

3.6-B NOISE ANALYSIS DETAIL APPENDIX

UNMITIGATED PROPOSED PROJECT NOISE TABLES

Noise associated with light rail transit includes noise from steel wheels rolling on steel rails (wheel/rail noise), propulsion motors, air conditioning, and other auxiliary equipment on the vehicles, as well as from TPSSs. The results of the noise analysis associated with the Proposed Project are shown in Table 1 for the light rail, Table 2 for TPSSs, and Table 3 for combined freight track relocation and light rail noise. Cluster numbers are defined in Figure 3.6-21 to Figure 3.6-24 in Section 3.6, Noise and Vibration of the EIR.

Table 1. Proposed Project Light Rail Noise at Sensitive Receptors

Proposed Project Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
A1	2	270	40	C	67.1	62.0	62.0	Significant
A2	2	280	45	C	67.1	63.0	62.0	Significant
A3	2	250	50	ABD	67.1	59.0	62.0	Less than Significant
A4	2	380	45	C	69.5	61.0	64.0	Less than Significant
A5	2	350	45	C	69.5	62.0	64.0	Less than Significant
A6	2	320	45	C	69.5	62.0	64.0	Less than Significant
A7	2	280	45	C	69.5	63.0	64.0	Less than Significant
B1	3	50	45	CG	71.2	65.0	70.0	Less than Significant
B2	2	130	45	CG	65.0	66.0	61.0	Significant
B3	2	210	45	C	65.0	64.0	61.0	Significant
B4	2	350	45	C	65.0	62.0	61.0	Significant
B5	2	70	45	CG	65.0	69.0	61.0	Significant
B6	2	185	45	CG	65.0	64.0	61.0	Significant
B7	2	300	45	C	65.0	62.0	61.0	Significant
B8	2	70	45	CG	70.0	69.0	64.0	Significant
B9	2	185	45	C	70.0	64.0	64.0	Significant
B10	2	300	45	C	70.0	62.0	64.0	Less than Significant
B11	2	70	45	CG	70.0	69.0	64.0	Significant
B12	2	185	45	C	70.0	64.0	64.0	Significant
B13	2	300	45	C	70.0	62.0	64.0	Less than Significant
B14	2	70	45	CG	70.0	69.0	64.0	Significant

Proposed Project Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
B15	2	170	45	C	70.0	65.0	64.0	Significant
B16	2	290	45	C	70.0	62.0	64.0	Less than Significant
B17	2	90	45	G	70.0	64.0	64.0	Significant
B18	2	180	45	None	70.0	61.0	64.0	Less than Significant
B19	2	300	45	None	70.0	58.0	64.0	Less than Significant
B20	2	90	45	None	70.0	64.0	64.0	Significant
B21	2	180	45	None	70.0	61.0	64.0	Less than Significant
B22	2	300	45	None	70.0	58.0	64.0	Less than Significant
B23	2	93	45	None	55.1	63.0	55.0	Significant
B24	2	140	45	None	55.1	62.0	55.0	Significant
B25	2	300	45	None	55.1	58.0	55.0	Significant
B26	2	93	45	None	55.1	63.0	55.0	Significant
B27	2	140	45	None	55.1	62.0	55.0	Significant
B28	2	300	45	None	55.1	58.0	55.0	Significant
B29	2	85	45	None	55.1	64.0	55.0	Significant
B30	2	140	45	None	55.1	62.0	55.0	Significant
B31	2	300	45	None	55.1	58.0	55.0	Significant
B32	2	85	45	None	55.1	64.0	55.0	Significant
B33	2	140	45	None	55.1	62.0	55.0	Significant
B34	2	300	45	None	55.1	58.0	55.0	Significant
B35	2	20	45	G	70.0	70.0	64.0	Significant
B36	2	115	45	CG	65.0	67.0	61.0	Significant
B37	2	230	45	C	65.0	63.0	61.0	Significant
B38	2	20	45	C	65.0	74.0	61.0	Significant
B39	2	100	45	C	65.0	67.0	61.0	Significant
B40	2	220	45	C	65.0	64.0	61.0	Significant
B41	2	35	45	CG	70.0	72.0	64.0	Significant
B42	2	90	45	CG	70.0	68.0	64.0	Significant
B43	2	250	45	C	70.0	63.0	64.0	Less than Significant
B44	2	35	45	CG	70.0	72.0	64.0	Significant
B45	2	90	45	CG	70.0	68.0	64.0	Significant
B46	2	250	45	C	70.0	63.0	64.0	Less than Significant

Proposed Project Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
B47	2	35	45	G	70.0	68.0	64.0	Significant
B48	2	90	45	None	70.0	64.0	64.0	Significant
B49	2	250	45	None	70.0	59.0	64.0	Less than Significant
B50	2	35	45	None	70.0	68.0	64.0	Significant
B51	2	90	45	None	70.0	64.0	64.0	Significant
B52	2	250	45	None	70.0	59.0	64.0	Less than Significant
B53	2	35	45	None	55.1	68.0	55.0	Significant
B54	2	90	45	None	55.1	64.0	55.0	Significant
B55	2	250	45	None	55.1	59.0	55.0	Significant
B56	2	35	45	None	55.1	68.0	55.0	Significant
B57	2	90	45	None	55.1	64.0	55.0	Significant
B58	2	250	45	None	55.1	59.0	55.0	Significant
B59	2	35	45	None	55.1	68.0	55.0	Significant
B60	2	90	45	None	55.1	64.0	55.0	Significant
B61	2	250	45	None	55.1	59.0	55.0	Significant
B62	2	35	45	None	55.1	68.0	55.0	Significant
B63	2	90	45	None	55.1	64.0	55.0	Significant
B64	2	250	45	None	55.1	59.0	55.0	Significant
C1	2	85	45	None	55.1	64.0	55.0	Significant
C2	2	145	45	None	55.1	61.0	55.0	Significant
C3	2	300	45	None	55.1	58.0	55.0	Significant
C4	2	80	45	None	55.1	64.0	55.0	Significant
C5	2	140	45	None	55.1	62.0	55.0	Significant
C6	2	295	45	None	55.1	58.0	55.0	Significant
C7	2	80	45	None	55.1	64.0	55.0	Significant
C8	2	140	45	None	55.1	62.0	55.0	Significant
C9	2	295	45	None	55.1	58.0	55.0	Significant
C10	2	80	45	None	55.1	64.0	55.0	Significant
C11	2	140	45	None	55.1	62.0	55.0	Significant
C12	2	295	45	None	55.1	58.0	55.0	Significant
C13	2	80	45	None	55.1	64.0	55.0	Significant
C14	2	140	45	None	55.1	62.0	55.0	Significant

Proposed Project Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
C15	2	295	45	None	55.1	58.0	55.0	Significant
C16	2	80	45	None	55.1	64.0	55.0	Significant
C17	2	140	45	None	55.1	62.0	55.0	Significant
C18	2	295	45	None	55.1	58.0	55.0	Significant
C19	2	80	45	None	55.1	64.0	55.0	Significant
C20	2	140	45	None	55.1	62.0	55.0	Significant
C21	2	295	45	None	55.1	58.0	55.0	Significant
C22	2	35	45	None	55.1	68.0	55.0	Significant
C23	2	90	45	None	55.1	64.0	55.0	Significant
C24	2	250	45	None	55.1	59.0	55.0	Significant
C25	2	35	45	None	55.1	68.0	55.0	Significant
C26	2	90	45	None	55.1	64.0	55.0	Significant
C27	2	250	45	None	55.1	59.0	55.0	Significant
C28	2	35	45	None	55.1	68.0	55.0	Significant
C29	2	90	45	None	55.1	64.0	55.0	Significant
C30	2	250	45	None	55.1	59.0	55.0	Significant
C31	2	35	45	None	55.1	68.0	55.0	Significant
C32	2	90	45	None	55.1	64.0	55.0	Significant
C33	2	250	45	None	55.1	59.0	55.0	Significant
C34	2	35	45	None	55.1	68.0	55.0	Significant
C35	2	90	45	None	55.1	64.0	55.0	Significant
C36	2	250	45	None	55.1	59.0	55.0	Significant
C37	2	35	45	None	55.1	68.0	55.0	Significant
C38	2	90	45	None	55.1	64.0	55.0	Significant
C39	2	250	45	None	55.1	59.0	55.0	Significant
C40	2	35	45	None	55.1	68.0	55.0	Significant
C41	2	90	45	None	55.1	64.0	55.0	Significant
C42	2	250	45	None	55.1	59.0	55.0	Significant
D1	2	90	45	F	55.1	64.0	55.0	Significant
D2	2	150	45	F	55.1	61.0	55.0	Significant
D3	2	275	45	None	55.1	59.0	55.0	Significant
D4	2	90	45	F	55.1	64.0	55.0	Significant

Proposed Project Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
D5	2	170	45	F	55.1	61.0	55.0	Significant
D6	2	250	45	F	55.1	59.0	55.0	Significant
D7	2	350	45	None	55.1	58.0	55.0	Significant
D8	2	50	45	F	55.1	66.0	55.0	Significant
D9	2	50	45	F	55.1	66.0	55.0	Significant
D10	2	50	45	F	55.1	66.0	55.0	Significant
D11	2	50	45	None	55.1	66.0	55.0	Significant
D12	2	50	45	None	55.1	66.0	55.0	Significant
D13	2	50	45	None	60.8	66.0	58.0	Significant
D14	2	50	45	None	60.8	66.0	58.0	Significant
D15	2	50	45	None	60.8	66.0	58.0	Significant
D16	2	50	45	None	60.8	66.0	58.0	Significant
D17	2	180	45	F	55.1	61.0	55.0	Significant
D18	2	260	45	F	55.1	59.0	55.0	Significant
D19	2	330	45	None	55.1	58.0	55.0	Significant
D20	2	180	45	F	55.1	61.0	55.0	Significant
D21	2	180	45	None	55.1	61.0	55.0	Significant
D22	2	180	45	None	55.1	61.0	55.0	Significant
D23	2	180	45	None	60.8	61.0	58.0	Significant
D24	2	180	45	None	60.8	61.0	58.0	Significant
D25	2	260	45	None	60.8	59.0	58.0	Significant
D26	2	30	45	F	55.1	68.0	55.0	Significant
D27	2	90	45	F	55.1	64.0	55.0	Significant
D28	2	250	45	None	55.1	59.0	55.0	Significant
D29	2	30	45	F	55.1	68.0	55.0	Significant
D30	2	90	45	F	55.1	64.0	55.0	Significant
D31	2	250	45	F	55.1	59.0	55.0	Significant
D32	2	30	45	F	55.1	68.0	55.0	Significant
D33	2	90	45	F	55.1	64.0	55.0	Significant
D34	2	250	45	F	55.1	59.0	55.0	Significant
D35	2	30	45	F	55.1	68.0	55.0	Significant
D36	2	90	45	F	55.1	64.0	55.0	Significant

Proposed Project Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
D37	2	250	45	None	55.1	59.0	55.0	Significant
D38	2	30	45	None	55.1	68.0	55.0	Significant
D39	2	90	45	None	55.1	64.0	55.0	Significant
D40	2	250	45	None	55.1	59.0	55.0	Significant
D41	2	30	45	B	60.8	67.0	58.0	Significant
D42	2	90	45	A	60.8	59.0	58.0	Significant
D43	2	250	45	AB	60.8	53.0	58.0	Less than Significant
D44	2	30	45	B	60.8	67.0	58.0	Significant
D45	2	90	45	A	60.8	59.0	58.0	Significant
D46	2	250	45	AB	60.8	53.0	58.0	Less than Significant
D47	2	30	45	None	60.8	68.0	58.0	Significant
D48	2	90	45	None	60.8	64.0	58.0	Significant
D49	2	250	45	None	60.8	59.0	58.0	Significant
D50	2	30	45	None	60.8	68.0	58.0	Significant
D51	2	90	45	None	60.8	64.0	58.0	Significant
D52	2	250	45	None	60.8	59.0	58.0	Significant
E1	2	230	45	None	75.1	59.0	65.0	Less than Significant
E2	2	90	45	None	57.1	64.0	56.0	Significant
E3	2	220	45	A	57.1	55.0	56.0	Less than Significant
E4	2	25	45	None	57.1	69.0	56.0	Significant
E5	2	150	45	None	57.1	61.0	56.0	Significant
E6	2	220	45	None	57.1	60.0	56.0	Significant
E7	2	350	45	None	57.1	58.0	56.0	Significant
E8	2	150	45	None	57.1	61.0	56.0	Significant
E9	2	320	45	None	57.1	58.0	56.0	Significant
F1	3	120	35	DEFG	52.6	61.0	59.0	Significant
F2	2	55	45	F	55.8	66.0	56.0	Significant
F3	2	60	45	F	55.8	65.0	56.0	Significant
F4	2	55	45	F	55.8	66.0	56.0	Significant
F5	2	220	45	AF	55.8	55.0	56.0	Less than Significant
F6	2	320	45	AF	55.8	54.0	56.0	Less than Significant
F7	2	50	45	None	55.8	66.0	56.0	Significant

Proposed Project Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
F8	2	220	45	A	55.8	55.0	56.0	Less than Significant
F9	2	320	45	A	55.8	54.0	56.0	Less than Significant
F10	2	70	45	None	55.8	65.0	56.0	Significant
F11	2	100	45	None	55.8	63.0	56.0	Significant
F12	2	200	45	None	55.8	60.0	56.0	Significant
F13	2	320	45	A	55.8	54.0	56.0	Less than Significant
F14	2	90	45	None	55.8	64.0	56.0	Significant
F15	2	160	45	None	55.8	61.0	56.0	Significant
F16	2	300	45	A	55.8	54.0	56.0	Less than Significant
F17	2	90	45	None	55.8	64.0	56.0	Significant
F18	2	260	45	A	55.8	54.0	56.0	Less than Significant
F19	2	350	45	A	55.8	53.0	56.0	Less than Significant
F20	3	80	45	D	52.6	64.0	59.0	Significant
G1	2	130	45	D	55.8	67.0	56.0	Significant
G2	2	300	55	A	55.8	56.0	56.0	Significant
G3	2	350	55	A	55.8	55.0	56.0	Less than Significant
G4	2	330	55	A	55.8	55.0	56.0	Less than Significant
G5	2	180	55	D	55.8	67.0	56.0	Significant
G6	2	270	55	D	55.8	66.0	56.0	Significant
G7	2	70	55	D	55.8	71.0	56.0	Significant
G8	2	150	55	AD	55.8	64.0	56.0	Significant
G9	2	210	55	AD	55.8	62.0	56.0	Significant
G10	2	300	55	A	55.8	56.0	56.0	Significant
G11	2	120	55	None	55.8	64.0	56.0	Significant
G12	2	75	55	None	55.8	66.0	56.0	Significant
G13	2	160	55	None	55.8	63.0	56.0	Significant
G14	2	220	55	None	55.8	61.0	56.0	Significant
G15	2	120	55	None	74.9	64.0	65.0	Less than Significant
G16	2	205	55	D	61.3	67.0	59.0	Significant
G17	2	150	55	D	61.3	68.0	59.0	Significant
G18	2	100	55	D	61.3	70.0	59.0	Significant
G19	2	220	55	D	61.3	66.0	59.0	Significant

Proposed Project Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
G20	2	80	55	D	61.3	71.0	59.0	Significant
G21	2	160	55	D	61.3	68.0	59.0	Significant
G22	2	250	55	D	61.3	66.0	59.0	Significant
G23	2	250	55	D	61.3	66.0	59.0	Significant
G24	2	350	55	None	61.3	59.0	59.0	Significant
G25	2	350	55	None	61.3	59.0	59.0	Significant
G26	2	430	55	None	61.3	59.0	59.0	Significant
G27	2	30	55	D	61.3	75.0	59.0	Significant
G28	2	75	55	D	61.3	71.0	59.0	Significant
G29	2	120	55	D	61.3	69.0	59.0	Significant
G30	2	250	55	None	61.3	61.0	59.0	Significant
G31	2	350	55	None	74.9	59.0	65.0	Less than Significant
H1	2	130	25	G	69.6	57.0	64.0	Less than Significant
H2	2	250	25	None	69.6	54.0	64.0	Less than Significant

1. Distance to the closest area of human use or closest building façade.

2. Adjustments to LRT noise based on intervening rows of buildings, track type, special trackwork, quacker noise, wheel squeal noise, audible warning noise and TPSS noise.

A = first row of intervening buildings.

B = second row of intervening buildings.

C = aerial structure with slab track.

D = jointed track or crossover.

E = quacker noise.

F = audible warnings noise.

G = TPSS Noise

Source: TAHA, 2023

Table 2. Proposed Project TPSS Noise at Sensitive Receptors

TPSS Site	Location	Cluster No.	Distance (feet)	Intervening Building Row ¹	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	TPSS Noise	Impact Threshold	
Site Option 1	Metro ROW south of Marine Ave.	None	None	No	None	None	None	None
Site Option 2	Commercial property at northeast corner of 159 th St. and Metro ROW	B1	80	No	71.2	46.0	70.0	Less than Significant
		B2	200	No	65.0	38.0	61.0	Less than Significant
		B5	150	No	65.0	40.0	61.0	Less than Significant
		B6	220	No	65.0	37.0	61.0	Less than Significant
		B35	23	No	70.0	57.0	64.0	Less than Significant
Site Option 3	Metro ROW between 161 st St. and 162 nd St.	B36	90	Yes	65.0	40.0	61.0	Less than Significant
		B8	230	No	70.0	43.0	64.0	Less than Significant
		B11	60	No	70.0	55.0	64.0	Less than Significant
		B14	60	No	70.0	55.0	64.0	Less than Significant
		B17	160	No	70.0	46.0	64.0	Less than Significant
		B41	35	No	70.0	59.0	64.0	Less than Significant
		B42	80	Yes	70.0	48.0	64.0	Less than Significant
		B44	35	No	70.0	59.0	64.0	Less than Significant
		B45	80	Yes	70.0	41.0	64.0	Less than Significant
B47	140	No	70.0	41.0	64.0	Less than Significant		
Site Option 4	Metro ROW south of Grant Ave.	F1	50	No	52.6	50.0	59.0	Less than Significant
Site Option 5	Electric utility ROW northeast corner of Hawthorne Blvd. and 190 th St.	None	None	None	None	None	None	None
Site Option 6	Metro ROW west of Prairie Ave.	None	None	None	None	None	None	None
Site Option 7	Metro ROW and northwest corner of Crenshaw Blvd.	H1	160	No	69.6	32.0	64.0	Less than Significant

1. Reduction of 4.5 dBA for intervening building rows.

Source: TAHA, 2023

Table 3. Proposed Project Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors

Proposed Project Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
A1	2	220	Yes	67.3	54.6	63.0	62.0	Significant
A2	2	220	Yes	67.3	54.6	63.0	62.0	Significant
A4	2	355	Yes	69.6	52.5	62.0	64.0	Less than Significant
A5	2	330	Yes	69.6	52.8	62.0	64.0	Less than Significant
A6	2	300	Yes	69.6	53.2	63.0	64.0	Less than Significant
A7	2	270	Yes	69.6	53.7	63.0	64.0	Less than Significant
B1	3	80	Yes	71.4	72.6	73.0	70.0	Significant
B2	2	120	Yes	65.8	57.2	67.0	61.0	Significant
B3	2	200	Yes	65.4	55.0	64.0	61.0	Significant
B4	2	360	Yes	65.2	52.4	62.0	61.0	Significant
B5	2	35	Yes	66.6	62.6	70.0	62.0	Significant
B6	2	160	Yes	65.5	56.0	65.0	61.0	Significant
B7	2	285	Yes	65.3	53.5	63.0	61.0	Significant
B8	2	40	Yes	70.5	62.0	70.0	65.0	Significant
B9	2	150	Yes	70.2	56.2	65.0	65.0	Significant
B10	2	265	Yes	70.1	53.8	63.0	64.0	Less than Significant
B11	2	40	Yes	70.5	62.0	70.0	65.0	Significant
B12	2	150	Yes	70.2	56.2	65.0	65.0	Significant
B13	2	265	Yes	70.1	53.8	63.0	64.0	Less than Significant
B14	2	40	Yes	70.5	62.0	70.0	65.0	Significant
B15	2	150	Yes	70.2	56.2	65.0	65.0	Significant
B16	2	265	Yes	70.1	53.8	63.0	64.0	Less than Significant
B17	2	60	Yes	70.4	60.2	65.0	65.0	Significant

Proposed Project Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
B18	2	160	Yes	70.2	56.0	62.0	65.0	Less than Significant
B19	2	275	Yes	70.1	53.6	60.0	64.0	Less than Significant
B20	2	60	Yes	70.4	60.2	65.0	65.0	Significant
B21	2	160	Yes	70.2	56.0	62.0	65.0	Less than Significant
B22	2	275	Yes	70.1	53.6	60.0	64.0	Less than Significant
B23	2	60	Yes	60.9	60.2	65.0	58.0	Significant
B24	2	160	Yes	58.4	56.0	63.0	57.0	Significant
B25	2	275	Yes	57.4	53.6	60.0	56.0	Significant
B26	2	60	Yes	60.9	60.2	65.0	58.0	Significant
B27	2	160	Yes	58.4	56.0	63.0	57.0	Significant
B28	2	275	Yes	57.4	53.6	60.0	56.0	Significant
B29	2	60	Yes	60.9	60.2	65.0	58.0	Significant
B30	2	160	Yes	58.4	56.0	63.0	57.0	Significant
B31	2	275	Yes	57.4	53.6	60.0	56.0	Significant
B32	2	60	Yes	60.9	60.2	65.0	58.0	Significant
B33	2	160	Yes	58.4	56.0	63.0	57.0	Significant
B34	2	275	Yes	57.4	53.6	60.0	56.0	Significant
B35	2	55	Yes	70.6	60.6	71.0	65.0	Significant
B36	2	175	Yes	65.5	55.6	67.0	61.0	Significant
B37	2	290	Yes	65.3	53.4	64.0	61.0	Significant
B38	2	55	Yes	66.6	60.6	74.0	62.0	Significant
B39	2	175	Yes	65.5	55.6	67.0	61.0	Significant
B40	2	290	Yes	65.3	53.4	64.0	61.0	Significant
B41	2	60	Yes	70.5	60.2	72.0	65.0	Significant
B42	2	130	Yes	70.2	56.9	68.0	65.0	Significant
B43	2	285	Yes	70.1	53.5	64.0	64.0	Significant
B44	2	60	Yes	70.5	60.2	72.0	65.0	Significant
B45	2	130	Yes	70.2	56.9	68.0	65.0	Significant

Proposed Project Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
B46	2	285	Yes	70.1	53.5	64.0	64.0	Significant
B47	2	65	Yes	70.5	59.9	68.0	65.0	Significant
B48	2	150	Yes	70.2	56.2	64.0	65.0	Less than Significant
B49	2	280	Yes	70.1	53.5	60.0	64.0	Less than Significant
B50	2	65	Yes	70.5	59.9	68.0	65.0	Significant
B51	2	150	Yes	70.2	56.2	64.0	65.0	Less than Significant
B52	2	280	Yes	70.1	53.5	60.0	64.0	Less than Significant
B53	2	65	Yes	61.7	59.9	68.0	59.0	Significant
B54	2	150	Yes	58.9	56.2	64.0	57.0	Significant
B55	2	280	Yes	57.5	53.5	60.0	56.0	Significant
B56	2	65	Yes	61.7	59.9	68.0	59.0	Significant
B57	2	150	Yes	58.9	56.2	64.0	57.0	Significant
B58	2	280	Yes	57.5	53.5	60.0	56.0	Significant
B59	2	65	Yes	61.7	59.9	68.0	59.0	Significant
B60	2	150	Yes	58.9	56.2	64.0	57.0	Significant
B61	2	280	Yes	57.5	53.5	60.0	56.0	Significant
B62	2	65	Yes	61.7	59.9	68.0	59.0	Significant
B63	2	150	Yes	58.9	56.2	64.0	57.0	Significant
B64	2	280	Yes	57.5	53.5	60.0	56.0	Significant
C1	2	65	Yes	60.7	59.9	65.0	58.0	Significant
C2	2	115	Yes	59.2	57.4	63.0	57.0	Significant
C3	2	275	Yes	57.4	53.6	60.0	56.0	Significant
C4	2	65	Yes	60.7	59.9	65.0	58.0	Significant
C5	2	115	Yes	59.2	57.4	63.0	57.0	Significant
C6	2	275	Yes	57.4	53.6	60.0	56.0	Significant
C7	2	65	Yes	60.7	59.9	65.0	58.0	Significant
C8	2	115	Yes	59.2	57.4	63.0	57.0	Significant
C9	2	275	Yes	57.4	53.6	60.0	56.0	Significant

Proposed Project Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
C10	2	65	Yes	60.7	59.9	65.0	58.0	Significant
C11	2	115	Yes	59.2	57.4	63.0	57.0	Significant
C12	2	275	Yes	57.4	53.6	60.0	56.0	Significant
C13	2	65	Yes	60.7	59.9	65.0	58.0	Significant
C14	2	115	Yes	59.2	57.4	63.0	57.0	Significant
C15	2	275	Yes	57.4	53.6	60.0	56.0	Significant
C16	2	65	Yes	60.9	59.9	65.0	58.0	Significant
C17	2	115	Yes	59.3	57.4	63.0	57.0	Significant
C18	2	275	Yes	57.4	53.6	60.0	56.0	Significant
C19	2	65	Yes	60.9	59.9	65.0	58.0	Significant
C20	2	115	Yes	59.3	57.4	63.0	57.0	Significant
C21	2	275	Yes	57.4	53.6	60.0	56.0	Significant
C22	2	65	Yes	61.7	59.9	68.0	59.0	Significant
C23	2	150	Yes	58.9	56.2	64.0	57.0	Significant
C24	2	280	Yes	57.5	53.5	60.0	56.0	Significant
C25	2	60	Yes	61.1	60.2	68.0	58.0	Significant
C26	2	160	Yes	58.5	56.0	64.0	57.0	Significant
C27	2	285	Yes	57.3	53.5	60.0	56.0	Significant
C28	2	60	Yes	61.1	60.2	68.0	58.0	Significant
C29	2	160	Yes	58.5	56.0	64.0	57.0	Significant
C30	2	285	Yes	57.3	53.5	60.0	56.0	Significant
C31	2	60	Yes	61.1	60.2	68.0	58.0	Significant
C32	2	160	Yes	58.5	56.0	64.0	57.0	Significant
C33	2	285	Yes	57.3	53.5	60.0	56.0	Significant
C34	2	60	Yes	61.1	60.2	68.0	58.0	Significant
C35	2	160	Yes	58.5	56.0	64.0	57.0	Significant
C36	2	285	Yes	57.3	53.5	60.0	56.0	Significant
C37	2	60	Yes	61.3	60.2	68.0	59.0	Significant
C38	2	160	Yes	58.5	56.0	64.0	57.0	Significant
C39	2	275	Yes	57.4	53.6	60.0	56.0	Significant
C40	2	60	Yes	61.3	60.2	68.0	59.0	Significant
C41	2	160	Yes	58.5	56.0	64.0	57.0	Significant

Proposed Project Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
C42	2	275	Yes	57.4	53.6	60.0	56.0	Significant
D1	2	65	Yes	61.0	59.9	65.0	58.0	Significant
D2	2	125	Yes	59.1	57.0	63.0	57.0	Significant
D3	2	240	Yes	57.7	54.2	60.0	57.0	Significant
D4	2	65	Yes	61.0	59.9	65.0	58.0	Significant
D5	2	145	Yes	58.8	56.4	62.0	57.0	Significant
D6	2	230	Yes	57.8	54.4	60.0	57.0	Significant
D7	2	320	Yes	57.2	53.0	59.0	56.0	Significant
D8	2	20	Yes	65.0	65.0	69.0	61.0	Significant
D9	2	20	Yes	65.0	65.0	69.0	61.0	Significant
D10	2	20	Yes	65.0	65.0	69.0	61.0	Significant
D11	2	20	Yes	65.0	65.0	69.0	61.0	Significant
D12	2	20	Yes	65.0	65.0	69.0	61.0	Significant
D13	2	20	Yes	66.1	65.0	69.0	62.0	Significant
D14	2	20	Yes	66.1	65.0	69.0	62.0	Significant
D17	2	165	Yes	58.5	55.8	62.0	57.0	Significant
D18	2	245	Yes	57.6	54.1	60.0	57.0	Significant
D19	2	325	Yes	57.1	52.9	59.0	56.0	Significant
D20	2	165	Yes	58.5	55.8	62.0	57.0	Significant
D21	2	165	Yes	58.5	55.8	62.0	57.0	Significant
D22	2	165	Yes	58.5	55.8	62.0	57.0	Significant
D23	2	170	Yes	62.0	55.7	62.0	59.0	Significant
D26	2	60	Yes	61.3	60.2	69.0	59.0	Significant
D27	2	120	Yes	59.2	57.2	64.0	57.0	Significant
D28	2	280	Yes	57.4	53.5	60.0	56.0	Significant
D29	2	60	Yes	61.3	60.2	69.0	59.0	Significant
D30	2	120	Yes	59.2	57.2	64.0	57.0	Significant
D31	2	280	Yes	57.4	53.5	60.0	56.0	Significant
D32	2	55	Yes	61.6	60.6	69.0	59.0	Significant
D33	2	115	Yes	59.4	57.4	65.0	57.0	Significant
D34	2	275	Yes	57.4	53.6	60.0	56.0	Significant
D35	2	55	Yes	61.6	60.6	69.0	59.0	Significant

