.
Roadway	At Grade	6-18	Reconfigure roadway, demolition of existing roadway installation of curb and gutter and other public Right-of-Way (ROW) improvements.
At-grade Guideway	At Grade	6-18	Install asphalt and striping for guideway.
Station Construction (overall)	At Grade	24-48	Install mechanical, electrical, and plumbing (MEP), canopies, faregates, ticketing, finishes, stairs, and walkways.
Parking	At Grade	3-6	Restoring existing parking stalls temporarily unavailable due to construction, as applicable.
MSF	At Grade	8-12	Install MEP, fencing, enclosed bays, specialized washing equipment, and rebar installation, and concrete pours.
Utility Relocation	Underground	7-14	Relocate and hang underground utilities from temporary and permanent elements related to the construction and operation of the Project.
Open Cut and Cut and Cover Construction	Underground	18-24	Supports the construction of the TBM launching and receiving pit, and of the access ramps connecting the tunnel with the at-grade stations. Install soldier piles for beam and lag support of excavation and excavation. Cover excavation with temporary decking.
Bored Tunnel	Underground	16-24	Underground guideway construction.
Ventilation and Emergency Access Shaft	Underground	6-8	Install ventilation and emergency access shaft.
Underground Guideway	Underground	12-18	Install asphalt and striping for guideway.

2 REGULATORY SETTING

2.1 FEDERAL

2.1.1 National Environmental Policy Act [42 United States Code (USC) Sections 4321 et seq.]

NEPA requires consideration of potential environmental effects, including noise and vibration effects, in the evaluation of any proposed federal agency action. General NEPA procedures are set forth in the Council on Environmental Quality regulations 42 USC 4332 Section 102.

2.1.2 Federal Transit Administration

As a transit project, the primary source used for the prediction and assessment of impacts associated with noise and vibration for the Build Alternative comes from the Federal Transit Administration (FTA) Noise and Vibration Impact Assessment Manual (2018), which provides prediction methodology and impact assessment guidance for both construction and operational phases of the Build Alternative as outlined below.

2.1.2.1 Construction Noise and Vibration

FTA recommended construction noise impact criteria are presented in Table 2 below, as a function of land use.

Table 2: FTA Construction Noise Impact Criteria

Land Use	$L_{eq\text{-}equip.\ (8\text{-}hr)}$, dBA Day	$L_{eq\text{-}equip.\ (8\text{-}hr)}$, dBA Night	$L_{eq\text{-}equip.\ (30\text{-}day)}$, dBA 30-Day Average
Residential	80	70	75
Commercial	85	85	80*
Industrial	90	90	85*

Source: (FTA 2018, Table 3-1, Table 7-3)
*Notes: *Use 24-hr L_{eq} (24-hr) instead of L_{dn}-equip (30-day)*
Day: 7 a.m. to 10 p.m.
Night: 10 p.m. to 7 a.m.
dBA = A-weight decibels
hr = hour
L_{eq} = Equivalent Sound Level
L_{eq}-equip.= Equivalent Sound Level for Equipment

For construction vibration, FTA guidance provides impact criteria for two different impact types, potential building damage and potential human annoyance; both are categorized by building type or land use, which are presented in Table 3 and Table 4, respectively.

Table 3: FTA Construction Vibration Damage Criteria

Building/Structural Category	PPV, in/sec	Approximate L_v*
I. Reinforced-concrete, steel, or timber (no plaster)	0.5	102
II. Engineering concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: (FTA 2018, Table 7-5)
Notes:
in/sec = inches per second
L_v = vibration level
PPV = peak particle velocity
Notes:
**Root mean square (RMS) velocity in decibels, vibration velocity level (VdB) relative to (re) 1 micro-in/sec*

Table 4: FTA Indoor Ground-Borne Noise (GBN) and Ground-Borne Vibration (GBV) Impact Criteria for General Vibration Assessment

Land Use Category	GBV Impact Levels (VdB re 1 micro-in/sec): Frequent Events	GBV Impact Levels (VdB re 1 micro-in/sec): Occasional Events	GBV Impact Levels (VdB re 1 micro-in/sec): Infrequent Events	GBN Impact Levels (dBA re 20 micro-Pascals): Frequent Events	GBN Impact Levels (dBA re 20 micro-Pascals): Occasional Events	GBN Impact Levels (dBA re 20 micro-Pascals): Infrequent Events
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB *	65 VdB *	65 VdB *	N/A **	N/A **	N/A **
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

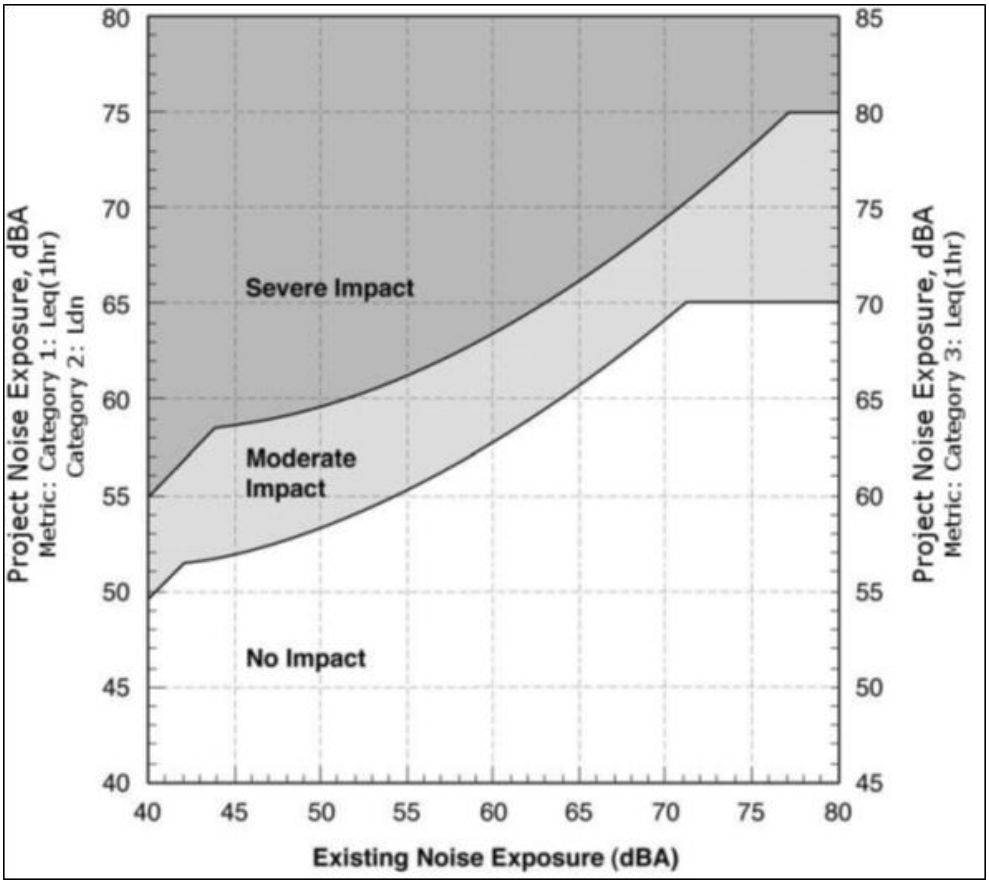
Source: (FTA 2018, Table 6-3)
Notes:
N/A= not applicable
**This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. For equipment that is more sensitive, a Detailed Vibration Analysis must be performed.*
*** Vibration-sensitive equipment is generally not sensitive to GBN; however, the manufacturer's specifications should be reviewed for acoustic and vibration sensitivity.*

2.1.2.2 Operational Noise and Vibration

FTA operational noise impacts are determined as a function of the predicted Build Alternative noise and existing noise exposure and land use category, as shown in Figure 3 below. Generally, the higher the

existing noise exposure, the higher the limit for moderate and severe impacts. For example, at a Category 2 (residential) receptor location with an existing noise exposure level of 55 dBA day-night noise level (L_{dn}), a moderate noise impact would be triggered with a Build Alternative noise exposure of 56 dBA L_{dn} and a severe impact at a Build Alternative noise level of 61 dBA L_{dn}. However, for the same receiver location with an existing exposure of 60 dBA L_{dn}, a moderate impact would exist at a Build Alternative noise level of 58 dBA L_{dn}, and a severe impact at 63 dBA L_{dn}. Operational GBV impact criteria are the same as for operation activity, as shown in Table 4.

Figure 3: FTA Operational Noise Impact Criteria



2.2 STATE

2.2.1 Caltrans Transportation and Construction Vibration

California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual (Caltrans 2020) provides guidelines for vibration damage potential and vibration annoyance criteria. These criteria are shown in Table 5 and Table 6, respectively, below.

Table 5: Caltrans Guideline Vibration Damage Potential Threshold Criteria

Structure and Conditions	Maximum PPV (in/sec): Transient Sources	Maximum PPV (in/sec): Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2020

Table 6: Caltrans Guideline Vibration Annoyance Criteria

Human Response	Maximum PPV (in/sec): Transient Sources	Maximum PPV (in/sec): Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2020

2.2.2 Caltrans Traffic Noise Analysis Protocol

The Caltrans traffic noise analysis protocol (Caltrans 2013) provides the noise abatement criteria corresponding to land use activity categories as shown in Table 7.

Table 7: Caltrans Traffic Noise Abatement Criteria

Activity Category	Activity $L_{eq[h]}$	Evaluation Location	Description of Activities
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	Exterior	Residential.
C	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.

E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A through D or F.
F			Agriculture, airports, bus yards, emergency services, industrial, logging, MSF, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G			Undeveloped lands that are not permitted.

Source: (Table 1: Caltrans Traffic Noise Abatement Criteria, Caltrans 2013)
Notes: L_{eq} (h) = equivalent sound level over a 1-hour period

It is noted that, while included for background information, the Caltrans noise abatement criteria listed above is typically used for new roadway projects, or projects where existing roadways are being significantly upgraded, which may not apply to the current Build Alternative .

2.3 REGIONAL AND LOCAL

2.3.1 County of San Bernardino

2.3.1.1 County of San Bernardino Countywide Plan

The County of San Bernardino Countywide Plan (General Plan) is a collection of planning tools intended to guide future decisions, investments, and improvements throughout the County of San Bernardino (County of San Bernardino 2020). The General Plan's Hazards Element contains the following goal and policies related to noise that are applicable to the Build Alternative:

> **Goal HZ-2:** People and the natural environment protected from exposure to hazardous materials, excessive noise, and other human-generated hazards.
>
> **Policy HZ-2.7:** We encourage truck delivery areas to be located away from residential properties and require associated noise impacts to be mitigated.
>
> **Policy HZ-2.9:** We prioritize noise mitigation measures that control sound at the source before buffers, sound walls, and other perimeter measures.

2.3.2 City of Ontario

2.3.2.1 City of Ontario General Plan

The Safety and Land Use Elements of the City of Ontario General Plan (2022) set forth goals, policies, and land use guidelines to protect residential neighborhoods and noise-sensitive receptors from excessive noise levels. The City of Ontario uses the Noise Level Exposure and Land Use Compatibly Guidelines when siting new development and making land use decisions. The following goals from the General Plan Safety Element are applicable to the Build Alternative:

> **Goal S4:** An environment where noise does not adversely affect the public's health, safety, and welfare.

Goal S4-1: Utilize the City's Noise Ordinance, building codes and subdivision and development codes to mitigate noise impacts.

Goal S4-2: Collaborate with airport owners, Federal Aviation Administration (FAA), Caltrans, San Bernardino Associated Governments (SANBAG)[1], Southern California Association of Governments (SCAG), neighboring jurisdictions, and other transportation providers in the preparation and maintenance of, and updates to transportation related plans to minimize noise impacts and provide appropriate mitigation measures.

Goal S4-4: Manage truck traffic to minimize noise impacts on sensitive land uses.

Goal S4-5: Design streets and highways to minimize noise impacts.

2.3.2.2 City of Ontario Municipal Code

The City of Ontario Municipal Code, Chapter 29 (Noise) establishes the maximum permissible noise level that may intrude into a neighbour's property. The Noise Ordinance establishes noise level standards for various land use categories affected by stationary noise sources. Land use categories in the City of Ontario are defined in five noise zones, as listed below. Table 8 and Table 9 provide the City of Ontario's maximum exterior and interior noise standard based on the noise zone and the time period, respectively (City of Ontario 2023).

1. Noise Zone I: All single-family residential properties,
2. Noise Zone II: All multi-family residential properties and mobile home parks,
3. Noise Zone III: All commercial property,
4. Noise Zone IV: The residential portion of mixed-use properties, and
5. Noise Zone V: All manufacturing or industrial properties and all other uses.

The City of Ontario Noise Ordinance provides the following regulations for construction activity:

a) No person, while engaged in construction, remodeling, digging, grading, demolition, or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.

[1] FAA, SANBAG and SCAG are Federal Aviation Administration, San Bernardino Associated Governments, and Southern California Association of Governments respectively.

b) No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment, or machine in violation of the provisions of this section.

c) Exceptions:

(1) The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the City Manager or his or her designee;

Table 8: City of Ontario, Exterior Noise Standards

Noise Zone	Type of Land Use	Allowable Exterior Noise Level[1] 7 a.m. to 10 p.m.	Allowed Equivalent Noise Level, L_{eq}[2] 10 p.m. to 7 a.m.
I	Single-Family Residential	65 dBA	45 dBA
II	Multi-family Residential, Mobile Home Parks	65 dBA	50 dBA
III	Commercial Property	65 dBA	60 dBA
IV	Residential Portion of Mixed-use	70 dBA	70 dBA
V	Manufacturing and Industrial, Other Uses	70 dBA	70 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.
(2) Measurements for compliance are made on the affected property pursuant to Section 5-29.15.
(b) It is unlawful for any person at any location within the incorporated area of the City of Ontario to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:
(1) The noise standard for the applicable zone for any 15-minute period; and
(2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus 20 dBA for any period of time (measured using A-weighted slow response).
(c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
(d) The Noise Zone IV standard shall apply to that portion of residential property falling within 100 feet of a commercial property or use, if the noise originates from that commercial property or use.
(e) If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.
(Section 2, Ordinance 2888, effective on March 6, 2008)

Table 9: City of Ontario, Interior Noise Standards

Noise Zone	Type of Land Use	Allowable Interior Noise Level[1] 7 a.m. to 10 p.m.	Allowed Equivalent Noise Level, L_{eq}[2] 10 p.m. to 7 a.m.
I	Single-Family Residential	45 dBA	40 dBA
II	Multi-Family Residential, Mobile Home Parks	45 dBA	40 dBA
IV	Residential Portion of Mixed Use	45 dBA	40 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.
(2) Measurements for compliance are made on the affected property pursuant to § 5-29.15.
(b) It is unlawful for any person at any location within the incorporated area of the City to create noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:
(1) The noise standard for the applicable zone for any fifteen-minute (15) period;
(2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).
(c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
(d) The Noise Zone IV standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use if the noise originates from that commercial property or use.

(e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.

(2) The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors, or agents, unless:

(i) The City Manager or a department head determines that the maintenance, repair, or improvement is immediately necessary to maintain public services,

(ii) The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or

(iii) The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day that would otherwise be prohibited pursuant to this section; and

(3) Any construction that complies with the interior and exterior noise limits.

2.3.2.3 Ontario International Airport Land Use Compatibility Plan

The ONT Land Use Compatibility Plan (ALUCP) was adopted on April 19, 2011, and amended in July 2018, by the Ontario City Council to address airport impacts and provide implementation techniques to ensure the development of compatible land uses around airports (Ontario International Airport – Inter Agency Collaborative [ONT-IAC] 2018a). The ALUCP implements relevant policies and guidelines for land use compatibility and specific findings of compatibility or incompatibility of land uses within the Airport Noise Impact Zone. The ALUCP limits land uses that might be harmful to the people near or within the Airport Noise Impact Zone.

2.3.3 City of Rancho Cucamonga

2.3.3.1 City of Rancho Cucamonga General Plan

The Noise Chapter of the City of Rancho Cucamonga General Plan specifies outdoor noise level limits for land uses impacted by transportation noise sources. The City of Rancho Cucamonga requires that new developments be designed to meet these standards (City of Rancho Cucamonga 2021). Noise compatibility can be achieved by avoiding the location of conflicting land uses adjacent to one another, incorporating buffers and noise control techniques including setbacks, landscaping, building transitions, site design, and building construction techniques. Selection of the appropriate noise control technique would vary depending on the level of noise that needs to be reduced as well as the location and intended land use. The following goal and policies from the Noise Chapter of the General Plan are applicable to the Build Alternative:

Goal N-1: A city with appropriate noise and vibration levels that support a range of places from quiet neighborhoods to active, exciting districts.

Policy N-1.1: Require new development to meet the noise compatibility standards identified in Table N-1.

Policy N-1.2: Require the use of integrated design-related noise reduction measures for both interior and exterior areas prior to the use of noise barriers, buffers, or walls to reduce noise levels generated by or affected by new development.

Policy N-1.4: Require development proposing to add people in areas where they may be exposed to major noise sources (e.g., roadways, rail lines, aircraft, industrial or other non-transportation noise sources) to conduct a project level noise analysis and implement recommended noise reduction measures.

Policy N-1.8: Require new development to reduce vibration to 85 VdB or below within 200 feet of an existing structure.

2.3.3.2 City of Rancho Cucamonga Municipal Code

The City of Rancho Cucamonga Municipal Code (City of Rancho Cucamonga 2023), Section 17.66.050 (Noise Standard), establishes the maximum permissible noise level that may intrude into a neighbour's property. The Noise Ordinance establishes the following designated noise zones:

- Noise Zone I: All single- and multiple-family residential properties, and
- Noise Zone II: All commercial properties.

Exterior Noise Standards - The Noise Ordinance of the City of Rancho Cucamonga Municipal Code establishes the following exterior noise standards:

> It shall be unlawful for any person at any location within the city to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on the property line of any other property to exceed the basic noise level as defined below:
>
> a) Basic noise level for a cumulative period of not more than 15 minutes in any one hour; or
>
> b) Basic noise level plus five dBA for a cumulative period of not more than ten minutes in any one hour; or
>
> c) Basic noise level plus 14 dBA for a cumulative period of not more than five minutes in any one hour; or
>
> d) Basic noise level plus 15 dBA at any time.

Residential Noise Standards - Table 10 includes the maximum noise limits in residential zones. These are the noise limits when measured at the adjacent residential property line (exterior) or within a neighboring home (interior).

Table 10: City of Rancho Cucamonga, Residential Noise Limits

Location of Measurement	Maximum Allowable between 10:00 pm to 7:00 am	Maximum Allowable between 7:00 am to 10:00 pm
Exterior	60 dBA	65 dBA
Interior	45 dBA	50 dBA

Notes:
a.m. = ante meridiem
p.m. = post meridiem

Noise sources associated with, or vibration created by, construction, repair, remodeling, or grading of any real property or during authorized seismic surveys could occur with adherence to the guidelines below:

a. When adjacent to a residential land use, school, church or similar type of use, the noise generating activity does not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday, and provided noise levels created do not exceed the noise standard of 65 dBA when measured at the adjacent property line.

b. When adjacent to a commercial or industrial use, the noise generating activity does not take place between the hours of 10:00 p.m. and 6:00 a.m. on weekdays, including Saturday and Sunday, and provided noise levels created do not exceed the noise standards of 70 dBA when measured at the adjacent property line.

3 METHODOLOGY

3.1 RESOURCE STUDY AREA

Based on conservatively calculated screening distances, such as the FTA screening distances for potential noise and vibration impacts (or estimated from reference vibration damage and annoyance thresholds), the resource study area limits for construction and operational noise and vibration are provided in Table 11.

Table 11: Resource Study Area Limits for Noise and Vibration

Project Phase	Impact Type	Land Use/Building Type	Distance to Impact (feet)	Measured from
Construction Noise	Human Annoyance	Residential Land Uses	500	Construction areas and truck haul routes
Construction Vibration	Building Damage	Modern buildings	32	Underground tunnel sections
Construction Vibration	Building Damage	Older buildings	60	Underground tunnel sections
Construction Vibration	Building Damage	Extremely fragile buildings	80	Underground tunnel sections
Construction Vibration	Human Annoyance	Residential	325	Underground tunnel sections
Construction Vibration	Human Annoyance	Institutional	250	Underground tunnel sections
Operational Noise	Human Annoyance	residential	250	Aboveground stations
Operational Vibration	Human Annoyance	Sensitive buildings	100	Underground tunnel sections
Operational Vibration	Human Annoyance	Residential	50	Underground tunnel sections

Source: AECOM 2024

3.2 BASICS OF SOUND

Noise is typically defined as unwanted sound. The following is a brief discussion of fundamental environmental noise concepts.

3.2.1 Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receptor determine the sound level and characteristics of the noise perceived by the receptor. The field of acoustics deals primarily with the propagation and control of sound.

3.2.2 Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

3.2.3 Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (µPa). One µPa is approximately 100-billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 µPa. Because of this huge range of values, sound is rarely expressed in terms of µPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 µPa.

3.2.4 Addition of Decibels

Because dB are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the dB scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB—rather, they would combine to produce 73 dB. Under the dB scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

3.2.5 A-Weighted Decibels

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000 to 4,000 Hz and perceive sounds within that range better than sounds of the same amplitude at higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with regular noise conditions. Noise levels for this report are reported in terms of A-weighted decibels or dBA. Table 12 describes typical A-weighted noise levels for various noise sources.

3.2.6 Human Response to Changes in Noise Levels

As discussed above, doubling sound energy results in a 3-dB increase in sound level. However, given a sound-level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different than what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the midfrequency (1,000 Hz to 8,000 Hz) range. In typical noisy environments, changes in noise levels of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound level would generally be perceived as barely detectable.

3.2.7 Noise Descriptors

Noise in a daily environment fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others fluctuate slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors used in this noise analysis.

Table 12: Typical A-Weighted Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock band
Jet fly-over at 1,000 feet		
	100	
Gas lawn mower at 3 feet		
	90	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
		Large business office
Quiet urban daytime	50	Dishwasher next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Notes: mph = miles per hour
Source: (Table 2.5: Typical Noise Levels, Caltrans 2013)

Equivalent Sound Level (L_{eq}): L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour A-weighted equivalent sound level ($L_{Aeq(h)}$) is the energy average of A-weighted sound levels occurring during a 1-hour period and is the basis for noise abatement criteria for many agencies.

Daytime Equivalent Sound Level ($L_{eq(day)}$): $L_{eq(day)}$ is the L_{eq} average of the A-weighted sound levels occurring during daytime hours from 7:00 a.m. to 10:00 p.m.

Nighttime Equivalent Sound Level ($L_{eq(night)}$): $L_{eq(night)}$ is the L_{eq} average of the A-weighted sound levels occurring during nighttime hours from 10:00 p.m. to 7:00 a.m.

Day-Night Level (L_{dn}): L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m. This metric is often used to assess human annoyance to community noise.

Community Noise Equivalent Level (CNEL): CNEL is the average of A-weighted sound levels occurring over a 24-hour period, with a 5-dB penalty applied to sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m., and a 10-dB penalty applied to sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m.

Sound Power Level (L_w): L_w is a quantity that describes the acoustical energy that is emitted by a sound source independent of the receptor's distance from the object (similar to the wattage of a light bulb). L_w is not usually referenced in regulations describing maximum allowable noise levels; rather, it is used in some calculations and design standards to achieve a desired or allowable noise level.

Maximum Sound Level (L_{max}): L_{max} is the maximum instantaneous sound level reached during a given period of time. This metric is commonly used in vehicle and construction equipment noise specifications.

3.2.8 Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

3.2.8.1 Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and, hence, can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

3.2.8.2 Ground Absorption

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective wave-canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For

acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance.

3.2.8.3 Atmospheric Effects

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway or rail noise due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

3.2.8.4 Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and solid walls) can substantially reduce noise levels. Walls are often constructed between a source and a receptor specifically to reduce noise. A barrier that breaks the line-of-sight between a source and a receptor will typically result in at least 5 dBA of noise reduction. Taller barriers provide increased noise reduction. Vegetation between the highway and receptor is rarely effective in reducing noise because it does not create a solid barrier.

3.3 BASICS OF VIBRATION

3.3.1 Characteristics of Vibration

Vibration is an oscillatory motion through a solid medium, such as soil or concrete, in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is also acoustic energy transmitted as waves through the solid medium. The rate at which pressure changes occur is called the frequency of the vibration, measured by the number of oscillations per second or Hz. Vibration may be the form of a single pulse of acoustical energy, a series of pulses, or a continuous oscillating motion.

The way that vibration is transmitted through the ground depends on the soil type, the presence of rock formations or manmade features, and the topography between the vibration source and the receptor location. As a general rule, vibration waves tend to dissipate and reduce in magnitude with distance from the source. Also, high-frequency vibrations are generally attenuated rapidly as they travel through the ground, so the vibration received at locations distant from the source tends to be dominated by low-frequency vibration. The GBV frequencies most perceptible to humans are in the range from less than 1 Hz to 100 Hz.

Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of vibration are trains, buses on rough roads, and construction activities, such as blasting, pile-driving, and heavy earth-moving equipment.

High levels of vibration may cause physical personal injury or damage to buildings. However, GBV levels rarely affect human health. Instead, most people consider GBV to be an annoyance that can affect concentration or disturb sleep. In addition, high levels of GBV can damage fragile buildings or interfere with equipment that is highly sensitive to GBV (e.g., electron microscopes).

3.3.2 Vibration Descriptors

There are several different methods that are used to quantify vibration.

The PPV is defined as the maximum instantaneous peak of the vibration signal. PPV is most frequently used to describe vibration impacts to buildings and is usually measured in in/sec.

The RMS amplitude is most frequently used to describe the effect of vibration on the human body. RMS amplitude is defined as the root mean square of the squared amplitude of the velocity signal. The dB notation for VdB is commonly used to measure RMS. VdB acts to compress the range of numbers required to describe vibration. L_v is expressed in velocity level decibels (L_v, VdB).

3.3.3 Effects of Vibration

When GBV arrives at a building, a portion of the energy will be reflected or refracted away from the building, and a portion of the energy will typically continue to penetrate through the ground-building interface. However, once the vibration energy is in the building structure, it can be amplified by the resonance of the walls and floors. Occupants can perceive vibration as motion of the building elements (particularly floors) and also rattling of lightweight components, such as windows, shutters, or items on shelves. At very high amplitudes (energy levels), low-frequency vibration can cause damage to buildings.

Unlike noise, GBV is not a phenomenon that most people experience every day. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible GBV are construction equipment and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

3.4 FIELD NOISE MEASUREMENTS AND PREDICTION OF NOISE AND VIBRATION LEVELS

3.4.1 Field Noise Measurements

Noise measurements were conducted at the Build Alternative site and selected nearby noise-sensitive locations on June 13 and 14, 2022. The measurements were conducted with American National Standards Institute Type 1 sound-level meters within their manufacturer's recommended 1-year calibration period. Measurements were conducted and documented in keeping with standard environmental noise measurement procedures, including field calibration checks, maintenance of detailed field data sheets, and measurement set-up photographs for each measurement location (all available upon request). Weather conditions during the measurement period were generally typical for this location during this time of year (temperatures ranging between 65 to 80 degrees Fahrenheit, wind speeds between 0 and 10 mph, relative humidity of 50 to 75 percent [%], and partly cloudy to sunny skies).

Noise measurements were conducted at five locations in the vicinity of the Build Alternative site, including one long-term (LT) measurement location for an entire 24-hour period, and four short-term (ST) locations with durations of approximately 20 to 30 minutes each.

3.4.2 Prediction of Project Noise and Vibration Levels

The general procedure for assessing noise and vibration impacts for a project is to predict the future noise and vibration levels associated with a project, and then compare those predicted levels to the appropriate identified significant impact thresholds in accordance with applicable local, state, and federal policies. The noise and vibration impact analysis for this Build Alternative includes two primary phases, noise and vibration for construction of the Build Alternative components and ongoing operational noise.

The methodology for predicting future noise and vibration levels associated with the construction and operation of the Build Alternative follow the procedures outline in the FTA Transit Noise and Vibration Impact Assessment Manual (FTA 2018), as described below, unless noted otherwise.

3.4.2.1 Construction Noise and Vibration

3.4.2.1.1 On-site Construction Noise

Potential construction noise impacts were determined by calculating the Build Alternative related construction noise levels at representative sensitive receptors and comparing these values to existing ambient noise levels (i.e., noise levels without construction noise from the Build Alternative). Construction noise associated with the Build Alternative was analyzed based on the worst-case construction equipment and processes expected to be in use during the Build Alternative's construction phases. The construction noise model for the Build Alternative is based on the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) (FHWA 2006). The ambient noise levels were based on field data and are provided in Section 4.1 of this technical report.

The methodology used to analyze on-site construction activities starts with the reference noise level and usage factor for each type of construction equipment to be used under conservative worst-case conditions for each identified construction phase. These reference noise levels are then adjusted for the distance from the source to the noise-sensitive receptor, the fractional portion of time (acoustic usage factor, acoustic usage factor [AUF]) that the equipment is operating at full power (L_{max}), and any acoustical shielding that may be present (such as buildings or terrain), and then summing together the contributed noise from all pieces of equipment.

Construction equipment rosters and usage are provided by the Build Alternative contractor to represent typical noise conditions over the course of a workday for worst-case conditions. The acoustical contribution (or the equivalent sound level) for each piece of equipment at each construction area is calculated using the following standard equation:

$$L_{eq} = L_{max(ref)} - 20\,log\left(\frac{D}{D_{ref}}\right) + 10\,log\left(\frac{AUF\%}{100}\right) + 10\,log(N) - S \quad (eq.1)$$

Where:

L_{eq} = equivalent sound level energy-averaged over the period of time over which the equipment is operating, in dBA

$L_{max(ref)}$ = maximum operating equipment sound level operating at full power as measured at the reference distance

D = distance between the operating equipment and the noise-sensitive receptor location (distances conservatively assumed to be the shortest distance from source to receptor at any given site for worst-case conditions)

D_{ref} = reference distance for the $L_{max(ref)}$, typically 50 feet

AUF% = Acoustic Usage Factor (typical percentage value of time that equipment is operating at full power)

N = number of similar pieces of equipment operating in the same area

S = estimated noise reduction shielding value between that source and noise-sensitive receptor, in dBA

The acoustic contribution for all equipment assumed to be operating during the defined construction phase is summed together on an energy basis as the estimated combined noise level for each specific noise-sensitive receptor and then adjusted for distance and acoustical shielding from intervening structures such as buildings or terrain in accordance with FTA methodology for estimating barrier insertion loss (FTA 2018, Table 4-28).

The list of construction equipment available to be used for the various construction phases of the Build Alternative are selected from the full RCNM equipment list, including $L_{max(ref)}$ and AUF% as shown in Table 13.

3.4.2.1.1.1 Off-site Construction Noise

In addition to the construction equipment identified above, there would be some additional traffic on the local roadway network to and from the construction sites associated with construction equipment movements, worker trips, and material delivery and removal. An off-site noise analysis was conducted using the FHWA Traffic Noise Model (TNM) version 2.5 to predict and evaluate additional noise contributed by construction-related traffic noise at typical receptor distances. The TNM is the current Caltrans standard computer noise model for traffic noise studies. The model allows for the input of roadways, noise receivers, and sound barriers, if applicable. The existing traffic volumes for haul route roadways were obtained from the SBCTA ONT Connector Project Environmental Impact Report (EIR), Appendix Q, Transportation Technical Report (SBCTA 2024). Additional construction-related off-site heavy-truck volumes were obtained from the Construction Methods Technical Report (Appendix E).

The TNM was used to calculate existing traffic noise levels at typical receptor distances of 50 and 100 feet from the roadway centerline for the area streets used for haul routes, and then compared to calculated noise levels for the existing traffic plus the Build Alternative traffic to assess significant increases in traffic noise levels as a result of the Build Alternative construction traffic. Noise impacts associated with off-site construction traffic are reported in Section 5 of this report.

3.4.2.1.1.2 Construction Vibration

GBV impacts due to the Build Alternative's construction activities were evaluated for both on-site and off-site construction activities by identifying potential vibration sources (i.e., construction equipment), estimating the vibration levels at the potentially affected receptor, and comparing the Build Alternative's activities to the applicable vibration significance thresholds. The methodology for calculating the construction vibration levels is described below.

Construction-related vibration is assessed using two different metrics: 1) to assess potential structural damage from vibration, and 2) to assess human annoyance from vibration. PPV in in/sec is used to assess potential structural damage. L_v in VdB is used to assess human annoyance. PPV and L_v are calculated using the following equations:

Structural Damage Equation (PPV):

$$PPV=PPV_{ref}*(25/D)\text{^}1.5 \quad (eq.2)$$

Table 13: Acoustical Properties of Construction Equipment

Equipment Type	$L_{max(ref)}$ dBA (50 feet)	AUF%
Auger Drill	84	20
Backhoe	78	40
Boring Jack Power Unit	83	50
Chain Saw	84	20
Compactor (ground)	83	20
Compressor (air)	78	40
Concrete Mixer Truck	79	40
Concrete Pump Truck	81	20
Concrete Saw	90	20
Crane	81	16
Dozer	82	40
Drill Rig Truck	79	20
Drum Mixer	80	50
Dump Truck	76	40
Excavator	81	40
Flat Bed Truck	74	40
Front End Loader	79	40
Generator (greater than 25-KVA)	81	50
Generator (less than 25-KVA)	73	50
Gradall	83	40
Grader	85	40
Horizontal Boring Jack	82	25
Hoe Ram	90	20
Jackhammer	89	20
Man Lift	75	20
Pavement Scarafier	90	20
Paver	77	50
Pickup Truck	75	40
Pneumatic Tools	85	50
Pumps	81	50
Roller	80	20
Scraper	84	40
Shears (on backhoe)	96	40
Tractor	84	40
Vacuum Excavator	85	40
Vacuum Street Sweeper	82	10
Ventilating Fan	79	100
Vibrating Hopper	87	50
Vibratory Concrete Mixer	80	20
Warning Horn	83	5
Welder/Torch	74	40

Notes:
KVA = kilovolt-ampere (electrical power measured in watts)
$L_{max(ref)}$ dBA (50 feet) = actual measured L_{max}
Source: RCNM Users Guide (FHWA 2006, Table 1)

Where:

PPV = peak particle velocity at the nearest structure
PPV_{ref} = reference PPV value for a piece of equipment at reference distance of 25 feet
D = distance from the construction equipment to the structure

Human Annoyance Equation (L_v)

$$L_v = L_{v(ref)} - 30 \log (D/25) \quad (eq.3)$$

Where:

L_v = vibration velocity level at the nearest structure
$L_{v(ref)}$ = reference L_v value for a piece of equipment at a reference distance of 25 feet
D = distance from the construction equipment to the structure

Not all construction equipment produces significant GBV. Of the equipment for the Build Alternative, as shown in Table 14 the equipment with the highest reference vibration level would be a vibratory roller which has reference values of PPV_{ref} equal to 0.21 in/sec at 25 feet, and $L_{v(ref)}$ equal to 94 VdB at 25 feet. Other construction equipment types expected to be used on the Build Alternative that cause GBV are listed in Table 14.

Table 14: Reference Vibration Properties of Construction Equipment

Equipment Type	PPV_{ref} at 25 feet, in/sec	$L_{v(ref)}$, VdB at 25 feet
Vibratory Roller	0.21	94
Hoe-Ram	0.089	87
Large Bulldozer	0.089	87
Caisson/Auger Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: (FTA 2018, Table 7-4)

Potential vibration impacts for both damage and human annoyance are typically assessed using the closest distance to the potentially impacted structure.

3.4.2.1.1.3 Tunnel Boring Machines

Vibration propagation due to tunneling was predicted using methodology outlined in the article "Vibrations induced by TBM in urban areas: In situ measurements and methodology of analysis" published in the Journal of Rock Mechanics and Geotechnical Engineering (Rallu et al. 2023). This article presented case studies of vibration produced by TBMs and developed an equation for predicting vibration propagation over distances from various TBMs and soil types:

$$PPV_{surface} = \beta/d^{\alpha}$$

Where

β = constant for TBM and soil type
α = damping factor due to distance
d = distance from TBM to Receptor

For this analysis, the coefficients β and α were set equal to 0.7 and 0.6, respectively, which is representative of the earth pressure balanced shield TBM to be used, and the alluvium soil of the Build Alternative area (Rallu et al. 2023). Thus, vibration levels at the receptors due to tunneling were able to be predicted.

3.4.2.2 Operational Noise and Vibration

Operational noise and vibration levels are predicted using techniques provided in the FTA Transit Noise and Vibration Impact Assessment Manual (FTA 2018).

3.4.2.2.1 Operational Noise

Operational noise levels for the aboveground station activity are calculated using equations and reference levels from Section 3.4 of the FTA manual (FTA 2018), assuming something similar to a Transit Center or Park and Ride Lot facility (see FTA Tables 13 and 14 for reference levels and computation of hourly noise levels, summarized below).

$$L_{eq(1hr)}\ at\ 50\ feet = SEL_{ref} + C_N - 35.6 \quad (eq.4)$$

Where:

SEL_{ref} = 101 dBA for Transit Center or Park and Ride Lot
C_N = volume adjustment = $10*\log(N_A/1000 + N_B/24)$
N_A = average number of automobiles per hour
N_B = average number of buses per hour

Operational Vibration

In-tunnel operational vibration levels are calculated using reference levels and prediction equations provided in Chapter 6 of the FTA manual (FTA 2018), as summarized below (assuming rubber-tired transit projects).

Predicted vibration velocity level for rubber-tired vehicles (FTA 2018, Table 6-10)

$$L_v = 66.08 + 34.28*\log(D) - 30.25*\log(D)^2 + 5.40*\log(D)^3 \quad (eq.4)$$

Where:

L_v = vibration velocity, VdB
D = distance in feet

3.5 Construction and Operational Thresholds

The analysis utilizes factors and considerations identified in the Ontario Municipal Code, Chapter 29: Noise, the Rancho Cucamonga, California Municipal Code, Section 17.66.050 Noise Standards, the FTA's GBV and noise criteria, and Caltrans's construction vibration damage and annoyance thresholds for assessing potential impacts relating to building damage and human annoyance. The construction and operation thresholds that are applicable to the Build Alternative and used for this report's analyses are included below.

3.5.1 Construction Impact Thresholds

3.5.1.1 Construction Noise Thresholds

City of Ontario: Construction exceeding the exterior and interior noise limits as shown in Table 3-7 and Table 3-8, respectively, would result in a significant impact.

City of Rancho Cucamonga: Construction exceeding the 65-dBA noise limit for residential land use and 70-dBA limit for commercial or industrial land use would result in a significant impact.

From FTA Guidance: The Build Alternative construction noise level exceeding a $L_{eq\text{-}day}$ of 80 dBA at a residential property or 85 dBA at a commercial, school, church, or park use would result in a significant impact.

3.5.1.2 Construction Vibration Thresholds

The City of Ontario and the City of Rancho Cucamonga do not currently have adopted standards, guidance, or thresholds relative to GBV. Therefore, available guidance from FTA and Caltrans are utilized to assess impacts due to GBV during construction.

From FTA Guidance, a significant vibration impact would exist if:

- For human annoyance, GBV levels exceed 72 VdB at residential structures or 75 VdB at Institution land uses;
- For potential structural damage, GBV levels exceeding:
  - 0.5 PPV, in/sec, for Category 1 buildings (reinforced-concrete, steel or timber [no plaster]);
  - 0.3 PPV, in/sec, for Category 2 buildings (engineered concrete and masonry [no plaster]);
  - 0.2 PPV, in/sec, for Category 3 buildings (non-engineered timber and masonry buildings); or

- 0.12 PPV, in/sec, for Category 4 buildings (buildings extremely susceptible to vibration damage).

3.5.2 Operational Impact Thresholds

From the City of Rancho Cucamonga noise ordinance, a significant noise impact would exist if:

- The existing ambient noise level is exceeded by 15 dBA when measured on the property line of any other property.

From FTA Guidance, a significant noise impact would exist if:

- The Build Alternative noise level would result in a "severe impact" at levels ranging from 55 to 80 dBA. Depending on existing noise exposure, in accordance with FTA Operational Noise Impact Criteria in Section 2.1.1 above.

3.6 EVALUATION OF IMPACTS UNDER NEPA

The FTA noise impact analysis process is a multi-step process used to evaluate the Build Alternative for potential noise and vibration impacts in compliance with NEPA approvals. This process, as defined by FTA guidance, includes the following general steps:

1. Determine appropriate impact criteria;
2. Conduct screening and determine appropriate level of noise analysis, analyze the Build Alternative noise impacts, and evaluate mitigation options if appropriate;
3. Determine appropriate level of vibration analysis, analyze the Build Alternative vibration impacts, and evaluate mitigation options if appropriate;
4. Analyze construction noise and vibration impacts; and
5. Document findings.