Proposed Project Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
D36	2	115	Yes	59.4	57.4	65.0	57.0	Significant
D37	2	275	Yes	57.4	53.6	60.0	56.0	Significant
D38	2	55	Yes	61.6	60.6	69.0	59.0	Significant
D39	2	115	Yes	59.4	57.4	65.0	57.0	Significant
D40	2	275	Yes	57.4	53.6	60.0	56.0	Significant
D41	2	55	Yes	63.0	60.6	68.0	60.0	Significant
D42	2	115	Yes	61.4	57.4	61.0	59.0	Significant
D43	2	275	Yes	61.0	53.6	56.0	58.0	Less than Significant
D44	2	55	Yes	63.0	60.6	68.0	60.0	Significant
D45	2	115	Yes	61.4	57.4	61.0	59.0	Significant
D46	2	275	Yes	61.0	53.6	56.0	58.0	Less than Significant
E1	2	205	No	75.1	44.5	60.0	65.0	Less than Significant
E2	2	50	No	57.8	50.6	64.0	57.0	Significant
E3	2	200	No	57.2	44.6	56.0	56.0	Significant
E4	2	60	No	58.0	49.8	69.0	57.0	Significant
E5	2	200	No	57.3	44.6	61.0	56.0	Significant
E6	2	275	No	57.3	43.2	60.0	56.0	Significant
E7	2	320	No	57.2	42.5	58.0	56.0	Significant
E8	2	215	No	57.3	44.3	61.0	56.0	Significant
E9	2	385	No	57.2	41.7	58.0	56.0	Significant
F1	3	70	Yes	59.7	73.0	73.0	63.0	Significant
F2	2	25	Yes	64.0	64.0	68.0	60.0	Significant
F3	2	30	Yes	63.7	63.2	67.0	60.0	Significant
F4	2	30	Yes	63.7	63.2	68.0	60.0	Significant
F5	2	185	Yes	57.0	55.3	58.0	56.0	Significant
F6	2	295	Yes	56.6	53.3	56.0	56.0	Significant
F7	2	35	Yes	63.2	62.6	68.0	60.0	Significant
F8	2	200	Yes	56.9	55.0	58.0	56.0	Significant
F9	2	305	Yes	56.6	53.2	56.0	56.0	Significant

Proposed Project Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
F10	2	63	Yes	61.1	60.0	66.0	58.0	Significant
F11	2	75	Yes	60.6	59.3	65.0	58.0	Significant
F12	2	170	Yes	58.7	55.7	61.0	57.0	Significant
F13	2	295	Yes	56.6	53.3	56.0	56.0	Significant
F14	2	65	Yes	60.9	59.9	65.0	58.0	Significant
F15	2	120	Yes	59.4	57.2	63.0	57.0	Significant
F16	2	265	Yes	56.6	53.8	57.0	56.0	Significant
F17	2	65	Yes	60.7	59.9	65.0	58.0	Significant
F18	2	240	Yes	56.7	54.2	57.0	56.0	Significant
F19	2	365	Yes	56.4	52.4	56.0	56.0	Significant
F20	3	100	Yes	59.5	71.4	72.0	63.0	Significant
G1	2	100	Yes	59.7	58.0	68.0	58.0	Significant
G2	2	270	Yes	56.6	53.7	58.0	56.0	Significant
G3	2	300	Yes	56.6	53.2	57.0	56.0	Significant
G4	2	305	No	55.9	42.7	55.0	56.0	Less than Significant
G5	2	150	No	56.2	45.8	67.0	56.0	Significant
G6	2	260	No	56.0	43.4	66.0	56.0	Significant
G7	2	45	No	56.9	51.1	71.0	56.0	Significant
G8	2	120	No	56.0	46.8	64.0	56.0	Significant
G9	2	195	No	55.9	44.7	62.0	56.0	Significant
G10	2	270	No	55.9	43.3	56.0	56.0	Significant
G11	2	110	No	56.3	47.2	64.0	56.0	Significant
G12	2	45	No	57.0	51.1	66.0	56.0	Significant
G13	2	145	No	56.2	46.0	63.0	56.0	Significant
G14	2	195	No	56.1	44.7	61.0	56.0	Significant
G15	2	150	No	74.9	45.8	64.0	65.0	Less than Significant
G16	2	260	No	61.4	43.4	67.0	59.0	Significant
G17	2	215	No	61.4	44.3	68.0	59.0	Significant
G18	2	140	No	61.4	46.1	70.0	59.0	Significant
G19	2	240	No	61.4	43.8	66.0	59.0	Significant

Proposed Project Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
G20	2	120	No	61.5	46.8	71.0	59.0	Significant
G21	2	200	No	61.4	44.6	68.0	59.0	Significant
G22	2	300	No	61.4	42.8	66.0	59.0	Significant
G23	2	290	No	61.4	43.0	66.0	59.0	Significant
G24	2	390	No	61.3	41.7	59.0	59.0	Significant
G25	2	362	No	61.4	42.0	59.0	59.0	Significant
G26	2	402	No	61.3	41.5	59.0	59.0	Significant
G27	2	75	No	61.5	48.8	75.0	59.0	Significant
G28	2	105	No	61.5	47.4	71.0	59.0	Significant
G29	2	172	No	61.4	45.2	69.0	59.0	Significant
G30	2	275	No	61.4	43.2	61.0	59.0	Significant

Note: This table only includes clusters affected by relocated freight tracks.

Source: TAHA, 2023.

MITIGATED PROPOSED PROJECT NOISE TABLES

Project Features PF-NV-2 and PF-NV-3 require CPUC authorization. In the event these features are not authorized by the CPUC, the combination of relocated freight tracks and LRT noise under the Proposed Project would result in seven of 244 Category 2 clusters remaining impacted after implementation of mitigation measures, shown in Table 4. No significant impacts would remain at Category 3 clusters. If the project features are authorized by the CPUC, there would be two impacts remaining after implementation of mitigation measures, shown in Table 5.

Table 4. Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact Threshold	Impact After Mitigation
					Existing	Unmitigated	Mitigated		
A1	2	270	40	NOI-2	67.1	62.0	54.0	62.0	Less Than Significant With Mitigation
A2	2	280	45	NOI-2	67.1	63.0	55.0	62.0	Less Than Significant With Mitigation
A3	2	250	50	NOI-3	67.1	59.0	59.0	62.0	Less than Significant
A4	2	350	45	NOI-2	69.5	61.0	57.0	64.0	Less than Significant
A5	2	330	45	NOI-2	69.5	62.0	57.0	64.0	Less than Significant
A6	2	300	45	NOI-2	69.5	62.0	57.0	64.0	Less than Significant
A7	2	280	45	NOI-2	69.5	63.0	58.0	64.0	Less than Significant
B1	3	50	45	NOI-2	71.2	65.0	57.0	70.0	Less than Significant
B2	2	130	45	NOI-2	65.0	66.0	60.0	61.0	Less Than Significant With Mitigation
B3	2	210	45	NOI-2	65.0	64.0	59.0	61.0	Less Than Significant With Mitigation
B4	2	350	45	NOI-2	65.0	62.0	57.0	61.0	Less Than Significant With Mitigation
B5	2	75	45	NOI-2	65.0	69.0	60.0	61.0	Less Than Significant With Mitigation
B6	2	185	45	NOI-2	65.0	64.0	58.0	61.0	Less Than Significant With Mitigation
B7	2	300	45	NOI-2	65.0	62.0	57.0	61.0	Less Than Significant With Mitigation
B8	2	70	45	NOI-2	70.0	69.0	62.0	64.0	Less Than Significant With Mitigation

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
B9	2	185	45	NOI-2	70.0	64.0	59.0	64.0	Less Than Significant With Mitigation
B10	2	300	45	NOI-2	70.0	62.0	57.0	64.0	Less than Significant
B11	2	70	45	NOI-2	70.0	69.0	62.0	64.0	Less Than Significant With Mitigation
B12	2	185	45	NOI-2	70.0	64.0	59.0	64.0	Less Than Significant With Mitigation
B13	2	300	45	NOI-2	70.0	62.0	57.0	64.0	Less than Significant
B14	2	70	45	NOI-2	70.0	69.0	62.0	64.0	Less Than Significant With Mitigation
B15	2	170	45	NOI-2	70.0	65.0	59.0	64.0	Less Than Significant With Mitigation
B16	2	290	45	NOI-2	70.0	62.0	57.0	64.0	Less than Significant
B17	2	90	45	NOI-2	70.0	64.0	57.0	64.0	Less Than Significant With Mitigation
B18	2	180	45	NOI-2	70.0	61.0	56.0	64.0	Less than Significant
B19	2	300	45	NOI-2	70.0	58.0	53.0	64.0	Less than Significant
B20	2	90	45	NOI-2	70.0	64.0	58.0	64.0	Less Than Significant With Mitigation
B21	2	180	45	NOI-2	70.0	61.0	56.0	64.0	Less than Significant
B22	2	300	45	NOI-2	70.0	58.0	54.0	64.0	Less than Significant
B23	2	93	45	NOI-2	55.1	63.0	54.0	55.0	Less Than Significant With Mitigation
B24	2	140	45	NOI-2	55.1	62.0	53.0	55.0	Less Than Significant With Mitigation
B25	2	300	45	NOI-2	55.1	58.0	49.0	55.0	Less Than Significant With Mitigation
B26	2	93	45	NOI-2	55.1	63.0	54.0	55.0	Less Than Significant With Mitigation
B27	2	140	45	NOI-2	55.1	62.0	53.0	55.0	Less Than Significant With Mitigation

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
B28	2	300	45	NOI-2	55.1	58.0	50.0	55.0	Less Than Significant With Mitigation
B29	2	85	45	NOI-2	55.1	64.0	52.0	55.0	Less Than Significant With Mitigation
B30	2	140	45	NOI-2	55.1	62.0	50.0	55.0	Less Than Significant With Mitigation
B31	2	300	45	NOI-2	55.1	58.0	47.0	55.0	Less Than Significant With Mitigation
B32	2	85	45	NOI-2	55.1	64.0	53.0	55.0	Less Than Significant With Mitigation
B33	2	140	45	NOI-2	55.1	62.0	51.0	55.0	Less Than Significant With Mitigation
B34	2	300	45	NOI-2	55.1	58.0	47.0	55.0	Less Than Significant With Mitigation
B35	2	20	45	NOI-2	70.0	70.0	60.0	64.0	Less Than Significant With Mitigation
B36	2	115	45	NOI-2	65.0	67.0	57.0	61.0	Less Than Significant With Mitigation
B37	2	230	45	NOI-2	65.0	63.0	54.0	61.0	Less Than Significant With Mitigation
B38	2	20	45	NOI-2	65.0	74.0	60.0	61.0	Less Than Significant With Mitigation
B39	2	100	45	NOI-2	65.0	67.0	57.0	61.0	Less Than Significant With Mitigation
B40	2	220	45	NOI-2	65.0	64.0	55.0	61.0	Less Than Significant With Mitigation
B41	2	35	45	NOI-2	65.0	72.0	60.0	61.0	Less Than Significant With Mitigation
B42	2	90	45	NOI-2	70.0	68.0	58.0	64.0	Less Than Significant With Mitigation
B43	2	250	45	NOI-2	70.0	63.0	55.0	64.0	Less than Significant

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
B44	2	35	45	NOI-2	70.0	72.0	63.0	64.0	Less Than Significant With Mitigation
B45	2	90	45	NOI-2	70.0	68.0	61.0	64.0	Less Than Significant With Mitigation
B46	2	250	45	NOI-2	70.0	63.0	58.0	64.0	Less than Significant
B47	2	35	45	NOI-2	70.0	68.0	59.0	64.0	Less Than Significant With Mitigation
B48	2	90	45	NOI-2	70.0	64.0	58.0	64.0	Less Than Significant With Mitigation
B49	2	250	45	NOI-2	70.0	59.0	55.0	64.0	Less than Significant
B50	2	35	45	NOI-2	70.0	68.0	59.0	64.0	Less Than Significant With Mitigation
B51	2	90	45	NOI-2	70.0	64.0	59.0	64.0	Less Than Significant With Mitigation
B52	2	250	45	NOI-2	70.0	59.0	55.0	64.0	Less than Significant
B53	2	35	45	NOI-2	55.1	68.0	54.0	55.0	Less Than Significant With Mitigation
B54	2	90	45	NOI-2	55.1	64.0	51.0	55.0	Less Than Significant With Mitigation
B55	2	250	45	NOI-2	55.1	59.0	46.0	55.0	Less Than Significant With Mitigation
B56	2	35	45	NOI-2	55.1	68.0	54.0	55.0	Less Than Significant With Mitigation
B57	2	90	45	NOI-2	55.1	64.0	51.0	55.0	Less Than Significant With Mitigation
B58	2	250	45	NOI-2	55.1	59.0	46.0	55.0	Less Than Significant With Mitigation
B59	2	35	45	NOI-2	55.1	68.0	53.0	55.0	Less Than Significant With Mitigation
B60	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
B61	2	250	45	NOI-2	55.1	59.0	45.0	55.0	Less Than Significant With Mitigation
B62	2	35	45	NOI-2	55.1	68.0	54.0	55.0	Less Than Significant With Mitigation
B63	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation
B64	2	250	45	NOI-2	55.1	59.0	46.0	55.0	Less Than Significant With Mitigation
C1	2	85	45	NOI-2	55.1	64.0	53.0	55.0	Less Than Significant With Mitigation
C2	2	145	45	NOI-2	55.1	61.0	50.0	55.0	Less Than Significant With Mitigation
C3	2	300	45	NOI-2	55.1	58.0	47.0	55.0	Less Than Significant With Mitigation
C4	2	80	45	NOI-2	55.1	64.0	52.0	55.0	Less Than Significant With Mitigation
C5	2	140	45	NOI-2	55.1	62.0	51.0	55.0	Less Than Significant With Mitigation
C6	2	295	45	NOI-2	55.1	58.0	47.0	55.0	Less Than Significant With Mitigation
C7	2	80	45	NOI-2	55.1	64.0	53.0	55.0	Less Than Significant With Mitigation
C8	2	140	45	NOI-2	55.1	62.0	51.0	55.0	Less Than Significant With Mitigation
C9	2	295	45	NOI-2	55.1	58.0	47.0	55.0	Less Than Significant With Mitigation
C10	2	80	45	NOI-2	55.1	64.0	53.0	55.0	Less Than Significant With Mitigation
C11	2	140	45	NOI-2	55.1	62.0	51.0	55.0	Less Than Significant With Mitigation
C12	2	295	45	NOI-2	55.1	58.0	47.0	55.0	Less Than Significant With Mitigation

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
C13	2	80	45	NOI-2	55.1	64.0	53.0	55.0	Less Than Significant With Mitigation
C14	2	140	45	NOI-2	55.1	62.0	51.0	55.0	Less Than Significant With Mitigation
C15	2	295	45	NOI-2	55.1	58.0	47.0	55.0	Less Than Significant With Mitigation
C16	2	80	45	NOI-2	55.1	64.0	54.0	55.0	Less Than Significant With Mitigation
C17	2	140	45	NOI-2	55.1	62.0	52.0	55.0	Less Than Significant With Mitigation
C18	2	295	45	NOI-2	55.1	58.0	47.0	55.0	Less Than Significant With Mitigation
C19	2	80	45	NOI-2	55.1	64.0	53.0	55.0	Less Than Significant With Mitigation
C20	2	140	45	NOI-2	55.1	62.0	51.0	55.0	Less Than Significant With Mitigation
C21	2	295	45	NOI-2	55.1	58.0	47.0	55.0	Less Than Significant With Mitigation
C22	2	35	45	NOI-2	55.1	68.0	54.0	55.0	Less Than Significant With Mitigation
C23	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation
C24	2	250	45	NOI-2	55.1	59.0	46.0	55.0	Less Than Significant With Mitigation
C25	2	35	45	NOI-2	55.1	68.0	54.0	55.0	Less Than Significant With Mitigation
C26	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation
C27	2	250	45	NOI-2	55.1	59.0	46.0	55.0	Less Than Significant With Mitigation
C28	2	35	45	NOI-2	55.1	68.0	54.0	55.0	Less Than Significant With Mitigation

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
C29	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation
C30	2	250	45	NOI-2	55.1	59.0	46.0	55.0	Less Than Significant With Mitigation
C31	2	35	45	NOI-2	55.1	68.0	53.0	55.0	Less Than Significant With Mitigation
C32	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation
C33	2	250	45	NOI-2	55.1	59.0	45.0	55.0	Less Than Significant With Mitigation
C34	2	35	45	NOI-2	55.1	68.0	53.0	55.0	Less Than Significant With Mitigation
C35	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation
C36	2	250	45	NOI-2	55.1	59.0	45.0	55.0	Less Than Significant With Mitigation
C37	2	35	45	NOI-2	55.1	68.0	53.0	55.0	Less Than Significant With Mitigation
C38	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation
C39	2	250	45	NOI-2	55.1	59.0	45.0	55.0	Less Than Significant With Mitigation
C40	2	35	45	NOI-2	55.1	68.0	54.0	55.0	Less Than Significant With Mitigation
C41	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation
C42	2	250	45	NOI-2	55.1	59.0	45.0	55.0	Less Than Significant With Mitigation
D1	2	90	45	NOI-2	55.1	64.0	53.0	55.0	Less Than Significant With Mitigation
D2	2	150	45	NOI-2	55.1	61.0	50.0	55.0	Less Than Significant With Mitigation

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
D3	2	275	45	NOI-2	55.1	59.0	48.0	55.0	Less Than Significant With Mitigation
D4	2	90	45	NOI-2	55.1	64.0	57.0	55.0	Significant and Unavoidable
D5	2	170	45	NOI-2	55.1	61.0	54.0	55.0	Less Than Significant With Mitigation
D6	2	250	45	NOI-2	55.1	59.0	52.0	55.0	Less Than Significant With Mitigation
D7	2	350	45	NOI-2	55.1	58.0	51.0	55.0	Less Than Significant With Mitigation
D8	2	50	45	NOI-2	55.1	66.0	59.0	55.0	Significant and Unavoidable
D9	2	50	45	NOI-2	55.1	66.0	54.0	55.0	Less Than Significant With Mitigation
D10	2	50	45	NOI-2	55.1	66.0	54.0	55.0	Less Than Significant With Mitigation
D11	2	50	45	NOI-2	55.1	66.0	54.0	55.0	Less Than Significant With Mitigation
D12	2	50	45	NOI-2	55.1	66.0	54.0	55.0	Less Than Significant With Mitigation
D13	2	50	45	NOI-2	60.8	66.0	54.0	58.0	Less Than Significant With Mitigation
D14	2	50	45	NOI-2	60.8	66.0	55.0	58.0	Less Than Significant With Mitigation
D15	2	50	45	NOI-2	60.8	66.0	54.0	58.0	Less Than Significant With Mitigation
D16	2	50	45	NOI-2	60.8	66.0	54.0	58.0	Less Than Significant With Mitigation
D17	2	180	45	NOI-2	55.1	61.0	53.0	55.0	Less Than Significant With Mitigation
D18	2	260	45	NOI-2	55.1	59.0	51.0	55.0	Less Than Significant With Mitigation
D19	2	330	45	NOI-2	55.1	58.0	50.0	55.0	Less Than Significant With Mitigation

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
D20	2	180	45	NOI-2	55.1	61.0	50.0	55.0	Less Than Significant With Mitigation
D21	2	180	45	NOI-2	55.1	61.0	50.0	55.0	Less Than Significant With Mitigation
D22	2	180	45	NOI-2	55.1	61.0	50.0	55.0	Less Than Significant With Mitigation
D23	2	180	45	NOI-2	60.8	61.0	50.0	58.0	Less Than Significant With Mitigation
D24	2	180	45	NOI-2	60.8	61.0	49.0	58.0	Less Than Significant With Mitigation
D25	2	260	45	NOI-2	60.8	59.0	47.0	58.0	Less Than Significant With Mitigation
D26	2	30	45	NOI-2	55.1	68.0	54.0	55.0	Less Than Significant With Mitigation
D27	2	90	45	NOI-2	55.1	64.0	51.0	55.0	Less Than Significant With Mitigation
D28	2	250	45	NOI-2	55.1	59.0	46.0	55.0	Less Than Significant With Mitigation
D29	2	30	45	NOI-2	60.8	68.0	60.0	58.0	Significant and Unavoidable
D30	2	90	45	NOI-2	55.1	64.0	55.0	55.0	Significant and Unavoidable
D31	2	250	45	NOI-2	55.1	59.0	50.0	55.0	Less Than Significant With Mitigation
D32	2	30	45	NOI-2	55.1	68.0	59.0	55.0	Significant and Unavoidable
D33	2	90	45	NOI-2	55.1	64.0	55.0	55.0	Significant and Unavoidable
D34	2	250	45	NOI-2	55.1	59.0	50.0	55.0	Less Than Significant With Mitigation
D35	2	30	45	NOI-2	55.1	68.0	54.0	55.0	Less Than Significant With Mitigation
D36	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation
D37	2	250	45	NOI-2	55.1	59.0	46.0	55.0	Less Than Significant With Mitigation

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
D38	2	30	45	NOI-2	55.1	68.0	54.0	55.0	Less Than Significant With Mitigation
D39	2	90	45	NOI-2	55.1	64.0	50.0	55.0	Less Than Significant With Mitigation
D40	2	250	45	NOI-2	55.1	59.0	46.0	55.0	Less Than Significant With Mitigation
D41	2	30	45	NOI-2	60.8	67.0	54.0	58.0	Less Than Significant With Mitigation
D42	2	90	45	NOI-2	60.8	59.0	46.0	58.0	Less Than Significant With Mitigation
D43	2	250	45	NOI-2	60.8	53.0	40.0	58.0	Less than Significant
D44	2	30	45	NOI-2	60.8	67.0	57.0	58.0	Less Than Significant With Mitigation
D45	2	90	45	NOI-2	60.8	59.0	47.0	58.0	Less Than Significant With Mitigation
D46	2	250	45	NOI-2	60.8	53.0	41.0	58.0	Less than Significant
D47	2	30	45	NOI-2	60.8	68.0	57.0	58.0	Less Than Significant With Mitigation
D48	2	90	45	NOI-2	60.8	64.0	52.0	58.0	Less Than Significant With Mitigation
D49	2	250	45	NOI-2	60.8	59.0	46.0	58.0	Less Than Significant With Mitigation
D50	2	30	45	NOI-2	60.8	68.0	55.0	58.0	Less Than Significant With Mitigation
D51	2	90	45	NOI-2	60.8	64.0	51.0	58.0	Less Than Significant With Mitigation
D52	2	250	45	NOI-2	60.8	59.0	46.0	58.0	Less Than Significant With Mitigation
E1	2	230	45	None	75.1	59.0	59.0	65.0	Less than Significant
E2	2	90	45	NOI-2	57.1	64.0	55.0	56.0	Less Than Significant With Mitigation
E3	2	220	45	NOI-2	57.1	55.0	44.0	56.0	Less than Significant

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
E4	2	25	45	NOI-2	57.1	69.0	55.0	56.0	Less Than Significant With Mitigation
E5	2	150	45	NOI-2	57.1	61.0	49.0	56.0	Less Than Significant With Mitigation
E6	2	220	45	NOI-2	57.1	60.0	48.0	56.0	Less Than Significant With Mitigation
E7	2	350	45	NOI-2	57.1	58.0	47.0	56.0	Less Than Significant With Mitigation
E8	2	150	45	NOI-2	57.1	61.0	49.0	56.0	Less Than Significant With Mitigation
E9	2	320	45	NOI-2	57.1	58.0	46.0	56.0	Less Than Significant With Mitigation
F1	3	120	35	NOI-2NOI-3	52.6	61.0	52.0	59.0	Less Than Significant With Mitigation
F2	2	55	45	NOI-2	55.8	66.0	59.0	56.0	Significant and Unavoidable
F3	2	60	45	NOI-2	55.8	65.0	53.0	56.0	Less Than Significant With Mitigation
F4	2	55	45	NOI-2	55.8	66.0	54.0	56.0	Less Than Significant With Mitigation
F5	2	220	45	NOI-2	55.8	55.0	47.0	56.0	Less than Significant
F6	2	320	45	NOI-2	55.8	54.0	46.0	56.0	Less than Significant
F7	2	50	45	NOI-2	55.8	66.0	53.0	56.0	Less Than Significant With Mitigation
F8	2	220	45	NOI-2	55.8	55.0	43.0	56.0	Less than Significant
F9	2	320	45	NOI-2	55.8	54.0	42.0	56.0	Less than Significant
F10	2	70	45	NOI-2	55.8	65.0	53.0	56.0	Less Than Significant With Mitigation
F11	2	100	45	NOI-2	55.8	63.0	51.0	56.0	Less Than Significant With Mitigation
F12	2	200	45	NOI-2	55.8	60.0	48.0	56.0	Less Than Significant With Mitigation
F13	2	320	45	NOI-2	55.8	54.0	42.0	56.0	Less than Significant

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
F14	2	90	45	NOI-2	55.8	64.0	52.0	56.0	Less Than Significant With Mitigation
F15	2	160	45	NOI-2	55.8	61.0	49.0	56.0	Less Than Significant With Mitigation
F16	2	300	45	NOI-2	55.8	54.0	42.0	56.0	Less than Significant
F17	2	90	45	NOI-2	55.8	64.0	51.0	56.0	Less Than Significant With Mitigation
F18	2	260	45	NOI-2	55.8	54.0	42.0	56.0	Less than Significant
F19	2	350	45	NOI-2	55.8	53.0	41.0	56.0	Less than Significant
F20	3	80	45	NOI-2NOI-3	52.6	64.0	46.0	59.0	Less Than Significant With Mitigation
G1	2	130	45	NOI-2NOI-3	55.8	67.0	50.0	56.0	Less Than Significant With Mitigation
G2	2	300	55	NOI-2	55.8	56.0	44.0	56.0	Less Than Significant With Mitigation
G3	2	350	55	NOI-2	55.8	55.0	43.0	56.0	Less than Significant
G4	2	330	55	NOI-2	55.8	55.0	43.0	56.0	Less than Significant
G5	2	180	55	NOI-2NOI-3	55.8	67.0	50.0	56.0	Less Than Significant With Mitigation
G6	2	270	55	NOI-2NOI-3	55.8	66.0	49.0	56.0	Less Than Significant With Mitigation
G7	2	70	55	NOI-2NOI-3	55.8	71.0	53.0	56.0	Less Than Significant With Mitigation
G8	2	150	55	NOI-2NOI-3	55.8	64.0	47.0	56.0	Less Than Significant With Mitigation
G9	2	210	55	NOI-2NOI-3	55.8	62.0	45.0	56.0	Less Than Significant With Mitigation
G10	2	300	55	NOI-2	55.8	56.0	44.0	56.0	Less Than Significant With Mitigation
G11	2	120	55	NOI-2	55.8	64.0	51.0	56.0	Less Than Significant With Mitigation

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
G12	2	75	55	NOI-2	55.8	66.0	53.0	56.0	Less Than Significant With Mitigation
G13	2	160	55	NOI-2	55.8	63.0	51.0	56.0	Less Than Significant With Mitigation
G14	2	220	55	NOI-2	55.8	61.0	49.0	56.0	Less Than Significant With Mitigation
G15	2	120	55	NOI-2	74.9	64.0	52.0	65.0	Less than Significant
G16	2	205	55	NOI-2NOI-3	61.3	67.0	50.0	59.0	Less Than Significant With Mitigation
G17	2	150	55	NOI-2NOI-3	61.3	68.0	51.0	59.0	Less Than Significant With Mitigation
G18	2	100	55	NOI-2NOI-3	61.3	70.0	52.0	59.0	Less Than Significant With Mitigation
G19	2	220	55	NOI-2NOI-3	61.3	66.0	49.0	59.0	Less Than Significant With Mitigation
G20	2	80	55	NOI-2NOI-3	61.3	71.0	55.0	59.0	Less Than Significant With Mitigation
G21	2	160	55	NOI-2NOI-3	61.3	68.0	52.0	59.0	Less Than Significant With Mitigation
G22	2	250	55	NOI-2NOI-3	61.3	66.0	50.0	59.0	Less Than Significant With Mitigation
G23	2	250	55	NOI-2NOI-3	61.3	66.0	50.0	59.0	Less Than Significant With Mitigation
G24	2	350	55	NOI-2	61.3	59.0	48.0	59.0	Less Than Significant With Mitigation
G25	2	350	55	NOI-2	61.3	59.0	48.0	59.0	Less Than Significant With Mitigation
G26	2	430	55	NOI-2	61.3	59.0	48.0	59.0	Less Than Significant With Mitigation
G27	2	30	55	NOI-2NOI-3	61.3	75.0	56.0	59.0	Less Than Significant With Mitigation

Proposed Project Mitigated Light Rail Noise at Sensitive Receptors (No Bell Shroud or Gate-Down-Bell-Stop)									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
G28	2	75	55	NOI-2NOI-3	61.3	71.0	53.0	59.0	Less Than Significant With Mitigation
G29	2	120	55	NOI-2NOI-3	61.3	69.0	52.0	59.0	Less Than Significant With Mitigation
G30	2	250	55	NOI-2	61.3	61.0	49.0	59.0	Less Than Significant With Mitigation
G31	2	350	55	NOI-2	74.9	59.0	48.0	65.0	Less than Significant
H1	2	130	25	None	69.6	57.0	57.0	64.0	Less than Significant
H2	2	250	25	None	69.6	54.0	54.0	64.0	Less than Significant

NOI-2 = Soundwalls.
NOI-3 = Low Impact Frogs
Source: TAHA, 2023.