4 EXISTING CONDITIONS

4.1 EXISTING NOISE MEASUREMENTS

Noise measurement locations are described in Table 15 and shown graphically in Figure 4. These locations represent the sensitive receptors within the Build Alternative footprint.

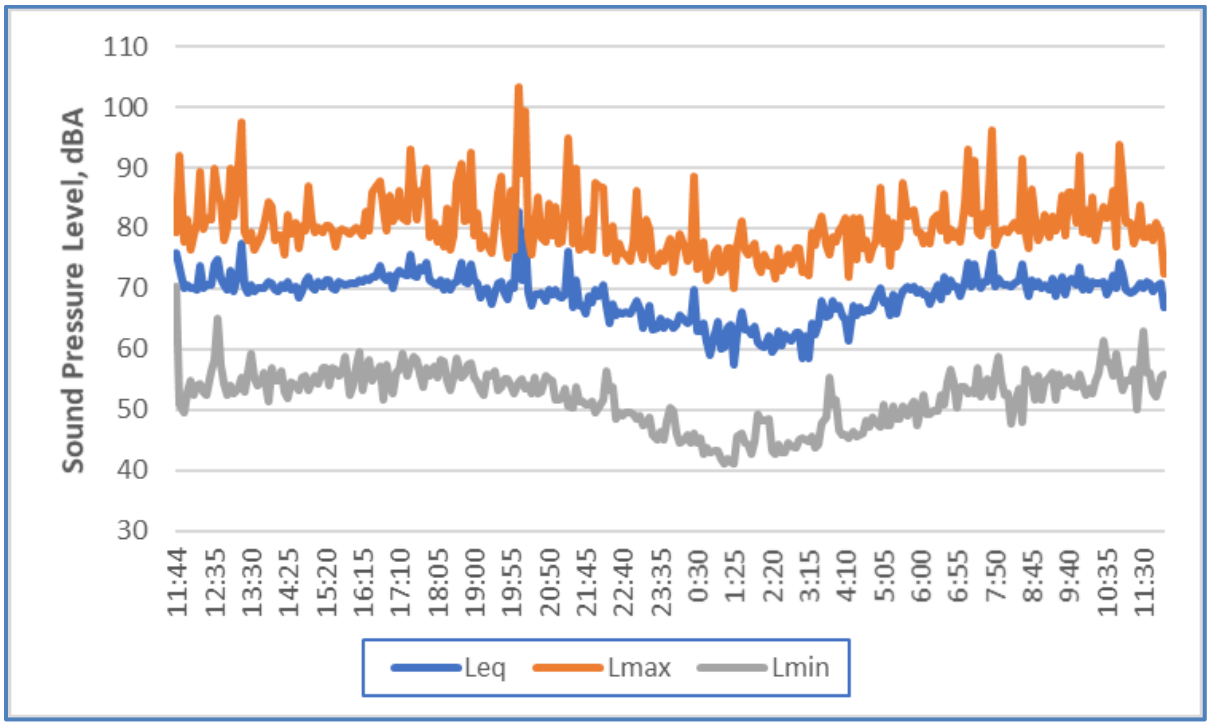
Table 15: Noise Measurement Locations

Location		Existing Noise Sources
LT-1	Commercial development located east of Milliken Avenue and about 250 feet north of 4th Street.	Traffic on Milliken Avenue.
ST-1	Multi-family residential development, exterior area, southwest of the intersection of Milliken Avenue and 7th Street.	Traffic on Milliken Avenue.
ST-2	Multi-family residential development, exterior area on western side of Milliken Avenue, located 450 feet south of 5th Street.	Traffic on Milliken Avenue.
ST-3	Hotel on the eastern side of Milliken Avenue, exterior area near entrance, located about 600 feet south of 5th Street.	Traffic on Milliken Avenue.
ST-4	Multi-family residential development north of the intersection of Duesenberg Drive and Concours Street.	Light traffic on Concours Street, dog barking, and distant aircraft.

Source: AECOM 2022

The results of the long-term (24 hours) noise measurements at LT-1 are shown graphically in Figure 4. These results indicate noise levels at this area averaging about 70 dBA, L_{eq} during the day and dropping down to about 60 dBA, L_{eq} in the early morning hours. Table 16 provides a summary of the measured LT and ST data, along with key calculated noise metrics, including the average L_{eq} for the entire measurement period, $L_{eq\text{-}day}$, $L_{eq\text{-}night}$ and L_{dn} for each measurement location.

The existing noise levels throughout the project area are dominated by traffic noise from local arterial roadways and the I-10 freeway. Some aircraft noise is occasionally audible for short periods in areas closer to the airport, but because the identified noise-sensitive land uses associated with the project are generally located perpendicular to the path of aircraft landing and taking off (i.e., aircraft not traveling directly over the project area), aircraft noise is not a dominant noise source (as illustrated in Figure 4).



Source: (AECOM 2022)

Figure 4: Long-Term Noise Measurement Data at LT-1

Table 16: Noise Measurement Results

Location	Date	Time	Measured L_{eq}, dBA	Average Measured L_{eq}, dBA	Calculated $L_{eq\text{-}day}$, dBA	Calculated $L_{eq\text{-}night}$, dBA	Calculated L_{dn}, dBA
ST-1	6/13/2022	4:58 p.m.–5:28 p.m.	66.7	63.9	64.6	59.5	67.1
ST-1	6/14/2022 9:11 a.m.–9:39 a.m.	53.5	-	-	-	-	-
ST-2	6/13/2022 2:15 p.m.–2:44 p.m.	65.0	65.8	66.7	61.6	69.2	-
ST-2	6/14/2022 9:55 a.m.–10:24 am	66.5	65.8	66.7	61.6	69.2	-
ST-3	6/13/2022 1:40 p.m.–2:09 p.m.	63.6	64.1	64.8	59.7	67.3	-
ST-3	6/14/2022	10:27 a.m.–10:59 am	64.6	-	-	-	-
ST-4	6/13/2022 1:04 p.m.–1:24 p.m.	67.9	65.2	63.8	58.6	66.3	-
ST-4	6/14/2022 8:24 a.m.–8:53 a.m.	55.3	65.2	63.8	58.6	66.3	-
LT-1	6/13/2022–6/14/2022	11:44 a.m.–12:00 p.m.	70.4	70.4	71.6	66.5	74.1

Source: AECOM 2022

5 IMPACT EVALUATION

5.1 NOISE AND VIBRATION SENSITIVE RECEPTORS

For the noise and vibration impact analysis, specific receptor locations were selected to assess potential impacts. These generally consisted of land uses that could be sensitive to elevated noise or vibration levels within about 500 feet of the Build Alternative components, such as future station location construction sites, truck haul routes, tunnel corridors, and vent shafts (beyond about 500 feet, construction and operational transit noise are typically less than ambient noise levels in most developed areas). Noise-sensitive receptor land uses included residential properties, hotels, places of worship, and some businesses with outdoor use areas. The selected sensitive receptors are described in Table 17 and shown in Figure 5 through Figure 9. It is noted that Receptor R8, remaining structures at Old Guasti Winery, is included as potentially sensitive structures, but are only assessed for potential vibration damage. Figure 4**Error! Reference source not found.** displays the airport noise impacts zones.

Table 17: Noise and Vibration-Sensitive Receptor Locations

Location	Description	Location	Noise and Vibration Sources
R1	Fairway Village, shops with outdoor seating, City of Rancho Cucamonga	Western side of Milliken Avenue between Azusa Court and 7th Street	Aboveground construction noise and vibration, haul route noise
R2	Solamonte Apartments, with street-facing units with balconies and patios, City of Rancho Cucamonga	Western side of Milliken Avenue between 7th and 6th Streets	Aboveground construction noise and vibration, tunnel construction vibration, haul route noise
R3	Reserve at Empire Lakes Apartments with street-facing units with balconies and patios, City of Rancho Cucamonga	Western side of Milliken Avenue between 5th and 4th Streets	Tunnel construction vibration, haul route noise
R4	Holiday Inn Express with exterior use areas, City of Rancho Cucamonga	9585 Milliken Avenue between 5th and 4th Streets	Tunnel construction vibration haul route noise
R5	In-N-Out, Chick Fil-A with outdoor seating, City of Ontario	Milliken Avenue at Ontario Mills Parkway	Haul route noise, vent construction noise and vibration
R6	TA Travel Center with outdoor seating, City of Ontario	Milliken Avenue at Guasti Road	Haul route noise, vent construction noise and vibration
R7	San Secondo d'Asti Church with exterior use areas, City of Ontario	250 North Turner Avenue	Aboveground construction noise and vibration
R8	Remaining Structures at Old Guasti winery, City of Ontario (no longer in use)	East Guasti Road between Archibald Avenue and North Turner Road	Construction and tunneling vibration only, not noise sensitive
R9	Holiday Inn with exterior use areas, City of Ontario	2155 East Convention Center Way	Aboveground construction noise

Source: AECOM 2022

Figure 5: Noise and Vibration Study Area

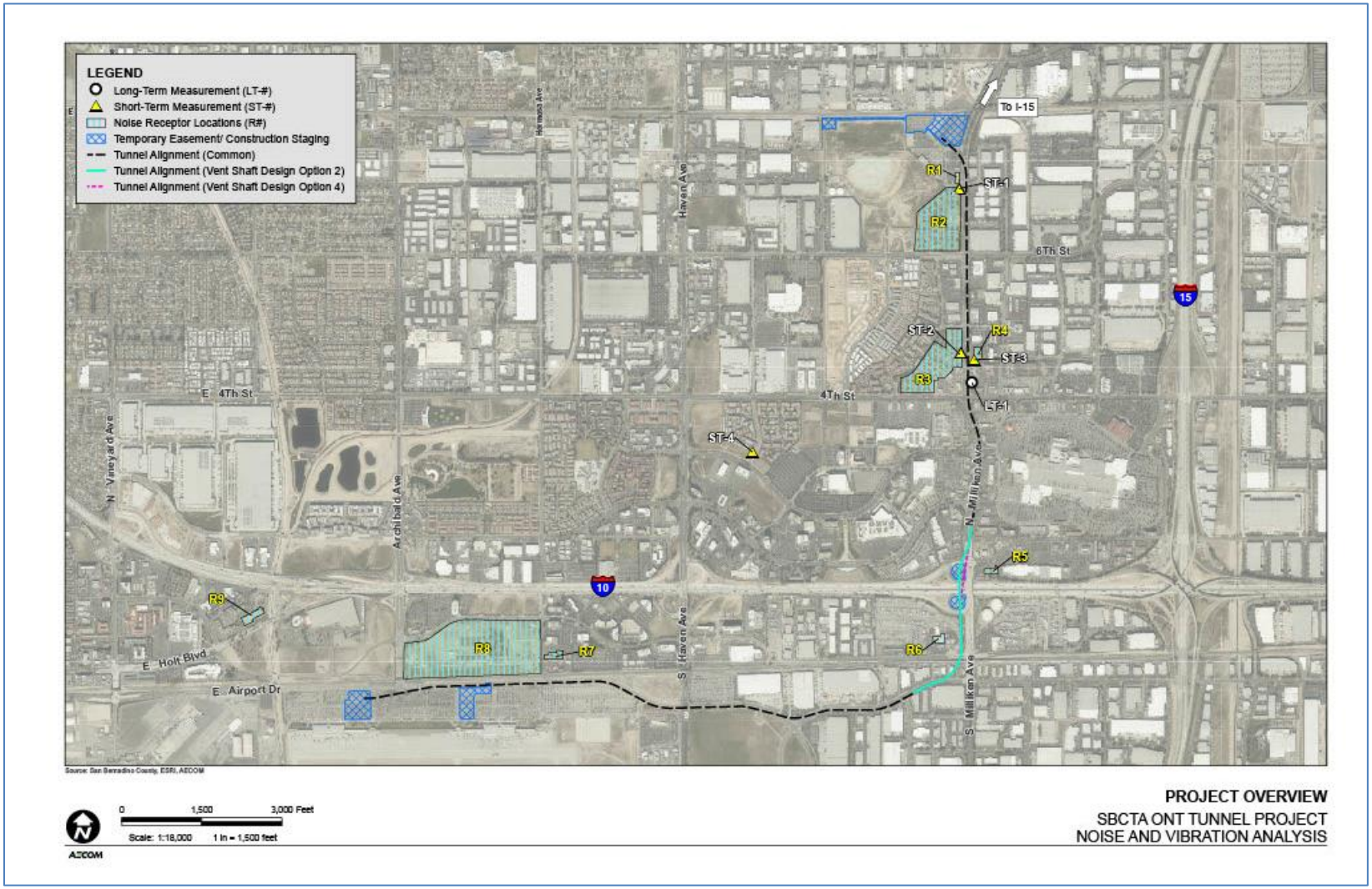


Figure 6: Cucamonga Station Construction Area, Receptors R1 and R2

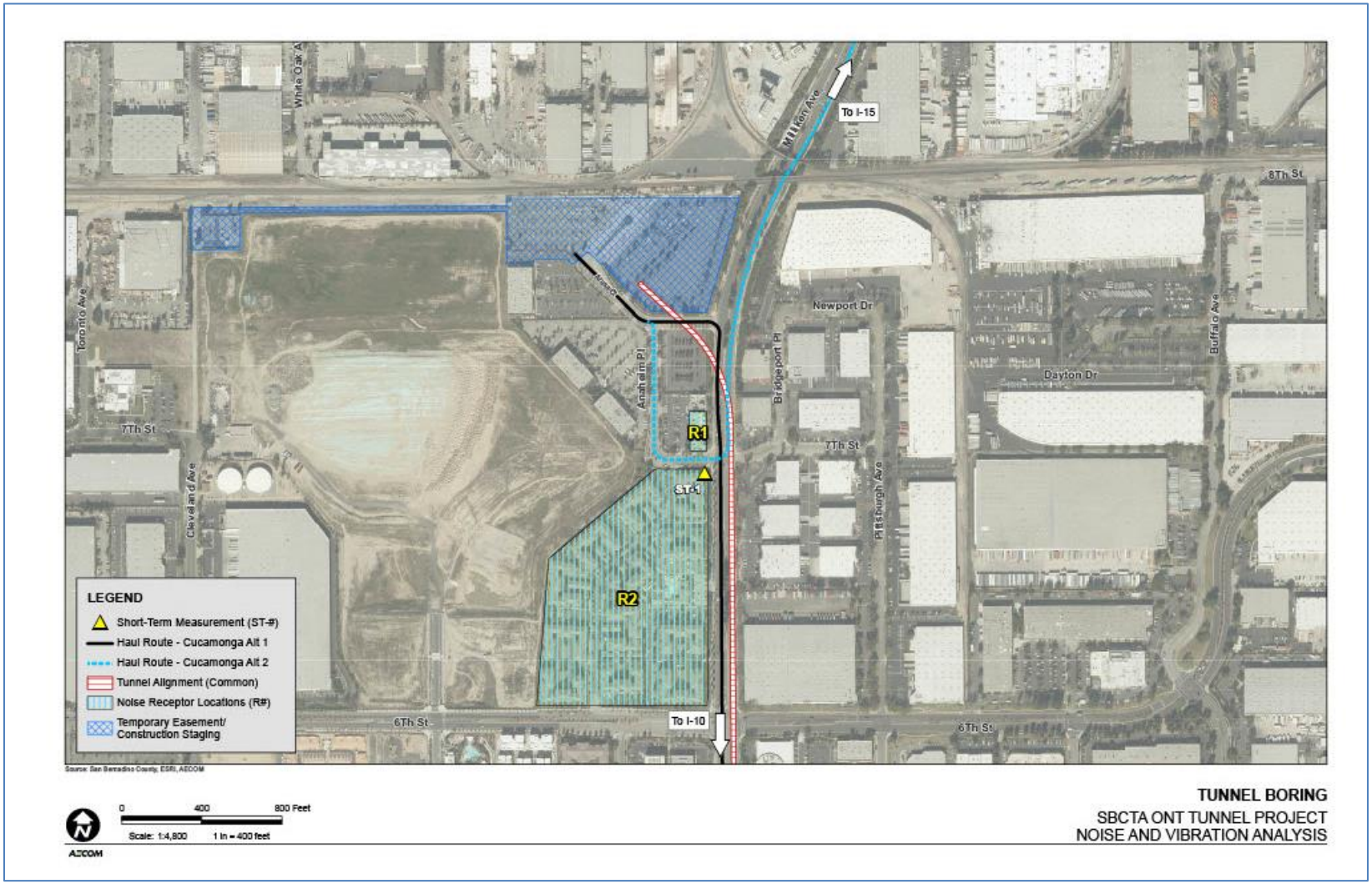
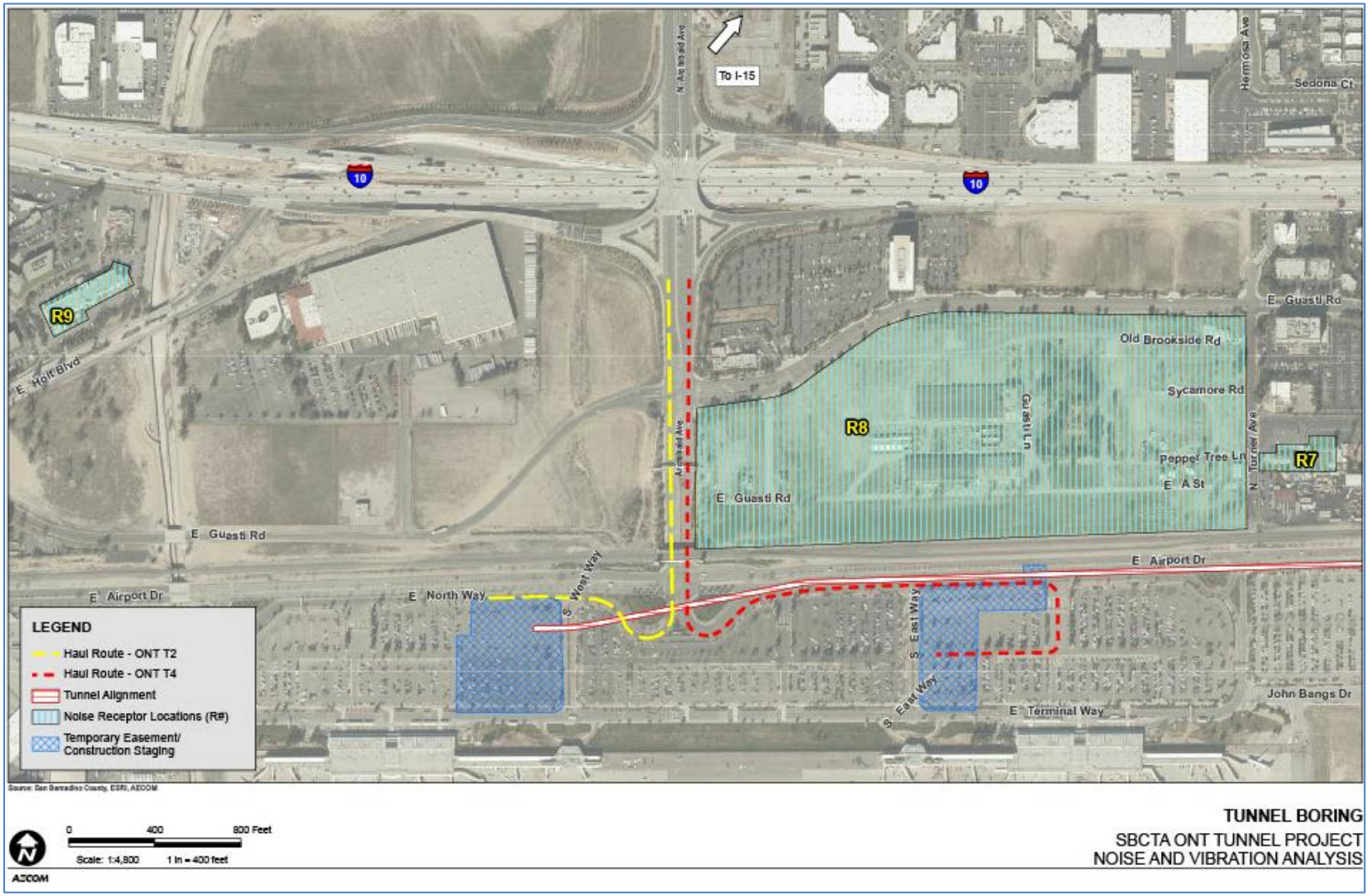


Figure 7: Tunnel Construction Area, Receptors R3 and R4

Figure 8: Vent Shaft Construction Area, Receptors R5 and R6

Figure 9: Ontario Airport Station Construction Areas, Receptors R7, R8, R9



5.2 NOISE IMPACT

5.2.1 No Build Alternative

5.2.1.1 Construction Impacts

The No Build Alternative would not generate construction-related noise.

5.2.1.2 Operational Impacts

The No Build Alternative would not include new transit services or facilities that could increase operational noise.

5.2.2 Build Alternative

5.2.2.1 Construction Impacts

Noise is generally defined as unwanted sound. Noise impacts on the human environment vary from levels that interfere with speech and sleep (annoyance and nuisance) to levels that cause adverse health effect (hearing loss and psychological effects). Human response to noise is subjective and can vary greatly from person to person. Factors that influence individual response include intensity, frequency, and pattern of noise, the amount of background noise present before the intruding noise, and the nature of work or human activity that is exposed to the noise source.

Noise impacts from the Build Alternative construction activities would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to noise-sensitive receptors. Each phase of construction would involve the use of various types of construction equipment and would, therefore, have its own distinct noise characteristics. Construction equipment is generally classified as either stationary equipment or mobile equipment. Stationary equipment consists of equipment that generates noise from one general area and includes items such as pumps, generators, and compressors. These types of equipment operate at a constant noise level under normal operation and are classified as non-impact equipment. Other types of stationary equipment such as pile drivers, jackhammers, pavement breakers, blasting operations, etc., produce variable and sporadic noise levels and often produce impact-type noises. Impact equipment is equipment that generates impulsive noise, where impulsive noise is defined as noise of short duration (generally less than one second), high intensity, abrupt onset, rapid decay, and often rapidly changing spectral composition.

Mobile equipment such as dozers, scrapers, graders, etc., may operate in a cyclic fashion in which a period of full power is followed by a period of reduced power. Other equipment such as compressors, although generally considered to be stationary when operating, can be readily relocated to another location for the next operation. Both mobile and stationary construction equipment are typically used across all types of

construction projects. The TBM, unique to this project, uses a rotating metal cutter head to dig tunnels through soil, rock, or soil-rock mixtures. As the TBM is underground noise is significantly reduced; however, the TBM does generate ground-borne noise which is caused by vibrations from the ground that are transmitted through the structure of buildings. As with sources of noise, vibration levels are a product of distance (i.e., those sensitive receptors closest to the source experience more than those receptors at a distance).

Construction noise levels would fluctuate throughout a given workday as construction equipment moves within the various construction sites. As previously described, construction activities would be phased across the 52-month construction period; as such, not all construction equipment would be operating continuously. Sensitive receptors are located throughout the Build Alternative footprint, and these receptors will likely experience periods of increased noise during the construction period. However, as shown on Table 18, Table 19, Table 20, and Table 21, construction activities including truck haul routes, ground borne vibrations, and noise and vibration from the TBM would not have an adverse noise and vibration effect on sensitive receptors.

Construction equipment used to calculate construction noise included the following:

- Piling rig;
- Crawling cranes;
- Vertical conveyers;
- Tunnel fans;
- Concrete trucks;
- Haul trucks;
- Muck trucks;
- Compressor generator;
- Wheel washers;
- Wheel loaders;
- Excavators; and
- Vent fans

To determine construction noise impacts at aboveground construction sites, sound-generating equipment was modeled at representative sensitive receptor locations within the construction area for each construction phase to determine the respective sound levels due to construction activity. The results of

the analysis for noise sensitive receptors in proximity to the three primary construction areas (Cucamonga Station, the vent shaft, and the ONT stations) are presented in Table 18.

Table 18: Daytime/Nighttime Construction Noise Impacts from Aboveground Construction Sites

Construction Area	Construction Phase	Receiver Location	FTA Daytime/Nighttime Impact Threshold / dBA, L_{eq}	Predicted Noise Level / dBA, L_{eq}	Impact
Cucamonga Station and MSF	Tunneling	R1. Fairway Village	85/85	61.8	None
Cucamonga Station and MSF	Tunneling	R2. Solamonte Apartments	80/70	59.9	None
Cucamonga Station and MSF	Station/MSF Construction	R1. Fairway Village	85/85	62.1	None
Cucamonga Station and MSF	Station/MSF Construction	R2. Solamonte Apartments	80/70	60.1	None
Vent Shaft Design Option	Shaft Construction, Vent Shaft Design Option 2	R5. Restaurants, Outdoor seating	85/85	71.0	None
Vent Shaft Design Option	Shaft Construction, Vent Shaft Design Option 2	R6. TA Travel Center, outdoor seating	85/85	62.9	None
Vent Shaft Design Option	Shaft Construction Vent Shaft Design Option 4	R5. Restaurants, Outdoor seating	85/85	67.0	None
Vent Shaft Design Option	Shaft Construction Vent Shaft Design Option 4	R6. TA Travel Center, outdoor seating	85/85	68.3	None
ONT Stations	Tunneling	R7. Church	80/70	61.6	None
ONT Stations	Tunneling	R9. Holiday Inn Hotel	85/85	58.1	None
ONT Stations	Station Construction	R7. Church	80/70	58.8	None
ONT Stations	Station Construction	R9. Holiday Inn Hotel	85/85	55.4	None

Source: (FTA 2018, *Table 3-1)*

As shown in Table 18, the predicted noise level for the Build Alternative during construction activities ranges from 55.4 dBA to 71.0 dBA. Under the FTA noise impact criteria presented in Table 2 (Federal Transit Administration Construction Noise Impact Criteria), the construction of the Build Alternative would not increase noise levels in exceedance of the FTA impact threshold (ranging from 80 to 90 dBA) at noise sensitive receptor locations. Anticipated daytime and nighttime construction activities would be all within the FTA's noise impact criteria.

The portion of the Build Alternative within the City of Rancho Cucamonga includes restaurants with outdoor seating and residential uses near or adjacent to the Build Alternative site. The portion of the Build Alternative within the City of Ontario has a travel center with outdoor seating, church, and hotels, but no residential uses near or adjacent to the Build Alternative site. These uses are sensitive receptors that are subject to temporary increases in ambient noise resulting from construction activities. Notwithstanding, noise levels are predicted to be below the FTA construction noise standards. The majority of the construction activities would occur underground during the construction of the 4.2-mile-long tunnel,

which would be located approximately 70 feet underground. Most of the aboveground construction activities are anticipated to occur during daytime hours. Construction activities are not anticipated to occur outside of the permitted daytime and nighttime hours, per the City of Rancho Cucamonga's and the City of Ontario's noise ordinance regulations. In addition, ambient noise policies for the City of Rancho Cucamonga and the City of Ontario generally prohibit non-emergency nighttime construction activities. The City of Rancho Cucamonga and the City of Ontario would require permits and variance approvals for aboveground nighttime construction activities outside of the permitted hours. Therefore, adherence to existing regulations would ensure that the Build Alternative during construction would have minimal effects to ambient noise levels.

5.2.2.1.1 Tunnel Boring

As discussed above, construction of the Build Alternative at aboveground construction sites would not increase noise levels in exceedance of the FTA impact threshold (ranging from 80 to 90 dBA) at noise-sensitive receptor locations. Construction activities include tunnel boring activities, as shown in Table 18. Because the tunnel-boring activity would generally take place either at the aboveground construction sites (evaluated above) or below ground (up to 70 feet), audible air-borne noise from tunnel-boring activity is not anticipated. As such, the Build Alternative during construction for the tunnel would have minimal effects to ambient noise levels.

5.2.2.1.2 Haul Routes

Haul routes associated with proposed Project/Build Alternative construction could create excess noise from trucks hauling material to or away from construction sites. Typically, vehicles legally allowed to travel on existing roadways are not regulated, from a noise perspective, and would not result in noise impacts unless they represented a significant increase in noise levels relative to typical traffic noise levels. Specifically, a 5-dBA increase in traffic noise levels would normally be considered a noticeable increase that would result in a noise impact. For this analysis, it was assumed that an additional 100 heavy trucks per day in each direction could be added during each workday to the defined haul routes, or about 10 trucks per hour over a 10-hour workday.

Table 19 demonstrates that noise impacts due to increased heavy traffic on haul routes (increase of 5 dBA or greater) are not anticipated at any of the noise-sensitive receptors. As shown in Table 19, an increase of 0.0 to 1.8 dBA at the receptors located near the haul routes is anticipated during construction of the proposed Project/Build Alternative. As discussed above, a noise impact would result from an increase of 5 dBA or greater in traffic noise levels. As such, estimated off-site construction traffic noise impacts would not exceed significance thresholds at the proposed haul routes. Therefore, the Build Alternative during construction would have minimal effects to ambient noise levels from the assumed haul route truck traffic.

Table 19: Haul Route Traffic Noise

Receiver near Haul Routes*	Nearest Haul Route Roadway	Predicted Traffic Noise ($L_{eq(hourly)}$, dBA) in Existing Traffic	Predicted Traffic Noise ($L_{eq(hourly)}$, dBA) with Haul Route	Increase	Impact
R1. Fairway Village, I-10 Alternative	7th Street/ Anaheim Place	54.9	56.1	1.2	None
R1. Fairway Village, I-15 Alternative	7th Street/ Anaheim Place	54.9	55.7	0.8	None
R2. North Solamonte Apartments (north-facing units), I-10 Alternative	7th Street/ Anaheim Place	60.6	61.8	1.2	None
R2. North Solamonte Apartments (north-facing units), I-15 Alternative	7th Street/ Anaheim Place	60.6	62.4	1.8	None
R2. East Solamonte Apartments (east-facing units), I-10 Alternative	Milliken Avenue	68.9	69.4	0.5	None
R2. East Solamonte Apartments (east-facing units), I-15 Alternative	Milliken Avenue	68.9	69.0	0.1	None
R3. Reserve at Empire Lakes	Milliken Avenue	67.2	67.6	0.4	None
R4. Holiday Inn	Milliken Avenue	64.5	65.0	0.5	None
R5. In-N-Out, Chick-fil-A	Milliken Avenue	73.5	73.5	0.0	None
R6. TA Travel Center	Milliken Avenue	60.2	60.8	0.6	None

*Notes: * Receptors R7, R8, and R9 are all greater than 1,000 feet from the nearest haul route and, therefore, not evaluated for haul route noise.*

5.2.2.2 Operational Impacts

The operation of the Build Alternative is not expected to significantly increase noise levels above current levels at nearby noise-sensitive receptor locations due to the following factors:

- Passenger vehicles using the stations and tunnel structure will be electrically powered, rubber-tired vehicles that would be operated primarily underground and would be expected to generate minimal noise at aboveground receptors.
- Maintenance activities near Cucamonga Metrolink Station will be conducted in a MSF with closed bay doors. The vehicle-washing station will not include noisy equipment.
- The vent shaft is not expected to have regularly operating equipment that would be audible at the nearest noise sensitive receptors (R5 and R6) over the existing traffic noise from I-10 and other nearby arterial roadways, therefore resulting in no increase in noise levels over existing conditions.

As a result, the Build Alternative during operation would have minimal effects to ambient noise levels.

5.3 VIBRATION IMPACT

5.3.1 No Build Alternative

5.3.1.1 Construction Impacts

The No Build Alternative would not generate construction-related vibrations.

5.3.1.2 Operational Impacts

The No Build Alternative would not include new transit services or facilities that could cause operational vibrations.

5.3.2 Build Alternative

5.3.2.1 Construction Impacts

Vibration impacts from aboveground construction activities were calculated for receiver locations within at least 500 feet of the Build Alternative construction. As provided in Table 20, predicted GBV levels were calculated in terms of VdB, to assess potential annoyance, and PPV, to assess potential damage. The piece of construction equipment with the highest potential vibration level would conservatively be a vibrator roller (used primarily for soil compaction), so this equipment type was used to predict worst-case vibrations for aboveground construction vibration impacts.

According to the FTA manual, a significant vibration impact would exist for human annoyance if GBV levels exceed 72 VdB at residential structures, or 75 VdB at institutional structures. For potential structural damage, a significant vibration impact would exist if GBV levels exceed the following:

- 0.5 PPV, in/sec, for Category 1 buildings (reinforced-concrete, steel, or timber [no plaster])
- 0.3 PPV, inches per second, for Category 2 buildings (engineered concrete and masonry [no plaster])
- 0.2 PPV, in/sec, for Category 3 buildings (non-engineered timber and masonry buildings)
- 0.12 PPV, in/sec, for Category 4 buildings (buildings extremely susceptible to vibration damage)

As shown in Table 20, construction activities would not result in potential vibration impacts due to human annoyance or building damage for vibration-sensitive uses. The Build Alternative during construction would have minimal effects to excessive GBV levels.

Table 20: GBV from Aboveground Construction Sites

Construction Area	Construction Phase	Receiver Location	Predicted Vibration Level (VdB/PPV)	Impact Threshold: Annoyance (VdB)	Impact Threshold: Damage (PPV)	Impacts
Cucamonga Station and MSF	Tunneling	R1. Fairway Village	47.1 VdB/ 0.0009 PPV	75	0.5	None
Cucamonga Station and MSF	Tunneling	R2. Solamonte Apartments	43.5 VdB/ 0.0006 PPV	72	0.5	None
Cucamonga Station and MSF	Station/MSF Construction	R1. Fairway Village	47.1 VdB/ 0.0009 PPV	75	0.5	None
Cucamonga Station and MSF	Station/MSF Construction	R2. Solamonte Apartments	44.5 VdB/ 0.0007 PPV	72	0.5	None
Vent Shaft Design Option 2	Vent Shaft Construction	R5. Restaurants, Outdoor seating	0.0026 PPV	NA	0.5	None
Vent Shaft Design Option 2	Vent Shaft Construction	R6. TA Travel Center, outdoor seating	0.0006 PPV	NA	0.5	None
Vent Shaft Design Option 4	Vent Shaft Construction	R5. Restaurants, Outdoor seating	0.0013 PPV	NA	0.5	None
Vent Shaft Design Option 4	Vent Shaft Construction	R6. TA Travel Center, outdoor seating	0.0016 PPV	NA	0.5	None
ONT Stations	Tunneling	R7. Church	41.3 VdB/ 0.0005 PPV	72	0.2	None
ONT Stations	Tunneling	R8. Winery Buildings	NA/0.0012 PPV	NA	0.12	None
ONT Stations	Tunneling	R9. Holiday Inn Hotel	35.9 VdB/ 0.0002 PPV	72	0.5	None
ONT Stations	Station Construction	R7. Church	41.3 VdB/ 0.0005 PPV	72	0.2	None
ONT Stations	Station Construction	R8. Winery Buildings	NA/0.0012 PPV	NA	0.12	None
ONT Stations	Station Construction	R9. Holiday Inn Hotel	35.9 VdB/ 0.0002 PPV	72	0.5	None

GBV = ground-borne vibration
MSF = Maintenance and Storage Facility
NA = not applicable
ONT = Ontario International Airport
PPV = peak particle velocity
VdB = vibration velocity level

5.3.2.1.1 Tunnel Boring

Because the tunnels are located underground, no airborne noise from construction or operation should be audible. While some Ground-Borne Noise and Vibration could make its way to the surface, the analysis indicated that the resulting levels would be well below FTA-established impact thresholds for annoyance and potential damage (Table 21 and Table 22, respectively) and would very likely be imperceptible to any human receptor.

Predicted GBV levels and resulting impacts from tunnel-boring activities are provided in Table 21 and Table 22, respectively. As indicated in the tables, no GBV impacts from tunnel-boring activities are anticipated. The Build Alternative during construction for the tunnel would have minimal effects to excessive GBV or ground borne noise levels.

Table 21: Annoyance due to GBV and GBN from Tunnel Boring

Receiver Location	GBV Impact threshold VdB re 1 micro-inch/sec	GBV Predicted level VdB re 1 micro-inch/sec	GBV Impact VdB re 1 micro-inch/sec	GBN Impact Threshold dBA re 20 micro-Pascals	GBN Predicted Level dBA re 20 micro-Pascals	GBN Impact dBA re 20 micro-Pascals
R1. Fairway Village	75	58.1	None	40	18.1	None
R2. Solamonte Apartments	72	56.7	None	35	16.7	None
R3. Reserve at Empire Lakes	72	57.9	None	35	17.9	None
R4. Holiday Inn Hotel	72	57.6	None	35	17.6	None

Table 22: Potential Damage due to GBV from Tunnel Boring

Receiver Location	GBV Impact threshold PPV (in/sec)	GBV Predicted level PPV (in/sec)	GBV Impact
R1. Fairway Village	0.5	0.0032	None
R2. Solamonte Apartments	0.5	0.0027	None
R3. Reserve at Empire Lakes	0.5	0.0031	None
R4. Holiday Inn Hotel	0.5	0.0030	None
R8. Winery Buildings	0.12	0.0015	None

5.3.2.1.2 Haul Routes

The Build Alternative would require approximately 200 haul trucks to transport construction materials on- and off-site. These haul trucks would be limited to construction activities and would only occur within the duration of the construction activities. Vibration may be felt on sidewalks at up to approximately 25 feet on roadways that serve as haul routes when large trucks pass by. These construction vibration levels have the potential to result in some annoyance impacts for people within occupied structures near the roadway. However, this potential vibration would be uncommon and similar to the heavy trucks that already uses the local haul routes. As such, the Build Alternative during construction would have minimal effects to excessive GBV and ground borne noise levels resulting from the trucks using local haul routes.

5.3.2.2 Operational Impacts

Operation of the Build Alternative would include the use of electric vehicles that would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. Vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Due to the use of smaller, rubber-tired electric vehicles in the stations and within tunnels, none of the Build

Alternative operations are anticipated to produce perceptible vibration beyond the Build Alternative footprint. Operation of Vent Shaft Design Option 2 and Vent Shaft Design Option 4 include fans and none are anticipated to produce perceptible vibration beyond the proposed Project/Build Alternative footprint. The Build Alternative during operation would have minimal effects to excessive GBV levels.

6 MITIGATION MEASURES AND NEPA SUMMARY

6.1 MITIGATION MEASURES, AVOIDANCE, AND/OR MINIMIZATION

6.1.1.1 No Build Alternative

No mitigation measure, avoidance and/or minimization would be required for the implementation of the No Build Alternative.

6.1.1.2 Build Alternative

No mitigation measure, avoidance and/or minimization would be required for the implementation of the Build Alternative.

6.2 NEPA SUMMARY

6.2.1 NOISE IMPACT

6.2.1.1 No Build Alternative

With compliance with the City of Rancho Cucamonga and City of Ontario's Municipal Codes, which require implementation of construction BMPs to reduce construction noise and limit the hours of construction, the No Build Alternative would have no adverse effects to ambient noise levels.

6.2.1.2 Build Alternative

Adherence to existing regulations would ensure that an increase in ambient noise during construction for the Build Alternative would have no adverse effects to ambient noise levels. Operation of the Build Alternative is not expected to significantly increase noise levels above current levels at nearby noise-sensitive receptor locations. Operational noise is not expected to be audible over existing noise levels, and adherence to existing noise regulations would ensure that the operational noise impacts would have no adverse effects to ambient noise levels.

6.2.2 VIRBATION IMPACT

6.2.2.1 No Build Alternative

With adherence to existing regulations, the No Build Alternative would have no adverse effects to ground-borne vibration and ground-borne noise levels.

6.2.2.2 Build Alternative

Construction of the Build Alternative would not result in potential vibration impacts due to human annoyance or building damage for vibration-sensitive uses. Therefore, the Build Alternative would not

result in GBV impacts from the use of vibration-generating construction equipment and would have no adverse effects to ground-borne vibration and ground-borne noise levels.

Additionally, due to the use of smaller, rubber-tired electric vehicles in the stations and tunnels, none of the Build Alternative operations are anticipated to produce perceptible vibration beyond the Build Alternative footprint. Therefore, operation of the Build Alternative would not increase the existing vibration levels in the immediate vicinity of the Build Alternative; as such, operation of the Build Alternative would have no adverse effects to ground-borne vibration and ground-borne noise levels.

7 REFERENCES

California Department of Transportation (Caltrans). 2013. Technical Noise Supplement to Traffic Noise Analysis Protocol. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf. Accessed March 11, 2024.