Table 5. Proposed Project Mitigated Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, Bell Shroud, and Gate-Down-Bell-Stop

Proposed Project Mitigated Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, Bell Shroud, and Gate-Down-Bell-Stop								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
A1	2	220	NOI-4	67.3	63.0	54.0	62.0	Less Than Significant With Mitigation
A2	2	220	NOI-4	67.3	63.0	55.0	62.0	Less Than Significant With Mitigation
A4	2	355	NOI-4	69.6	62.0	57.0	64.0	Less than Significant
A5	2	330	NOI-4	69.6	62.0	57.0	64.0	Less than Significant
A6	2	300	NOI-4	69.6	63.0	57.0	64.0	Less than Significant
A7	2	270	NOI-4	69.6	63.0	58.0	64.0	Less than Significant
B1	3	80	NOI-4	71.4	73.0	61.0	70.0	Less Than Significant With Mitigation
B2	2	120	NOI-4	65.8	67.0	60.0	61.0	Less Than Significant With Mitigation
B3	2	200	NOI-4	65.4	64.0	59.0	61.0	Less Than Significant With Mitigation
B4	2	360	NOI-4	65.2	62.0	57.0	61.0	Less Than Significant With Mitigation
B5	2	35	NOI-4	66.6	70.0	61.0	62.0	Less Than Significant With Mitigation
B6	2	160	NOI-4	65.5	65.0	59.0	61.0	Less Than Significant With Mitigation
B7	2	285	NOI-4	65.3	63.0	57.0	61.0	Less Than Significant With Mitigation
B8	2	40	NOI-4	70.5	70.0	62.0	65.0	Less Than Significant With Mitigation
B9	2	150	NOI-4	70.2	65.0	60.0	65.0	Less Than Significant With Mitigation
B10	2	265	NOI-4	70.1	63.0	57.0	64.0	Less than Significant
B11	2	40	NOI-4	70.5	70.0	62.0	65.0	Less Than Significant With Mitigation
B12	2	150	NOI-4	70.2	65.0	60.0	65.0	Less Than Significant With Mitigation
B13	2	265	NOI-4	70.1	63.0	57.0	64.0	Less than Significant
B14	2	40	NOI-4	70.5	70.0	62.0	65.0	Less Than Significant With Mitigation
B15	2	150	NOI-4	70.2	65.0	59.0	65.0	Less Than Significant With Mitigation
B16	2	265	NOI-4	70.1	63.0	58.0	64.0	Less than Significant
B17	2	60	NOI-4	70.4	65.0	58.0	65.0	Less Than Significant With Mitigation
B18	2	160	NOI-4	70.2	62.0	56.0	65.0	Less than Significant
B19	2	275	NOI-4	70.1	60.0	54.0	64.0	Less than Significant
B20	2	60	NOI-4	70.4	65.0	58.0	65.0	Less Than Significant With Mitigation
B21	2	160	NOI-4	70.2	62.0	56.0	65.0	Less than Significant
B22	2	275	NOI-4	70.1	60.0	55.0	64.0	Less than Significant

Proposed Project Mitigated Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, Bell Shroud, and Gate-Down-Bell-Stop								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
B23	2	60	NOI-4	60.9	65.0	56.0	58.0	Less Than Significant With Mitigation
B24	2	160	NOI-4	58.4	63.0	53.0	57.0	Less Than Significant With Mitigation
B25	2	275	NOI-4	57.4	60.0	50.0	56.0	Less Than Significant With Mitigation
B26	2	60	NOI-4	60.9	65.0	56.0	58.0	Less Than Significant With Mitigation
B27	2	160	NOI-4	58.4	63.0	53.0	57.0	Less Than Significant With Mitigation
B28	2	275	NOI-4	57.4	60.0	51.0	56.0	Less Than Significant With Mitigation
B29	2	60	NOI-4	60.9	65.0	54.0	58.0	Less Than Significant With Mitigation
B30	2	160	NOI-4	58.4	63.0	51.0	57.0	Less Than Significant With Mitigation
B31	2	275	NOI-4	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
B32	2	60	NOI-4	60.9	65.0	55.0	58.0	Less Than Significant With Mitigation
B33	2	160	NOI-4	58.4	63.0	52.0	57.0	Less Than Significant With Mitigation
B34	2	275	NOI-4	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
B35	2	55	NOI-4	70.6	71.0	60.0	65.0	Less Than Significant With Mitigation
B36	2	175	NOI-4	65.5	67.0	57.0	61.0	Less Than Significant With Mitigation
B37	2	290	NOI-4	65.3	64.0	55.0	61.0	Less Than Significant With Mitigation
B38	2	55	NOI-4	66.6	74.0	61.0	62.0	Less Than Significant With Mitigation
B39	2	175	NOI-4	65.5	67.0	57.0	61.0	Less Than Significant With Mitigation
B40	2	290	NOI-4	65.3	64.0	55.0	61.0	Less Than Significant With Mitigation
B41	2	60	NOI-4	70.5	72.0	60.0	65.0	Less Than Significant With Mitigation
B42	2	130	NOI-4	70.2	68.0	58.0	65.0	Less Than Significant With Mitigation
B43	2	285	NOI-4	70.1	64.0	55.0	64.0	Less Than Significant With Mitigation
B44	2	60	NOI-4	70.5	72.0	63.0	65.0	Less Than Significant With Mitigation
B45	2	130	NOI-4	70.2	68.0	61.0	65.0	Less Than Significant With Mitigation
B46	2	285	NOI-4	70.1	64.0	58.0	64.0	Less Than Significant With Mitigation
B47	2	65	NOI-4	70.5	68.0	59.0	65.0	Less Than Significant With Mitigation
B48	2	150	NOI-4	70.2	64.0	58.0	65.0	Less than Significant
B49	2	280	NOI-4	70.1	60.0	55.0	64.0	Less than Significant
B50	2	65	NOI-4	70.5	68.0	59.0	65.0	Less Than Significant With Mitigation
B51	2	150	NOI-4	70.2	64.0	59.0	65.0	Less than Significant
B52	2	280	NOI-4	70.1	60.0	55.0	64.0	Less than Significant

Proposed Project Mitigated Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, Bell Shroud, and Gate-Down-Bell-Stop								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
B53	2	65	NOI-4	61.7	68.0	55.0	59.0	Less Than Significant With Mitigation
B54	2	150	NOI-4	58.9	64.0	52.0	57.0	Less Than Significant With Mitigation
B55	2	280	NOI-4	57.5	60.0	48.0	56.0	Less Than Significant With Mitigation
B56	2	65	NOI-4	61.7	68.0	55.0	59.0	Less Than Significant With Mitigation
B57	2	150	NOI-4	58.9	64.0	52.0	57.0	Less Than Significant With Mitigation
B58	2	280	NOI-4	57.5	60.0	48.0	56.0	Less Than Significant With Mitigation
B59	2	65	NOI-4	61.7	68.0	54.0	59.0	Less Than Significant With Mitigation
B60	2	150	NOI-4	58.9	64.0	51.0	57.0	Less Than Significant With Mitigation
B61	2	280	NOI-4	57.5	60.0	47.0	56.0	Less Than Significant With Mitigation
B62	2	65	NOI-4	61.7	68.0	55.0	59.0	Less Than Significant With Mitigation
B63	2	150	NOI-4	58.9	64.0	51.0	57.0	Less Than Significant With Mitigation
B64	2	280	NOI-4	57.5	60.0	48.0	56.0	Less Than Significant With Mitigation
C1	2	65	NOI-4	60.7	65.0	54.0	58.0	Less Than Significant With Mitigation
C2	2	115	NOI-4	59.2	63.0	52.0	57.0	Less Than Significant With Mitigation
C3	2	275	NOI-4	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C4	2	65	NOI-4	60.7	65.0	54.0	58.0	Less Than Significant With Mitigation
C5	2	115	NOI-4	59.2	63.0	52.0	57.0	Less Than Significant With Mitigation
C6	2	275	NOI-4	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C7	2	65	NOI-4	60.7	65.0	55.0	58.0	Less Than Significant With Mitigation
C8	2	115	NOI-4	59.2	63.0	52.0	57.0	Less Than Significant With Mitigation
C9	2	275	NOI-4	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C10	2	65	NOI-4	60.7	65.0	55.0	58.0	Less Than Significant With Mitigation
C11	2	115	NOI-4	59.2	63.0	52.0	57.0	Less Than Significant With Mitigation
C12	2	275	NOI-4	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C13	2	65	NOI-4	60.7	65.0	55.0	58.0	Less Than Significant With Mitigation
C14	2	115	NOI-4	59.2	63.0	52.0	57.0	Less Than Significant With Mitigation
C15	2	275	NOI-4	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C16	2	65	NOI-4	60.9	65.0	55.0	58.0	Less Than Significant With Mitigation
C17	2	115	NOI-4	59.3	63.0	53.0	57.0	Less Than Significant With Mitigation
C18	2	275	NOI-4	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation

Proposed Project Mitigated Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, Bell Shroud, and Gate-Down-Bell-Stop								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
C19	2	65	NOI-4	60.9	65.0	55.0	58.0	Less Than Significant With Mitigation
C20	2	115	NOI-4	59.3	63.0	52.0	57.0	Less Than Significant With Mitigation
C21	2	275	NOI-4	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C22	2	65	NOI-4	61.7	68.0	55.0	59.0	Less Than Significant With Mitigation
C23	2	150	NOI-4	58.9	64.0	51.0	57.0	Less Than Significant With Mitigation
C24	2	280	NOI-4	57.5	60.0	48.0	56.0	Less Than Significant With Mitigation
C25	2	60	NOI-4	61.1	68.0	55.0	58.0	Less Than Significant With Mitigation
C26	2	160	NOI-4	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C27	2	285	NOI-4	57.3	60.0	48.0	56.0	Less Than Significant With Mitigation
C28	2	60	NOI-4	61.1	68.0	55.0	58.0	Less Than Significant With Mitigation
C29	2	160	NOI-4	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C30	2	285	NOI-4	57.3	60.0	48.0	56.0	Less Than Significant With Mitigation
C31	2	60	NOI-4	61.1	68.0	55.0	58.0	Less Than Significant With Mitigation
C32	2	160	NOI-4	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C33	2	285	NOI-4	57.3	60.0	47.0	56.0	Less Than Significant With Mitigation
C34	2	60	NOI-4	61.1	68.0	55.0	58.0	Less Than Significant With Mitigation
C35	2	160	NOI-4	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C36	2	285	NOI-4	57.3	60.0	47.0	56.0	Less Than Significant With Mitigation
C37	2	60	NOI-4	61.3	68.0	55.0	59.0	Less Than Significant With Mitigation
C38	2	160	NOI-4	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C39	2	275	NOI-4	57.4	60.0	47.0	56.0	Less Than Significant With Mitigation
C40	2	60	NOI-4	61.3	68.0	55.0	59.0	Less Than Significant With Mitigation
C41	2	160	NOI-4	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C42	2	275	NOI-4	57.4	60.0	47.0	56.0	Less Than Significant With Mitigation
D1	2	65	NOI-4	61.0	65.0	54.0	58.0	Less Than Significant With Mitigation
D2	2	125	NOI-4	59.1	63.0	52.0	57.0	Less Than Significant With Mitigation
D3	2	240	NOI-4	57.7	60.0	49.0	57.0	Less Than Significant With Mitigation
D4	2	65	NOI-4	61.0	65.0	57.0	58.0	Less Than Significant With Mitigation
D5	2	145	NOI-4	58.8	62.0	54.0	57.0	Less Than Significant With Mitigation
D6	2	230	NOI-4	57.8	60.0	53.0	57.0	Less Than Significant With Mitigation

Proposed Project Mitigated Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, Bell Shroud, and Gate-Down-Bell-Stop								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
D7	2	320	NOI-4	57.2	59.0	51.0	56.0	Less Than Significant With Mitigation
D8	2	20	NOI-4	65.0	69.0	60.0	61.0	Less Than Significant With Mitigation
D9	2	20	NOI-4	65.0	69.0	57.0	61.0	Less Than Significant With Mitigation
D10	2	20	NOI-4	65.0	69.0	57.0	61.0	Less Than Significant With Mitigation
D11	2	20	NOI-4	65.0	69.0	57.0	61.0	Less Than Significant With Mitigation
D12	2	20	NOI-4	65.0	69.0	57.0	61.0	Less Than Significant With Mitigation
D13	2	20	NOI-4	66.1	69.0	57.0	62.0	Less Than Significant With Mitigation
D14	2	20	NOI-4	66.1	69.0	58.0	62.0	Less Than Significant With Mitigation
D17	2	165	NOI-4	58.5	62.0	53.0	57.0	Less Than Significant With Mitigation
D18	2	245	NOI-4	57.6	60.0	52.0	57.0	Less Than Significant With Mitigation
D19	2	325	NOI-4	57.1	59.0	51.0	56.0	Less Than Significant With Mitigation
D20	2	165	NOI-4	58.5	62.0	51.0	57.0	Less Than Significant With Mitigation
D21	2	165	NOI-4	58.5	62.0	51.0	57.0	Less Than Significant With Mitigation
D22	2	165	NOI-4	58.5	62.0	51.0	57.0	Less Than Significant With Mitigation
D23	2	170	NOI-4	62.0	62.0	51.0	59.0	Less Than Significant With Mitigation
D26	2	60	NOI-4	61.3	69.0	56.0	59.0	Less Than Significant With Mitigation
D27	2	120	NOI-4	59.2	64.0	52.0	57.0	Less Than Significant With Mitigation
D28	2	280	NOI-4	57.4	60.0	48.0	56.0	Less Than Significant With Mitigation
D29	2	60	NOI-4	61.3	69.0	60.0	59.0	Significant and Unavoidable
D30	2	120	NOI-4	59.2	64.0	55.0	57.0	Less Than Significant With Mitigation
D31	2	280	NOI-4	57.4	60.0	51.0	56.0	Less Than Significant With Mitigation
D32	2	55	NOI-4	61.6	69.0	59.0	59.0	Significant and Unavoidable
D33	2	115	NOI-4	59.4	65.0	55.0	57.0	Less Than Significant With Mitigation
D34	2	275	NOI-4	57.4	60.0	51.0	56.0	Less Than Significant With Mitigation
D35	2	55	NOI-4	61.6	69.0	56.0	59.0	Less Than Significant With Mitigation
D36	2	115	NOI-4	59.4	65.0	51.0	57.0	Less Than Significant With Mitigation
D37	2	275	NOI-4	57.4	60.0	48.0	56.0	Less Than Significant With Mitigation
D38	2	55	NOI-4	61.6	69.0	56.0	59.0	Less Than Significant With Mitigation
D39	2	115	NOI-4	59.4	65.0	51.0	57.0	Less Than Significant With Mitigation
D40	2	275	NOI-4	57.4	60.0	48.0	56.0	Less Than Significant With Mitigation

Proposed Project Mitigated Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, Bell Shroud, and Gate-Down-Bell-Stop								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
D41	2	55	NOI-4	63.0	68.0	55.0	60.0	Less Than Significant With Mitigation
D42	2	115	NOI-4	61.4	61.0	50.0	59.0	Less Than Significant With Mitigation
D43	2	275	NOI-4	61.0	56.0	45.0	58.0	Less than Significant
D44	2	55	NOI-4	63.0	68.0	58.0	60.0	Less Than Significant With Mitigation
D45	2	115	NOI-4	61.4	61.0	50.0	59.0	Less Than Significant With Mitigation
D46	2	275	NOI-4	61.0	56.0	45.0	58.0	Less than Significant
E1	2	205	NOI-4	75.1	60.0	60.0	65.0	Less than Significant
E2	2	50	NOI-4	57.8	64.0	56.0	57.0	Less Than Significant With Mitigation
E3	2	200	NOI-4	57.2	56.0	47.0	56.0	Less Than Significant With Mitigation
E4	2	60	NOI-4	58.0	69.0	56.0	57.0	Less Than Significant With Mitigation
E5	2	200	NOI-4	57.3	61.0	51.0	56.0	Less Than Significant With Mitigation
E6	2	275	NOI-4	57.3	60.0	49.0	56.0	Less Than Significant With Mitigation
E7	2	320	NOI-4	57.2	58.0	48.0	56.0	Less Than Significant With Mitigation
E8	2	215	NOI-4	57.3	61.0	51.0	56.0	Less Than Significant With Mitigation
E9	2	385	NOI-4	57.2	58.0	47.0	56.0	Less Than Significant With Mitigation
F1	3	70	NOI-4	59.7	73.0	55.0	63.0	Less Than Significant With Mitigation
F2	2	25	NOI-4	64.0	68.0	59.0	60.0	Less Than Significant With Mitigation
F3	2	30	NOI-4	63.7	67.0	56.0	60.0	Less Than Significant With Mitigation
F4	2	30	NOI-4	63.7	68.0	56.0	60.0	Less Than Significant With Mitigation
F5	2	185	NOI-4	57.0	58.0	49.0	56.0	Less Than Significant With Mitigation
F6	2	295	NOI-4	56.6	56.0	47.0	56.0	Less Than Significant With Mitigation
F7	2	35	NOI-4	63.2	68.0	56.0	60.0	Less Than Significant With Mitigation
F8	2	200	NOI-4	56.9	58.0	47.0	56.0	Less Than Significant With Mitigation
F9	2	305	NOI-4	56.6	56.0	45.0	56.0	Less Than Significant With Mitigation
F10	2	63	NOI-4	61.1	66.0	54.0	58.0	Less Than Significant With Mitigation
F11	2	75	NOI-4	60.6	65.0	53.0	58.0	Less Than Significant With Mitigation
F12	2	170	NOI-4	58.7	61.0	50.0	57.0	Less Than Significant With Mitigation
F13	2	295	NOI-4	56.6	56.0	45.0	56.0	Less Than Significant With Mitigation
F14	2	65	NOI-4	60.9	65.0	54.0	58.0	Less Than Significant With Mitigation
F15	2	120	NOI-4	59.4	63.0	51.0	57.0	Less Than Significant With Mitigation

Proposed Project Mitigated Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, Bell Shroud, and Gate-Down-Bell-Stop								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
F16	2	265	NOI-4	56.6	57.0	46.0	56.0	Less Than Significant With Mitigation
F17	2	65	NOI-4	60.7	65.0	53.0	58.0	Less Than Significant With Mitigation
F18	2	240	NOI-4	56.7	57.0	46.0	56.0	Less Than Significant With Mitigation
F19	2	365	NOI-4	56.4	56.0	45.0	56.0	Less Than Significant With Mitigation
F20	3	100	NOI-4	59.5	72.0	51.0	63.0	Less Than Significant With Mitigation
G1	2	100	NOI-4	59.7	68.0	49.0	58.0	Less Than Significant With Mitigation
G2	2	270	NOI-4	56.6	58.0	46.0	56.0	Less Than Significant With Mitigation
G3	2	300	NOI-4	56.6	57.0	46.0	56.0	Less Than Significant With Mitigation
G4	2	305	NOI-4	55.9	55.0	46.0	56.0	Less than Significant
G5	2	150	NOI-4	56.2	67.0	49.0	56.0	Less Than Significant With Mitigation
G6	2	260	NOI-4	56.0	66.0	46.0	56.0	Less Than Significant With Mitigation
G7	2	45	NOI-4	56.9	71.0	53.0	56.0	Less Than Significant With Mitigation
G8	2	120	NOI-4	56.0	64.0	48.0	56.0	Less Than Significant With Mitigation
G9	2	195	NOI-4	55.9	62.0	46.0	56.0	Less Than Significant With Mitigation
G10	2	270	NOI-4	55.9	56.0	46.0	56.0	Less Than Significant With Mitigation
G11	2	110	NOI-4	56.3	64.0	53.0	56.0	Less Than Significant With Mitigation
G12	2	45	NOI-4	57.0	66.0	55.0	56.0	Less Than Significant With Mitigation
G13	2	145	NOI-4	56.2	63.0	52.0	56.0	Less Than Significant With Mitigation
G14	2	195	NOI-4	56.1	61.0	51.0	56.0	Less Than Significant With Mitigation
G15	2	150	NOI-4	74.9	64.0	53.0	65.0	Less than Significant
G16	2	260	NOI-4	61.4	67.0	47.0	59.0	Less Than Significant With Mitigation
G17	2	215	NOI-4	61.4	68.0	48.0	59.0	Less Than Significant With Mitigation
G18	2	140	NOI-4	61.4	70.0	50.0	59.0	Less Than Significant With Mitigation
G19	2	240	NOI-4	61.4	66.0	47.0	59.0	Less Than Significant With Mitigation
G20	2	120	NOI-4	61.5	71.0	52.0	59.0	Less Than Significant With Mitigation
G21	2	200	NOI-4	61.4	68.0	49.0	59.0	Less Than Significant With Mitigation
G22	2	300	NOI-4	61.4	66.0	47.0	59.0	Less Than Significant With Mitigation
G23	2	290	NOI-4	61.4	66.0	47.0	59.0	Less Than Significant With Mitigation
G24	2	390	NOI-4	61.3	59.0	49.0	59.0	Less Than Significant With Mitigation
G25	2	362	NOI-4	61.4	59.0	49.0	59.0	Less Than Significant With Mitigation

Proposed Project Mitigated Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, Bell Shroud, and Gate-Down-Bell-Stop								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
G26	2	402	NOI-4	61.3	59.0	48.0	59.0	Less Than Significant With Mitigation
G27	2	75	NOI-4	61.5	75.0	53.0	59.0	Less Than Significant With Mitigation
G28	2	105	NOI-4	61.5	71.0	51.0	59.0	Less Than Significant With Mitigation
G29	2	172	NOI-4	61.4	69.0	49.0	59.0	Less Than Significant With Mitigation
G30	2	275	NOI-4	61.4	61.0	50.0	59.0	Less Than Significant With Mitigation

Note: This table only includes clusters affected by relocated freight tracks.

NOI-4 = Quiet Zone Establishment

Source: TAHA, 2023

UNMITIGATED TRENCH OPTION NOISE TABLES

The results of the noise analysis associated with the Trench Option are shown in Table 6 for light rail noise, Table 7 for TPSSs, and Table 8 for combined freight track relocation and light rail noise. Cluster numbers are defined in Figure 3.6-25 to Figure 3.6-27 in Section 3.6, Noise and Vibration of the EIR.