California Department of Transportation (Caltrans). 2020. Transportation and Vibration Guidance Manual. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf. Accessed March 11, 2024.

Code of Federal Regulations Title 23 Chapter I Subchapter H Part 771. Amended August 2024. Part 771 – Environmental Impact and Related Procedures. Available at: https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-771. Accessed September 4, 2024.

Code of Federal Regulations Title 23 Chapter I Subchapter H Part 772. Amended August 2024. Part 772 – Procedures for Abatement of Highway Traffic Noise and Construction Noise. Available at: https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-772. Accessed September 4, 2024.

San Bernardino County. 2020. *San Bernardino County General Plan*. Available at: https://countywideplan.com/policy-plan/. (Accessed September 21, 2022)

Federal Highway Administration (FHWA). 2006. Roadway Construction Noise Model, User's Guide. Available at: https://www.fhwa.dot.gov/ENVIRonment/noise/construction_noise/rcnm/rcnm.pdf. Accessed March 11, 2024.

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed March 11, 2024.

Ontario International Airport Inter-Agency Collaborative (ONT- IAC). 2018. Airport Land Use Compatibility Plan. Available at: https://www.ont-iac.com/airport-land-use-compatibility-plan/. Accessed March 11, 2024.

Ontario, City of. 2023. Ontario Municipal Code, Chapter 29 – Noise. Available at: https://www.nonoise.org/regulation/ordinance/Ontario,%20California.pdf. Accessed March 11, 2024.

Ontario, City of. 2022. City of Ontario Policy Plan. A Component of the Ontario Plan 2050. Available: https://www.ontarioplan.org/top2050/. Accessed September 14, 2022.

Rallu, Antoine, et al. "Vibrations induced by tunnel boring machine in urban areas: In situ measurements and methodology of analysis." Journal of Rock Mechanics and Geotechnical Engineering 15.1 (2023): 130-145.

Rancho Cucamonga, City of. 2021. Plan RC, City of Rancho Cucamonga General Plan. Available: https://www.cityofrc.us/GeneralPlan. Accessed July 6, 2022.

Rancho Cucamonga, City of. 2023. Rancho Cucamonga, California Municipal Code, Section 17.66.050 Noise Standards. Available at: https://ecode360.com/RA4992. Accessed March 11, 2024.

San Bernardino County Transportation Authority (SBCTA). 2024. SBCTA Ontario International Airport Connector Project, Draft Environmental Impact Report.

Ontario International Airport Connector Project

ONTCONNECTOR

APPENDIX K

ENVIRONMENTAL JUSTICE TECHNICAL REPORT

October 2024

Prepared by:

sbcta

San Bernardino County Transportation Authority
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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACS	American Community Survey
ADA	Americans with Disabilities Act
ALUCP	Airport Land Use Compatibility Plan
ATMP	Active Transportation Master Plan
BMPs	Best Management Practices
Bureau	Bureau of Environmental Justice
CCTV	Closed-circuit television
CEQ	Council on Environmental Quality
CIP	Capital Improvement Program
Connect SoCal	2020 Regional Transportation Plan/Sustainable Communities Strategy
dBA	A-weight decibels
DHHS	Department of Health and Human Services
e-blasts	Electronic Distribution
EJ	Environmental Justice
EO	Executive Order
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GPS	Global Positioning System
I-15	Interstate 15
k-8	Kindergarten through 8th Grade
LEP	Limited English Proficiency
LSTs	Localized significance threshold
MEP	Mechanical, Electrical and Plumbing
MM	Mitigation measure
MPO	Metropolitan Planning Organization
MSF	Maintenance and Storage Facility
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalent
NEPA	National Environmental Policy Act
ONT	Ontario International Airport
PM	Particulate Matter
PM_{10}	Particulate Matter with diameter of 10 microns or less
$PM_{2.5}$	Particulate Matter with diameter of 2.5 microns or less
ROW	Right-of-Way
RSA	Resource Study Area
RTP	Regional Transportation Plan
RTSs	Regional Thresholds of Significance
SB	Senate Bill

SBCTA	San Bernardino County Transportation Authority
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCRRA	Southern California Regional Rail Authority
SUSMP	Standard Urban Stormwater Mitigation Plan
TAC	Toxic Air Contaminant
TBM	Tunnel Boring Machine
TMP	Transportation Management Plan
U.S.	United States
U.S.C.	United States Code
U.S. HHS	United States Department of Health and Human Services
U.S. DOT	United States Department of Transportation
VMT	Vehicle Miles Traveled

1 INTRODUCTION

San Bernardino County Transportation Authority (SBCTA) is proposing the Ontario International Airport (ONT) Connector Project in the City of Ontario and the City of Rancho Cucamonga. The purpose of this technical report is to describe environmental justice communities, applicable regulations, methodology for the analysis, and potential impacts from construction and operation of the Build Alternative and the No Build Alternative. The information contained in this technical report will be used to support the environmental review process.

1.1 NO BUILD ALTERNATIVE

The No Build Alternative would not result in a new direct electrically powered, on-demand fixed transit guideway connection from the Cucamonga Metrolink Station to ONT. Existing roads, highways, and transit services, such as Omnitrans' limited-service bus route to ONT, known as ONT Connect or Route 380, would be the primary transportation options for access to ONT. Some highway improvements may be undertaken by other agencies as part of separate planned projects, which would take place with either the No Build or Build Alternative associated with this project.

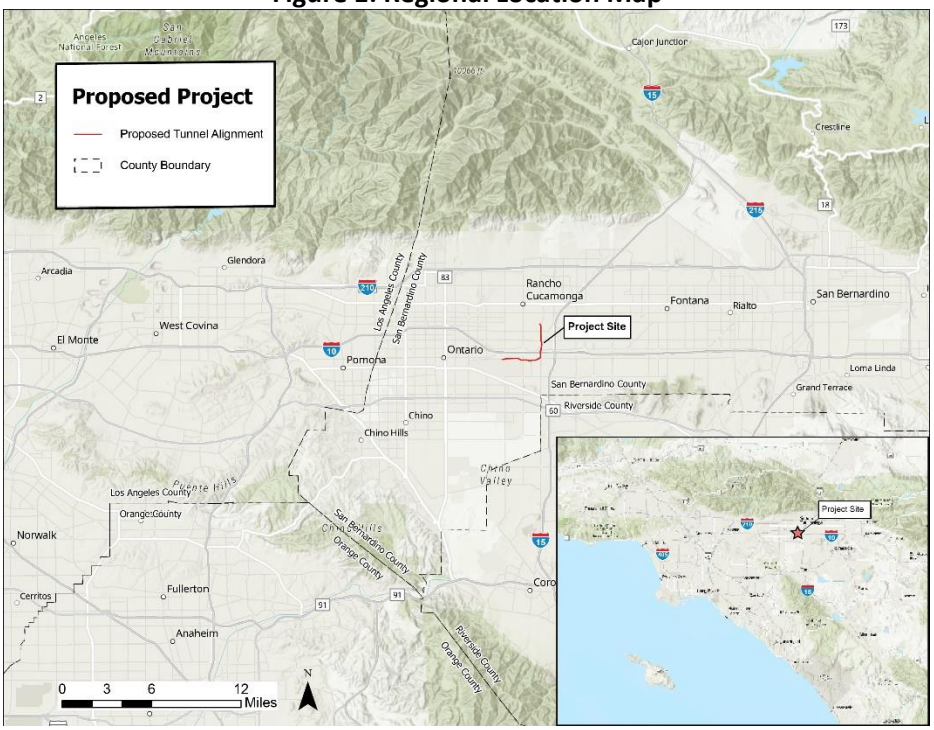
1.2 BUILD ALTERNATIVE

The Build Alternative includes a 4.2-mile tunnel alignment, three passenger stations, a maintenance and storage facility (MSF), and an access and ventilation shaft in the cities of Rancho Cucamonga and Ontario within the County of San Bernardino (see Figure 1). The Build Alternative would include autonomous electric vehicles that would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers.

The Build Alternative would provide a peak one-way passenger throughput of approximately a minimum of 100 per hour. Operations would be managed by Omnitrans, with on-demand service provided daily from 4:00 a.m. to 11:30 p.m., including weekends and holidays.

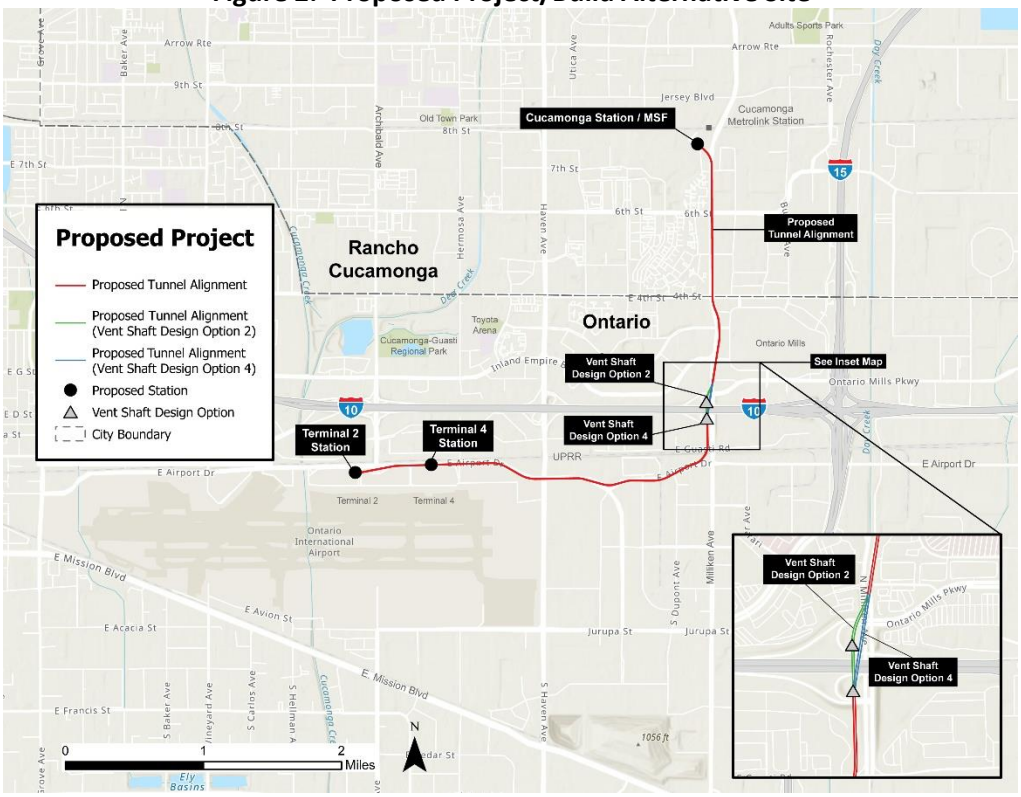
Overall construction of the Build Alternative would last approximately 56 months, with project elements varying in their specific construction duration (see Table 1). Construction is projected to start in 2025 and is anticipated to be completed in 2031. Although no property acquisitions would be required for the Build Alternative, surface and subsurface easements would be needed for the stations and tunnel, with some temporary easements for construction access and staging.

Figure 1: Regional Location Map



Source: AECOM 2024

Figure 2: Proposed Project/Build Alternative Site



Source: AECOM 2024

Table 1: Typical Sequencing of Transit Construction Activities

Activity	Location of Construction Activities	Typical Duration (Total Months)	Description
Utility Relocation	At Grade	7-14	Relocate utilities from temporary and permanent elements related to the construction and/or operation of the Project.
Construction Staging Laydown Yard	At Grade	3-6	Prepare existing lots to store construction equipment and materials, including the Tunnel Boring Machine (TBM), office space.
Roadway	At Grade	6-18	Reconfigure roadway, demolition of existing roadway installation of curb and gutter and other public Right-of-Way (ROW) improvements.
At-grade Guideway	At Grade	6-18	Install asphalt and striping for guideway.
Station Construction (overall)	At Grade	24-48	Install mechanical, electrical, and plumbing (MEP), canopies, faregates, ticketing, finishes, stairs, and walkways.
Parking	At Grade	3-6	Restoring existing parking stalls temporarily unavailable due to construction, as applicable.
MSF	At Grade	8-12	Install MEP, fencing, enclosed bays, specialized washing equipment, and rebar installation, and concrete pours.
Utility Relocation	Underground	7-14	Relocate and hang underground utilities from temporary and permanent elements related to the construction and operation of the Project.
Open Cut and Cut and Cover Construction	Underground	18-24	Supports the construction of the TBM launching and receiving pit, and of the access ramps connecting the tunnel with the at-grade stations. Install soldier piles for beam and lag support of excavation and excavation. Cover excavation with temporary decking.
Bored Tunnel	Underground	16-24	Underground guideway construction.
Ventilation and Emergency Access Shaft	Underground	6-8	Install ventilation and emergency access shaft.
Underground Guideway	Underground	12-18	Install asphalt and striping for guideway.

2 REGULATORY SETTING

Federal agencies must consider environmental justice in their activities under the National Environmental Policy Act (NEPA). In addition, a project must comply with one or more federal regulations concerning Environmental Justice if (1) the project involves land under the jurisdiction of a federal agency, (2) a federal agency has oversight on the project, and/or (3) a permit, a license, authorization, or funding from a federal agency is required to complete the project. The Council on Environmental Quality (CEQ) has oversight of the Federal government's compliance with NEPA, and all Executive Orders (EO) relating to Environmental Justice (CEQ 1997). Because this Project is under the oversight of federal agencies and is federally funded, the following federal regulations applies to this project.

2.1 FEDERAL

2.1.1 Executive Order (EO) 12898

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed on February 11, 1994, calls on federal agencies to identify and address any disproportionately high and adverse human health or environmental effects of federal programs, policies, and activities on minority and low-income populations to the greatest extent practicable and permitted by law. The Order directs federal actions, including transportation projects, to use existing law to avoid discrimination based on race, color, or national origin and to avoid disproportionally high and adverse human health or environmental effects on minority and low-income populations. These are often referred to as environmental justice (EJ) populations. Low income is defined based on the U.S. Department of Health and Human Services (U.S. HHS) poverty guidelines. For 2024, this is $31,200 for a family of four (U.S. HHS 2024).

2.1.2 Executive Order (EO) 14096

Revitalizing Our Nation's Commitment to Environmental Justice for All, or EO 14096, was signed on April 21, 2023. EO 14096 on environmental justice does not rescind EO 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, (described above) but works as a supplement to EO 12898 to support EJ, to build upon EO 12898, EO 14096 provides clear guidance to federal agencies to better engage with the community and execute cumulative impacts analysis for environmental burdens. EO 14096 also establishes an Office of Environmental Justice within the White House Council on Environmental Quality to bolster interagency coordination. The Order maintains the same non-discriminatory framework as EO 12898. Further, EO 14096 is currently implemented through the U.S. Department of Transportation (U.S. DOT) Order 5610.2C. This implementation will continue until further guidance is provided regarding the implementation of the new EO 14096 on environmental justice.

2.1.3 Title VI of the Civil Rights Act of 1964

Title VI of the Civil Rights Act of 1964, United States Code (U.S.C.) 2000d *et seq*., and agency implementing regulations, prohibit recipients of federal financial assistance from taking actions that discriminate on the basis of race, sex, color, national origin, or religion. If an agency is aware that a recipient of federal funds may be taking action that is causing a racially discriminatory impact, the agency should consider using Title VI as a means to prevent or eliminate that discrimination. SBCTA's commitment to upholding the mandates of Title VI is demonstrated by its Title VI notice (SBCTA 2019).

2.1.4 Federal Transit Administration Circular 4703.1

Environmental Justice Policy Guidance for Federal Transportation Administration (FTA) Recipients (Circular), went into effect on August 15, 2012. The purpose of the Circular is to assist FTA funding recipients, such as Omnitrans, in fulfilling the intent of EO 12898. The general environmental justice principles embedded in EO 12898 and the Circular can be summarized as:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- Ensure the full and fair participations by all potentially affected communities in the transportation decision-making process; and
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

2.1.5 U.S. Department of Transportation Order 5610.2C

The U.S. DOT Order 5610.2C updates environmental procedures of U.S. DOT in response to EO 12898. U.S. DOT's Environmental Justice Strategy (USDOT 2021) ensures that no population, duet to policy or economic disempowerment, is forced to bear a disproportionate burden of the negative human health and environmental impacts, including social and economic effects, resulting from transportation decision, programs, and policies made, implemented and enforces at the Federal, State, local or tribal level.

2.2 STATE

2.2.1 Senate Bill (SB) 1000

In order to help protect community health and well-being, on February 22, 2018, Attorney General Becerra established the Bureau of Environmental Justice (Bureau) and, on April 28, 2021, Attorney General Bonta announced the expansion of the Bureau. Today, the Bureau is composed of twelve attorneys who are solely focused on fighting environmental injustices throughout the State of California and giving a voice to frontline communities who are all too often under-resourced and overburdened.

2.2.2 California Government Code Section 11135

No person in the State of California shall, on the basis of sex, race, color, religion, ancestry, national origin, ethnic group identification, age, mental disability, physical disability, medical condition, genetic information, marital status, or sexual orientation, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state.

2.3 REGIONAL AND LOCAL

2.3.1 Southern California Association of Government 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Government (SCAG)'s 2020 Regional Transportation Plan (RTP) /Sustainable Communities Strategy (SCS) (Connect SoCal) is designed to create region-wide benefits that are distributed equitably, while ensuring that any one group does not carry the burdens of development disproportionately. Connect SoCal needs to consider the consequences of transportation projects on low-income and minority communities, and avoids, minimizes, or mitigates disproportionately high and adverse human health and environmental impacts on low-income and minority populations (also referred to as EJ communities). As a Metropolitan Planning Organization (MPO) that receives federal funding, SCAG is required to conduct an EJ analysis for Connect SoCal. The Connect SoCal EJ Technical Report would address the potential impacts of the Plan on low-income and minority populations and would also examine historical trends related to EJ throughout the region.

2.3.2 City of Rancho Cucamonga General Plan, *Plan RC 2040*

The City of Rancho Cucamonga General Plan, *Plan RC 2040 – Volume 4* (2021) details the City's Environmental Justice Strategy, which considers environmental justice issues in every aspect of design for the City's future. The following *PlanRC 2040* goals and polices directly supporting and furthering environmental justice relevant to the purpose and need of the Build Alternative are as follows:

Goal LC-1: A City of Places. A beautiful city with a diversity and balance of unique and well-connected places

- **LC-1.6: Disadvantaged Communities.** Prioritize development appropriate to the needs of disadvantaged communities, particularly south of Foothill Boulevard.

Goal LC-2: Human Scaled. A city planned and designed for people fostering social and economic interaction, an active and vital public realm, and high levels of public safety and comfort.

- **LC-2.3: Streetscape.** Enhance the pedestrian experience through streetscape improvements such as enhanced street lighting, street trees and easement dedications to increase the

widths of the sidewalks, provide side access parking lanes, and other pedestrian and access amenities.

- **LC-2.4: Tree Planting**. Require the planning of predominately native and drought-tolerant trees that shade the sidewalks, buffer pedestrians from traffic, define the public spaces of streets, and moderate high temperatures and wind speeds throughout the city.

Goal LC-5: Connected Corridors. A citywide network of transportation and open space corridors that provides a high level of connectivity for pedestrians, bicyclists, equestrians, motorists, and transit users.

Goal MA-1: Regional Mobility Hub. A multimodal transportation hub that connects regional and local destination.

Goal MA-2: Access for all. A safe, efficient, accessible, and equitable transportation system the serves the mobility needs of all users.

Goal MA-3: Safety. A transportation network that adapts to changing mobility needs while preserving sustainable community values.

Goal MA-5: Sustainable Transportation. A transportation network that adapts to changing mobility needs.

- **MA-5.1: Land Use Supporting Reduced Vehicle Miles Traveled (VMT).** Work to reduce VMT through land use planning, transit access, localized attractions and access to non-automotive modes.

Goal RC-5: Local Air Quality. Healthy air quality for all residents.

- **RC-5.1: Pollutant Sources.** Minimize increased of new air pollutant emissions in the city and encourage the use of advance control techniques and clean manufacturing techniques.
- **RC-5.3: Barriers and Buffers.** Require design features such as site and building orientation, trees or other landscaped barriers, ventilation and filtration, construction, and operational practices to reduce air quality impacts during construction and operation of large stationary and mobile sources.
- **RC-5.5: Impacts to Air Quality**. Ensure new development does not disproportionately burden residents, due to age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, with health effect for air pollution. Prioritize resource allocation, investments, and decision making that improves air quality for residents disproportionately burdened by air pollution because of historical land use planning decisions and overarching institutional and structural inequities.