Table 6. Trench Option Light Rail Noise at Sensitive Receptors

Trench Option Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
A1	2	270	40	CH	67.1	62.0	62.0	Significant
A2	2	280	45	CH	67.1	62.0	62.0	Significant
A3	2	250	50	ABCD	67.1	51.0	62.0	Less than Significant
A4	2	380	45	G	69.5	46.0	64.0	Less than Significant
A5	2	350	45	G	69.5	46.0	64.0	Less than Significant
A6	2	320	45	G	69.5	47.0	64.0	Less than Significant
A7	2	280	45	G	69.5	49.0	64.0	Less than Significant
B1	3	50	45	H	71.2	49.0	70.0	Less than Significant
B2	2	130	45	H	65.0	50.0	61.0	Less than Significant
B3	2	210	45	H	65.0	48.0	61.0	Less than Significant
B4	2	350	45	H	65.0	46.0	61.0	Less than Significant
B5	2	70	45	H	65.0	53.0	61.0	Less than Significant
B6	2	185	45	H	65.0	48.0	61.0	Less than Significant
B7	2	300	45	H	65.0	46.0	61.0	Less than Significant
B8	2	70	45	GH	70.0	53.0	64.0	Less than Significant
B9	2	185	45	H	70.0	48.0	64.0	Less than Significant
B10	2	300	45	H	70.0	46.0	64.0	Less than Significant
B11	2	70	45	GH	70.0	54.0	64.0	Less than Significant
B12	2	185	45	H	70.0	48.0	64.0	Less than Significant
B13	2	300	45	H	70.0	46.0	64.0	Less than Significant
B14	2	70	45	GH	70.0	54.0	64.0	Less than Significant
B15	2	170	45	H	70.0	49.0	64.0	Less than Significant
B16	2	290	45	H	70.0	46.0	64.0	Less than Significant
B17	2	90	45	GH	70.0	52.0	64.0	Less than Significant

Trench Option Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
B18	2	180	45	H	70.0	49.0	64.0	Less than Significant
B19	2	300	45	H	70.0	46.0	64.0	Less than Significant
B20	2	90	45	H	70.0	52.0	64.0	Less than Significant
B21	2	180	45	H	70.0	49.0	64.0	Less than Significant
B22	2	300	45	H	70.0	46.0	64.0	Less than Significant
B23	2	85	45	H	55.1	52.0	55.0	Less than Significant
B24	2	140	45	H	55.1	50.0	55.0	Less than Significant
B25	2	300	45	H	55.1	46.0	55.0	Less than Significant
B26	2	85	45	H	55.1	52.0	55.0	Less than Significant
B27	2	140	45	H	55.1	50.0	55.0	Less than Significant
B28	2	300	45	H	55.1	46.0	55.0	Less than Significant
B29	2	85	45	H	55.1	52.0	55.0	Less than Significant
B30	2	140	45	H	55.1	50.0	55.0	Less than Significant
B31	2	300	45	H	55.1	46.0	55.0	Less than Significant
B32	2	85	45	H	55.1	52.0	55.0	Less than Significant
B33	2	140	45	H	55.1	50.0	55.0	Less than Significant
B34	2	300	45	H	55.1	46.0	55.0	Less than Significant
B35	2	20	45	H	70.0	60.0	64.0	Less than Significant
B36	2	115	45	H	65.0	51.0	61.0	Less than Significant
B37	2	230	45	H	65.0	47.0	61.0	Less than Significant
B38	2	20	45	H	65.0	60.0	61.0	Less than Significant
B39	2	100	45	H	65.0	51.0	61.0	Less than Significant
B40	2	220	45	H	65.0	48.0	61.0	Less than Significant
B41	2	35	45	GH	70.0	58.0	64.0	Less than Significant
B42	2	90	45	GH	70.0	52.0	64.0	Less than Significant
B43	2	250	45	H	70.0	47.0	64.0	Less than Significant
B44	2	35	45	GH	70.0	58.0	64.0	Less than Significant
B45	2	90	45	GH	70.0	52.0	64.0	Less than Significant
B46	2	250	45	H	70.0	47.0	64.0	Less than Significant
B47	2	35	45	GH	70.0	57.0	64.0	Less than Significant
B48	2	90	45	H	70.0	52.0	64.0	Less than Significant

Trench Option Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
B49	2	250	45	H	70.0	47.0	64.0	Less than Significant
B50	2	35	45	H	70.0	56.0	64.0	Less than Significant
B51	2	90	45	H	70.0	52.0	64.0	Less than Significant
B52	2	250	45	H	70.0	47.0	64.0	Less than Significant
B53	2	35	45	H	55.1	58.0	55.0	Significant
B54	2	90	45	H	55.1	52.0	55.0	Less than Significant
B55	2	250	45	H	55.1	47.0	55.0	Less than Significant
B56	2	35	45	H	55.1	58.0	55.0	Significant
B57	2	90	45	H	55.1	52.0	55.0	Less than Significant
B58	2	250	45	H	55.1	47.0	55.0	Less than Significant
B59	2	35	45	H	55.1	56.0	55.0	Significant
B60	2	90	45	H	55.1	52.0	55.0	Less than Significant
B61	2	250	45	H	55.1	47.0	55.0	Less than Significant
B62	2	35	45	H	55.1	57.0	55.0	Significant
B63	2	90	45	H	55.1	52.0	55.0	Less than Significant
B64	2	250	45	H	55.1	47.0	55.0	Less than Significant
C1	2	85	45	H	55.1	52.0	55.0	Less than Significant
C2	2	145	45	H	55.1	49.0	55.0	Less than Significant
C3	2	300	45	H	55.1	46.0	55.0	Less than Significant
C4	2	80	45	H	55.1	52.0	55.0	Less than Significant
C5	2	140	45	H	55.1	50.0	55.0	Less than Significant
C6	2	295	45	H	55.1	46.0	55.0	Less than Significant
C7	2	80	45	H	55.1	52.0	55.0	Less than Significant
C8	2	140	45	H	55.1	50.0	55.0	Less than Significant
C9	2	295	45	H	55.1	46.0	55.0	Less than Significant
C10	2	80	45	H	55.1	52.0	55.0	Less than Significant
C11	2	140	45	H	55.1	50.0	55.0	Less than Significant
C12	2	295	45	H	55.1	46.0	55.0	Less than Significant
C13	2	80	45	H	55.1	52.0	55.0	Less than Significant
C14	2	140	45	H	55.1	50.0	55.0	Less than Significant
C15	2	295	45	H	55.1	46.0	55.0	Less than Significant

Trench Option Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
C16	2	80	45	H	55.1	52.0	55.0	Less than Significant
C17	2	140	45	H	55.1	50.0	55.0	Less than Significant
C18	2	295	45	H	55.1	46.0	55.0	Less than Significant
C19	2	80	45	H	55.1	52.0	55.0	Less than Significant
C20	2	140	45	H	55.1	50.0	55.0	Less than Significant
C21	2	295	45	H	55.1	46.0	55.0	Less than Significant
C22	2	35	45	H	55.1	57.0	55.0	Significant
C23	2	90	45	H	55.1	52.0	55.0	Less than Significant
C24	2	250	45	H	55.1	47.0	55.0	Less than Significant
C25	2	35	45	H	55.1	56.0	55.0	Significant
C26	2	90	45	H	55.1	52.0	55.0	Less than Significant
C27	2	250	45	H	55.1	47.0	55.0	Less than Significant
C28	2	35	45	H	55.1	56.0	55.0	Significant
C29	2	90	45	H	55.1	52.0	55.0	Less than Significant
C30	2	250	45	H	55.1	47.0	55.0	Less than Significant
C31	2	35	45	H	55.1	56.0	55.0	Significant
C32	2	90	45	H	55.1	52.0	55.0	Less than Significant
C33	2	250	45	H	55.1	47.0	55.0	Less than Significant
C34	2	35	45	H	55.1	56.0	55.0	Significant
C35	2	90	45	H	55.1	52.0	55.0	Less than Significant
C36	2	250	45	H	55.1	47.0	55.0	Less than Significant
C37	2	35	45	H	55.1	56.0	55.0	Significant
C38	2	90	45	H	55.1	52.0	55.0	Less than Significant
C39	2	250	45	H	55.1	47.0	55.0	Less than Significant
C40	2	35	45	H	55.1	56.0	55.0	Significant
C41	2	90	45	H	55.1	52.0	55.0	Less than Significant
C42	2	250	45	H	55.1	47.0	55.0	Less than Significant
D1	2	90	45	H	55.1	52.0	55.0	Less than Significant
D2	2	150	45	H	55.1	49.0	55.0	Less than Significant
D3	2	275	45	H	55.1	47.0	55.0	Less than Significant
D4	2	90	45	H	55.1	52.0	55.0	Less than Significant

Trench Option Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
D5	2	170	45	H	55.1	49.0	55.0	Less than Significant
D6	2	250	45	H	55.1	47.0	55.0	Less than Significant
D7	2	350	45	H	55.1	46.0	55.0	Less than Significant
D8	2	50	45	H	55.1	54.0	55.0	Less than Significant
D9	2	50	45	H	55.1	54.0	55.0	Less than Significant
D10	2	50	45	H	55.1	54.0	55.0	Less than Significant
D11	2	50	45	H	55.1	54.0	55.0	Less than Significant
D12	2	50	45	H	55.1	54.0	55.0	Less than Significant
D13	2	50	45	H	60.8	54.0	58.0	Less than Significant
D14	2	50	45	H	60.8	55.0	58.0	Less than Significant
D15	2	50	45	None	60.8	54.0	58.0	Less than Significant
D16	2	50	45	None	60.8	65.0	58.0	Significant
D17	2	180	45	H	55.1	49.0	55.0	Less than Significant
D18	2	260	45	H	55.1	47.0	55.0	Less than Significant
D19	2	330	45	H	55.1	46.0	55.0	Less than Significant
D20	2	180	45	H	55.1	49.0	55.0	Less than Significant
D21	2	180	45	H	55.1	49.0	55.0	Less than Significant
D22	2	180	45	H	55.1	49.0	55.0	Less than Significant
D23	2	180	45	H	60.8	50.0	58.0	Less than Significant
D24	2	180	45	None	60.8	61.0	58.0	Significant
D25	2	260	45	None	60.8	59.0	58.0	Significant
D26	2	30	45	H	55.1	57.0	55.0	Significant
D27	2	90	45	H	55.1	52.0	55.0	Less than Significant
D28	2	250	45	H	55.1	47.0	55.0	Less than Significant
D29	2	30	45	H	55.1	58.0	55.0	Significant
D30	2	90	45	H	55.1	52.0	55.0	Less than Significant
D31	2	250	45	H	55.1	47.0	55.0	Less than Significant
D32	2	30	45	H	55.1	57.0	55.0	Significant
D33	2	90	45	H	55.1	52.0	55.0	Less than Significant
D34	2	250	45	H	55.1	47.0	55.0	Less than Significant
D35	2	30	45	H	55.1	57.0	55.0	Significant

Trench Option Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
D36	2	90	45	H	55.1	52.0	55.0	Less than Significant
D37	2	250	45	H	55.1	47.0	55.0	Less than Significant
D38	2	30	45	H	55.1	57.0	55.0	Significant
D39	2	90	45	H	55.1	52.0	55.0	Less than Significant
D40	2	250	45	H	55.1	49.0	55.0	Less than Significant
D41	2	30	45	BH	60.8	58.0	58.0	Significant
D42	2	90	45	AH	60.8	49.0	58.0	Less than Significant
D43	2	250	45	ABH	60.8	43.0	58.0	Less than Significant
D44	2	30	45	BH	60.8	62.0	58.0	Significant
D45	2	90	45	AH	60.8	52.0	58.0	Less than Significant
D46	2	250	45	ABH	60.8	45.0	58.0	Less than Significant
D47	2	30	45	None	60.8	61.0	58.0	Significant
D48	2	90	45	None	60.8	56.0	58.0	Less than Significant
D49	2	250	45	None	60.8	51.0	58.0	Less than Significant
D50	2	30	45	None	60.8	68.0	58.0	Significant
D51	2	90	45	None	60.8	64.0	58.0	Significant
D52	2	250	45	None	60.8	59.0	58.0	Significant
E1	2	230	45	DH	75.1	64.0	65.0	Less than Significant
E2	2	90	45	DH	57.1	64.0	56.0	Significant
E3	2	220	45	ADH	57.1	60.0	56.0	Significant
E4	2	25	45	DH	57.1	67.0	56.0	Significant
E5	2	150	45	DH	57.1	66.0	56.0	Significant
E6	2	220	45	DH	57.1	65.0	56.0	Significant
E7	2	380	45	None	57.1	57.0	56.0	Significant
E8	2	150	45	H	57.1	61.0	56.0	Significant
E9	2	320	45	H	57.1	58.0	56.0	Significant
F1	3	120	35	EGH	52.6	51.0	59.0	Less than Significant
F2	2	55	45	H	55.8	54.0	56.0	Less than Significant
F3	2	60	45	H	55.8	53.0	56.0	Less than Significant
F4	2	55	45	H	55.8	54.0	56.0	Less than Significant
F5	2	220	45	AH	55.8	43.0	56.0	Less than Significant

Trench Option Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
F6	2	320	45	A	55.8	42.0	56.0	Less than Significant
F7	2	50	45	H	55.8	54.0	56.0	Less than Significant
F8	2	220	45	AH	55.8	43.0	56.0	Less than Significant
F9	2	320	45	AH	55.8	42.0	56.0	Less than Significant
F10	2	70	45	H	55.8	53.0	56.0	Less than Significant
F11	2	100	45	H	55.8	51.0	56.0	Less than Significant
F12	2	200	45	H	55.8	48.0	56.0	Less than Significant
F13	2	320	45	AH	55.8	42.0	56.0	Less than Significant
F14	2	90	45	H	55.8	52.0	56.0	Less than Significant
F15	2	160	45	H	55.8	49.0	56.0	Less than Significant
F16	2	300	45	AH	55.8	42.0	56.0	Less than Significant
F17	2	90	45	H	55.8	52.0	56.0	Less than Significant
F18	2	260	45	AH	55.8	42.0	56.0	Less than Significant
F19	2	350	45	AH	55.8	41.0	56.0	Less than Significant
F20	3	80	45	DH	52.6	52.0	59.0	Less than Significant
G1	2	130	45	DH	55.8	55.0	56.0	Less than Significant
G2	2	300	55	AH	55.8	45.0	56.0	Less than Significant
G3	2	350	55	AH	55.8	44.0	56.0	Less than Significant
G4	2	330	55	AH	55.8	44.0	56.0	Less than Significant
G5	2	180	55	DH	55.8	56.0	56.0	Significant
G6	2	270	55	DH	55.8	55.0	56.0	Less than Significant
G7	2	70	55	DH	55.8	60.0	56.0	Significant
G8	2	150	55	ADH	55.8	52.0	56.0	Less than Significant
G9	2	210	55	ADH	55.8	50.0	56.0	Less than Significant
G10	2	300	55	AH	55.8	44.0	56.0	Less than Significant
G11	2	120	55	H	55.8	52.0	56.0	Less than Significant
G12	2	75	55	H	55.8	54.0	56.0	Less than Significant
G13	2	160	55	H	55.8	51.0	56.0	Less than Significant
G14	2	220	55	H	55.8	49.0	56.0	Less than Significant
G15	2	120	55	H	74.9	52.0	65.0	Less than Significant
G16	2	205	55	DH	61.3	58.0	59.0	Less than Significant

Trench Option Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
G17	2	150	55	DH	61.3	59.0	59.0	Significant
G18	2	100	55	DH	61.3	60.0	59.0	Significant
G19	2	220	55	DH	61.3	57.0	59.0	Less than Significant
G20	2	80	55	DH	61.3	64.0	59.0	Significant
G21	2	160	55	DH	61.3	61.0	59.0	Significant
G22	2	250	55	DH	61.3	59.0	59.0	Significant
G23	2	250	55	DH	61.3	59.0	59.0	Significant
G24	2	350	55	H	61.3	52.0	59.0	Less than Significant
G25	2	350	55	H	61.3	52.0	59.0	Less than Significant
G26	2	430	55	H	61.3	52.0	59.0	Less than Significant
G27	2	30	55	DH	61.3	70.0	59.0	Significant
G28	2	75	55	DH	61.3	68.0	59.0	Significant
G29	2	120	55	DH	61.3	69.0	59.0	Significant
G30	2	250	55	DH	61.3	66.0	59.0	Significant
G31	2	350	55	D	74.9	64.0	65.0	Less than Significant

1. Distance to the closest area of human use or closest building façade.

2. Adjustments to LRT noise based on intervening rows of buildings, track type, special trackwork, quacker noise, wheel squeal noise, and audible warning noise.

A = first row of intervening buildings.

B = second row of intervening buildings.

C = aerial structure with slab track.

D = jointed track or crossover.

E = quacker noise.

F = audible warnings noise.

G = TPSS Noise

H= Trench adjustment.

Source: TAHA, 2023

Table 7. Trench Option TPSS Noise at Sensitive Receptors

TPSS Site	Location	Cluster No.	Distance (feet) ¹	Intervening Building Row	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	TPSS Noise	Impact Threshold	
Site Option T1	Commercial property at northeast corner of Manhattan Beach Blvd. and Metro right-of-way	A4	90	Yes	69.5	33.0	64.0	Less than Significant
		A5	140	Yes	69.5	35.0	64.0	Less than Significant
		A6	170	No	69.5	41.0	64.0	Less than Significant
		A7	200	No	69.5	45.0	64.0	Less than Significant

Source: TAHA, 2023

Table 8. Trench Option Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors

Trench Option Combined Freight Track Relocation and Light Noise at Sensitive Receptors								
Cluster No.	Land Use	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
A1	2	220	Yes	67.3	54.6	63.0	62.0	Significant
A2	2	220	Yes	67.3	54.6	62.0	62.0	Significant
A4	2	355	Yes	69.6	52.5	53.0	64.0	Less than Significant
A5	2	330	Yes	69.6	52.8	54.0	64.0	Less than Significant
A6	2	300	Yes	69.6	53.2	54.0	64.0	Less than Significant
A7	2	270	Yes	69.6	53.7	55.0	64.0	Less than Significant
B1	3	80	Yes	71.4	72.6	73.0	70.0	Significant
B2	2	120	Yes	65.8	57.2	58.0	61.0	Less than Significant
B3	2	200	Yes	65.4	55.0	56.0	61.0	Less than Significant
B4	2	360	Yes	65.2	52.4	53.0	61.0	Less than Significant
B5	2	35	Yes	66.6	62.6	63.0	62.0	Significant
B6	2	160	Yes	65.5	56.0	57.0	61.0	Less than Significant
B7	2	285	Yes	65.3	53.5	54.0	61.0	Less than Significant
B8	2	40	Yes	70.5	62.0	62.0	65.0	Less than Significant
B9	2	150	Yes	70.2	56.2	57.0	65.0	Less than Significant
B10	2	265	Yes	70.1	53.8	55.0	64.0	Less than Significant
B11	2	40	Yes	70.5	62.0	63.0	65.0	Less than Significant
B12	2	150	Yes	70.2	56.2	57.0	65.0	Less than Significant
B13	2	265	Yes	70.1	53.8	55.0	64.0	Less than Significant
B14	2	40	Yes	70.5	62.0	63.0	65.0	Less than Significant
B15	2	150	Yes	70.2	56.2	57.0	65.0	Less than Significant
B16	2	265	Yes	70.1	53.8	55.0	64.0	Less than Significant
B17	2	60	Yes	70.4	60.2	61.0	65.0	Less than Significant
B18	2	160	Yes	70.2	56.0	57.0	65.0	Less than Significant
B19	2	275	Yes	70.1	53.6	54.0	64.0	Less than Significant
B20	2	60	Yes	70.4	60.2	61.0	65.0	Less than Significant
B21	2	160	Yes	70.2	56.0	57.0	65.0	Less than Significant
B22	2	275	Yes	70.1	53.6	54.0	64.0	Less than Significant
B23	2	60	Yes	60.9	60.2	61.0	58.0	Significant

Trench Option Combined Freight Track Relocation and Light Noise at Sensitive Receptors								
Cluster No.	Land Use	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
B24	2	160	Yes	58.4	56.0	57.0	57.0	Significant
B25	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
B26	2	60	Yes	60.9	60.2	61.0	58.0	Significant
B27	2	160	Yes	58.4	56.0	57.0	57.0	Significant
B28	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
B29	2	60	Yes	60.9	60.2	61.0	58.0	Significant
B30	2	160	Yes	58.4	56.0	57.0	57.0	Significant
B31	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
B32	2	60	Yes	60.9	60.2	61.0	58.0	Significant
B33	2	160	Yes	58.4	56.0	57.0	57.0	Significant
B34	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
B35	2	55	Yes	70.6	60.6	63.0	65.0	Less than Significant
B36	2	175	Yes	65.5	55.6	57.0	61.0	Less than Significant
B37	2	290	Yes	65.3	53.4	54.0	61.0	Less than Significant
B38	2	55	Yes	66.6	60.6	63.0	62.0	Significant
B39	2	175	Yes	65.5	55.6	57.0	61.0	Less than Significant
B40	2	290	Yes	65.3	53.4	54.0	61.0	Less than Significant
B41	2	60	Yes	70.5	60.2	62.0	65.0	Less than Significant
B42	2	130	Yes	70.2	56.9	58.0	65.0	Less than Significant
B43	2	285	Yes	70.1	53.5	54.0	64.0	Less than Significant
B44	2	60	Yes	70.5	60.2	62.0	65.0	Less than Significant
B45	2	130	Yes	70.2	56.9	58.0	65.0	Less than Significant
B46	2	285	Yes	70.1	53.5	54.0	64.0	Less than Significant
B47	2	65	Yes	70.5	59.9	62.0	65.0	Less than Significant
B48	2	150	Yes	70.2	56.2	57.0	65.0	Less than Significant
B49	2	280	Yes	70.1	53.5	54.0	64.0	Less than Significant
B50	2	65	Yes	70.5	59.9	61.0	65.0	Less than Significant
B51	2	150	Yes	70.2	56.2	57.0	65.0	Less than Significant
B52	2	280	Yes	70.1	53.5	54.0	64.0	Less than Significant
B53	2	65	Yes	61.7	59.9	62.0	59.0	Significant

Trench Option Combined Freight Track Relocation and Light Noise at Sensitive Receptors								
Cluster No.	Land Use	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
B54	2	150	Yes	58.9	56.2	57.0	57.0	Significant
B55	2	280	Yes	57.5	53.5	54.0	56.0	Less than Significant
B56	2	65	Yes	61.7	59.9	62.0	59.0	Significant
B57	2	150	Yes	58.9	56.2	57.0	57.0	Significant
B58	2	280	Yes	57.5	53.5	54.0	56.0	Less than Significant
B59	2	65	Yes	61.7	59.9	61.0	59.0	Significant
B60	2	150	Yes	58.9	56.2	57.0	57.0	Significant
B61	2	280	Yes	57.5	53.5	54.0	56.0	Less than Significant
B62	2	65	Yes	61.7	59.9	62.0	59.0	Significant
B63	2	150	Yes	58.9	56.2	57.0	57.0	Significant
B64	2	280	Yes	57.5	53.5	54.0	56.0	Less than Significant
C1	2	65	Yes	60.7	59.9	61.0	58.0	Significant
C2	2	115	Yes	59.2	57.4	58.0	57.0	Significant
C3	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
C4	2	65	Yes	60.7	59.9	61.0	58.0	Significant
C5	2	115	Yes	59.2	57.4	58.0	57.0	Significant
C6	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
C7	2	65	Yes	60.7	59.9	61.0	58.0	Significant
C8	2	115	Yes	59.2	57.4	58.0	57.0	Significant
C9	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
C10	2	65	Yes	60.7	59.9	61.0	58.0	Significant
C11	2	115	Yes	59.2	57.4	58.0	57.0	Significant
C12	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
C13	2	65	Yes	60.7	59.9	61.0	58.0	Significant
C14	2	115	Yes	59.2	57.4	58.0	57.0	Significant
C15	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
C16	2	65	Yes	60.9	59.9	61.0	58.0	Significant
C17	2	115	Yes	59.3	57.4	58.0	57.0	Significant
C18	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
C19	2	65	Yes	60.9	59.9	61.0	58.0	Significant

Trench Option Combined Freight Track Relocation and Light Noise at Sensitive Receptors								
Cluster No.	Land Use	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
C20	2	115	Yes	59.3	57.4	58.0	57.0	Significant
C21	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
C22	2	65	Yes	61.7	59.9	62.0	59.0	Significant
C23	2	150	Yes	58.9	56.2	57.0	57.0	Significant
C24	2	280	Yes	57.5	53.5	54.0	56.0	Less than Significant
C25	2	60	Yes	61.1	60.2	62.0	58.0	Significant
C26	2	160	Yes	58.5	56.0	57.0	57.0	Significant
C27	2	285	Yes	57.3	53.5	54.0	56.0	Less than Significant
C28	2	60	Yes	61.1	60.2	62.0	58.0	Significant
C29	2	160	Yes	58.5	56.0	57.0	57.0	Significant
C30	2	285	Yes	57.3	53.5	54.0	56.0	Less than Significant
C31	2	60	Yes	61.1	60.2	62.0	58.0	Significant
C32	2	160	Yes	58.5	56.0	57.0	57.0	Significant
C33	2	285	Yes	57.3	53.5	54.0	56.0	Less than Significant
C34	2	60	Yes	61.1	60.2	62.0	58.0	Significant
C35	2	160	Yes	58.5	56.0	57.0	57.0	Significant
C36	2	285	Yes	57.3	53.5	54.0	56.0	Less than Significant
C37	2	60	Yes	61.3	60.2	62.0	59.0	Significant
C38	2	160	Yes	58.5	56.0	57.0	57.0	Significant
C39	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
C40	2	60	Yes	61.3	60.2	62.0	59.0	Significant
C41	2	160	Yes	58.5	56.0	57.0	57.0	Significant
C42	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
D1	2	65	Yes	61.0	59.9	60.0	58.0	Significant
D2	2	125	Yes	59.1	57.0	58.0	57.0	Significant
D3	2	240	Yes	57.7	54.2	55.0	57.0	Less than Significant
D4	2	65	Yes	61.0	59.9	60.0	58.0	Significant
D5	2	145	Yes	58.8	56.4	57.0	57.0	Significant
D6	2	230	Yes	57.8	54.4	55.0	57.0	Less than Significant
D7	2	320	Yes	57.2	53.0	54.0	56.0	Less than Significant

Trench Option Combined Freight Track Relocation and Light Noise at Sensitive Receptors								
Cluster No.	Land Use	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
D8	2	20	Yes	65.0	65.0	65.0	61.0	Significant
D9	2	20	Yes	65.0	65.0	65.0	61.0	Significant
D10	2	20	Yes	65.0	65.0	65.0	61.0	Significant
D11	2	20	Yes	65.0	65.0	65.0	61.0	Significant
D12	2	20	Yes	65.0	65.0	65.0	61.0	Significant
D13	2	20	Yes	66.1	65.0	65.0	62.0	Significant
D14	2	20	Yes	66.1	65.0	65.0	62.0	Significant
D17	2	165	Yes	58.5	55.8	57.0	57.0	Significant
D18	2	245	Yes	57.6	54.1	55.0	57.0	Less than Significant
D19	2	325	Yes	57.1	52.9	54.0	56.0	Less than Significant
D20	2	165	Yes	58.5	55.8	57.0	57.0	Significant
D21	2	165	Yes	58.5	55.8	57.0	57.0	Significant
D22	2	165	Yes	58.5	55.8	57.0	57.0	Significant
D23	2	170	Yes	62.0	55.7	57.0	59.0	Less than Significant
D26	2	60	Yes	61.3	60.2	62.0	59.0	Significant
D27	2	120	Yes	59.2	57.2	58.0	57.0	Significant
D28	2	280	Yes	57.4	53.5	54.0	56.0	Less than Significant
D29	2	60	Yes	61.3	60.2	62.0	59.0	Significant
D30	2	120	Yes	59.2	57.2	58.0	57.0	Significant
D31	2	280	Yes	57.4	53.5	54.0	56.0	Less than Significant
D32	2	55	Yes	61.6	60.6	62.0	59.0	Significant
D33	2	115	Yes	59.4	57.4	58.0	57.0	Significant
D34	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
D35	2	55	Yes	61.6	60.6	62.0	59.0	Significant
D36	2	115	Yes	59.4	57.4	58.0	57.0	Significant
D37	2	275	Yes	57.4	53.6	54.0	56.0	Less than Significant
D38	2	55	Yes	61.6	60.6	62.0	59.0	Significant
D39	2	115	Yes	59.4	57.4	58.0	57.0	Significant
D40	2	275	Yes	57.4	53.6	55.0	56.0	Less than Significant
D41	2	55	Yes	63.0	60.6	62.0	60.0	Significant

Trench Option Combined Freight Track Relocation and Light Noise at Sensitive Receptors								
Cluster No.	Land Use	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
D42	2	115	Yes	61.4	57.4	58.0	59.0	Less than Significant
D43	2	275	Yes	61.0	53.6	54.0	58.0	Less than Significant
D44	2	55	Yes	63.0	60.6	64.0	60.0	Significant
D45	2	115	Yes	61.4	57.4	59.0	59.0	Significant
D46	2	275	Yes	61.0	53.6	54.0	58.0	Less than Significant
F1	3	70	Yes	59.7	73.0	73.0	63.0	Significant
F2	2	25	Yes	64.0	64.0	64.0	60.0	Significant
F3	2	30	Yes	63.7	63.2	64.0	60.0	Significant
F4	2	30	Yes	63.7	63.2	64.0	60.0	Significant
F5	2	185	Yes	57.0	55.3	56.0	56.0	Significant
F6	2	295	Yes	56.6	53.3	54.0	56.0	Less than Significant
F7	2	35	Yes	63.2	62.6	63.0	60.0	Significant
F8	2	200	Yes	56.9	55.0	55.0	56.0	Less than Significant
F9	2	305	Yes	56.6	53.2	53.0	56.0	Less than Significant
F10	2	63	Yes	61.1	60.0	61.0	58.0	Significant
F11	2	75	Yes	60.6	59.3	60.0	58.0	Significant
F12	2	170	Yes	58.7	55.7	56.0	57.0	Less than Significant
F13	2	295	Yes	56.6	53.3	54.0	56.0	Less than Significant
F14	2	65	Yes	60.9	59.9	60.0	58.0	Significant
F15	2	120	Yes	59.4	57.2	58.0	57.0	Significant
F16	2	265	Yes	56.6	53.8	54.0	56.0	Less than Significant
F17	2	65	Yes	60.7	59.9	60.0	58.0	Significant
F18	2	240	Yes	56.7	54.2	54.0	56.0	Less than Significant
F19	2	365	Yes	56.4	52.4	53.0	56.0	Less than Significant
F20	3	100	Yes	59.5	71.4	71.0	63.0	Significant
G1	2	100	Yes	59.7	58.0	60.0	58.0	Significant
G2	2	270	Yes	56.6	53.7	54.0	56.0	Less than Significant
G3	2	300	Yes	56.6	53.2	54.0	56.0	Less than Significant
G4	2	305	No	55.9	42.7	47.0	56.0	Less than Significant
G5	2	150	No	56.2	45.8	57.0	56.0	Significant

Trench Option Combined Freight Track Relocation and Light Noise at Sensitive Receptors								
Cluster No.	Land Use	Relocated Freight Track Distance (Feet)	Horn?	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Freight	LRT and Freight Combined	Impact Threshold	
G6	2	260	No	56.0	43.4	55.0	56.0	Less than Significant
G7	2	45	No	56.9	51.1	61.0	56.0	Significant
G8	2	120	No	56.0	46.8	53.0	56.0	Less than Significant
G9	2	195	No	55.9	44.7	51.0	56.0	Less than Significant
G10	2	270	No	55.9	43.3	46.0	56.0	Less than Significant
G11	2	110	No	56.3	47.2	53.0	56.0	Less than Significant
G12	2	50	No	57.0	51.1	56.0	56.0	Significant
G13	2	145	No	56.2	46.0	52.0	56.0	Less than Significant
G14	2	195	No	56.1	44.7	51.0	56.0	Less than Significant
G15	2	150	No	74.9	45.8	53.0	65.0	Less than Significant
G16	2	260	No	61.4	43.4	58.0	59.0	Less than Significant
G17	2	215	No	61.4	44.3	59.0	59.0	Significant
G18	2	140	No	61.4	46.1	60.0	59.0	Significant
G19	2	240	No	61.4	43.8	58.0	59.0	Less than Significant
G20	2	120	No	61.5	46.8	64.0	59.0	Significant
G21	2	200	No	61.4	44.6	61.0	59.0	Significant
G22	2	300	No	61.4	42.8	59.0	59.0	Significant
G23	2	290	No	61.4	43.0	59.0	59.0	Significant
G24	2	390	No	61.3	41.7	53.0	59.0	Less than Significant
G25	2	362	No	61.4	42.0	53.0	59.0	Less than Significant
G26	2	402	No	61.3	41.5	52.0	59.0	Less than Significant
G27	2	75	No	61.5	48.8	70.0	59.0	Significant
G28	2	105	No	61.5	47.4	68.0	59.0	Significant
G29	2	172	No	61.4	45.2	69.0	59.0	Significant
G30	2	275	No	61.4	43.2	66.0	59.0	Significant

Source: TAHA, 2023.

MITIGATED TRENCH OPTION NOISE TABLES

Because the Trench Option does not require PF-NV-2 and PF-NV-3, CPUC authorization does not affect its impact analysis. The impacts of the Trench Option with mitigation are shown in Table 9 for light rail and Table 10 for combined freight track relocation and light rail.

Table 9. Trench Option Mitigated Light Rail Noise at Sensitive Receptors

Trench Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
A1	2	270	40	NOI-2	67.1	62.0	56.0	62.0	Less Than Significant With Mitigation
A2	2	280	45	NOI-2	67.1	62.0	58.0	62.0	Less Than Significant With Mitigation
A3	2	250	50	None	67.1	51.0	51.0	62.0	Less than Significant
A4	2	350	45	None	69.5	46.0	50.0	64.0	Less than Significant
A5	2	330	45	None	69.5	46.0	50.0	64.0	Less than Significant
A6	2	300	45	None	69.5	47.0	51.0	64.0	Less than Significant
A7	2	280	45	None	69.5	49.0	52.0	64.0	Less than Significant
B1	3	50	45	None	71.2	49.0	49.0	70.0	Less than Significant
B2	2	130	45	None	65.0	50.0	50.0	61.0	Less than Significant
B3	2	210	45	None	65.0	48.0	48.0	61.0	Less than Significant
B4	2	350	45	None	65.0	46.0	46.0	61.0	Less than Significant
B5	2	70	45	None	65.0	53.0	53.0	61.0	Less than Significant
B6	2	185	45	None	65.0	48.0	48.0	61.0	Less than Significant
B7	2	300	45	None	65.0	46.0	46.0	61.0	Less than Significant
B8	2	70	45	None	70.0	53.0	53.0	64.0	Less than Significant
B9	2	185	45	None	70.0	48.0	48.0	64.0	Less than Significant
B10	2	300	45	None	70.0	46.0	46.0	64.0	Less than Significant
B11	2	70	45	None	70.0	54.0	54.0	64.0	Less than Significant
B12	2	185	45	None	70.0	48.0	48.0	64.0	Less than Significant
B13	2	300	45	None	70.0	46.0	46.0	64.0	Less than Significant
B14	2	70	45	None	70.0	54.0	54.0	64.0	Less than Significant
B15	2	170	45	None	70.0	49.0	49.0	64.0	Less than Significant
B16	2	290	45	None	70.0	46.0	46.0	64.0	Less than Significant
B17	2	90	45	None	70.0	52.0	52.0	64.0	Less than Significant
B18	2	180	45	None	70.0	49.0	49.0	64.0	Less than Significant

Trench Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
B19	2	300	45	None	70.0	46.0	46.0	64.0	Less than Significant
B20	2	90	45	None	70.0	52.0	52.0	64.0	Less than Significant
B21	2	180	45	None	70.0	49.0	49.0	64.0	Less than Significant
B22	2	300	45	None	70.0	46.0	46.0	64.0	Less than Significant
B23	2	85	45	None	55.1	52.0	52.0	55.0	Less than Significant
B24	2	140	45	None	55.1	50.0	50.0	55.0	Less than Significant
B25	2	300	45	None	55.1	46.0	46.0	55.0	Less than Significant
B26	2	85	45	None	55.1	52.0	52.0	55.0	Less than Significant
B27	2	140	45	None	55.1	50.0	50.0	55.0	Less than Significant
B28	2	300	45	None	55.1	46.0	46.0	55.0	Less than Significant
B29	2	85	45	None	55.1	52.0	52.0	55.0	Less than Significant
B30	2	140	45	None	55.1	50.0	50.0	55.0	Less than Significant
B31	2	300	45	None	55.1	46.0	46.0	55.0	Less than Significant
B32	2	85	45	None	55.1	52.0	52.0	55.0	Less than Significant
B33	2	140	45	None	55.1	50.0	50.0	55.0	Less than Significant
B34	2	300	45	None	55.1	46.0	46.0	55.0	Less than Significant
B35	2	20	45	None	70.0	60.0	60.0	64.0	Less than Significant
B36	2	115	45	None	65.0	51.0	51.0	61.0	Less than Significant
B37	2	230	45	None	65.0	47.0	47.0	61.0	Less than Significant
B38	2	20	45	None	65.0	60.0	60.0	61.0	Less than Significant
B39	2	100	45	None	65.0	51.0	51.0	61.0	Less than Significant
B40	2	220	45	None	65.0	48.0	48.0	61.0	Less than Significant
B41	2	35	45	None	70.0	58.0	58.0	64.0	Less than Significant
B42	2	90	45	None	70.0	52.0	52.0	64.0	Less than Significant
B43	2	250	45	None	70.0	47.0	47.0	64.0	Less than Significant
B44	2	35	45	None	70.0	58.0	58.0	64.0	Less than Significant
B45	2	90	45	None	70.0	52.0	52.0	64.0	Less than Significant
B46	2	250	45	None	70.0	47.0	47.0	64.0	Less than Significant
B47	2	35	45	None	70.0	57.0	57.0	64.0	Less than Significant
B48	2	90	45	None	70.0	52.0	52.0	64.0	Less than Significant
B49	2	250	45	None	70.0	47.0	47.0	64.0	Less than Significant

Trench Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
B50	2	35	45	None	70.0	56.0	56.0	64.0	Less than Significant
B51	2	90	45	NOI-2	70.0	52.0	52.0	64.0	Less than Significant
B52	2	250	45	NOI-2	70.0	47.0	47.0	64.0	Less than Significant
B53	2	35	45	NOI-2	55.1	58.0	53.0	55.0	Less Than Significant With Mitigation
B54	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
B55	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
B56	2	35	45	NOI-2	55.1	58.0	53.0	55.0	Less Than Significant With Mitigation
B57	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
B58	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
B59	2	35	45	NOI-2	55.1	56.0	53.0	55.0	Less Than Significant With Mitigation
B60	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
B61	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
B62	2	35	45	NOI-2	55.1	57.0	53.0	55.0	Less Than Significant With Mitigation
B63	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
B64	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
C1	2	85	45	None	55.1	52.0	52.0	55.0	Less than Significant
C2	2	145	45	None	55.1	49.0	49.0	55.0	Less than Significant
C3	2	300	45	None	55.1	46.0	46.0	55.0	Less than Significant
C4	2	80	45	None	55.1	52.0	52.0	55.0	Less than Significant
C5	2	140	45	None	55.1	50.0	50.0	55.0	Less than Significant
C6	2	295	45	None	55.1	46.0	46.0	55.0	Less than Significant
C7	2	80	45	None	55.1	52.0	52.0	55.0	Less than Significant
C8	2	140	45	None	55.1	50.0	50.0	55.0	Less than Significant
C9	2	295	45	None	55.1	46.0	46.0	55.0	Less than Significant
C10	2	80	45	None	55.1	52.0	52.0	55.0	Less than Significant
C11	2	140	45	None	55.1	50.0	50.0	55.0	Less than Significant
C12	2	295	45	None	55.1	46.0	46.0	55.0	Less than Significant
C13	2	80	45	None	55.1	52.0	52.0	55.0	Less than Significant
C14	2	140	45	None	55.1	50.0	50.0	55.0	Less than Significant
C15	2	295	45	None	55.1	46.0	46.0	55.0	Less than Significant
C16	2	80	45	None	55.1	52.0	52.0	55.0	Less than Significant

Trench Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
C17	2	140	45	None	55.1	50.0	50.0	55.0	Less than Significant
C18	2	295	45	None	55.1	46.0	46.0	55.0	Less than Significant
C19	2	80	45	None	55.1	52.0	52.0	55.0	Less than Significant
C20	2	140	45	None	55.1	50.0	50.0	55.0	Less than Significant
C21	2	295	45	None	55.1	46.0	46.0	55.0	Less than Significant
C22	2	35	45	NOI-2	55.1	57.0	53.0	55.0	Less Than Significant With Mitigation
C23	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
C24	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
C25	2	35	45	NOI-2	55.1	56.0	53.0	55.0	Less Than Significant With Mitigation
C26	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
C27	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
C28	2	35	45	NOI-2	55.1	56.0	53.0	55.0	Less Than Significant With Mitigation
C29	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
C30	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
C31	2	35	45	NOI-2	55.1	56.0	53.0	55.0	Less Than Significant With Mitigation
C32	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
C33	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
C34	2	35	45	NOI-2	55.1	56.0	53.0	55.0	Less Than Significant With Mitigation
C35	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
C36	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
C37	2	35	45	NOI-2	55.1	56.0	53.0	55.0	Less Than Significant With Mitigation
C38	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
C39	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
C40	2	35	45	NOI-2	55.1	56.0	53.0	55.0	Less Than Significant With Mitigation
C41	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
C42	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
D1	2	90	45	None	55.1	52.0	52.0	55.0	Less than Significant
D2	2	150	45	None	55.1	49.0	49.0	55.0	Less than Significant
D3	2	275	45	None	55.1	47.0	47.0	55.0	Less than Significant
D4	2	90	45	None	55.1	52.0	52.0	55.0	Less than Significant
D5	2	175	45	None	55.1	49.0	49.0	55.0	Less than Significant

Trench Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
D6	2	270	45	None	55.1	47.0	47.0	55.0	Less than Significant
D7	2	350	45	None	55.1	46.0	46.0	55.0	Less than Significant
D8	2	50	45	None	55.1	54.0	54.0	55.0	Less than Significant
D9	2	50	45	None	55.1	54.0	54.0	55.0	Less than Significant
D10	2	50	45	None	55.1	54.0	54.0	55.0	Less than Significant
D11	2	50	45	None	55.1	54.0	54.0	55.0	Less than Significant
D12	2	50	45	None	55.1	54.0	54.0	55.0	Less than Significant
D13	2	50	45	None	60.8	54.0	54.0	58.0	Less than Significant
D14	2	50	45	None	60.8	55.0	55.0	58.0	Less than Significant
D15	2	50	45	None	60.8	54.0	54.0	58.0	Less than Significant
D16	2	50	45	NOI-2	60.8	65.0	55.0	58.0	Less Than Significant With Mitigation
D17	2	180	45	None	55.1	49.0	49.0	55.0	Less than Significant
D18	2	260	45	None	55.1	47.0	47.0	55.0	Less than Significant
D19	2	330	45	None	55.1	46.0	46.0	55.0	Less than Significant
D20	2	180	45	None	55.1	49.0	49.0	55.0	Less than Significant
D21	2	180	45	None	55.1	49.0	49.0	55.0	Less than Significant
D22	2	180	45	None	55.1	49.0	49.0	55.0	Less than Significant
D23	2	180	45	None	60.8	50.0	50.0	58.0	Less than Significant
D24	2	180	45	NOI-2	60.8	61.0	51.0	58.0	Less Than Significant With Mitigation
D25	2	260	45	NOI-2	60.8	59.0	49.0	58.0	Less Than Significant With Mitigation
D26	2	30	45	NOI-2	55.1	57.0	53.0	55.0	Less Than Significant With Mitigation
D27	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
D28	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
D29	2	30	45	NOI-2	55.1	58.0	53.0	55.0	Less Than Significant With Mitigation
D30	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
D31	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
D32	2	30	45	NOI-2	55.1	57.0	53.0	55.0	Less Than Significant With Mitigation
D33	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
D34	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
D35	2	30	45	NOI-2	55.1	57.0	53.0	55.0	Less Than Significant With Mitigation
D36	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant

Trench Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
D37	2	250	45	NOI-2	55.1	47.0	44.0	55.0	Less than Significant
D38	2	30	45	NOI-2	55.1	57.0	53.0	55.0	Less Than Significant With Mitigation
D39	2	90	45	NOI-2	55.1	52.0	49.0	55.0	Less than Significant
D40	2	250	45	NOI-2	55.1	49.0	44.0	55.0	Less than Significant
D41	2	30	45	NOI-2	60.8	58.0	56.0	58.0	Less Than Significant With Mitigation
D42	2	90	45	NOI-2	60.8	49.0	47.0	58.0	Less than Significant
D43	2	250	45	NOI-2	60.8	43.0	41.0	58.0	Less than Significant
D44	2	30	45	NOI-2	60.8	62.0	57.0	58.0	Less Than Significant With Mitigation
D45	2	90	45	NOI-2	60.8	52.0	48.0	58.0	Less than Significant
D46	2	250	45	NOI-2	60.8	45.0	42.0	58.0	Less than Significant
D47	2	30	45	NOI-2	60.8	61.0	57.0	58.0	Less Than Significant With Mitigation
D48	2	90	45	NOI-2	60.8	56.0	53.0	58.0	Less than Significant
D49	2	250	45	NOI-2	60.8	51.0	48.0	58.0	Less than Significant
D50	2	30	45	NOI-2	60.8	68.0	57.0	58.0	Less Than Significant With Mitigation
D51	2	90	45	NOI-2	60.8	64.0	54.0	58.0	Less Than Significant With Mitigation
D52	2	250	45	NOI-2	60.8	59.0	49.0	58.0	Less Than Significant With Mitigation
E1	2	230	45	NOI-3	75.1	64.0	59.0	65.0	Less than Significant
E2	2	90	45	NOI-2NOI-3	57.1	64.0	53.0	56.0	Less Than Significant With Mitigation
E3	2	220	45	NOI-2NOI-3	57.1	60.0	43.0	56.0	Less Than Significant With Mitigation
E4	2	25	45	NOI-2NOI-3	57.1	67.0	54.0	56.0	Less Than Significant With Mitigation
E5	2	150	45	NOI-2NOI-3	57.1	66.0	48.0	56.0	Less Than Significant With Mitigation
E6	2	220	45	NOI-2NOI-3	57.1	65.0	47.0	56.0	Less Than Significant With Mitigation
E7	2	380	45	NOI-2	57.1	57.0	45.0	56.0	Less Than Significant With Mitigation
E8	2	150	45	NOI-2	57.1	61.0	48.0	56.0	Less Than Significant With Mitigation
E9	2	320	45	NOI-2	57.1	58.0	45.0	56.0	Less Than Significant With Mitigation
F1	3	120	45	None	52.6	51.0	51.0	59.0	Less than Significant
F2	2	55	45	None	55.8	54.0	54.0	56.0	Less than Significant
F3	2	60	45	None	55.8	53.0	53.0	56.0	Less than Significant
F4	2	55	45	None	55.8	54.0	54.0	56.0	Less than Significant
F5	2	220	45	None	55.8	43.0	43.0	56.0	Less than Significant
F6	2	320	45	None	55.8	42.0	47.0	56.0	Less than Significant

Trench Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
F7	2	50	45	None	55.8	54.0	54.0	56.0	Less than Significant
F8	2	220	45	None	55.8	43.0	43.0	56.0	Less than Significant
F9	2	320	45	None	55.8	42.0	42.0	56.0	Less than Significant
F10	2	70	45	None	55.8	53.0	53.0	56.0	Less than Significant
F11	2	100	45	None	55.8	51.0	51.0	56.0	Less than Significant
F12	2	200	45	None	55.8	48.0	48.0	56.0	Less than Significant
F13	2	320	45	None	55.8	42.0	42.0	56.0	Less than Significant
F14	2	90	45	None	55.8	52.0	52.0	56.0	Less than Significant
F15	2	160	45	None	55.8	49.0	49.0	56.0	Less than Significant
F16	2	300	45	None	55.8	42.0	42.0	56.0	Less than Significant
F17	2	90	45	None	55.8	52.0	52.0	56.0	Less than Significant
F18	2	260	45	None	55.8	42.0	42.0	56.0	Less than Significant
F19	2	350	45	None	55.8	41.0	36.0	56.0	Less than Significant
F20	3	80	45	NOI-3	52.6	52.0	47.0	59.0	Less than Significant
G1	2	130	45	NOI-3	55.8	55.0	50.0	56.0	Less than Significant
G2	2	300	55	None	55.8	45.0	45.0	56.0	Less than Significant
G3	2	350	55	None	55.8	44.0	44.0	56.0	Less than Significant
G4	2	330	55	None	55.8	44.0	44.0	56.0	Less than Significant
G5	2	180	55	NOI-3	55.8	56.0	51.0	56.0	Less Than Significant With Mitigation
G6	2	270	55	NOI-3	55.8	55.0	50.0	56.0	Less than Significant
G7	2	75	55	NOI-2NOI-3	55.8	60.0	51.0	56.0	Less Than Significant With Mitigation
G8	2	150	55	NOI-2NOI-3	55.8	52.0	44.0	56.0	Less than Significant
G9	2	210	55	NOI-2NOI-3	55.8	50.0	42.0	56.0	Less than Significant
G10	2	300	55	NOI-2	55.8	44.0	41.0	56.0	Less than Significant
G11	2	120	55	NOI-2	55.8	52.0	49.0	56.0	Less than Significant
G12	2	80	55	NOI-2	55.8	54.0	51.0	56.0	Less than Significant
G13	2	160	55	NOI-2	55.8	51.0	48.0	56.0	Less than Significant
G14	2	220	55	NOI-2	55.8	49.0	46.0	56.0	Less than Significant
G15	2	120	55	NOI-2	74.9	52.0	49.0	65.0	Less than Significant
G16	2	205	55	NOI-3	61.3	58.0	53.0	59.0	Less than Significant
G17	2	150	55	NOI-3	61.3	59.0	54.0	59.0	Less Than Significant With Mitigation

Trench Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact After Mitigation
					Existing	Unmitigated	Mitigated	Impact Threshold	
G18	2	100	55	NOI-3	61.3	60.0	55.0	59.0	Less Than Significant With Mitigation
G19	2	220	55	NOI-3	61.3	57.0	52.0	59.0	Less than Significant
G20	2	80	55	NOI-2NOI-3	61.3	64.0	56.0	59.0	Less Than Significant With Mitigation
G21	2	160	55	NOI-2NOI-3	61.3	61.0	56.0	59.0	Less Than Significant With Mitigation
G22	2	250	55	NOI-2NOI-3	61.3	59.0	54.0	59.0	Less Than Significant With Mitigation
G23	2	250	55	NOI-2NOI-3	61.3	59.0	54.0	59.0	Less Than Significant With Mitigation
G24	2	350	55	NOI-2	61.3	52.0	52.0	59.0	Less than Significant
G25	2	350	55	NOI-2	61.3	52.0	52.0	59.0	Less than Significant
G26	2	430	55	NOI-2	61.3	52.0	52.0	59.0	Less than Significant
G27	2	30	55	NOI-2NOI-3	61.3	70.0	55.0	59.0	Less Than Significant With Mitigation
G28	2	75	55	NOI-2NOI-3	61.3	68.0	55.0	59.0	Less Than Significant With Mitigation
G29	2	120	55	NOI-2NOI-3	61.3	69.0	53.0	59.0	Less Than Significant With Mitigation
G30	2	250	55	NOI-2	61.3	66.0	50.0	59.0	Less Than Significant With Mitigation
G31	2	350	55	None	74.9	64.0	59.0	65.0	Less than Significant

NOI-2 = Soundwalls.

NOI-3 = Low Impact Frogs

Source: TAHA, 2023.

Table 10. Trench Option Mitigated Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors

Trench Option Mitigated Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
A1	2	220	NOI-4	67.3	63.0	56.0	62.0	Less Than Significant With Mitigation
A2	2	220	NOI-4	67.3	62.0	58.0	62.0	Less Than Significant With Mitigation
A4	2	355	NOI-4	69.6	53.0	50.0	64.0	Less than Significant
A5	2	330	NOI-4	69.6	54.0	51.0	64.0	Less than Significant
A6	2	300	NOI-4	69.6	54.0	51.0	64.0	Less than Significant
A7	2	270	NOI-4	69.6	55.0	52.0	64.0	Less than Significant
B1	3	80	NOI-4	71.4	73.0	60.0	70.0	Less Than Significant With Mitigation
B2	2	120	NOI-4	65.8	58.0	52.0	61.0	Less than Significant
B3	2	200	NOI-4	65.4	56.0	50.0	61.0	Less than Significant
B4	2	360	NOI-4	65.2	53.0	47.0	61.0	Less than Significant
B5	2	35	NOI-4	66.6	63.0	56.0	62.0	Less Than Significant With Mitigation
B6	2	160	NOI-4	65.5	57.0	50.0	61.0	Less than Significant
B7	2	285	NOI-4	65.3	54.0	48.0	61.0	Less than Significant
B8	2	40	NOI-4	70.5	62.0	55.0	65.0	Less than Significant
B9	2	150	NOI-4	70.2	57.0	50.0	65.0	Less than Significant
B10	2	265	NOI-4	70.1	55.0	48.0	64.0	Less than Significant
B11	2	40	NOI-4	70.5	63.0	56.0	65.0	Less than Significant
B12	2	150	NOI-4	70.2	57.0	50.0	65.0	Less than Significant
B13	2	265	NOI-4	70.1	55.0	48.0	64.0	Less than Significant
B14	2	40	NOI-4	70.5	63.0	56.0	65.0	Less than Significant
B15	2	150	NOI-4	70.2	57.0	51.0	65.0	Less than Significant
B16	2	265	NOI-4	70.1	55.0	48.0	64.0	Less than Significant
B17	2	60	NOI-4	70.4	61.0	54.0	65.0	Less than Significant
B18	2	160	NOI-4	70.2	57.0	50.0	65.0	Less than Significant
B19	2	275	NOI-4	70.1	54.0	48.0	64.0	Less than Significant
B20	2	60	NOI-4	70.4	61.0	54.0	65.0	Less than Significant
B21	2	160	NOI-4	70.2	57.0	50.0	65.0	Less than Significant
B22	2	275	NOI-4	70.1	54.0	48.0	64.0	Less than Significant
B23	2	60	NOI-4	60.9	61.0	54.0	58.0	Less Than Significant With Mitigation

Trench Option Mitigated Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
B24	2	160	NOI-4	58.4	57.0	51.0	57.0	Less Than Significant With Mitigation
B25	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
B26	2	60	NOI-4	60.9	61.0	54.0	58.0	Less Than Significant With Mitigation
B27	2	160	NOI-4	58.4	57.0	51.0	57.0	Less Than Significant With Mitigation
B28	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
B29	2	60	NOI-4	60.9	61.0	54.0	58.0	Less Than Significant With Mitigation
B30	2	160	NOI-4	58.4	57.0	51.0	57.0	Less Than Significant With Mitigation
B31	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
B32	2	60	NOI-4	60.9	61.0	54.0	58.0	Less Than Significant With Mitigation
B33	2	160	NOI-4	58.4	57.0	51.0	57.0	Less Than Significant With Mitigation
B34	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
B35	2	55	NOI-4	70.6	63.0	61.0	65.0	Less than Significant
B36	2	175	NOI-4	65.5	57.0	52.0	61.0	Less than Significant
B37	2	290	NOI-4	65.3	54.0	49.0	61.0	Less than Significant
B38	2	55	NOI-4	66.6	63.0	61.0	62.0	Less Than Significant With Mitigation
B39	2	175	NOI-4	65.5	57.0	52.0	61.0	Less than Significant
B40	2	290	NOI-4	65.3	54.0	49.0	61.0	Less than Significant
B41	2	60	NOI-4	70.5	62.0	59.0	65.0	Less than Significant
B42	2	130	NOI-4	70.2	58.0	53.0	65.0	Less than Significant
B43	2	285	NOI-4	70.1	54.0	49.0	64.0	Less than Significant
B44	2	60	NOI-4	70.5	62.0	59.0	65.0	Less than Significant
B45	2	130	NOI-4	70.2	58.0	53.0	65.0	Less than Significant
B46	2	285	NOI-4	70.1	54.0	49.0	64.0	Less than Significant
B47	2	65	NOI-4	70.5	62.0	58.0	65.0	Less than Significant
B48	2	150	NOI-4	70.2	57.0	53.0	65.0	Less than Significant
B49	2	280	NOI-4	70.1	54.0	49.0	64.0	Less than Significant
B50	2	65	NOI-4	70.5	61.0	57.0	65.0	Less than Significant
B51	2	150	NOI-4	70.2	57.0	53.0	65.0	Less than Significant
B52	2	280	NOI-4	70.1	54.0	49.0	64.0	Less than Significant
B53	2	65	NOI-4	61.7	62.0	54.0	59.0	Less Than Significant With Mitigation

Trench Option Mitigated Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
B54	2	150	NOI-4	58.9	57.0	50.0	57.0	Less Than Significant With Mitigation
B55	2	280	NOI-4	57.5	54.0	47.0	56.0	Less than Significant
B56	2	65	NOI-4	61.7	62.0	54.0	59.0	Less Than Significant With Mitigation
B57	2	150	NOI-4	58.9	57.0	50.0	57.0	Less Than Significant With Mitigation
B58	2	280	NOI-4	57.5	54.0	47.0	56.0	Less than Significant
B59	2	65	NOI-4	61.7	61.0	54.0	59.0	Less Than Significant With Mitigation
B60	2	150	NOI-4	58.9	57.0	50.0	57.0	Less Than Significant With Mitigation
B61	2	280	NOI-4	57.5	54.0	47.0	56.0	Less than Significant
B62	2	65	NOI-4	61.7	62.0	54.0	59.0	Less Than Significant With Mitigation
B63	2	150	NOI-4	58.9	57.0	50.0	57.0	Less Than Significant With Mitigation
B64	2	280	NOI-4	57.5	54.0	47.0	56.0	Less than Significant
C1	2	65	NOI-4	60.7	61.0	54.0	58.0	Less Than Significant With Mitigation
C2	2	115	NOI-4	59.2	58.0	51.0	57.0	Less Than Significant With Mitigation
C3	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
C4	2	65	NOI-4	60.7	61.0	54.0	58.0	Less Than Significant With Mitigation
C5	2	115	NOI-4	59.2	58.0	52.0	57.0	Less Than Significant With Mitigation
C6	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
C7	2	65	NOI-4	60.7	61.0	54.0	58.0	Less Than Significant With Mitigation
C8	2	115	NOI-4	59.2	58.0	52.0	57.0	Less Than Significant With Mitigation
C9	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
C10	2	65	NOI-4	60.7	61.0	54.0	58.0	Less Than Significant With Mitigation
C11	2	115	NOI-4	59.2	58.0	52.0	57.0	Less Than Significant With Mitigation
C12	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
C13	2	65	NOI-4	60.7	61.0	54.0	58.0	Less Than Significant With Mitigation
C14	2	115	NOI-4	59.2	58.0	52.0	57.0	Less Than Significant With Mitigation
C15	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
C16	2	65	NOI-4	60.9	61.0	54.0	58.0	Less Than Significant With Mitigation
C17	2	115	NOI-4	59.3	58.0	52.0	57.0	Less Than Significant With Mitigation
C18	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
C19	2	65	NOI-4	60.9	61.0	54.0	58.0	Less Than Significant With Mitigation