- **RC-5.10: Clean and Green Industry.** Prioritize non-polluting industries and companies using zero or low air pollution technologies.
- **RC-5.11: Dust and Odor.** Require new construction to include measures to minimize dust and odor during construction and operation.

Goal RC-6: Climate Change. A resilient community that reduces its contribution to a changing climate and is prepared for the health and safety risk of climate change.

- **RC-6.2: Renewable Energy.** Encourage renewable energy installations and facilitate green technology and business.
- **RC-6.3: Reduce Energy Consumption.** Encourage a reduction in community-wide energy consumption.
- **RC-6.6: Co-Benefits.** Prioritize the development and implementation of Greenhouse Gas (GHG) reduction measures that also achieve economic, health, social, environmental, and other co-benefits for the City and its residents and businesses.
- **RC-6.9: Access**. Require pedestrian, vehicle, and transit connectivity of streets, trails, and sidewalks, as well as between complementary adjacent land uses.

Goal RC-7: Energy. An energy efficient community that relies primarily on renewable energy and non-polluting energy sources.

2.3.3 City of Ontario The Ontario Plan 2050

The Ontario Plan 2050 (2022a) describes the City's direction for community development over the next two or decade by integrating policy into a framework focused on current and future development yet provides lasting policies to accommodate change. The Ontario Plan consists of six components with The Policy Plan serving as the City's General Plan, the long-term policy document, describing the goals, principles, and policies for achieving the City of Ontario's future vision. The City address environmental justice throughout multiple elements of the Policy Plan to ensure environmental justices is presented alongside the multitude of issues and topics that affect their residents and resources. The City of Ontario has opted for an "environmental justice in all policies" approach to ensure the topic is present alongside the multitude of issues and topics that affect our residents and resources:

- Quality design of the physical environment includes vigilant stewardship of the City of Ontario's environmental resources.
- Efficient backbone infrastructure systems should be multifunctional, strategically sited, sustainably designed, and integrated into the urban fabric.

- Commitment to the development and maintenance of our environmental infrastructure ensures community prosperity.
- Environmental infrastructure is a critical public investment.
- Every resident of Ontario should have the opportunity to live in a community that is healthy and safe.
- High-quality environmental resources are integral building blocks of the community.
- Ecosystems improve public health and contribute significantly to the City of Ontario's overall economic vitality.
- In order to protect our environmental resources, we must make wise decisions regarding the use of these resources.
- Protecting environmental resources is the responsibility of individuals, communities, the region, and the world.

2.3.4 City of Ontario The Policy Plan Environmental Resources Element

The Vision and Principles throughout the Policy Plan reinforce the City of Ontario's commitment to enabling all persons to enjoy equal access to healthy environments, healthy foods, parks and recreational facilities, and civic engagement opportunities. The Environmental Resources Element (City of Ontario 2022c) includes a number of policies that addresses the topic of environmental justice and provides a map (City of Ontario 2022d) illustrating environmental justice areas within the City. The following polices directly supporting environmental justice relevant to the purpose and need of the Build Alternative are as follows:

M-3.1: We maintain a proactive working partnership with transit providers to ensure that adequate public transit service is available, cost-efficient, and convenient, particularly for residents in environmental justice areas.

M-1.4: We work to provide a complete, balanced, context-aware, multimodal transportation network that meets the needs of all users of streets, roads, and highways, including motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation. We prioritize implementation of complete streets improvements in environmental justice areas to facilitate opportunities for residents to use active transportation systems.

LU-2.2: We require new uses to provide mitigation or buffers between existing uses where potential adverse impacts could occur. Additional mitigation is required when new uses could negatively impact environmental justice areas.

LU-2.10: We monitor and share information with the community about stationary and non-stationary emission sources. We encourage siting and design of facilities to minimize health and safety risks on existing and proposed sensitive uses, especially in environmental justice areas.

2.3.5 City of Ontario The Policy Plan Appendix A: Implementation Actions Related to Environmental Justice and Climate Adaptation and Resiliency.

In August 2022, in accordance with state law, specifically SB 1000, the City adopted *Appendix A: Implementation Actions Related to Environmental Justice and Climate Adaptation and Resiliency* (2022b) which reflects new activities the City should conduct related to the topics of environmental justice. The following actions outlined in Appendix A that directly support and further environmental justice relevant to the purpose and need of the Build Alternative are as follows:

LU-2.1: Development Standards. Review existing development and design standards and update as necessary to provide appropriate mitigation or buffers between existing uses, with a focus on additional buffering when new uses could negatively impact environmental justice areas.

ER-4.5: Trucks and cargo handling equipment. Evaluate and implement strategies to reduce emissions associated with truck idling and cargo handling equipment near areas with existing and planned sensitive receptors, with a priority placed on facilities that have not yet finalized building permits and for those facilities in or adjacent to environmental justice areas.

S-4.1: Vibration studies. Update development regulations to require vibration-sensitive uses in areas within 200 feet of rail to evaluate for indoor vibration levels and mitigate any exceedance of the Federal Transit Administration vibration-annoyance criteria.

M-2.1: Priority Improvements. Refine the City's Capital Improvement Program (CIP) and implementation recommendations of the Active Transportation Master Plan (ATMP) to elevate the priority of improvements proposed in (or serving) environmental justice areas. Continue to identify additional improvements that should be added to complete networks, remove barriers, and create buffers for pedestrians and bicyclists along truck routes, with priority given to those in environmental justice areas.

M-3.1: Expand Transit Service. Coordinate with Omnitrans and Metrolink to implement and update the agencies' strategic plans and long-range transportation plans to prioritize improvements in and expansion of service in Ontario's environmental justice areas.

3 METHODOLOGY

EJ ensures that minority and low-income populations participate in the planning and decision making for transportation investment. Regional, State, and local agencies have adopted EJ principles into their goals, plans and policies to ensure that their concerns and needs are incorporated into plans and policies with the objective that the resulting system can better serve all of its users.

This analysis identifies potential effects on minority and low-income populations that reside in the communities associated with a project and determines whether these effects are disproportionate in comparison to the effects on the surrounding community. Impacts and benefits of transportation projects result from the physical placement of transportation-related infrastructure and facilities and also from their ability to improve or impede access to neighborhoods. Per NEPA requirements, public agencies are obligated to disclose any adverse effects of transportation plans, programs, and projects that fall disproportionately on low-income and minority communities. They must examine alternatives that could eliminate or reduce the severity of such effects and to ensure that minority and low-income communities receive an equitable distribution of the benefits of transportation investments.

3.1 METHODS FOR IDENTIFYING MINORITY AND LOW-INCOME POPULATIONS

The Federal Highway Administration (FHWA) (2015) and USDOT (2021) EJ Orders define minority populations as:

- Black or African American
- American Indian and Alaskan Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Hispanic or Latino

To assess whether the project could lead to disproportionately high and adverse effect on an EJ population, demographic characteristics within and adjacent to the project area were reviewed. The analysis of EJ impacts utilizes data from the American Community Survey (ACS) (United States [U.S.] Census Bureau 2022) for project area census block groups for estimates for race, ethnicity, and poverty levels. Census block groups are the smallest geographic areas of census data and are useful for small-area studies and provide more tailored demographic information. Based on FHWA (2015), USDOT (2021), and Environmental Protection Agency (EPA) (2016) guidance EJ populations should be identified (a) where either the minority population of the affected area exceeds 50 percent or (b) the minority population percentage in the affected area is less than 50 percent but “meaningfully greater” than the percentage of the next larger geographical unit of analysis. For this analysis, the next larger geographical units are the City of Ontario, the City of Rancho Cucamonga, and then San Bernardino County. The cities and county provide a comparison between the proposed Project area and the larger local and regional area. Data was

collected from the U.S. Census Bureau for minority populations located within block groups that are within a half-mile of the Build Alternative footprint (ACS 2022 5-Year Estimate).

Low-income populations are defined as any individual or household with income at or below the current federal poverty level established by the U.S. Department of Health and Human Services (DHHS) guidelines. The DHHS guidelines use household size and correlated income to determine poverty status as shown in **Error! Reference source not found.**. As suggested by Circular 4703.1, all households whose median household income is at or below 150 percent of the poverty-level guidelines were considered low-income. No numerical threshold has been established by FTA for defining a low-income community, but this study follows convention applied in other planning contexts in which 15 percent or greater above a larger geographical baseline, such as a countywide service area, may be used to satisfy what is intended by the term a "meaningful greater" percentage.

Table 2: 2024 Poverty Guidelines per Household

Persons in Family/Household	Poverty Guideline
1	$15,060
2	$20,440
3	$25,820
4	$31,200
5	$36,580
6	$41,960
7	$47,370
8	$52,720

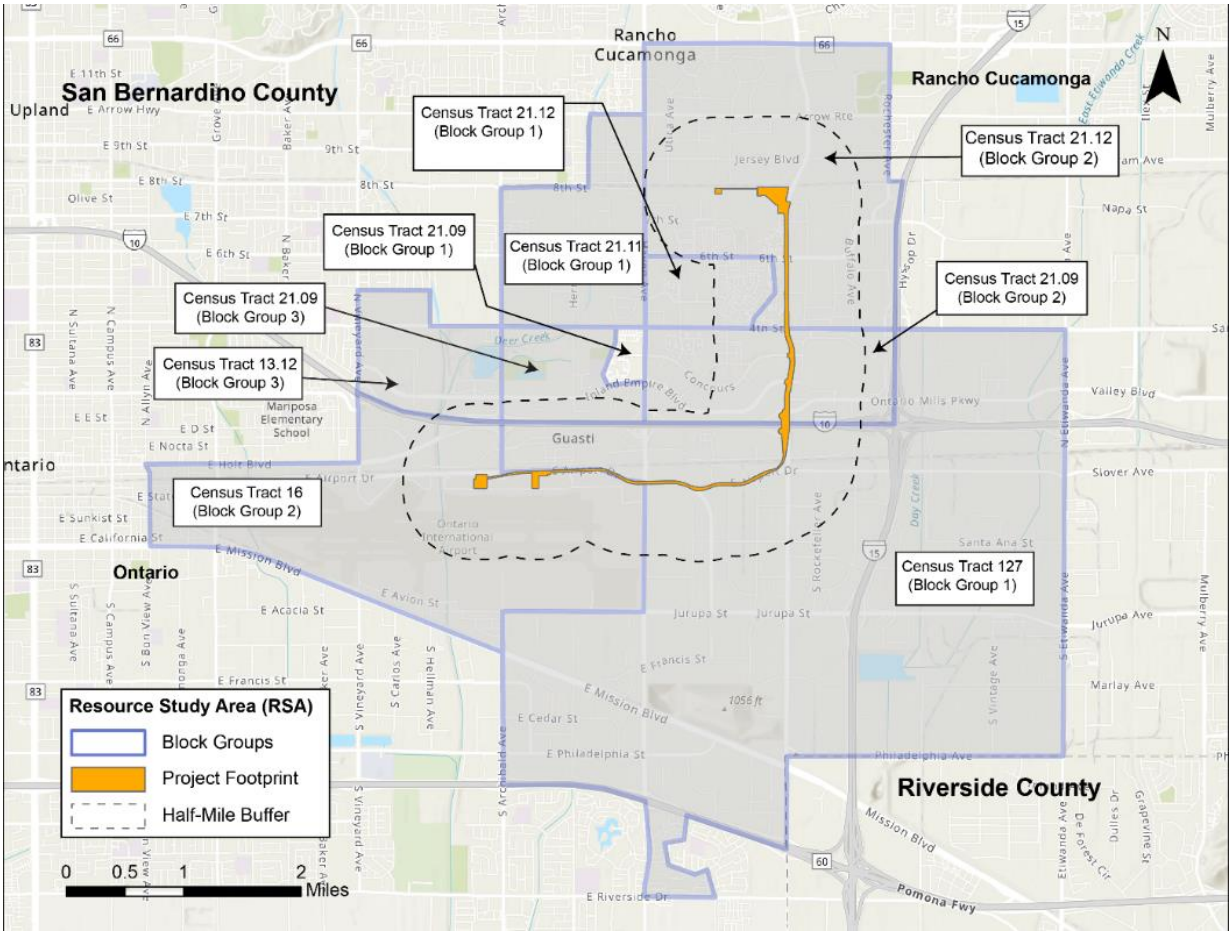
Note: The 2024 HHS Poverty Guidelines only reflect price changes through calendar year 2023; accordingly, they are most closely equal to the Census Bureau American Community Survey 5-Year Estimate (2017-2022).
Source: DHHS 2024

Accordingly, as 15 percent of households in San Bernardino County fall within the poverty level, if the low-income population percentage in a study area census track or block group equaled or exceeded the county threshold, then that community was considered low-income for purposes of this analysis. Data collected from the U.S. Census Bureau for low-income populations includes income levels based on the DHHS Poverty Guidelines.

3.2 RESOURCE STUDY AREA

The resource study area (RSA) for environmental justice comprises the community surrounding the proposed Project Area in which secondary or indirect community impacts could occur. The RSA used to identify minority and low-income populations includes the entire census block groups located within 0.5 mile of the Build Alternative footprint, as shown in Figure 3.

Figure 3: Resource Study Area



3.3 EVALUATION OF IMPACTS UNDER NEPA

The location of Build Alternative elements was evaluated in terms of their potential to disrupt or divide an existing EJ community and the need for easements on parcels in an EJ community. The analysis of impacts on EJ populations considered impacts on other resources that could affect individuals or communities to determine whether the effects experienced by EJ populations would be appreciably more severe or greater in magnitude (i.e., disproportionate) than the effects on non-EJ populations. The implementation of mitigation measures to alleviate potential impacts was considered in assessing the overall impacts on EJ populations.

3.4 PUBLIC OUTREACH

Access to the decision-making process is a fundamental principle of environmental justice. Community outreach and participation have been integrated into the project development process from the outset,

including the alternatives development, extensive public and agency stakeholder involvement, and public scoping.

SBCTA issued a Notice of Preparation of an Environmental Impact Report and Notice of Public Meeting on July 5, 2022 (SBCTA 2022b). The public was invited to review information about the Build Alternative and submit questions and comments during a 30-day scoping period concluding on August 5, 2022. A virtual public meeting was held on July 20, 2022. In addition, SBCTA conducted public outreach activities throughout the Build Alternative corridor in July 2022 to explain the purpose and objectives of the Build Alternative and to provide a range of opportunities to answer questions and collect comments from the public regarding the environmental analysis and Build Alternative. To maximize public awareness, a variety of noticing methods were implemented in advance of the Public Scoping Meetings, which are provided in Appendix B of the Scoping Summary Report. These included mailing bilingual notices, electronic distribution (e-blasts), social media posts @goSBCTA Facebook, Instagram and Twitter accounts, and newspapers advertisements. All forms of noticing provided meeting details (date, time, zoom link, and in-language services) as well as contact information for accessing additional Build Alternative information. Additionally, each notice included details on the public comment period deadline and comment submittal instructions.

A total of 3,057 postcards were produced in English and Spanish and distributed to property owners, business owners, and non-owner-occupied residents located within one mile from the proposed alignment and from each proposed station. The Build Alternative's website (https://www.gosbcta.com/project/ontloop-rail-to-air-tunnel-connection/) also included meeting information, including the dates and times of the meeting and links to project materials.

Public comments received during the public scoping for the proposed Project included concerns about air quality, and water quality, particularly groundwater; traffic circulation and parking for surrounding residents and businesses; potential alternative modes of transportation particularly with increased ridership; and safety and security design features during operations, including compliance with the ADA (Scoping Report, 2022). Some of these environmental issues can be disproportionately borne by environmental justice communities, and need to be evaluated with that perspective. All of the communities (Census Tracts) in the Study Area are considered environmental justice communities because they have census block groups with more than 50 percent of the population identifying as minorities.

The analysis of these topics in context of the proposed Project, and their potential impacts on EJ populations is presented in Section 5, Impact Evaluation. Once the draft environmental document is available for public review, the public will have the opportunity to attend public information meetings and provide additional comments, which will then be considered as part of the environmental process for the proposed Project.

Geofencing is the act of creating a virtual boundary around a geographic area that can be paired with a software application to trigger various pre-programmed actions using global positioning system (GPS),

Wi-Fi, or cellular data. A geofence boundary created for this Build Alternative allowed SBCTA to reach people with a targeted ad through smartphones in real-time locations within a defined geographical boundary. SBCTA targeted a one-mile radius surrounding the length of the project corridor with geofencing ads. This method helped reach motorists that may live outside the Build Alternative area but who may work, commute, or visit the corridor using geographic targeting.

Additionally, information about the scoping meeting was advertised on digital screens at the following three Metrolink Stations: Montclair, Cucamonga, and San Bernardino. This method helped reach transit patrons that may live outside the Build Alternative area but who may work, commute, or visit the corridor.

3.4.1 Title VI, Environmental Justice, and Limited English Proficiency

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this Build Alternative. During the Public Scoping process, Title IV, Environmental Justice and Limited English Proficiency (LEP) accommodations were made in order to expand access for participants during the Public Scoping process. Scoping notices were developed and distributed through several different methods including mail delivery, email, social media, and an electronic display banner that was displayed along the Build Alternative footprint and visible to all motorists. Materials were developed in both English and Spanish and translation request forms were made available during the virtual Public Scoping Meeting to ensure all language needs were met. Additionally, Scoping Meeting notices included the SBCTA's LEP phone number, which gives stakeholders the ability to make SBCTA aware of any language or Americans With Disabilities Act (ADA) accommodations required for attendance. No specific requests were made for language accommodations; however, a Spanish-language interpreter with simultaneous interpretation equipment was present at the meeting.

In accordance with SBCTA's Public Participation Plan, targeted community outreach efforts were completed in the cities of Rancho Cucamonga and Ontario within the Build Alternative footprint to ensure participation of LEP and EJ communities.

4 EXISTING CONDITIONS

Communities in the proposed Project area are ethnically diverse and predominantly family communities. Community values center on quality of life, health, equity, sense of identity, connectivity and accessibility to goods, services, jobs, affordable housing and amenities needed to have quality of life. The RSA includes census block groups within the cities of Ontario and Rancho Cucamonga. The land use in and around the proposed Project area is mostly urban in character with large-scale industrial, manufacturing, transportation, surface parking, office, commercial, multi-family residential, hotel, and airport-related land uses. While facilities potentially used for congregation, such as the Cucamonga-Guasti Regional Park, Toyota Arena, and Ontario Mills Mall lay within the RSA, they are outside of the 0.5mile buffer around the Build Alternative footprint. Additionally, the San Secondo d'Asti Catholic Church and the Cucamonga Christian Fellowship are located with 0.1 mile of the project footprint. There are no hospitals registered on the California Department of Public Health facility database within the 0.5-mile buffer around the Build Alternative footprint, and the closest Kindred hospital, which provides long-term acute care, is located 0.76 mile north of the Project area. The Project area is served by Cucamonga School District and Ontario-Montclair School District for kindergarten through eighth grade (K-8), with the closest school to the Project area being the Ontario Center School.

4.1 MINORITY POPULATIONS

As shown in **Error! Reference source not found.** and Figure 4, most of the study area is composed of minority residents, as define by FHWA and USDOT, as discussed in Section 3.1 above. Within the Cities of Ontario, and Rancho Cucamonga, approximately 55% and 35% respectively, of the population speaks another language at home (U.S. Census ACS 5-year estimates 2018-2022). As shown in Table 3 below, Each of the Census tracts in the Build Alternative corridor has more than 50 percent minority population; therefore, they are considered EJ communities by the federal definition. The distribution of minority populations within the corridor is generally consistent across the RSA, and with the County, but significantly higher compared to the Cities of Rancho Cucamonga and Ontario. In general, the highest concentrations of minority residents are in the western portions of the study area, with clusters of multi-family residents located along Milliken Avenue. Community facilities such as parks, schools, places of worship, and hospitals are not present in the RSA, and land uses are primarily commercial and industrial.