Trench Option Mitigated Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
C20	2	115	NOI-4	59.3	58.0	52.0	57.0	Less Than Significant With Mitigation
C21	2	275	NOI-4	57.4	54.0	48.0	56.0	Less than Significant
C22	2	65	NOI-4	61.7	62.0	54.0	59.0	Less Than Significant With Mitigation
C23	2	150	NOI-4	58.9	57.0	50.0	57.0	Less Than Significant With Mitigation
C24	2	280	NOI-4	57.5	54.0	47.0	56.0	Less than Significant
C25	2	60	NOI-4	61.1	62.0	55.0	58.0	Less Than Significant With Mitigation
C26	2	160	NOI-4	58.5	57.0	50.0	57.0	Less Than Significant With Mitigation
C27	2	285	NOI-4	57.3	54.0	47.0	56.0	Less than Significant
C28	2	60	NOI-4	61.1	62.0	55.0	58.0	Less Than Significant With Mitigation
C29	2	160	NOI-4	58.5	57.0	50.0	57.0	Less Than Significant With Mitigation
C30	2	285	NOI-4	57.3	54.0	47.0	56.0	Less than Significant
C31	2	60	NOI-4	61.1	62.0	55.0	58.0	Less Than Significant With Mitigation
C32	2	160	NOI-4	58.5	57.0	50.0	57.0	Less Than Significant With Mitigation
C33	2	285	NOI-4	57.3	54.0	47.0	56.0	Less than Significant
C34	2	60	NOI-4	61.1	62.0	55.0	58.0	Less Than Significant With Mitigation
C35	2	160	NOI-4	58.5	57.0	50.0	57.0	Less Than Significant With Mitigation
C36	2	285	NOI-4	57.3	54.0	47.0	56.0	Less than Significant
C37	2	60	NOI-4	61.3	62.0	55.0	59.0	Less Than Significant With Mitigation
C38	2	160	NOI-4	58.5	57.0	50.0	57.0	Less Than Significant With Mitigation
C39	2	275	NOI-4	57.4	54.0	47.0	56.0	Less than Significant
C40	2	60	NOI-4	61.3	62.0	55.0	59.0	Less Than Significant With Mitigation
C41	2	160	NOI-4	58.5	57.0	50.0	57.0	Less Than Significant With Mitigation
C42	2	275	NOI-4	57.4	54.0	47.0	56.0	Less than Significant
D1	2	65	NOI-4	61.0	60.0	54.0	58.0	Less Than Significant With Mitigation
D2	2	125	NOI-4	59.1	58.0	51.0	57.0	Less Than Significant With Mitigation
D3	2	240	NOI-4	57.7	55.0	48.0	57.0	Less than Significant
D4	2	65	NOI-4	61.0	60.0	54.0	58.0	Less Than Significant With Mitigation
D5	2	145	NOI-4	58.8	57.0	51.0	57.0	Less Than Significant With Mitigation
D6	2	230	NOI-4	57.8	55.0	49.0	57.0	Less than Significant
D7	2	320	NOI-4	57.2	54.0	47.0	56.0	Less than Significant

Trench Option Mitigated Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
D8	2	20	NOI-4	65.0	65.0	57.0	61.0	Less Than Significant With Mitigation
D9	2	20	NOI-4	65.0	65.0	57.0	61.0	Less Than Significant With Mitigation
D10	2	20	NOI-4	65.0	65.0	57.0	61.0	Less Than Significant With Mitigation
D11	2	20	NOI-4	65.0	65.0	57.0	61.0	Less Than Significant With Mitigation
D12	2	20	NOI-4	65.0	65.0	57.0	61.0	Less Than Significant With Mitigation
D13	2	20	NOI-4	66.1	65.0	57.0	62.0	Less Than Significant With Mitigation
D14	2	20	NOI-4	66.1	65.0	58.0	62.0	Less Than Significant With Mitigation
D17	2	165	NOI-4	58.5	57.0	50.0	57.0	Less Than Significant With Mitigation
D18	2	245	NOI-4	57.6	55.0	49.0	57.0	Less than Significant
D19	2	325	NOI-4	57.1	54.0	48.0	56.0	Less than Significant
D20	2	165	NOI-4	58.5	57.0	50.0	57.0	Less Than Significant With Mitigation
D21	2	165	NOI-4	58.5	57.0	50.0	57.0	Less Than Significant With Mitigation
D22	2	165	NOI-4	58.5	57.0	50.0	57.0	Less Than Significant With Mitigation
D23	2	170	NOI-4	62.0	57.0	51.0	59.0	Less than Significant
D26	2	60	NOI-4	61.3	62.0	55.0	59.0	Less Than Significant With Mitigation
D27	2	120	NOI-4	59.2	58.0	51.0	57.0	Less Than Significant With Mitigation
D28	2	280	NOI-4	57.4	54.0	47.0	56.0	Less than Significant
D29	2	60	NOI-4	61.3	62.0	55.0	59.0	Less Than Significant With Mitigation
D30	2	120	NOI-4	59.2	58.0	51.0	57.0	Less Than Significant With Mitigation
D31	2	280	NOI-4	57.4	54.0	47.0	56.0	Less than Significant
D32	2	55	NOI-4	61.6	62.0	55.0	59.0	Less Than Significant With Mitigation
D33	2	115	NOI-4	59.4	58.0	51.0	57.0	Less Than Significant With Mitigation
D34	2	275	NOI-4	57.4	54.0	47.0	56.0	Less than Significant
D35	2	55	NOI-4	61.6	62.0	55.0	59.0	Less Than Significant With Mitigation
D36	2	115	NOI-4	59.4	58.0	51.0	57.0	Less Than Significant With Mitigation
D37	2	275	NOI-4	57.4	54.0	47.0	56.0	Less than Significant
D38	2	55	NOI-4	61.6	62.0	55.0	59.0	Less Than Significant With Mitigation
D39	2	115	NOI-4	59.4	58.0	51.0	57.0	Less Than Significant With Mitigation
D40	2	275	NOI-4	57.4	55.0	47.0	56.0	Less than Significant
D41	2	55	NOI-4	63.0	62.0	57.0	60.0	Less Than Significant With Mitigation

Trench Option Mitigated Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
D42	2	115	NOI-4	61.4	58.0	50.0	59.0	Less than Significant
D43	2	275	NOI-4	61.0	54.0	45.0	58.0	Less than Significant
D44	2	55	NOI-4	63.0	64.0	58.0	60.0	Less Than Significant With Mitigation
D45	2	115	NOI-4	61.4	59.0	51.0	59.0	Less Than Significant With Mitigation
D46	2	275	NOI-4	61.0	54.0	46.0	58.0	Less than Significant
F1	3	70	NOI-4	59.7	73.0	55.0	63.0	Less Than Significant With Mitigation
F2	2	25	NOI-4	64.0	64.0	57.0	60.0	Less Than Significant With Mitigation
F3	2	30	NOI-4	63.7	64.0	56.0	60.0	Less Than Significant With Mitigation
F4	2	30	NOI-4	63.7	64.0	56.0	60.0	Less Than Significant With Mitigation
F5	2	185	NOI-4	57.0	56.0	47.0	56.0	Less Than Significant With Mitigation
F6	2	295	NOI-4	56.6	54.0	48.0	56.0	Less than Significant
F7	2	35	NOI-4	63.2	63.0	56.0	60.0	Less Than Significant With Mitigation
F8	2	200	NOI-4	56.9	55.0	47.0	56.0	Less than Significant
F9	2	305	NOI-4	56.6	53.0	45.0	56.0	Less than Significant
F10	2	63	NOI-4	61.1	61.0	54.0	58.0	Less Than Significant With Mitigation
F11	2	75	NOI-4	60.6	60.0	53.0	58.0	Less Than Significant With Mitigation
F12	2	170	NOI-4	58.7	56.0	50.0	57.0	Less than Significant
F13	2	295	NOI-4	56.6	54.0	45.0	56.0	Less than Significant
F14	2	65	NOI-4	60.9	60.0	54.0	58.0	Less Than Significant With Mitigation
F15	2	120	NOI-4	59.4	58.0	51.0	57.0	Less Than Significant With Mitigation
F16	2	265	NOI-4	56.6	54.0	46.0	56.0	Less than Significant
F17	2	65	NOI-4	60.7	60.0	54.0	58.0	Less Than Significant With Mitigation
F18	2	240	NOI-4	56.7	54.0	46.0	56.0	Less than Significant
F19	2	365	NOI-4	56.4	53.0	43.0	56.0	Less than Significant
F20	3	100	NOI-4	59.5	71.0	52.0	63.0	Less Than Significant With Mitigation
G1	2	100	NOI-4	59.7	60.0	52.0	58.0	Less Than Significant With Mitigation
G2	2	270	NOI-4	56.6	54.0	47.0	56.0	Less than Significant
G3	2	300	NOI-4	56.6	54.0	46.0	56.0	Less than Significant
G4	2	305	NOI-4	55.9	47.0	47.0	56.0	Less than Significant
G5	2	150	NOI-4	56.2	57.0	52.0	56.0	Less Than Significant With Mitigation

Trench Option Mitigated Combined Freight Track Relocation and Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Freight Mitigation Measure	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
				Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and LRT Combined	Impact Threshold	
G6	2	260	NOI-4	56.0	55.0	50.0	56.0	Less than Significant
G7	2	45	NOI-4	56.9	61.0	54.0	56.0	Less Than Significant With Mitigation
G8	2	120	NOI-4	56.0	53.0	49.0	56.0	Less than Significant
G9	2	195	NOI-4	55.9	51.0	47.0	56.0	Less than Significant
G10	2	270	NOI-4	55.9	46.0	45.0	56.0	Less than Significant
G11	2	110	NOI-4	56.3	53.0	51.0	56.0	Less than Significant
G12	2	50	NOI-4	57.0	56.0	54.0	56.0	Less Than Significant With Mitigation
G13	2	145	NOI-4	56.2	52.0	50.0	56.0	Less than Significant
G14	2	195	NOI-4	56.1	51.0	49.0	56.0	Less than Significant
G15	2	150	NOI-4	74.9	53.0	51.0	65.0	Less than Significant
G16	2	260	NOI-4	61.4	58.0	53.0	59.0	Less than Significant
G17	2	215	NOI-4	61.4	59.0	55.0	59.0	Less Than Significant With Mitigation
G18	2	140	NOI-4	61.4	60.0	55.0	59.0	Less Than Significant With Mitigation
G19	2	240	NOI-4	61.4	58.0	53.0	59.0	Less than Significant
G20	2	120	NOI-4	61.5	64.0	56.0	59.0	Less Than Significant With Mitigation
G21	2	200	NOI-4	61.4	61.0	56.0	59.0	Less Than Significant With Mitigation
G22	2	300	NOI-4	61.4	59.0	54.0	59.0	Less Than Significant With Mitigation
G23	2	290	NOI-4	61.4	59.0	54.0	59.0	Less Than Significant With Mitigation
G24	2	390	NOI-4	61.3	53.0	53.0	59.0	Less than Significant
G25	2	362	NOI-4	61.4	53.0	53.0	59.0	Less than Significant
G26	2	402	NOI-4	61.3	52.0	52.0	59.0	Less than Significant
G27	2	75	NOI-4	61.5	70.0	56.0	59.0	Less Than Significant With Mitigation
G28	2	105	NOI-4	61.5	68.0	56.0	59.0	Less Than Significant With Mitigation
G29	2	172	NOI-4	61.4	69.0	54.0	59.0	Less Than Significant With Mitigation
G30	2	275	NOI-4	61.4	66.0	51.0	59.0	Less Than Significant With Mitigation

Note: This table only includes clusters affected by relocated freight tracks.

NOI-4 = Quiet Zone Establishment

Source: TAHA, 2023

UNMITIGATED HAWTHORNE OPTION NOISE TABLES

The results of the noise analysis associated with the Hawthorne Option are shown in Table 11 for light rail and Table 12 for TPSSs. Cluster numbers are defined in Figure 3.6-28 through Figure 3.6-30 in Section 3.6, Noise and Vibration of the EIR.

Table 11. Hawthorne Option Light Rail Noise at Sensitive Receptors

Hawthorne Option LRT Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
A1	2	270	40	C	67.1	62.0	62.0	Significant
A2	2	280	45	C	67.1	63.0	62.0	Significant
A3	2	300	50	CF	67.1	73.0	62.0	Significant
A4	2	15	40	None	69.5	74.0	64.0	Significant
A5	2	35	40	None	69.5	71.0	64.0	Significant
A6	2	65	40	None	69.5	68.0	64.0	Significant
A7	2	110	40	None	69.5	66.0	64.0	Significant
I1	2	80	40	CG	71.2	67.0	65.0	Significant
I2	2	220	40	CG	65.0	63.0	61.0	Significant
I3	2	170	40	CG	65.0	64.0	61.0	Significant
I4	2	100	40	CDG	65.0	71.0	61.0	Significant
I5	2	20	40	CDG	62.2	78.0	59.0	Significant
I6	2	60	45	CD	62.2	74.0	59.0	Significant
I7	2	110	45	CD	62.2	72.0	59.0	Significant
I8	2	200	45	CD	62.2	69.0	59.0	Significant
I9	2	300	45	C	62.2	62.0	59.0	Significant
I10	2	120	45	CD	62.2	71.0	59.0	Significant
I11	2	220	45	CD	62.2	69.0	59.0	Significant
I12	2	310	45	C	62.2	62.0	59.0	Significant
I13	2	15	35	CD	62.2	78.0	59.0	Significant
I14	2	120	40	CD	62.2	70.0	59.0	Significant
I15	2	200	40	CD	62.2	68.0	59.0	Significant
I16	2	270	45	CD	62.2	68.0	59.0	Significant
I17	2	50	35	CF	62.2	78.0	59.0	Significant
I18	2	120	35	CF	62.2	74.0	59.0	Significant

Hawthorne Option LRT Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
I19	2	215	40	C	62.2	63.0	59.0	Significant
I20	2	290	40	C	62.2	61.0	59.0	Significant
I21	2	200	35	CF	62.2	72.0	59.0	Significant
I22	2	310	35	CF	62.2	70.0	59.0	Significant
I23	2	100	35	CF	62.2	75.0	59.0	Significant
I24	2	180	35	CF	62.2	72.0	59.0	Significant
I25	2	250	35	CF	62.2	71.0	59.0	Significant
I26	2	320	35	CF	62.2	70.0	59.0	Significant
J1	2	180	35	CF	60.0	72.0	58.0	Significant
J2	3	200	35	CF	65.1	67.0	66.0	Significant
J3	2	320	35	CF	60.0	70.0	58.0	Significant
J4	2	200	45	C	60.0	64.0	58.0	Significant
J5	2	285	45	C	60.0	63.0	58.0	Significant
J6	3	110	55	C	69.5	63.0	69.0	Less than Significant
J7	3	200	55	C	69.5	61.0	69.0	Less than Significant
J8	2	240	55	C	60.0	65.0	58.0	Significant
J9	2	320	55	C	60.0	64.0	58.0	Significant
J10	2	200	55	C	63.2	66.0	60.0	Significant
J11	2	285	55	C	63.2	64.0	60.0	Significant
J12	2	230	55	C	63.2	65.0	60.0	Significant
J13	2	270	55	C	63.2	65.0	60.0	Significant
J14	2	230	55	C	63.2	65.0	60.0	Significant
J15	2	260	55	C	63.2	65.0	60.0	Significant
J16	2	220	55	C	63.2	65.0	60.0	Significant
J17	2	300	55	C	63.2	64.0	60.0	Significant
J18	2	220	55	CD	63.2	70.0	60.0	Significant
J19	2	300	55	CD	63.2	69.0	60.0	Significant
J20	2	220	55	CD	63.2	70.0	60.0	Significant
J21	2	300	55	CD	63.2	69.0	60.0	Significant
J22	2	230	55	CD	61.1	70.0	58.0	Significant
J23	2	310	55	CD	61.1	69.0	58.0	Significant
J24	2	230	55	CD	61.1	70.0	58.0	Significant

Hawthorne Option LRT Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
J25	2	310	55	CD	61.1	69.0	58.0	Significant
J26	2	230	45	CD	61.1	68.0	58.0	Significant
J27	2	310	45	C	61.1	62.0	58.0	Significant
J28	2	230	45	C	61.1	63.0	58.0	Significant
J29	2	310	45	C	61.1	62.0	58.0	Significant
J30	2	320	45	C	61.1	62.0	58.0	Significant
J31	2	230	35	C	60.0	61.0	58.0	Significant
J32	2	320	35	C	60.0	60.0	58.0	Significant
J33	2	150	45	C	71.4	65.0	65.0	Significant
J34	2	230	45	C	60.0	63.0	58.0	Significant
J35	2	285	45	C	60.0	63.0	58.0	Significant
J36	2	85	55	C	71.4	70.0	65.0	Significant
J37	2	230	55	C	60.0	65.0	58.0	Significant
J38	2	280	55	C	60.0	64.0	58.0	Significant
J39	2	230	55	C	60.0	65.0	58.0	Significant
J40	2	280	55	C	60.0	64.0	58.0	Significant
J41	2	220	55	C	63.2	65.0	60.0	Significant
J42	2	280	55	C	63.2	64.0	60.0	Significant
J43	2	220	55	C	63.2	65.0	60.0	Significant
J44	2	280	55	C	63.2	64.0	60.0	Significant
J45	2	220	55	C	63.2	65.0	60.0	Significant
J46	2	280	55	C	63.2	64.0	60.0	Significant
J47	2	220	55	CD	63.2	70.0	60.0	Significant
J48	2	280	55	CD	63.2	69.0	60.0	Significant
J49	2	220	55	CD	63.2	70.0	60.0	Significant
J50	2	280	55	CD	63.2	69.0	60.0	Significant
J51	2	225	55	CD	61.1	70.0	58.0	Significant
J52	2	275	55	CD	61.1	69.0	58.0	Significant
J53	2	225	55	CD	61.1	70.0	58.0	Significant
J54	2	275	55	CD	61.1	69.0	58.0	Significant
J55	2	230	50	CD	61.1	69.0	58.0	Significant
J56	2	310	50	C	61.1	63.0	58.0	Significant

Hawthorne Option LRT Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
J57	2	315	45	C	71.3	62.0	65.0	Less than Significant
J58	2	350	35	C	61.1	59.0	58.0	Significant
J59	2	340	35	C	72.8	60.0	65.0	Less than Significant
K1	2	85	25	C	55.8	63.0	56.0	Significant
K2	2	190	25	C	55.8	59.0	56.0	Significant
K3	2	295	25	C	55.8	57.0	56.0	Significant
K4	2	90	35	C	55.8	65.0	56.0	Significant
K5	2	190	35	C	55.8	62.0	56.0	Significant
K6	2	300	35	C	55.8	60.0	56.0	Significant
K7	2	100	35	C	55.8	65.0	56.0	Significant
K8	2	200	35	C	55.8	62.0	56.0	Significant
K9	2	300	35	C	55.8	60.0	56.0	Significant
K10	2	60	45	C	55.8	69.0	56.0	Significant
K11	2	185	45	C	55.8	64.0	56.0	Significant
K12	2	280	45	C	55.8	63.0	56.0	Significant
K13	2	105	55	C	55.8	69.0	56.0	Significant
K14	2	185	55	C	55.8	66.0	56.0	Significant
K15	2	285	55	C	55.8	64.0	56.0	Significant
K16	2	75	55	CD	55.8	75.0	56.0	Significant
K17	2	190	55	CD	55.8	71.0	56.0	Significant
K18	2	285	55	CD	55.8	69.0	56.0	Significant
K19	2	220	55	CD	55.8	70.0	56.0	Significant
K20	2	270	55	CD	55.8	70.0	56.0	Significant
K21	2	290	55	CD	56.6	69.0	56.0	Significant
K22	2	300	55	C	56.6	64.0	56.0	Significant
K23	2	300	55	C	56.6	64.0	56.0	Significant
K24	2	300	55	C	56.6	64.0	56.0	Significant
K25	2	260	55	C	56.6	65.0	56.0	Significant
K26	2	80	55	C	75.1	70.0	65.0	Significant
K27	2	215	55	C	56.6	66.0	56.0	Significant
K28	2	215	55	C	56.6	66.0	56.0	Significant
K29	2	205	55	C	56.6	66.0	56.0	Significant

Hawthorne Option LRT Light Rail Noise at Sensitive Receptors								
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Adjustments to LRT Noise ²	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	Project	Impact Threshold	
K30	2	100	50	C	75.1	68.0	65.0	Significant
K31	2	160	50	C	75.1	66.0	65.0	Significant
K32	2	230	50	C	75.1	64.0	65.0	Less than Significant
L1	2	300	50	C	73.9	63.0	65.0	Less than Significant

1. Distance to the closest area of human use or closest building façade.

2. Adjustments to LRT noise based on intervening rows of buildings, track type, special trackwork, quacker noise, wheel squeal noise, and audible warning noise.

A = first row of intervening buildings.

B = second row of intervening buildings.

C = aerial structure with slab track.

D = jointed track or crossover.

E = quacker noise.

F = wheel squeal noise.

G = TPSS Noise

Source: TAHA, 2023

Table 12. Hawthorne Option TPSS Noise at Sensitive Receptors

TPSS Site	Location	Cluster No.	Distance (feet) ¹	Intervening Building Row ¹	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})			Impact
					Existing	TPSS Noise	Impact Threshold	
Site Option 1	Metro right-of-way south of Marine Ave.	None	None	None	None	None	None	None
Site Option H1	Metro right-of-way south of Manhattan Beach Blvd.	I1	100	Yes	71.2	39.0	65.0	Less than Significant
		I2	150	Yes	65	36.0	61.0	Less than Significant
		I3	100	Yes	65	39.0	61.0	Less than Significant
		I4	75	Yes	65	42.0	61.0	Less than Significant
		I5	75	Yes	62.2	42.0	59.0	Less than Significant
Site Option H2	Commercial property at the northeast corner of Redondo Beach Blvd. and Artesia Blvd.	None	None	None	None	None	None	None
Site Option 6	Electric utility right-of-way northeast corner of Hawthorne Blvd. and 190 th St.	None	None	None	None	None	None	None

¹Reduction of -4.5 dBA for intervening building row.

Source: TAHA, 2023

MITIGATED HAWTHORNE OPTION NOISES TABLES

Because the Hawthorne Option does not require PF-NV-2 and PF-NV-3, CPUC authorization does not affect its impact analysis. The noise analysis of the Hawthorne Option with mitigation is shown in Table 13 for light rail noise.

Table 13. Hawthorne Option Mitigated Light Rail Noise at Sensitive Receptors

Hawthorne Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measures	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
					Existing	Unmitigated	Mitigated	Impact Threshold	
A1	2	270	40	NOI-2	67.1	62.0	56.0	62.0	Less Than Significant With Mitigation
A2	2	280	45	NOI-2	67.1	63.0	57.0	62.0	Less Than Significant With Mitigation
A3	2	250	50	NOI-2NOI-5	67.1	73.0	58.0	62.0	Less Than Significant With Mitigation
A4	2	15	40	NOI-2	69.5	74.0	62.0	64.0	Less Than Significant With Mitigation
A5	2	35	40	NOI-2	69.5	71.0	60.0	64.0	Less Than Significant With Mitigation
A6	2	65	40	NOI-2	69.5	68.0	58.0	64.0	Less Than Significant With Mitigation
A7	2	110	40	NOI-2	69.5	66.0	57.0	64.0	Less Than Significant With Mitigation
I1	2	80	40	NOI-2	71.2	67.0	53.0	65.0	Less Than Significant With Mitigation
I2	2	220	40	NOI-2	65.0	63.0	50.0	61.0	Less Than Significant With Mitigation
I3	2	170	40	NOI-2	65.0	64.0	52.0	61.0	Less Than Significant With Mitigation
I4	2	100	40	NOI-2NOI-3	65.0	71.0	53.0	61.0	Less Than Significant With Mitigation
I5	2	20	40	NOI-2NOI-3	62.2	78.0	58.0	59.0	Less Than Significant With Mitigation
I6	2	60	45	NOI-2NOI-3	62.2	74.0	55.0	59.0	Less Than Significant With Mitigation

Hawthorne Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measures	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
					Existing	Unmitigated	Mitigated	Impact Threshold	
I7	2	110	45	NOI-2NOI-3	62.2	72.0	53.0	59.0	Less Than Significant With Mitigation
I8	2	200	45	NOI-2NOI-3	62.2	69.0	51.0	59.0	Less Than Significant With Mitigation
I9	2	300	45	NOI-2	62.2	62.0	50.0	59.0	Less Than Significant With Mitigation
I10	2	120	45	NOI-2NOI-3	62.2	71.0	53.0	59.0	Less Than Significant With Mitigation
I11	2	220	45	NOI-2NOI-3	62.2	69.0	51.0	59.0	Less Than Significant With Mitigation
I12	2	310	45	NOI-2	62.2	62.0	50.0	59.0	Less Than Significant With Mitigation
I13	2	15	35	NOI-2NOI-3	62.2	78.0	58.0	59.0	Less Than Significant With Mitigation
I14	2	120	40	NOI-2NOI-3	62.2	70.0	52.0	59.0	Less Than Significant With Mitigation
I15	2	200	40	NOI-2NOI-3	62.2	68.0	50.0	59.0	Less Than Significant With Mitigation
I16	2	270	45	NOI-2NOI-3	62.2	68.0	51.0	59.0	Less Than Significant With Mitigation
I17	2	50	35	NOI-2NOI-5	62.2	78.0	53.0	59.0	Less Than Significant With Mitigation
I18	2	120	35	NOI-2NOI-5	62.2	74.0	51.0	59.0	Less Than Significant With Mitigation
I19	2	215	40	NOI-2	62.2	63.0	51.0	59.0	Less Than Significant With Mitigation
I20	2	290	40	NOI-2	62.2	61.0	49.0	59.0	Less Than Significant With Mitigation
I21	2	200	35	NOI-2NOI-5	62.2	72.0	54.0	59.0	Less Than Significant With Mitigation
I22	2	310	35	NOI-2NOI-5	62.2	70.0	52.0	59.0	Less Than Significant With Mitigation

Hawthorne Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measures	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
					Existing	Unmitigated	Mitigated	Impact Threshold	
I23	2	100	35	NOI-2NOI-5	62.2	75.0	56.0	59.0	Less Than Significant With Mitigation
I24	2	180	35	NOI-2NOI-5	62.2	72.0	54.0	59.0	Less Than Significant With Mitigation
I25	2	250	35	NOI-2NOI-5	62.2	71.0	53.0	59.0	Less Than Significant With Mitigation
I26	2	320	35	NOI-2NOI-5	62.2	70.0	52.0	59.0	Less Than Significant With Mitigation
J1	2	180	35	NOI-2NOI-5	60.0	72.0	52.0	58.0	Less Than Significant With Mitigation
J2	3	200	35	NOI-2NOI-5	65.1	67.0	48.0	66.0	Less Than Significant With Mitigation
J3	2	320	35	NOI-2NOI-5	60.0	70.0	51.0	58.0	Less Than Significant With Mitigation
J4	2	200	45	NOI-2	60.0	64.0	55.0	58.0	Less Than Significant With Mitigation
J5	2	285	45	NOI-2	60.0	63.0	54.0	58.0	Less Than Significant With Mitigation
J6	3	110	55	NOI-2	69.5	63.0	55.0	69.0	Less than Significant
J7	3	200	55	NOI-2	69.5	61.0	53.0	69.0	Less than Significant
J8	2	240	55	NOI-2	60.0	65.0	57.0	58.0	Less Than Significant With Mitigation
J9	2	320	55	NOI-2	60.0	64.0	57.0	58.0	Less Than Significant With Mitigation
J10	2	200	55	NOI-2	63.2	66.0	58.0	60.0	Less Than Significant With Mitigation
J11	2	285	55	NOI-2	63.2	64.0	57.0	60.0	Less Than Significant With Mitigation
J12	2	230	55	NOI-2	63.2	65.0	56.0	60.0	Less Than Significant With Mitigation
J13	2	270	55	NOI-2	63.2	65.0	56.0	60.0	Less Than Significant With Mitigation

Hawthorne Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measures	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
					Existing	Unmitigated	Mitigated	Impact Threshold	
J14	2	230	55	NOI-2	63.2	65.0	56.0	60.0	Less Than Significant With Mitigation
J15	2	260	55	NOI-2	63.2	65.0	56.0	60.0	Less Than Significant With Mitigation
J16	2	220	55	NOI-2	63.2	65.0	56.0	60.0	Less Than Significant With Mitigation
J17	2	300	55	NOI-2	63.2	64.0	55.0	60.0	Less Than Significant With Mitigation
J18	2	220	55	NOI-2NOI-3	63.2	70.0	56.0	60.0	Less Than Significant With Mitigation
J19	2	300	55	NOI-2NOI-3	63.2	69.0	55.0	60.0	Less Than Significant With Mitigation
J20	2	220	55	NOI-2NOI-3	63.2	70.0	56.0	60.0	Less Than Significant With Mitigation
J21	2	300	55	NOI-2NOI-3	63.2	69.0	55.0	60.0	Less Than Significant With Mitigation
J22	2	230	55	NOI-2NOI-3	61.1	70.0	56.0	58.0	Less Than Significant With Mitigation
J23	2	310	55	NOI-2NOI-3	61.1	69.0	55.0	58.0	Less Than Significant With Mitigation
J24	2	230	55	NOI-2NOI-3	61.1	70.0	56.0	58.0	Less Than Significant With Mitigation
J25	2	310	55	NOI-2NOI-3	61.1	69.0	55.0	58.0	Less Than Significant With Mitigation
J26	2	230	45	NOI-2NOI-3	61.1	68.0	54.0	58.0	Less Than Significant With Mitigation
J27	2	310	45	NOI-2	61.1	62.0	53.0	58.0	Less Than Significant With Mitigation
J28	2	230	45	NOI-2	61.1	63.0	54.0	58.0	Less Than Significant With Mitigation
J29	2	310	45	NOI-2	61.1	62.0	53.0	58.0	Less Than Significant With Mitigation

Hawthorne Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measures	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
					Existing	Unmitigated	Mitigated	Impact Threshold	
J30	2	320	45	NOI-2	61.1	62.0	53.0	58.0	Less Than Significant With Mitigation
J31	2	230	35	NOI-2	60.0	61.0	52.0	58.0	Less Than Significant With Mitigation
J32	2	320	35	NOI-2	60.0	60.0	51.0	58.0	Less Than Significant With Mitigation
J33	2	150	45	NOI-2	71.4	65.0	55.0	65.0	Less Than Significant With Mitigation
J34	2	230	45	NOI-2	60.0	63.0	54.0	58.0	Less Than Significant With Mitigation
J35	2	285	45	NOI-2	60.0	63.0	54.0	58.0	Less Than Significant With Mitigation
J36	2	85	55	NOI-2	71.4	70.0	61.0	65.0	Less Than Significant With Mitigation
J37	2	230	55	NOI-2	60.0	65.0	57.0	58.0	Less Than Significant With Mitigation
J38	2	280	55	NOI-2	60.0	64.0	56.0	58.0	Less Than Significant With Mitigation
J39	2	230	55	NOI-2	60.0	65.0	57.0	58.0	Less Than Significant With Mitigation
J40	2	280	55	NOI-2	60.0	64.0	57.0	58.0	Less Than Significant With Mitigation
J41	2	220	55	NOI-2	63.2	65.0	57.0	60.0	Less Than Significant With Mitigation
J42	2	280	55	NOI-2	63.2	64.0	56.0	60.0	Less Than Significant With Mitigation
J43	2	220	55	NOI-2	63.2	65.0	57.0	60.0	Less Than Significant With Mitigation
J44	2	280	55	NOI-2	63.2	64.0	57.0	60.0	Less Than Significant With Mitigation
J45	2	220	55	NOI-2	63.2	65.0	57.0	60.0	Less Than Significant With Mitigation

Hawthorne Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measures	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
					Existing	Unmitigated	Mitigated	Impact Threshold	
J46	2	280	55	NOI-2	63.2	64.0	56.0	60.0	Less Than Significant With Mitigation
J47	2	220	55	NOI-2NOI-3	63.2	70.0	57.0	60.0	Less Than Significant With Mitigation
J48	2	280	55	NOI-2NOI-3	63.2	69.0	57.0	60.0	Less Than Significant With Mitigation
J49	2	220	55	NOI-2NOI-3	63.2	70.0	57.0	60.0	Less Than Significant With Mitigation
J50	2	280	55	NOI-2NOI-3	63.2	69.0	57.0	60.0	Less Than Significant With Mitigation
J51	2	225	55	NOI-2NOI-3	61.1	70.0	57.0	58.0	Less Than Significant With Mitigation
J52	2	275	55	NOI-2NOI-3	61.1	69.0	56.0	58.0	Less Than Significant With Mitigation
J53	2	225	55	NOI-2NOI-3	61.1	70.0	57.0	58.0	Less Than Significant With Mitigation
J54	2	275	55	NOI-2NOI-3	61.1	69.0	56.0	58.0	Less Than Significant With Mitigation
J55	2	230	50	NOI-2NOI-3	61.1	69.0	56.0	58.0	Less Than Significant With Mitigation
J56	2	310	50	NOI-2	61.1	63.0	55.0	58.0	Less Than Significant With Mitigation
J57	2	315	45	NOI-2	71.3	62.0	54.0	65.0	Less than Significant
J58	2	350	35	NOI-2	61.1	59.0	54.0	58.0	Less Than Significant With Mitigation
J59	2	340	35	NOI-2	72.8	60.0	55.0	65.0	Less than Significant
K1	2	85	25	NOI-2	55.8	63.0	50.0	57.0	Less Than Significant With Mitigation
K2	2	190	25	NOI-2	55.8	59.0	47.0	57.0	Less Than Significant With Mitigation
K3	2	295	25	NOI-2	55.8	57.0	45.0	57.0	Less Than Significant With Mitigation

Hawthorne Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measures	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
					Existing	Unmitigated	Mitigated	Impact Threshold	
K4	2	90	35	NOI-2	55.8	65.0	52.0	57.0	Less Than Significant With Mitigation
K5	2	190	35	NOI-2	55.8	62.0	50.0	57.0	Less Than Significant With Mitigation
K6	2	300	35	NOI-2	55.8	60.0	48.0	57.0	Less Than Significant With Mitigation
K7	2	100	35	NOI-2	55.8	65.0	52.0	57.0	Less Than Significant With Mitigation
K8	2	200	35	NOI-2	55.8	62.0	50.0	57.0	Less Than Significant With Mitigation
K9	2	300	35	NOI-2	55.8	60.0	48.0	57.0	Less Than Significant With Mitigation
K10	2	60	45	NOI-2	55.8	69.0	55.0	57.0	Less Than Significant With Mitigation
K11	2	185	45	NOI-2	55.8	64.0	52.0	57.0	Less Than Significant With Mitigation
K12	2	280	45	NOI-2	55.8	63.0	51.0	57.0	Less Than Significant With Mitigation
K13	2	105	55	NOI-2	55.8	69.0	56.0	57.0	Less Than Significant With Mitigation
K14	2	185	55	NOI-2	55.8	66.0	54.0	57.0	Less Than Significant With Mitigation
K15	2	285	55	NOI-2	55.8	64.0	52.0	57.0	Less Than Significant With Mitigation
K16	2	75	55	NOI-2NOI-3	55.8	75.0	56.0	57.0	Less Than Significant With Mitigation
K17	2	190	55	NOI-2NOI-3	55.8	71.0	54.0	57.0	Less Than Significant With Mitigation
K18	2	285	55	NOI-2NOI-3	55.8	69.0	52.0	57.0	Less Than Significant With Mitigation
K19	2	220	55	NOI-2NOI-3	55.8	70.0	53.0	57.0	Less Than Significant With Mitigation

Hawthorne Option Mitigated LRT Light Rail Noise at Sensitive Receptors									
Cluster No.	Land Use	Near Track Distance (ft) ¹	Speed (mph)	Mitigation Measures	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
					Existing	Unmitigated	Mitigated	Impact Threshold	
K20	2	270	55	NOI-2NOI-3	55.8	70.0	53.0	57.0	Less Than Significant With Mitigation
K21	2	290	55	NOI-2NOI-3	56.6	69.0	55.0	56.0	Less Than Significant With Mitigation
K22	2	300	55	NOI-2	56.6	64.0	55.0	56.0	Less Than Significant With Mitigation
K23	2	300	55	NOI-2	56.6	64.0	55.0	56.0	Less Than Significant With Mitigation
K24	2	300	55	NOI-2	56.6	64.0	55.0	56.0	Less Than Significant With Mitigation
K25	2	260	55	NOI-2	56.6	65.0	53.0	56.0	Less Than Significant With Mitigation
K26	2	80	55	NOI-2	75.1	70.0	57.0	65.0	Less Than Significant With Mitigation
K27	2	215	55	NOI-2	56.6	66.0	54.0	56.0	Less Than Significant With Mitigation
K28	2	215	55	NOI-2	56.6	66.0	54.0	56.0	Less Than Significant With Mitigation
K29	2	205	55	NOI-2	56.6	66.0	54.0	56.0	Less Than Significant With Mitigation
K30	2	100	50	NOI-2	75.1	68.0	61.0	65.0	Less Than Significant With Mitigation
K31	2	160	50	NOI-2	75.1	66.0	60.0	65.0	Less Than Significant With Mitigation
K32	2	230	50	NOI-2	75.1	64.0	59.0	65.0	Less than Significant
L1	2	300	50	None	73.9	63.0	63.0	65.0	Less than Significant

NOI-2 = Soundwalls.

NOI-3 = Low Impact Frogs

NOI-5 = Wheel squeal noise monitoring and wayside friction applicator.

Source: TAHA, 2023

MITIGATED PROPOSED PROJECT WITHOUT THIRD-PARTY APPROVALS

If Cities implement quiet zones and all other mitigations are implemented by Metro for the Proposed Project, but CPUC does not permit bell shroud and gate-down-stop measures, impacts would be as described in Table 14 for the combined freight track relocation and light rail noise, with impacts at four clusters remaining. If Cities do not implement quiet zones and CPUC does not permit bell shroud and gate-down-stop measures and all other mitigations are implemented by Metro for the Proposed Project, impacts would be as described in Table 15, with impacts at 92 clusters remaining. If Cities do not implement quiet zones for the Trench Option (bell shroud and gate-down-stop approval by CPUC not required), impacts would be as described in Table 16, with 87 impacts remaining.

Table 14. Proposed Project Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop

Proposed Project Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and Mitigated LRT Combined	Impact Threshold	
A1	2	220	67.3	63.0	54.0	62.0	Less Than Significant With Mitigation
A2	2	220	67.3	63.0	55.0	62.0	Less Than Significant With Mitigation
A4	2	355	69.6	62.0	57.0	64.0	Less than Significant
A5	2	330	69.6	62.0	57.0	64.0	Less than Significant
A6	2	300	69.6	63.0	57.0	64.0	Less than Significant
A7	2	270	69.6	63.0	58.0	64.0	Less than Significant
B1	3	80	71.4	73.0	61.0	70.0	Less Than Significant With Mitigation
B2	2	120	65.8	67.0	60.0	61.0	Less Than Significant With Mitigation
B3	2	200	65.4	64.0	59.0	61.0	Less Than Significant With Mitigation
B4	2	360	65.2	62.0	57.0	61.0	Less Than Significant With Mitigation
B5	2	35	66.6	70.0	61.0	62.0	Less Than Significant With Mitigation
B6	2	160	65.5	65.0	59.0	61.0	Less Than Significant With Mitigation
B7	2	285	65.3	63.0	57.0	61.0	Less Than Significant With Mitigation
B8	2	40	70.5	70.0	62.0	65.0	Less Than Significant With Mitigation
B9	2	150	70.2	65.0	60.0	65.0	Less Than Significant With Mitigation
B10	2	265	70.1	63.0	57.0	64.0	Less than Significant
B11	2	40	70.5	70.0	62.0	65.0	Less Than Significant With Mitigation
B12	2	150	70.2	65.0	60.0	65.0	Less Than Significant With Mitigation
B13	2	265	70.1	63.0	57.0	64.0	Less than Significant
B14	2	40	70.5	70.0	62.0	65.0	Less Than Significant With Mitigation

Proposed Project Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and Mitigated LRT Combined	Impact Threshold	
B15	2	150	70.2	65.0	59.0	65.0	Less Than Significant With Mitigation
B16	2	265	70.1	63.0	58.0	64.0	Less than Significant
B17	2	60	70.4	65.0	58.0	65.0	Less Than Significant With Mitigation
B18	2	160	70.2	62.0	56.0	65.0	Less than Significant
B19	2	275	70.1	60.0	54.0	64.0	Less than Significant
B20	2	60	70.4	65.0	58.0	65.0	Less Than Significant With Mitigation
B21	2	160	70.2	62.0	56.0	65.0	Less than Significant
B22	2	275	70.1	60.0	55.0	64.0	Less than Significant
B23	2	60	60.9	65.0	56.0	58.0	Less Than Significant With Mitigation
B24	2	160	58.4	63.0	53.0	57.0	Less Than Significant With Mitigation
B25	2	275	57.4	60.0	50.0	56.0	Less Than Significant With Mitigation
B26	2	60	60.9	65.0	56.0	58.0	Less Than Significant With Mitigation
B27	2	160	58.4	63.0	53.0	57.0	Less Than Significant With Mitigation
B28	2	275	57.4	60.0	51.0	56.0	Less Than Significant With Mitigation
B29	2	60	60.9	65.0	54.0	58.0	Less Than Significant With Mitigation
B30	2	160	58.4	63.0	51.0	57.0	Less Than Significant With Mitigation
B31	2	275	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
B32	2	60	60.9	65.0	55.0	58.0	Less Than Significant With Mitigation
B33	2	160	58.4	63.0	52.0	57.0	Less Than Significant With Mitigation
B34	2	275	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
B35	2	55	70.6	71.0	60.0	65.0	Less Than Significant With Mitigation
B36	2	175	65.5	67.0	57.0	61.0	Less Than Significant With Mitigation
B37	2	290	65.3	64.0	55.0	61.0	Less Than Significant With Mitigation
B38	2	55	66.6	74.0	61.0	62.0	Less Than Significant With Mitigation
B39	2	175	65.5	67.0	57.0	61.0	Less Than Significant With Mitigation
B40	2	290	65.3	64.0	55.0	61.0	Less Than Significant With Mitigation
B41	2	60	70.5	72.0	60.0	65.0	Less Than Significant With Mitigation
B42	2	130	70.2	68.0	58.0	65.0	Less Than Significant With Mitigation
B43	2	285	70.1	64.0	55.0	64.0	Less Than Significant With Mitigation
B44	2	60	70.5	72.0	63.0	65.0	Less Than Significant With Mitigation

Proposed Project Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and Mitigated LRT Combined	Impact Threshold	
B45	2	130	70.2	68.0	61.0	65.0	Less Than Significant With Mitigation
B46	2	285	70.1	64.0	58.0	64.0	Less Than Significant With Mitigation
B47	2	65	70.5	68.0	59.0	65.0	Less Than Significant With Mitigation
B48	2	150	70.2	64.0	58.0	65.0	Less than Significant
B49	2	280	70.1	60.0	55.0	64.0	Less than Significant
B50	2	65	70.5	68.0	59.0	65.0	Less Than Significant With Mitigation
B51	2	150	70.2	64.0	59.0	65.0	Less than Significant
B52	2	280	70.1	60.0	55.0	64.0	Less than Significant
B53	2	65	61.7	68.0	55.0	59.0	Less Than Significant With Mitigation
B54	2	150	58.9	64.0	52.0	57.0	Less Than Significant With Mitigation
B55	2	280	57.5	60.0	48.0	56.0	Less Than Significant With Mitigation
B56	2	65	61.7	68.0	55.0	59.0	Less Than Significant With Mitigation
B57	2	150	58.9	64.0	52.0	57.0	Less Than Significant With Mitigation
B58	2	280	57.5	60.0	48.0	56.0	Less Than Significant With Mitigation
B59	2	65	61.7	68.0	54.0	59.0	Less Than Significant With Mitigation
B60	2	150	58.9	64.0	51.0	57.0	Less Than Significant With Mitigation
B61	2	280	57.5	60.0	47.0	56.0	Less Than Significant With Mitigation
B62	2	65	61.7	68.0	55.0	59.0	Less Than Significant With Mitigation
B63	2	150	58.9	64.0	51.0	57.0	Less Than Significant With Mitigation
B64	2	280	57.5	60.0	48.0	56.0	Less Than Significant With Mitigation
C1	2	65	60.7	65.0	54.0	58.0	Less Than Significant With Mitigation
C2	2	115	59.2	63.0	52.0	57.0	Less Than Significant With Mitigation
C3	2	275	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C4	2	65	60.7	65.0	54.0	58.0	Less Than Significant With Mitigation
C5	2	115	59.2	63.0	52.0	57.0	Less Than Significant With Mitigation
C6	2	275	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C7	2	65	60.7	65.0	55.0	58.0	Less Than Significant With Mitigation
C8	2	115	59.2	63.0	52.0	57.0	Less Than Significant With Mitigation
C9	2	275	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C10	2	65	60.7	65.0	55.0	58.0	Less Than Significant With Mitigation

Proposed Project Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and Mitigated LRT Combined	Impact Threshold	
C11	2	115	59.2	63.0	52.0	57.0	Less Than Significant With Mitigation
C12	2	275	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C13	2	65	60.7	65.0	55.0	58.0	Less Than Significant With Mitigation
C14	2	115	59.2	63.0	52.0	57.0	Less Than Significant With Mitigation
C15	2	275	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C16	2	65	60.9	65.0	55.0	58.0	Less Than Significant With Mitigation
C17	2	115	59.3	63.0	53.0	57.0	Less Than Significant With Mitigation
C18	2	275	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C19	2	65	60.9	65.0	55.0	58.0	Less Than Significant With Mitigation
C20	2	115	59.3	63.0	52.0	57.0	Less Than Significant With Mitigation
C21	2	275	57.4	60.0	49.0	56.0	Less Than Significant With Mitigation
C22	2	65	61.7	68.0	55.0	59.0	Less Than Significant With Mitigation
C23	2	150	58.9	64.0	51.0	57.0	Less Than Significant With Mitigation
C24	2	280	57.5	60.0	48.0	56.0	Less Than Significant With Mitigation
C25	2	60	61.1	68.0	55.0	58.0	Less Than Significant With Mitigation
C26	2	160	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C27	2	285	57.3	60.0	48.0	56.0	Less Than Significant With Mitigation
C28	2	60	61.1	68.0	55.0	58.0	Less Than Significant With Mitigation
C29	2	160	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C30	2	285	57.3	60.0	48.0	56.0	Less Than Significant With Mitigation
C31	2	60	61.1	68.0	55.0	58.0	Less Than Significant With Mitigation
C32	2	160	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C33	2	285	57.3	60.0	47.0	56.0	Less Than Significant With Mitigation
C34	2	60	61.1	68.0	55.0	58.0	Less Than Significant With Mitigation
C35	2	160	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C36	2	285	57.3	60.0	47.0	56.0	Less Than Significant With Mitigation
C37	2	60	61.3	68.0	55.0	59.0	Less Than Significant With Mitigation
C38	2	160	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C39	2	275	57.4	60.0	47.0	56.0	Less Than Significant With Mitigation
C40	2	60	61.3	68.0	55.0	59.0	Less Than Significant With Mitigation

Proposed Project Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and Mitigated LRT Combined	Impact Threshold	
C41	2	160	58.5	64.0	51.0	57.0	Less Than Significant With Mitigation
C42	2	275	57.4	60.0	47.0	56.0	Less Than Significant With Mitigation
D1	2	65	61.0	65.0	54.0	58.0	Less Than Significant With Mitigation
D2	2	125	59.1	63.0	52.0	57.0	Less Than Significant With Mitigation
D3	2	240	57.7	60.0	49.0	57.0	Less Than Significant With Mitigation
D4	2	65	61.0	65.0	58.0	58.0	Significant and Unavoidable
D5	2	145	58.8	62.0	55.0	57.0	Less Than Significant With Mitigation
D6	2	230	57.8	60.0	53.0	57.0	Less Than Significant With Mitigation
D7	2	320	57.2	59.0	51.0	56.0	Less Than Significant With Mitigation
D8	2	20	65.0	69.0	60.0	61.0	Less Than Significant With Mitigation
D9	2	20	65.0	69.0	57.0	61.0	Less Than Significant With Mitigation
D10	2	20	65.0	69.0	57.0	61.0	Less Than Significant With Mitigation
D11	2	20	65.0	69.0	57.0	61.0	Less Than Significant With Mitigation
D12	2	20	65.0	69.0	57.0	61.0	Less Than Significant With Mitigation
D13	2	20	66.1	69.0	57.0	62.0	Less Than Significant With Mitigation
D14	2	20	66.1	69.0	58.0	62.0	Less Than Significant With Mitigation
D17	2	165	58.5	62.0	53.0	57.0	Less Than Significant With Mitigation
D18	2	245	57.6	60.0	52.0	57.0	Less Than Significant With Mitigation
D19	2	325	57.1	59.0	51.0	56.0	Less Than Significant With Mitigation
D20	2	165	58.5	62.0	51.0	57.0	Less Than Significant With Mitigation
D21	2	165	58.5	62.0	51.0	57.0	Less Than Significant With Mitigation
D22	2	165	58.5	62.0	51.0	57.0	Less Than Significant With Mitigation
D23	2	170	62.0	62.0	51.0	59.0	Less Than Significant With Mitigation
D26	2	60	61.3	69.0	56.0	59.0	Less Than Significant With Mitigation
D27	2	120	59.2	64.0	52.0	57.0	Less Than Significant With Mitigation
D28	2	280	57.4	60.0	48.0	56.0	Less Than Significant With Mitigation
D29	2	60	61.3	69.0	60.0	59.0	Significant and Unavoidable
D30	2	120	59.2	64.0	55.0	57.0	Less Than Significant With Mitigation
D31	2	280	57.4	60.0	51.0	56.0	Less Than Significant With Mitigation
D32	2	55	61.6	69.0	60.0	59.0	Significant and Unavoidable

Proposed Project Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and Mitigated LRT Combined	Impact Threshold	
D33	2	115	59.4	65.0	55.0	57.0	Less Than Significant With Mitigation
D34	2	275	57.4	60.0	51.0	56.0	Less Than Significant With Mitigation
D35	2	55	61.6	69.0	56.0	59.0	Less Than Significant With Mitigation
D36	2	115	59.4	65.0	52.0	57.0	Less Than Significant With Mitigation
D37	2	275	57.4	60.0	48.0	56.0	Less Than Significant With Mitigation
D38	2	55	61.6	69.0	56.0	59.0	Less Than Significant With Mitigation
D39	2	115	59.4	65.0	51.0	57.0	Less Than Significant With Mitigation
D40	2	275	57.4	60.0	48.0	56.0	Less Than Significant With Mitigation
D41	2	55	63.0	68.0	55.0	60.0	Less Than Significant With Mitigation
D42	2	115	61.4	61.0	50.0	59.0	Less Than Significant With Mitigation
D43	2	275	61.0	56.0	45.0	58.0	Less than Significant
D44	2	55	63.0	68.0	58.0	60.0	Less Than Significant With Mitigation
D45	2	115	61.4	61.0	50.0	59.0	Less Than Significant With Mitigation
D46	2	275	61.0	56.0	45.0	58.0	Less than Significant
E1	2	205	75.1	60.0	60.0	65.0	Less than Significant
E2	2	50	57.8	64.0	56.0	57.0	Less Than Significant With Mitigation
E3	2	200	57.2	56.0	47.0	56.0	Less Than Significant With Mitigation
E4	2	60	58.0	69.0	56.0	57.0	Less Than Significant With Mitigation
E5	2	200	57.3	61.0	51.0	56.0	Less Than Significant With Mitigation
E6	2	275	57.3	60.0	49.0	56.0	Less Than Significant With Mitigation
E7	2	320	57.2	58.0	48.0	56.0	Less Than Significant With Mitigation
E8	2	215	57.3	61.0	51.0	56.0	Less Than Significant With Mitigation
E9	2	385	57.2	58.0	47.0	56.0	Less Than Significant With Mitigation
F1	3	70	59.7	73.0	55.0	63.0	Less Than Significant With Mitigation
F2	2	25	64.0	68.0	60.0	60.0	Significant and Unavoidable
F3	2	30	63.7	67.0	56.0	60.0	Less Than Significant With Mitigation
F4	2	30	63.7	68.0	56.0	60.0	Less Than Significant With Mitigation
F5	2	185	57.0	58.0	49.0	56.0	Less Than Significant With Mitigation
F6	2	295	56.6	56.0	48.0	56.0	Less Than Significant With Mitigation
F7	2	35	63.2	68.0	56.0	60.0	Less Than Significant With Mitigation

Proposed Project Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and Mitigated LRT Combined	Impact Threshold	
F8	2	200	56.9	58.0	47.0	56.0	Less Than Significant With Mitigation
F9	2	305	56.6	56.0	45.0	56.0	Less Than Significant With Mitigation
F10	2	63	61.1	66.0	54.0	58.0	Less Than Significant With Mitigation
F11	2	75	60.6	65.0	53.0	58.0	Less Than Significant With Mitigation
F12	2	170	58.7	61.0	50.0	57.0	Less Than Significant With Mitigation
F13	2	295	56.6	56.0	45.0	56.0	Less Than Significant With Mitigation
F14	2	65	60.9	65.0	54.0	58.0	Less Than Significant With Mitigation
F15	2	120	59.4	63.0	51.0	57.0	Less Than Significant With Mitigation
F16	2	265	56.6	57.0	46.0	56.0	Less Than Significant With Mitigation
F17	2	65	60.7	65.0	53.0	58.0	Less Than Significant With Mitigation
F18	2	240	56.7	57.0	46.0	56.0	Less Than Significant With Mitigation
F19	2	365	56.4	56.0	45.0	56.0	Less Than Significant With Mitigation
F20	3	100	59.5	72.0	51.0	63.0	Less Than Significant With Mitigation
G1	2	100	59.7	68.0	49.0	58.0	Less Than Significant With Mitigation
G2	2	270	56.6	58.0	46.0	56.0	Less Than Significant With Mitigation
G3	2	300	56.6	57.0	46.0	56.0	Less Than Significant With Mitigation
G4	2	305	55.9	55.0	46.0	56.0	Less than Significant
G5	2	150	56.2	67.0	49.0	56.0	Less Than Significant With Mitigation
G6	2	260	56.0	66.0	46.0	56.0	Less Than Significant With Mitigation
G7	2	45	56.9	71.0	53.0	56.0	Less Than Significant With Mitigation
G8	2	120	56.0	64.0	48.0	56.0	Less Than Significant With Mitigation
G9	2	195	55.9	62.0	46.0	56.0	Less Than Significant With Mitigation
G10	2	270	55.9	56.0	46.0	56.0	Less Than Significant With Mitigation
G11	2	110	56.3	64.0	53.0	56.0	Less Than Significant With Mitigation
G12	2	45	57.0	66.0	55.0	56.0	Less Than Significant With Mitigation
G13	2	145	56.2	63.0	52.0	56.0	Less Than Significant With Mitigation
G14	2	195	56.1	61.0	51.0	56.0	Less Than Significant With Mitigation
G15	2	150	74.9	64.0	53.0	65.0	Less than Significant
G16	2	260	61.4	67.0	47.0	59.0	Less Than Significant With Mitigation
G17	2	215	61.4	68.0	48.0	59.0	Less Than Significant With Mitigation

Proposed Project Combined Freight Track Relocation and Light Rail Noise with Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Mitigated Freight and Mitigated LRT Combined	Impact Threshold	
G18	2	140	61.4	70.0	50.0	59.0	Less Than Significant With Mitigation
G19	2	240	61.4	66.0	47.0	59.0	Less Than Significant With Mitigation
G20	2	120	61.5	71.0	52.0	59.0	Less Than Significant With Mitigation
G21	2	200	61.4	68.0	49.0	59.0	Less Than Significant With Mitigation
G22	2	300	61.4	66.0	47.0	59.0	Less Than Significant With Mitigation
G23	2	290	61.4	66.0	47.0	59.0	Less Than Significant With Mitigation
G24	2	390	61.3	59.0	49.0	59.0	Less Than Significant With Mitigation
G25	2	362	61.4	59.0	49.0	59.0	Less Than Significant With Mitigation
G26	2	402	61.3	59.0	48.0	59.0	Less Than Significant With Mitigation
G27	2	75	61.5	75.0	53.0	59.0	Less Than Significant With Mitigation
G28	2	105	61.5	71.0	51.0	59.0	Less Than Significant With Mitigation
G29	2	172	61.4	69.0	49.0	59.0	Less Than Significant With Mitigation
G30	2	275	61.4	61.0	50.0	59.0	Less Than Significant With Mitigation

Note: This table only includes clusters affected by freight track relocation.

Source: TAHA, 2023.