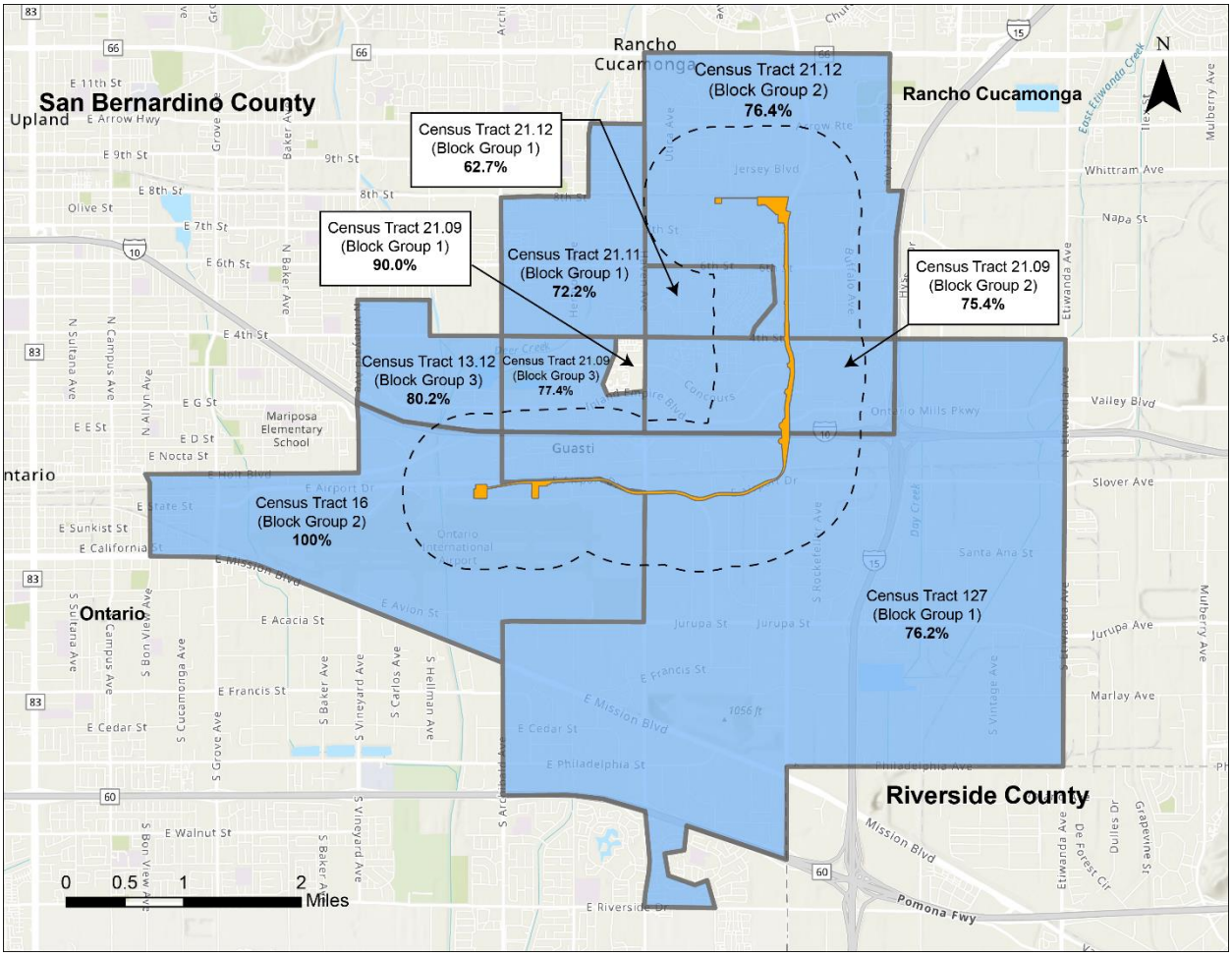
Table 3: Minority Populations

Geographic Area	Total Population	Minority Population	Percent Minority (%)
Census Tract 16 (Block Group 2)	102	102	100%
Census Tract 127 (Block Group 1)	2,282	1,738	76.2%
Census Tract 13.12 (Block Group 3)	2,347	1,910	80.2%
Census Tract 21.09 (Block Group 3)	3,933	3,060	77.4%

Geographic Area	Total Population	Minority Population	Percent Minority (%)
Census Tract 21.09 (Block Group 2)	1,258	948	75.4%
Census Tract 21.11 (Block Group 1)	990	715	72.2%
Census Tract 21.12 (Block Group 1)	1,319	827	62.7%
Census Tract 21.12 (Block Group 2)	2,435	1861	76.4%
City of Rancho Cucamonga	178,060	73,007	41.0%
City of Ontario	178,194	74,538	41.8%
San Bernardino County	2,162,532	1,629,283	75.3%

Source: ACS 2018-2022 5-Year Estimate

Figure 4: Minority Population within a Half-Mile of the Build Alternative Footprint



Source: ACS 2018-2022 5-Year Estimate

4.2 LOW-INCOME POPULATIONS

As shown in Table and 5 below, of the eight census tracts located within a half-mile of the Build Alternative footprint, only one (Census Tract 21.09, Block Group 2, located within the City of Rancho Cucamonga) includes 15 percent or greater of low-income households and is considered an EJ community with regard to income level, as defined by federal guidance described in Section 3.1. All other census tracts have household incomes greater than the county average and are not considered potential environmental justice communities with regards to low-income populations. However, because all of the census tracts are considered minority populations, all census tracts in the study area are evaluated as potential environmental justice communities. Census Tract 21.09, Block Group 2 is bounded by 4th Avenue on the north, the I-10 freeway on the south, the Interstate (I-15) freeway on the east, and Haven Avenue on the west, an approximately 1-square mile area. This area is dominated by commercial and industrial land uses and includes the Ontario Mills shopping center, and the Toyota Arena, and a variety of big box retail stores, and numerous restaurants. The residential area is comprised of numerous multi-family complexes

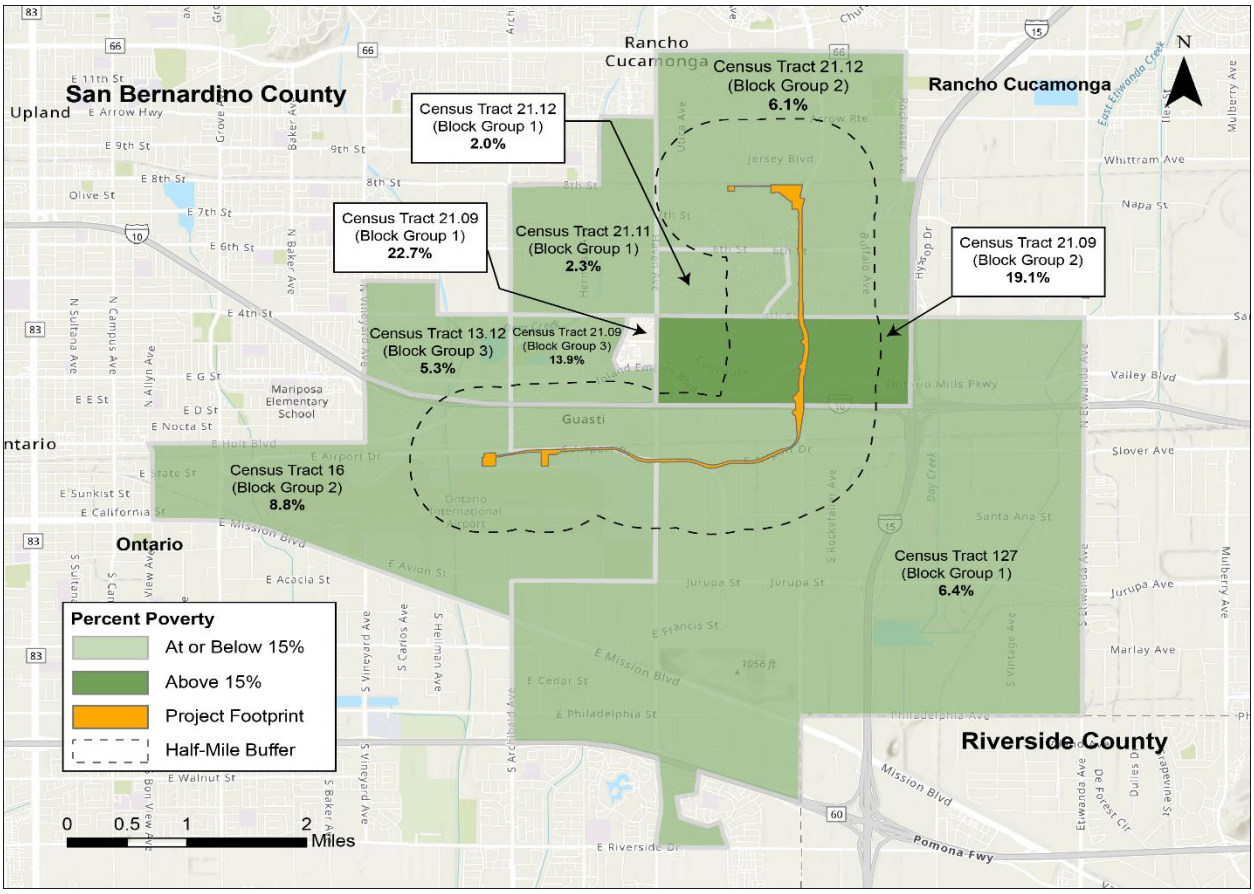
concentrated at the southeast intersection of 4th Street and Haven Avenue. OmniTrans bus stops are located along 4th Street and Haven Avenue in this area. All other census tracts have household incomes greater than the county average and are not considered EJ communities with regard to income.

Table 4: Low-Income Populations

Geographic Area	Total Population	Low-Income Population	Percent of Poverty Level (%)
Census Tract 16 (Block Group 2)	102	9	8.8%
Census Tract 127 (Block Group 1)	2,282	147	6.4%
Census Tract 13.12 (Block Group 3)	2,347	125	5.3%
Census Tract 21.09 (Block Group 3)	3,933	545	13.9%
Census Tract 21.09 (Block Group 2)	1,258	240	19.1%
Census Tract 21.11 (Block Group 1)	990	23	2.3%
Census Tract 21.12 (Block Group 1)	1,319	26	2.0%
Census Tract 21.12 (Block Group 2)	2,435	149	6.1%
City of Rancho Cucamonga	178,060	12,108	6.8%
City of Ontario	178,194	23,700	13.3%
San Bernardino County	2,107,058	315,656	15.0%

Source: ACS 2018-2022 5-Year Estimate

Figure 5: Low-Income Population within a Half-Mile of the Build Alternative Footprint



Source: ACS 2018-2022 5-Year Estimate

5 IMPACT EVALUATION

5.1 NO BUILD ALTERNATIVE

The No Build Alternative would not address the transportation deficiencies experienced by the RSA and persons traveling within the RSA due to the lack of a direct connection between the Cucamonga Metrolink Station and ONT. The No Build Alternative would not provide congestion relief nor access to an affordable transit connection for EJ populations. Further, the No Build Alternative would not increase mobility, connectivity, and access for EJ transit riders. The No Build Alternative will not accommodate future employment growth in the region, impacting EJ populations by limiting employment options. Additionally, the No Build Alternative will not contribute to improving local and regional air quality and GHG emissions. Therefore, the No Build Alternative would result in a direct disproportionate adverse effect to EJ populations since the direct connection deficiency would be experienced by all persons traveling within the RSA between the Cucamonga Metrolink Station and ONT.

5.2 BUILD ALTERNATIVE

As all eight of the affected the census blocks within the RSA are considered environmental justice communities, the *Environmental Justice Technical Report* determined that construction and operation of the Build Alternative would not result in disproportionately high and/or adverse impacts to EJ populations. While the effects of the Build Alternative would be predominantly borne by the environmental justice communities due to their proximity to the proposed Project, the construction activities could not occur elsewhere within the proposed Project area. Further, construction activities would provide jobs that may benefit the local economy of the RSA, including environmental justice communities. Once operational, the Build Alternative would provide a net benefit to EJ communities in the study area as well regionally. These benefits include improved transit service, transit access, and regional mobility. Further long-term benefits to EJ communities include improvements in travel time and travel cost savings, while providing a direction between a transit hub and a major regional employment center. Operation of the Build Alternative would result in beneficial effects to local and regional air quality and a reduction in GHG emissions by providing a direction connection between transit and employment thereby reducing vehicle congestion and incorporating zero-emission vehicles. Once operational, the Build Alternative would not result in the use or discharge of unregulated hazardous materials, nor create a significant hazard through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials. Noise from operation of the Build Alternative would not generate excessive ground-borne vibration levels, nor increase noise levels about current levels experienced by EJ communities.

There are no acquisitions associated with the Build Alternative, and no properties serving as community facilities or providing community services would be affected by the Build Alternative, and no businesses or residences would be affected. Temporary construction effects would be predominantly borne by

environmental justice populations, but adverse construction-related effects would not be concentrated in one environmental justice community.

Construction of the Build Alternative would not result in adverse effects to EJ communities related to air quality, GHG emissions, hazards, noise, vibration, safety and security, or transportation and traffic with implementation of the avoidance, minimization and mitigation measures. These measures and standard construction Best Management Practices (BMPs), and local construction and building codes would reduce effects associated with construction activities. Therefore, construction of the Build Alternative would not have disproportionately high and adverse effect on EJ communities.

Once operational, the Build Alternative would provide a net benefit to environmental justice communities in the RSA. These benefits include improved transit service, transit access, and regional mobility. Additional long-term benefits to the environmental justice communities in proximity to the Proposed Project include improvements in travel time and travel cost savings by providing a direct connection between a transit hub and a major regional airport, which also serves as an employment center. Additionally, operation of the Build Alternative would result in beneficial effects to the local and regional air quality and reduction in GHG emissions by providing a direction connection between transit stations and an employment center. thereby reducing vehicle congestion and incorporating zero-emission vehicles. Once operational, the Build Alternative would not result in the use or discharge of unregulated hazardous materials, nor create a substantial hazard through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials. Noise from operation of the Build Alternative would not generate excessive ground-borne vibration levels, nor increase noise levels currently experienced by environmental justice communities. Therefore, operation of the Build Alternative would not have a disproportionately high and adverse effect on environmental justice communities.

Construction Impacts

Construction-period emissions would not have adverse air quality effects; therefore, effects are not warranted for a hot spot analysis and not considered adverse for non-environmental justice and environmental justice communities. During tunnel excavation and construction, the primary source emissions would be from diesel Particulate Matter (PM) emissions from the temporary operation of construction equipment, where a TBM would be used to construct the 4.2-mile tunnel 70 feet below ground surface, and transportation construction-related waste, which would require an anticipated over 200 haul truck trips daily. Overall PM emissions are below regional thresholds of significance and localized significance thresholds. Construction equipment, in most cases, is mobile and will move around each construction site throughout the day and over the course of the construction period with less cumulative effects at any one receptor location as compared to stationary sources. In addition, equipment would not be operating during all hours of the day or even during every day of the construction period, and therefore substantial pollutant concentrations specific sensitive receptors would be unlikely.

Construction equipment, in most cases, is mobile and will move around each construction site throughout the day and over the course of the construction period with less cumulative effects at any one receptor location as compared to stationary sources. In addition, equipment would not be operating during all hours of the day or even during every day of the construction period, and therefore substantial pollutant concentrations at specific sensitive receptors would be unlikely. Sensitive receptors within the RSA are commercial properties within 0.01 mile to 0.09 mile of all four construction locations (MSF, stations and Vent Shaft Design Option), an apartment community within 0.23 mile of the Cucamonga Metrolink Station site, a restaurant within 0.07 mile northwest of Vent Shaft Design Option 2, a restaurant within 0.11 mile southwest of Vent Shaft Design Option 4, airport terminals within 0.7 mile of the proposed Ontario Airport T2 Station and airport terminals within 0.11 mile of the proposed ONT T4 Station. Due to the temporary and mobile nature of the main source of Toxic Air Contaminant (TAC) emissions, it is expected that the Build Alternative would not result in substantial TAC pollutant concentrations at sensitive receptors. However, given the temporary and mobile nature of insignificant emissions compared to Regional Thresholds of Significance (RTSs) and Localized significance threshold (LSTs), no substantial pollutant concentration exposure to sensitive receptors would occur.

The maximum construction daily emissions evaluated above would not exceed any applicable South Coast Air Quality Management District (SCAQMD) RTs on a regional level or LSTs per construction site for each criteria pollutant. Therefore, the Build Alternative would not have adverse air quality effects during construction. Although Build Alternative would not violate air quality standards, construction of the Build Alternative would include Nitrogen Oxide (NO_X), (Volatile Organic Compounds (VOCs), Particulate Matter with diameter of 10 microns or less (PM_{10}), and Particulate Matter with diameter of 2.5 microns or less ($PM_{2.5}$), and development of the cumulative projects, in combination with the Build Alternative, exceed the same significant thresholds. Therefore, the Build Alternative's contribution would be cumulative considerable, and would have a substantial cumulative effect. MM-AQ-1 would be implemented during construction to reduce potential effects for PM_{10} and $PM_{2.5}$ fugitive emissions and implement dust control measures.

The Build Alternative would not expose sensitive receptors to substantial localized pollutant concentrations, as construction activities would occur at various sites along the alignment and would not be concentrated at any given location. As described above, most construction equipment, including haul trucks required for transporting excavated material, will primarily be mobile and would result in less cumulative effects at any one receptor location than compared to stationary sources. Furthermore, emissions resulting from worker vehicle and haul trips would not be localized at any given location. Temporary construction-related adverse effects would not occur in EJ communities.

Construction of Vent Shaft Design Option 2, Vent Shaft Design Option 4 and MSF would not result in adverse air quality effects. The maximum daily construction emissions of Vent Shaft Design Option 2 would not exceed any applicable SCAQMD RTSs on a regional level or LSTs for criteria pollutants. As with the overall Build Alternative, construction of Vent Shaft Design Option 2 would not violate air quality

standards or result in a cumulatively considerable net increase in NOx, PM_{10}, and $PM_{2.5}$. Implementation of MM-AQ-1 would reduce potential fugitive dust emissions. With implementation of MM-AQ-1, and in consideration of offsetting benefits, the Build Alternative would not have disproportionately high and adverse effects on the environmental justice communities in the RSA.

As the entire project alignment is within EJ communities, construction of the Build Alternative, including Vent Shaft Design Option 2, Vent Shaft Design Option 4, the MSF, and terminals would result in temporary effects to EJ communities, as described above. Implementation of MM-TRA-1, and MM-AQ-1 would reduce temporary construction effects related to land use, traffic delays and detours and air quality to EJ communities. In addition, standard construction BMPs and local construction and building codes would reduce effects association with construction activities such as noise, vibration, and aesthetics. The Build Alternative would not have disproportionately high and adverse effects on the environmental justice communities in the RSA.

During construction of the Build Alternative, including Vent Shaft Design Option 2, Vent Shaft Design Option 4, the MSF, and the terminals, implementation of MM-GEO-1 would ensure that the effects related to seismic-related ground failure, thus exposing people or structure to seismic ground-shaking during construction, would result in no adverse effect by following the requirements of the California Building Code. The possibility for landslides to occur at the Build Alternative site is considered remote. The Build Alternative site is not in a designated seismic hazard zone for seismic slope instability as defined by either the state or county. Consequently, there is minimal potential for landslides to occur in the Build Alternative area. However, construction of the Build Alternative may require temporary slopes which could be vulnerable to seismic shaking. Implementation of MM-GEO-2 would reduce the effects of landslides and/or slope instability during construction.

Soils at the Build Alternative site have a low to moderate susceptibility to erosion. However, these soils would be susceptible to erosion during construction activities, such as excavation. As part of the City of Rancho Cucamonga and the City of Ontario permitting process, a site-specific Standard Urban Stormwater Mitigation Plan (SUSMP), part of the National Pollutant Discharge Elimination System (NPDES) Municipal General Permit, would be prepared for the Build Alternative. All development activities associated with the Build Alternative would comply with the site-specific SUSMP.

Adherence to the City of Rancho Cucamonga and the City of Ontario's codes and policies and implementation of MM-GEO-3 through MM-GEO-6 would reduce the potential effects associated with the exposure of people or structures to hazards associated with unstable geologic units or soils, and expansive soils during construction of the Build Alternative.

With implementation of MM-GEO-1 through MM-GEO-6, the Build Alternative would not have disproportionately high and adverse effects on the environmental justice communities in the RSA.

Construction of the Build Alternative including Vent Shaft Design Option 2, Vent Shaft Design Option 4, the MSF, and stations would result in minimal effects related to greenhouse gas emissions. The Build

Alternative would not have disproportionately high and adverse effects to communities and neighborhoods in EJ communities in the RSA.

Construction of the Build Alternative, including Vent Shaft Design Option 2, Vent Shaft Design Option 4, the MSF, and stations, effects related to hazards and hazardous materials are anticipated to occur in EJ communities within the RSA that would result in adverse effects. Implementation of MM-HAZ-1 through MM HAZ-3 would reduce potential adverse effects to EJ communities during construction from release of hazardous materials undocumented soil or groundwater contamination, elevated concentrations of lead in the striping paint used on the existing roadways and ground, ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces (e.g., trenches and tunnels), and skin contact with contaminated soil or water.

With the mitigation measures described above, the Build Alternative would not result in an adverse effect related to hazards or hazardous waste, and therefore, would not result in a disproportionately high and adverse effects related to EJ communities and neighborhoods and in the RSA.

Construction of the Build Alternative would not result in potential adverse vibration effects due to human annoyance or building damage for vibration-sensitive uses. As described in the Noise and Vibration Technical Report (Appendix J), construction activities, including tunnel boring would not result in potential vibration effects due to human annoyance or building damage for vibration-sensitive uses.

Noise effects from the Build Alternative construction activities would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to noise-sensitive receptors. Each phase of construction would involve the use of various types of construction equipment and would, therefore, have its own distinct noise characteristics. Construction noise levels would fluctuate throughout a given workday as construction equipment moves within the various construction sites. Under the FTA noise impact criteria as described in the Noise and Vibration Technical Report (Appendix J), the construction of the Build Alternative would not increase noise levels in exceedance of the FTA impact threshold (ranging from 80 to 90 A-weight decibels [dBA]) at noise sensitive receptor locations. Anticipated daytime and nighttime construction activities would be all within the FTA's noise impact criteria. Further, because the tunnel-boring activity would generally take place either at the aboveground construction sites (evaluated above) or below ground (up to 70 feet), audible air-borne noise from tunnel-boring activity is not anticipated.

Noise effects due to increased heavy traffic on haul routes (increase of 5 dBA or greater) are not anticipated at any of the noise-sensitive receptors. As described in the Noise and Vibration Technical Report (Appendix J) an increase of 0.0 to 1.8 dBA at the receptors located near the haul routes is anticipated during construction of the Build Alternative. As discussed above, a noise effects would result from an increase of 5 dBA or greater in traffic noise levels. As such, estimated off-site construction traffic noise effects would not exceed significance thresholds at the proposed haul routes.

Construction activities would result in minimal noise and vibration effects in the RSA. Compliance with the City of Rancho Cucamonga and City of Ontario's Municipal Codes, which require implementation of construction Best Management Practices to reduce construction noise and limit the hours of construction would ensure construction of the Build Alternative would not result in disproportionately high and adverse effects related to noise and vibration to EJ communities.

Construction sites for the Build Alternative project elements including stations and MSF, tunnel, and vent shaft, would include the potential for safety hazards for workers, which are typical for similar types of construction projects. Safety of construction workers, employees and passengers, and the public may be compromised if sufficient safeguards are not in place to protect each of these groups and to ensure safe conditions.

Public hazard control measures at construction staging sites for the stations and MSF, tunnel, and vent shaft would be implemented to ensure adequate construction site access control, traffic routing, fencing, and barricading, signage, and security. Construction sites would be fully fenced, secured, and equipped with 24-hour video surveillance, preventing unauthorized access to the sites and protecting the public from construction hazards. Gates to construction sites would be locked, and if needed for extra security, fences would be equipped with barbed or razor wire. The potential of contaminated soil being encountered by workers during construction activities is further discussed in SBCTA ONT Connector Project EIR, Appendix M, Hazards and Hazardous Materials Technical Report (SBCTA 2024a).

Construction of the Build Alternative, including stations and MSF, tunnel, and vent shaft would require a combination of lane closures, street closures, increased vehicular traffic from haul trucks, and/or detours throughout the work limits to provide sufficient work area for the alignment, and associated construction staging areas. As discussed in the SBCTA ONT Connector Project EIR, Appendix Q, Transportation Technical Report (SBTCA 2024b), lane and/or road closures would be scheduled to minimize disruptions. A Transportation Management Plan (TMP) would also be prepared and approved in coordination with local fire departments and emergency responders prior to construction. The nearest local first responders would be notified, as appropriate, of traffic control measures in the plan prior to construction activities to coordinate emergency response routing. Adherence to existing regulations and implementation of the TMP would ensure that the Build Alternative would provide adequate access for emergency vehicles. In addition, local and state agencies involved in health and safety, emergency response, and disaster preparedness coordinate and communicate with one another to address safety concerns, and security threats.

High-profile terrorist targets include large population concentrations, mass transportation, important federal and state centers, and sites that can be used to produce mass casualties. While there are no documented instances of a terrorist attack within the Build Alternative area, the presence of the Build Alternative could result in a higher likelihood of this occurring because the number of construction workers at the Build Alternative area would increase. During the Build Alternative construction, SBCTA

would coordinate with local agencies and local and regional transit providers to provide guidance for safety, security, and emergency response.

Implementation of MM-SAF-1 through SAF-3, which would require a Safety and Security Management Plan, preliminary hazards analysis, and threat and vulnerability assessment, and implementation of the TMP (MM-TRA-1) would ensure that the Build Alternative, including Vent Shaft Design Option 2, Vent Shaft Design Option 4, the MSF and terminals would not have minimal effects related to safety and security effect. The Build Alternative would not have disproportionately high and adverse effects related to safety and security in environmental justice communities located in the Build Alternative area.

Construction activities for the Build Alternative would have temporary traffic effects associated with street and lane closures, reconfiguration of roads, detours, and traffic related to construction workers accessing and departing construction staging areas. In general, increased delay for drivers would occur where there are lane reductions or increased travel distances because of detours, resulting in additional vehicle delay and traffic circulation. Detours would be identified to preserve circulation around temporary street closures or where turning movements are restricted. All construction activity near or on freeway facilities including ramp closures would be coordinated with Caltrans. Minor effects to traffic operations associated with the staging/laydown areas and haul routes would occur. Effects would be further minimized with the implementation of MM-TRA-1 (Transportation Management Plan) which would address and minimize potential construction-related traffic effects on the street and highway system. There would be a temporary loss of parking stalls during construction activities; however, there is a surplus among existing parking lots on a typical weekend day during project construction. Parking impacts would be minimal and are not considered disproportionate.

Implementation of MM-TRA-1 would minimize temporary construction-related effects to transit, active transportation, and parking. As such, construction of the Build Alternative, including Vent Shaft Design Option 2, Vent Shaft Design Option 4, the MSF, and stations would not have disproportionately high and adverse effects to EJ communities within the RSA.

Operational Impacts

Operation of the Build Alternative including the Vent Shaft Design Option 2, Vent Shaft Design Option 4, and MSF would be electrically powered, and the predicted operational regional and local criteria pollutant emissions would result in a net air quality benefit. The Build Alternative would not have disproportionately high and adverse effects on the environmental justice communities in the RSA.

Once operational, the Build Alternative would have a net benefit on EJ populations in the RSA by reducing congestion and GHG emissions, improving air quality, and providing an additional energy efficient transit option. The Build Alternative would not have disproportionately high and adverse effects on the environmental justice communities in the RSA.

The Build Alternative would be designed in accordance with all standard requirements relating to geotechnical, subsurface, and seismic hazards. The Build Alternative would not have disproportionately high and adverse effects on the environmental justice communities in the RSA.

The station operations and the MSF at the proposed Cucamonga Metrolink Station would result in direct GHG area emissions from landscape maintenance and building heating and would generate indirect GHG emissions from electricity generation. Similarly, the proposed station operations at ONT would result in direct GHG area emissions from landscape maintenance and would generate indirect GHG emissions from electricity generation. The tunnel would not generate any GHG directly, but the shuttles operating within would consume electricity, thus generating indirect GHG emissions from energy generation. Similarly, the ventilation shaft would not generate any GHG directly, but the ventilation equipment would consume electricity from the operation of mechanical equipment. The Build Alternative operations would result in approximately 888 Metric Tons of Carbon Dioxide Equivalent ($MTCO_2e$) per year. This is less than SCAQMD's threshold of 3,000 $MTCO_2e$ per year. The Build Alternative would not generate GHG emissions, either directly or indirectly, that would have an adverse on the environment. Therefore, no adverse effects would occur.

Therefore, implementation of the Build Alternative would result in a net decrease in GHG emissions, as the Build Alternative would replace the GHG-emitting vehicles driving the last portion of their route with electric shuttles between the Cucamonga Metrolink Station and ONT. The Build Alternative would result in beneficial effects to regional air quality and a reduction in GHG emissions. Additionally, because the Build Alternative's GHG emissions would be less than SCAQMD's threshold and would not result in an adverse cumulative effect, the Build Alternative would not generate GHG emissions, either directly or indirectly, and would result in a no adverse effect.

The Build Alternative would increase transit opportunities and reduce single-passenger automobile use, which is consistent with several adopted State and local policies and regulations in reducing GHG emissions. Therefore, implementation of the Build Alternative would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. SCAQMD applies a screening threshold of 3,000 $MTCO_2e$ per year to comply with the reduction goals of Assembly Bill (AB) 32 and SB 32. The Build Alternative's GHG emissions would be less than the SCAQMD's threshold; therefore, the Project would be consistent with AB 32 and SB 32. The Build Alternative would not have disproportionately high and adverse effects on the environmental justice communities in the RSA.

No activities are proposed during operations that would result in the use or discharge of unregulated hazardous materials, nor have adverse effects related to Cortese-listed hazardous materials sites. The Build Alternative would have no adverse effect related to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials. Operation of the Build Alternative would result in no adverse effect related to hazardous emissions within 0.25-miles of a school.

Per the ONT Airport Land Use Compatibility Plan (ALUCP), the Build Alternative is a compatible use within the ONT Safety Zones. Operation of the Build Alternative would not create a safety hazard for people residing or working in the vicinity of an airport. The Build Alternative would not have disproportionately high and adverse effects on the environmental justice communities in the RSA.

As described, noise effects from operation of the Build Alternative, including the MSF, terminals, vent shaft, and tunnel is not anticipated to increase noise levels above current levels experienced in the RSA. Further, operation of the Build Alternative would not generate excessive ground-borne vibration levels. Operations of the Build Alternative would not result in minimal excessive ground-borne vibration levels effects and would not have disproportionately high and adverse effects related to noise and vibration to EJ communities.

Security and safety hazards during operations include hindrances to the safe operation of the system, whether building integrity, or electrical systems. Employee, passenger, and public safety may be compromised if sufficient safeguards are not in place to protect each of these groups and to ensure safe conditions. During operation of the Build Alternative, the underground tunnel would be inaccessible to bystanders with signage and/or barricades preventing entrance to unauthorized users and the general public. Adherence to safety and engineering standards will ensure the safety of riders of the Build Alternative, including passage through the tunnel.

Hazardous situations and behaviors could include inappropriate crossing, jaywalking in the station areas, ignoring warning signs and alarms, any other inappropriate or unsafe behavior that could delay operations or damage the Build Alternative vehicles, stations and MSF, tunnel, and vent shaft. If needed, signage and/or fencing may be erected along the perimeter of certain Build Alternative elements once operational, particularly at the Build Alternative's vent shaft. The MSF would be located within the current Cucamonga Metrolink Station parking lot. Operation of the MSF would include the maintenance, cleaning, and storage of autonomous electric vehicles. Similar to other Build Alternative elements, hazardous situations and behaviors could include inappropriate crossing, ignoring warning signs and alarms, and any other inappropriate or unsafe behavior that could delay operations or damage the MSF.

Closed-circuit television (CCTV) cameras would be placed at all stations and monitored by Omnitrans. Lighting and security cameras would be provided at each station to prevent unauthorized access to restricted areas. Stations and vehicles would contain Passenger Assistance Telephones or alerts that would link to the central control center. Omnitrans or SBCTA would also provide patrols at stations and associated areas. Intercoms on transit vehicles would be used to make emergency announcements. Each station platform would be equipped with a public notification system to inform transit users of emergency procedures. Safety elements that would be put in place for the station and park-and-ride lots would include transition walkways, blue light emergency telephones, limited entry and exit points, and provisions for persons with disabilities.

The Build Alternative is proposed to be below grade in a tunnel alignment, which would not conflict with motor vehicles on the roadways. Conflicts would occur if private vehicles entered automated vehicle designated lanes or when automated vehicles emerge from the tunnel alignment and across the at-grade guideway at the MSF location. The Build Alternative would provide barriers and clear signage to prevent private vehicles from entering the tunnel and the MSF facility. Physical barriers such as a guard rail would be built along the interchange where Vent Shaft Design Option 2 or Vent Shaft Design Option 4 would be located. Existing guard rails would be extended along Milliken Avenue and clear signage would be added to prevent private vehicles from entering the vent shaft area.

High-profile terrorist targets include large population concentrations, mass transportation, important federal and state centers, and sites that can be used to produce mass casualties. While there are no documented instances of a terrorist attack within the Build Alternative area, the presence of the Build Alternative could result in a higher likelihood of this occurring because the number of passengers traveling in the Build Alternative area would increase. The Build Alternative would coordinate with local agencies and local and regional transit providers and provide guidance for safety, security, and emergency response.

The Build Alternative does not directly result in an increase in population that would increase the demand for emergency services or public health and safety officers. Emergency plans (i.e., Emergency Operations Plan or Emergency Plan) provide a coordinated strategy to mobilize responses when disasters occur. These plans describe specific response actions to be taken by the emergency response agencies, and other city and county departments during and in the aftermath of a disaster. In addition, Emergency Plans and General Plans provide designated emergency evacuation routes for each jurisdiction to be used as alternate routes during any disaster or emergency situations.

Compliance with existing regulations and implementation of the TMP would ensure that the Build Alternative, including the vent shaft, MSF, tunnel, and stations, would have minimal adverse effects related to safety and security. The Build Alternative would not have disproportionately high and adverse effects related to safety and security in environmental justice communities located in the Build Alternative area.

5.2.1 Transportation and Traffic

5.2.1.1 Summary of Effects

The vehicle delays that could occur with implementation of the Build Alternative were compared to the No Build Alternative, and effects were assessed on a variety of criteria including, but not limited to, operational effects due to new crossings and roadway network changes. The analysis considered effects to each element of the transportation system: streets and intersections, freight tracks, transit, bicycle and pedestrian facilities, and parking. Adverse effects in the RSA may occur in either the a.m. peak period, the p.m. peak period, or during both peak periods.

5.2.1.2 Environmental Justice Analysis

Once operational, the Build Alternative would also provide benefits to the affected EJ communities, including improved transit service, transit access, regional mobility, and air quality. The Build Alternative includes three new stations (Cucamonga Station, Terminals 2 and 4 at ONT), which would be a benefit to those communities. Considering the implementation of mitigation measures and the off-setting benefits, the Build Alternative would not have disproportionately high and adverse effects to EJ communities within the RSA.

Construction Impacts

Once operational, the Build Alternative including Vent Shaft Design Option 2, Vent Shaft Design Option 4, the MSF, and terminals would provide benefits to the affected EJ communities, including improved transit service, transit access, regional mobility, and air quality. The Build Alternative includes three new stations (Cucamonga Station, Terminals 2 and 4 at ONT), which would be a benefit to those communities by providing a direct connection to a major employment hub in the region. SBCTA would continue to coordinate with Southern California Regional Rail Authority (SCRRA), Brightline West, Omnitrans, and the City of Rancho Cucamonga to minimize potential parking impacts. Parking impacts would be minimal and are not considered disproportionate. Considering the implementation of mitigation measures and the off-setting benefits, the Build Alternative would not have disproportionately high and adverse effects to EJ communities within the RSA.

6 REFERENCES

City of Ontario. 2022a. The Ontario Plan 2050. Available at: https://www.ontarioplan.org/top2050. Accessed September 12, 2022.

_____. City of Ontario. 2022b. City of Ontario Policy Plan Appendix A: Implementation Actions Related to Environmental Justice and Climate Adaptation and Resiliency. Available at: https://www.ontarioca.gov/sites/default/files/Ontario-Files/Planning/The%20Ontario%20Plann/Exhibits/Appendix%20A.pdf. Accessed April 18, 2024

_____. 2022c. The Ontario Plan 2050: Environmental Resources Element. Available at: https://www.ontarioca.gov/about-ontario-ontario-plan-policy-plan/environmental-resourcesAccessed April 18, 2024.

_____. 2022d. The Ontario Plan 2050: Environmental Resources – Environmental Justice Areas. Available at: https://www.ontarioca.gov/sites/default/files/Ontario-Files/Planning/The%20Ontario%20Plann/Environmental%20Resources/Figure%20ER-01%20Environmental%20Justice%20Areas.pdf. Accessed April 18, 2024.

City of Rancho Cucamonga. 2021a. General Plan RC2040 – Volume 2: Built Environment. Available at: https://www.cityofrc.us/sites/default/files/2022-01/PlanRC_Volume%202_Final_pages.pdf. Accessed March 1, 2024

_____. 2021b. General Plan RC2040 – Volume 3: Environmental Performance. Available at: https://www.cityofrc.us/sites/default/files/2022-01/PlanRC_Volume%203_Final_pages.pdf. Accessed March 1, 2024

_____. 2021c. General Plan RC2040 – Volume 4: Implementation Strategy. Available at: https://www.cityofrc.us/sites/default/files/2022-01/PlanRC_Volume%204_Final_pages.pdf. Accessed April 18, 2024.

Council on Environmental Quality. 1997. Environmental Justice: Guidance Under the National Environmental Policy Act. Available at: https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf. Accessed April 18, 2024.

San Bernardino County Transportation Authority (SBCTA). 2019a. Title IV Notice. Available at: https://www.gosbcta.com/wp-content/uploads/2021/02/Title-VI-Notice_English.pdf. Accessed April 17, 2024.

_____. 2022b. Notice of Preparation of an Environmental Impact Report and Notice of Public Meeting. Available at: https://www.gosbcta.com/wp-content/uploads/2022/03/Notice_of_Preparation_of_an_Environmental_Impact_Report_and_Notice_of_Public.pdf

_____. 2024a. *SBCTA Ontario International Airport Connector Project. Hazards and Hazardous Materials Technical Report*

_____. 2024b. *SBCTA Ontario International Airport Connector Project. Transportation Technical Report* Southern California Association of Governments. Connect SoCal. Adopted September 3, 2020

United States Census Bureau. 2018 – 2022 American Community Survey 5-Year Estimates. Available at: https://www.census.gov/data/developers/data-sets/acs-5year.html

United States Census Bureau. 2023. QuickFacts – Ontario, California. Available at: https://www.census.gov/quickfacts/fact/table/ontariocitycalifornia/PST045223. Accessed February 28, 2024.

United States Census Bureau. 2023. QuickFacts – Rancho Cucamonga, California. Available at: https://www.census.gov/quickfacts/fact/table/ranchocucamongacitycalifornia/PST045223. Accessed February 28, 2024.

United States Department of Health and Human Services. 2024. Annual Update of the HHS Poverty Guidelines. Federal Register Volume 89, Issue 11. Available at: https://www.govinfo.gov/content/pkg/FR-2024-01-17/pdf/2024-00796.pdf. Accessed April 17, 2024.

United States Department of Transportation (USDOT). Federal Highway Administration. 2015. Environmental Justice Reference Guide. Available at: https://www.fhwa.dot.gov/environment/environmental_justice/publications/reference_guide_2015/section00.cfm. Accessed February 28, 2024.

United States Department of Transportation (USDOT). Federal Transit Administration. 2012. Environmental Justice Policy Guidance for Federal Transit Administration Recipients. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_EJ_Circular_7.14-12_FINAL.pdf

United States Department of Transportation (USDOT). Federal Transit Administration. 2021. U.S. Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (DOT 5610.2C). Available at: https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2021-06/DOT%20Order%205610.2C.pdf. Accessed: April 17, 2024.

United States Department of Transportation (USDOT). Federal Transit Administration. 2011. Guidance on Environmental Justice and NEPA. Available at: https://www.environment.fhwa.dot.gov/env_topics/ej/guidance_ejustice-nepa.aspx. Accessed March 18, 2024.

United States Environmental Protection Agency (EPA). 2016. Promising Practices for EJ Methodologies in NEPA Reviews. Available at: https://www.epa.gov/sites/default/files/2016-05/documents/iwg_promising_practices_final_5-16-2016.pdf. Accessed April 19, 2024.