Table 15. Proposed Project Combined Freight Track Relocation and Light Rail Noise No Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop

Proposed Project Combined Freight Track Relocation and Light Rail Noise No Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
A1	2	220	67.3	63.0	57.0	62.0	Less Than Significant With Mitigation
A2	2	220	67.3	63.0	58.0	62.0	Less Than Significant With Mitigation
A4	2	355	69.6	62.0	58.0	64.0	Less than Significant
A5	2	330	69.6	62.0	58.0	64.0	Less than Significant
A6	2	300	69.6	63.0	59.0	64.0	Less than Significant
A7	2	270	69.6	63.0	59.0	64.0	Less than Significant
B1	3	80	71.4	73.0	73.0	70.0	Significant and Unavoidable
B2	2	120	65.8	67.0	62.0	61.0	Significant and Unavoidable
B3	2	200	65.4	64.0	60.0	61.0	Less Than Significant With Mitigation
B4	2	360	65.2	62.0	58.0	61.0	Less Than Significant With Mitigation
B5	2	35	66.6	70.0	65.0	62.0	Significant and Unavoidable
B6	2	160	65.5	65.0	60.0	61.0	Less Than Significant With Mitigation
B7	2	285	65.3	63.0	59.0	61.0	Less Than Significant With Mitigation
B8	2	40	70.5	70.0	65.0	65.0	Significant and Unavoidable
B9	2	150	70.2	65.0	61.0	65.0	Less Than Significant With Mitigation
B10	2	265	70.1	63.0	59.0	64.0	Less than Significant
B11	2	40	70.5	70.0	65.0	65.0	Significant and Unavoidable
B12	2	150	70.2	65.0	61.0	65.0	Less Than Significant With Mitigation
B13	2	265	70.1	63.0	59.0	64.0	Less than Significant
B14	2	40	70.5	70.0	65.0	65.0	Significant and Unavoidable
B15	2	150	70.2	65.0	61.0	65.0	Less Than Significant With Mitigation
B16	2	265	70.1	63.0	59.0	64.0	Less than Significant
B17	2	60	70.4	65.0	62.0	65.0	Less Than Significant With Mitigation
B18	2	160	70.2	62.0	59.0	65.0	Less than Significant
B19	2	275	70.1	60.0	56.0	64.0	Less than Significant
B20	2	60	70.4	65.0	62.0	65.0	Less Than Significant With Mitigation
B21	2	160	70.2	62.0	59.0	65.0	Less than Significant
B22	2	275	70.1	60.0	57.0	64.0	Less than Significant
B23	2	60	60.9	65.0	61.0	58.0	Significant and Unavoidable

Proposed Project Combined Freight Track Relocation and Light Rail Noise No Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
B24	2	160	58.4	63.0	58.0	57.0	Significant and Unavoidable
B25	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
B26	2	60	60.9	65.0	61.0	58.0	Significant and Unavoidable
B27	2	160	58.4	63.0	58.0	57.0	Significant and Unavoidable
B28	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
B29	2	60	60.9	65.0	61.0	58.0	Significant and Unavoidable
B30	2	160	58.4	63.0	57.0	57.0	Significant and Unavoidable
B31	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
B32	2	60	60.9	65.0	61.0	58.0	Significant and Unavoidable
B33	2	160	58.4	63.0	57.0	57.0	Significant and Unavoidable
B34	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
B35	2	55	70.6	71.0	63.0	65.0	Less Than Significant With Mitigation
B36	2	175	65.5	67.0	59.0	61.0	Less Than Significant With Mitigation
B37	2	290	65.3	64.0	57.0	61.0	Less Than Significant With Mitigation
B38	2	55	66.6	74.0	63.0	62.0	Significant and Unavoidable
B39	2	175	65.5	67.0	59.0	61.0	Less Than Significant With Mitigation
B40	2	290	65.3	64.0	57.0	61.0	Less Than Significant With Mitigation
B41	2	60	70.5	72.0	63.0	65.0	Less Than Significant With Mitigation
B42	2	130	70.2	68.0	60.0	65.0	Less Than Significant With Mitigation
B43	2	285	70.1	64.0	57.0	64.0	Less Than Significant With Mitigation
B44	2	60	70.5	72.0	65.0	65.0	Significant and Unavoidable
B45	2	130	70.2	68.0	62.0	65.0	Less Than Significant With Mitigation
B46	2	285	70.1	64.0	59.0	64.0	Less Than Significant With Mitigation
B47	2	65	70.5	68.0	62.0	65.0	Less Than Significant With Mitigation
B48	2	150	70.2	64.0	60.0	65.0	Less than Significant
B49	2	280	70.1	60.0	57.0	64.0	Less than Significant
B50	2	65	70.5	68.0	62.0	65.0	Less Than Significant With Mitigation
B51	2	150	70.2	64.0	61.0	65.0	Less than Significant
B52	2	280	70.1	60.0	57.0	64.0	Less than Significant
B53	2	65	61.7	68.0	61.0	59.0	Significant and Unavoidable

Proposed Project Combined Freight Track Relocation and Light Rail Noise No Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
B54	2	150	58.9	64.0	57.0	57.0	Significant and Unavoidable
B55	2	280	57.5	60.0	54.0	56.0	Less Than Significant With Mitigation
B56	2	65	61.7	68.0	61.0	59.0	Significant and Unavoidable
B57	2	150	58.9	64.0	57.0	57.0	Significant and Unavoidable
B58	2	280	57.5	60.0	54.0	56.0	Less Than Significant With Mitigation
B59	2	65	61.7	68.0	61.0	59.0	Significant and Unavoidable
B60	2	150	58.9	64.0	57.0	57.0	Significant and Unavoidable
B61	2	280	57.5	60.0	54.0	56.0	Less Than Significant With Mitigation
B62	2	65	61.7	68.0	61.0	59.0	Significant and Unavoidable
B63	2	150	58.9	64.0	57.0	57.0	Significant and Unavoidable
B64	2	280	57.5	60.0	54.0	56.0	Less Than Significant With Mitigation
C1	2	65	60.7	65.0	61.0	58.0	Significant and Unavoidable
C2	2	115	59.2	63.0	58.0	57.0	Significant and Unavoidable
C3	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
C4	2	65	60.7	65.0	61.0	58.0	Significant and Unavoidable
C5	2	115	59.2	63.0	58.0	57.0	Significant and Unavoidable
C6	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
C7	2	65	60.7	65.0	61.0	58.0	Significant and Unavoidable
C8	2	115	59.2	63.0	58.0	57.0	Significant and Unavoidable
C9	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
C10	2	65	60.7	65.0	61.0	58.0	Significant and Unavoidable
C11	2	115	59.2	63.0	58.0	57.0	Significant and Unavoidable
C12	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
C13	2	65	60.7	65.0	61.0	58.0	Significant and Unavoidable
C14	2	115	59.2	63.0	58.0	57.0	Significant and Unavoidable
C15	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
C16	2	65	60.9	65.0	61.0	58.0	Significant and Unavoidable
C17	2	115	59.3	63.0	58.0	57.0	Significant and Unavoidable
C18	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
C19	2	65	60.9	65.0	61.0	58.0	Significant and Unavoidable

Proposed Project Combined Freight Track Relocation and Light Rail Noise No Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
C20	2	115	59.3	63.0	58.0	57.0	Significant and Unavoidable
C21	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
C22	2	65	61.7	68.0	61.0	59.0	Significant and Unavoidable
C23	2	150	58.9	64.0	57.0	57.0	Significant and Unavoidable
C24	2	280	57.5	60.0	54.0	56.0	Less Than Significant With Mitigation
C25	2	60	61.1	68.0	61.0	58.0	Significant and Unavoidable
C26	2	160	58.5	64.0	57.0	57.0	Significant and Unavoidable
C27	2	285	57.3	60.0	54.0	56.0	Less Than Significant With Mitigation
C28	2	60	61.1	68.0	61.0	58.0	Significant and Unavoidable
C29	2	160	58.5	64.0	57.0	57.0	Significant and Unavoidable
C30	2	285	57.3	60.0	54.0	56.0	Less Than Significant With Mitigation
C31	2	60	61.1	68.0	61.0	58.0	Significant and Unavoidable
C32	2	160	58.5	64.0	57.0	57.0	Significant and Unavoidable
C33	2	285	57.3	60.0	54.0	56.0	Less Than Significant With Mitigation
C34	2	60	61.1	68.0	61.0	58.0	Significant and Unavoidable
C35	2	160	58.5	64.0	57.0	57.0	Significant and Unavoidable
C36	2	285	57.3	60.0	54.0	56.0	Less Than Significant With Mitigation
C37	2	60	61.3	68.0	61.0	59.0	Significant and Unavoidable
C38	2	160	58.5	64.0	57.0	57.0	Significant and Unavoidable
C39	2	275	57.4	60.0	54.0	56.0	Less Than Significant With Mitigation
C40	2	60	61.3	68.0	61.0	59.0	Significant and Unavoidable
C41	2	160	58.5	64.0	57.0	57.0	Significant and Unavoidable
C42	2	275	57.4	60.0	54.0	56.0	Less Than Significant With Mitigation
D1	2	65	61.0	65.0	61.0	58.0	Significant and Unavoidable
D2	2	125	59.1	63.0	58.0	57.0	Significant and Unavoidable
D3	2	240	57.7	60.0	55.0	57.0	Less Than Significant With Mitigation
D4	2	65	61.0	65.0	62.0	58.0	Significant and Unavoidable
D5	2	145	58.8	62.0	58.0	57.0	Significant and Unavoidable
D6	2	230	57.8	60.0	56.0	57.0	Less Than Significant With Mitigation
D7	2	320	57.2	59.0	55.0	56.0	Less Than Significant With Mitigation

Proposed Project Combined Freight Track Relocation and Light Rail Noise No Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
D8	2	20	65.0	69.0	66.0	61.0	Significant and Unavoidable
D9	2	20	65.0	69.0	65.0	61.0	Significant and Unavoidable
D10	2	20	65.0	69.0	65.0	61.0	Significant and Unavoidable
D11	2	20	65.0	69.0	65.0	61.0	Significant and Unavoidable
D12	2	20	65.0	69.0	65.0	61.0	Significant and Unavoidable
D13	2	20	66.1	69.0	65.0	62.0	Significant and Unavoidable
D14	2	20	66.1	69.0	65.0	62.0	Significant and Unavoidable
D17	2	165	58.5	62.0	57.0	57.0	Significant and Unavoidable
D18	2	245	57.6	60.0	56.0	57.0	Less Than Significant With Mitigation
D19	2	325	57.1	59.0	55.0	56.0	Less Than Significant With Mitigation
D20	2	165	58.5	62.0	57.0	57.0	Significant and Unavoidable
D21	2	165	58.5	62.0	57.0	57.0	Significant and Unavoidable
D22	2	165	58.5	62.0	57.0	57.0	Significant and Unavoidable
D23	2	170	62.0	62.0	57.0	59.0	Less Than Significant With Mitigation
D26	2	60	61.3	69.0	61.0	59.0	Significant and Unavoidable
D27	2	120	59.2	64.0	58.0	57.0	Significant and Unavoidable
D28	2	280	57.4	60.0	54.0	56.0	Less Than Significant With Mitigation
D29	2	60	61.3	69.0	63.0	59.0	Significant and Unavoidable
D30	2	120	59.2	64.0	59.0	57.0	Significant and Unavoidable
D31	2	280	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
D32	2	55	61.6	69.0	63.0	59.0	Significant and Unavoidable
D33	2	115	59.4	65.0	59.0	57.0	Significant and Unavoidable
D34	2	275	57.4	60.0	55.0	56.0	Less Than Significant With Mitigation
D35	2	55	61.6	69.0	62.0	59.0	Significant and Unavoidable
D36	2	115	59.4	65.0	58.0	57.0	Significant and Unavoidable
D37	2	275	57.4	60.0	54.0	56.0	Less Than Significant With Mitigation
D38	2	55	61.6	69.0	62.0	59.0	Significant and Unavoidable
D39	2	115	59.4	65.0	58.0	57.0	Significant and Unavoidable
D40	2	275	57.4	60.0	54.0	56.0	Less Than Significant With Mitigation
D41	2	55	63.0	68.0	61.0	60.0	Significant and Unavoidable

Proposed Project Combined Freight Track Relocation and Light Rail Noise No Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
D42	2	115	61.4	61.0	58.0	59.0	Less Than Significant With Mitigation
D43	2	275	61.0	56.0	54.0	58.0	Less than Significant
D44	2	55	63.0	68.0	62.0	60.0	Significant and Unavoidable
D45	2	115	61.4	61.0	58.0	59.0	Less Than Significant With Mitigation
D46	2	275	61.0	56.0	54.0	58.0	Less than Significant
E1	2	205	75.1	60.0	60.0	65.0	Less than Significant
E2	2	50	57.8	64.0	56.0	57.0	Less Than Significant With Mitigation
E3	2	200	57.2	56.0	47.0	56.0	Less Than Significant With Mitigation
E4	2	60	58.0	69.0	56.0	57.0	Less Than Significant With Mitigation
E5	2	200	57.3	61.0	51.0	56.0	Less Than Significant With Mitigation
E6	2	275	57.3	60.0	49.0	56.0	Less Than Significant With Mitigation
E7	2	320	57.2	58.0	48.0	56.0	Less Than Significant With Mitigation
E8	2	215	57.3	61.0	51.0	56.0	Less Than Significant With Mitigation
E9	2	385	57.2	58.0	47.0	56.0	Less Than Significant With Mitigation
F1	3	70	59.7	73.0	73.0	63.0	Significant and Unavoidable
F2	2	25	64.0	68.0	65.0	60.0	Significant and Unavoidable
F3	2	30	63.7	67.0	64.0	60.0	Significant and Unavoidable
F4	2	30	63.7	68.0	64.0	60.0	Significant and Unavoidable
F5	2	185	57.0	58.0	56.0	56.0	Significant and Unavoidable
F6	2	295	56.6	56.0	54.0	56.0	Less Than Significant With Mitigation
F7	2	35	63.2	68.0	63.0	60.0	Significant and Unavoidable
F8	2	200	56.9	58.0	55.0	56.0	Less Than Significant With Mitigation
F9	2	305	56.6	56.0	53.0	56.0	Less Than Significant With Mitigation
F10	2	63	61.1	66.0	61.0	58.0	Significant and Unavoidable
F11	2	75	60.6	65.0	60.0	58.0	Significant and Unavoidable
F12	2	170	58.7	61.0	56.0	57.0	Less Than Significant With Mitigation
F13	2	295	56.6	56.0	54.0	56.0	Less Than Significant With Mitigation
F14	2	65	60.9	65.0	60.0	58.0	Significant and Unavoidable
F15	2	120	59.4	63.0	58.0	57.0	Significant and Unavoidable
F16	2	265	56.6	57.0	54.0	56.0	Less Than Significant With Mitigation

Proposed Project Combined Freight Track Relocation and Light Rail Noise No Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
F17	2	65	60.7	65.0	60.0	58.0	Significant and Unavoidable
F18	2	240	56.7	57.0	54.0	56.0	Less Than Significant With Mitigation
F19	2	365	56.4	56.0	53.0	56.0	Less Than Significant With Mitigation
F20	3	100	59.5	72.0	71.0	63.0	Significant and Unavoidable
G1	2	100	59.7	68.0	58.0	58.0	Significant and Unavoidable
G2	2	270	56.6	58.0	54.0	56.0	Less Than Significant With Mitigation
G3	2	300	56.6	57.0	54.0	56.0	Less Than Significant With Mitigation
G4	2	305	55.9	55.0	46.0	56.0	Less than Significant
G5	2	150	56.2	67.0	49.0	56.0	Less Than Significant With Mitigation
G6	2	260	56.0	66.0	46.0	56.0	Less Than Significant With Mitigation
G7	2	45	56.9	71.0	53.0	56.0	Less Than Significant With Mitigation
G8	2	120	56.0	64.0	48.0	56.0	Less Than Significant With Mitigation
G9	2	195	55.9	62.0	46.0	56.0	Less Than Significant With Mitigation
G10	2	270	55.9	56.0	46.0	56.0	Less Than Significant With Mitigation
G11	2	110	56.3	64.0	53.0	56.0	Less Than Significant With Mitigation
G12	2	45	57.0	66.0	55.0	56.0	Less Than Significant With Mitigation
G13	2	145	56.2	63.0	52.0	56.0	Less Than Significant With Mitigation
G14	2	195	56.1	61.0	51.0	56.0	Less Than Significant With Mitigation
G15	2	150	74.9	64.0	53.0	65.0	Less than Significant
G16	2	260	61.4	67.0	47.0	59.0	Less Than Significant With Mitigation
G17	2	215	61.4	68.0	48.0	59.0	Less Than Significant With Mitigation
G18	2	140	61.4	70.0	50.0	59.0	Less Than Significant With Mitigation
G19	2	240	61.4	66.0	47.0	59.0	Less Than Significant With Mitigation
G20	2	120	61.5	71.0	52.0	59.0	Less Than Significant With Mitigation
G21	2	200	61.4	68.0	49.0	59.0	Less Than Significant With Mitigation
G22	2	300	61.4	66.0	47.0	59.0	Less Than Significant With Mitigation
G23	2	290	61.4	66.0	47.0	59.0	Less Than Significant With Mitigation
G24	2	390	61.3	59.0	49.0	59.0	Less Than Significant With Mitigation
G25	2	362	61.4	59.0	49.0	59.0	Less Than Significant With Mitigation
G26	2	402	61.3	59.0	48.0	59.0	Less Than Significant With Mitigation

Proposed Project Combined Freight Track Relocation and Light Rail Noise No Quiet Zone, No Bell Shroud, No Gate-Down-Bell Stop							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
G27	2	75	61.5	75.0	53.0	59.0	Less Than Significant With Mitigation
G28	2	105	61.5	71.0	51.0	59.0	Less Than Significant With Mitigation
G29	2	172	61.4	69.0	49.0	59.0	Less Than Significant With Mitigation
G30	2	275	61.4	61.0	50.0	59.0	Less Than Significant With Mitigation

Note: This table only includes clusters affected by freight track relocation.

Source: TAHA, 2023

Table 16. Trench Option Combined Freight Track Relocation and Light Rail Noise No Quiet Zone

Trench Option Combined Freight Track Relocation and Light Rail Noise No Quiet Zone							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
A1	2	220	67.3	63.0	58.0	62.0	Less Than Significant With Mitigation
A2	2	220	67.3	62.0	59.0	62.0	Less Than Significant With Mitigation
A4	2	355	69.6	53.0	54.0	64.0	Less than Significant
A5	2	330	69.6	54.0	55.0	64.0	Less than Significant
A6	2	300	69.6	54.0	55.0	64.0	Less than Significant
A7	2	270	69.6	55.0	56.0	64.0	Less than Significant
B1	3	80	71.4	73.0	73.0	70.0	Significant and Unavoidable
B2	2	120	65.8	58.0	58.0	61.0	Less than Significant
B3	2	200	65.4	56.0	56.0	61.0	Less than Significant
B4	2	360	65.2	53.0	53.0	61.0	Less than Significant
B5	2	35	66.6	63.0	63.0	62.0	Significant and Unavoidable
B6	2	160	65.5	57.0	57.0	61.0	Less than Significant
B7	2	285	65.3	54.0	54.0	61.0	Less than Significant
B8	2	40	70.5	62.0	62.0	65.0	Less than Significant
B9	2	150	70.2	57.0	57.0	65.0	Less than Significant
B10	2	265	70.1	55.0	55.0	64.0	Less than Significant
B11	2	40	70.5	63.0	63.0	65.0	Less than Significant
B12	2	150	70.2	57.0	57.0	65.0	Less than Significant
B13	2	265	70.1	55.0	55.0	64.0	Less than Significant
B14	2	40	70.5	63.0	63.0	65.0	Less than Significant
B15	2	150	70.2	57.0	57.0	65.0	Less than Significant
B16	2	265	70.1	55.0	55.0	64.0	Less than Significant
B17	2	60	70.4	61.0	61.0	65.0	Less than Significant
B18	2	160	70.2	57.0	57.0	65.0	Less than Significant
B19	2	275	70.1	54.0	54.0	64.0	Less than Significant
B20	2	60	70.4	61.0	61.0	65.0	Less than Significant
B21	2	160	70.2	57.0	57.0	65.0	Less than Significant
B22	2	275	70.1	54.0	54.0	64.0	Less than Significant

Trench Option Combined Freight Track Relocation and Light Rail Noise No Quiet Zone							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
B23	2	60	60.9	61.0	61.0	58.0	Significant and Unavoidable
B24	2	160	58.4	57.0	57.0	57.0	Significant and Unavoidable
B25	2	275	57.4	54.0	54.0	56.0	Less than Significant
B26	2	60	60.9	61.0	61.0	58.0	Significant and Unavoidable
B27	2	160	58.4	57.0	57.0	57.0	Significant and Unavoidable
B28	2	275	57.4	54.0	54.0	56.0	Less than Significant
B29	2	60	60.9	61.0	61.0	58.0	Significant and Unavoidable
B30	2	160	58.4	57.0	57.0	57.0	Significant and Unavoidable
B31	2	275	57.4	54.0	54.0	56.0	Less than Significant
B32	2	60	60.9	61.0	61.0	58.0	Significant and Unavoidable
B33	2	160	58.4	57.0	57.0	57.0	Significant and Unavoidable
B34	2	275	57.4	54.0	54.0	56.0	Less than Significant
B35	2	55	70.6	63.0	63.0	65.0	Less than Significant
B36	2	175	65.5	57.0	57.0	61.0	Less than Significant
B37	2	290	65.3	54.0	54.0	61.0	Less than Significant
B38	2	55	66.6	63.0	63.0	62.0	Significant and Unavoidable
B39	2	175	65.5	57.0	57.0	61.0	Less than Significant
B40	2	290	65.3	54.0	54.0	61.0	Less than Significant
B41	2	60	70.5	62.0	62.0	65.0	Less than Significant
B42	2	130	70.2	58.0	58.0	65.0	Less than Significant
B43	2	285	70.1	54.0	54.0	64.0	Less than Significant
B44	2	60	70.5	62.0	62.0	65.0	Less than Significant
B45	2	130	70.2	58.0	58.0	65.0	Less than Significant
B46	2	285	70.1	54.0	54.0	64.0	Less than Significant
B47	2	65	70.5	62.0	62.0	65.0	Less than Significant
B48	2	150	70.2	57.0	57.0	65.0	Less than Significant
B49	2	280	70.1	54.0	54.0	64.0	Less than Significant
B50	2	65	70.5	61.0	61.0	65.0	Less than Significant
B51	2	150	70.2	57.0	57.0	65.0	Less than Significant
B52	2	280	70.1	54.0	54.0	64.0	Less than Significant

Trench Option Combined Freight Track Relocation and Light Rail Noise No Quiet Zone							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
B53	2	65	61.7	62.0	61.0	59.0	Significant and Unavoidable
B54	2	150	58.9	57.0	57.0	57.0	Significant and Unavoidable
B55	2	280	57.5	54.0	54.0	56.0	Less than Significant
B56	2	65	61.7	62.0	61.0	59.0	Significant and Unavoidable
B57	2	150	58.9	57.0	57.0	57.0	Significant and Unavoidable
B58	2	280	57.5	54.0	54.0	56.0	Less than Significant
B59	2	65	61.7	61.0	61.0	59.0	Significant and Unavoidable
B60	2	150	58.9	57.0	57.0	57.0	Significant and Unavoidable
B61	2	280	57.5	54.0	54.0	56.0	Less than Significant
B62	2	65	61.7	62.0	61.0	59.0	Significant and Unavoidable
B63	2	150	58.9	57.0	57.0	57.0	Significant and Unavoidable
B64	2	280	57.5	54.0	54.0	56.0	Less than Significant
C1	2	65	60.7	61.0	61.0	58.0	Significant and Unavoidable
C2	2	115	59.2	58.0	58.0	57.0	Significant and Unavoidable
C3	2	275	57.4	54.0	54.0	56.0	Less than Significant
C4	2	65	60.7	61.0	61.0	58.0	Significant and Unavoidable
C5	2	115	59.2	58.0	58.0	57.0	Significant and Unavoidable
C6	2	275	57.4	54.0	54.0	56.0	Less than Significant
C7	2	65	60.7	61.0	61.0	58.0	Significant and Unavoidable
C8	2	115	59.2	58.0	58.0	57.0	Significant and Unavoidable
C9	2	275	57.4	54.0	54.0	56.0	Less than Significant
C10	2	65	60.7	61.0	61.0	58.0	Significant and Unavoidable
C11	2	115	59.2	58.0	58.0	57.0	Significant and Unavoidable
C12	2	275	57.4	54.0	54.0	56.0	Less than Significant
C13	2	65	60.7	61.0	61.0	58.0	Significant and Unavoidable
C14	2	115	59.2	58.0	58.0	57.0	Significant and Unavoidable
C15	2	275	57.4	54.0	54.0	56.0	Less than Significant
C16	2	65	60.9	61.0	61.0	58.0	Significant and Unavoidable
C17	2	115	59.3	58.0	58.0	57.0	Significant and Unavoidable
C18	2	275	57.4	54.0	54.0	56.0	Less than Significant

Trench Option Combined Freight Track Relocation and Light Rail Noise No Quiet Zone							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
C19	2	65	60.9	61.0	61.0	58.0	Significant and Unavoidable
C20	2	115	59.3	58.0	58.0	57.0	Significant and Unavoidable
C21	2	275	57.4	54.0	54.0	56.0	Less than Significant
C22	2	65	61.7	62.0	61.0	59.0	Significant and Unavoidable
C23	2	150	58.9	57.0	57.0	57.0	Significant and Unavoidable
C24	2	280	57.5	54.0	54.0	56.0	Less than Significant
C25	2	60	61.1	62.0	61.0	58.0	Significant and Unavoidable
C26	2	160	58.5	57.0	57.0	57.0	Significant and Unavoidable
C27	2	285	57.3	54.0	54.0	56.0	Less than Significant
C28	2	60	61.1	62.0	61.0	58.0	Significant and Unavoidable
C29	2	160	58.5	57.0	57.0	57.0	Significant and Unavoidable
C30	2	285	57.3	54.0	54.0	56.0	Less than Significant
C31	2	60	61.1	62.0	61.0	58.0	Significant and Unavoidable
C32	2	160	58.5	57.0	57.0	57.0	Significant and Unavoidable
C33	2	285	57.3	54.0	54.0	56.0	Less than Significant
C34	2	60	61.1	62.0	61.0	58.0	Significant and Unavoidable
C35	2	160	58.5	57.0	57.0	57.0	Significant and Unavoidable
C36	2	285	57.3	54.0	54.0	56.0	Less than Significant
C37	2	60	61.3	62.0	61.0	59.0	Significant and Unavoidable
C38	2	160	58.5	57.0	57.0	57.0	Significant and Unavoidable
C39	2	275	57.4	54.0	54.0	56.0	Less than Significant
C40	2	60	61.3	62.0	61.0	59.0	Significant and Unavoidable
C41	2	160	58.5	57.0	57.0	57.0	Significant and Unavoidable
C42	2	275	57.4	54.0	54.0	56.0	Less than Significant
D1	2	65	61.0	60.0	60.0	58.0	Significant and Unavoidable
D2	2	125	59.1	58.0	58.0	57.0	Significant and Unavoidable
D3	2	240	57.7	55.0	55.0	57.0	Less than Significant
D4	2	65	61.0	60.0	60.0	58.0	Significant and Unavoidable
D5	2	145	58.8	57.0	57.0	57.0	Significant and Unavoidable
D6	2	230	57.8	55.0	55.0	57.0	Less than Significant

Trench Option Combined Freight Track Relocation and Light Rail Noise No Quiet Zone							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
D7	2	320	57.2	54.0	54.0	56.0	Less than Significant
D8	2	20	65.0	65.0	65.0	61.0	Significant and Unavoidable
D9	2	20	65.0	65.0	65.0	61.0	Significant and Unavoidable
D10	2	20	65.0	65.0	65.0	61.0	Significant and Unavoidable
D11	2	20	65.0	65.0	65.0	61.0	Significant and Unavoidable
D12	2	20	65.0	65.0	65.0	61.0	Significant and Unavoidable
D13	2	20	66.1	65.0	65.0	62.0	Significant and Unavoidable
D14	2	20	66.1	65.0	65.0	62.0	Significant and Unavoidable
D17	2	165	58.5	57.0	57.0	57.0	Significant and Unavoidable
D18	2	245	57.6	55.0	55.0	57.0	Less than Significant
D19	2	325	57.1	54.0	54.0	56.0	Less than Significant
D20	2	165	58.5	57.0	57.0	57.0	Significant and Unavoidable
D21	2	165	58.5	57.0	57.0	57.0	Significant and Unavoidable
D22	2	165	58.5	57.0	57.0	57.0	Significant and Unavoidable
D23	2	170	62.0	57.0	57.0	59.0	Less than Significant
D26	2	60	61.3	62.0	61.0	59.0	Significant and Unavoidable
D27	2	120	59.2	58.0	58.0	57.0	Significant and Unavoidable
D28	2	280	57.4	54.0	54.0	56.0	Less than Significant
D29	2	60	61.3	62.0	61.0	59.0	Significant and Unavoidable
D30	2	120	59.2	58.0	58.0	57.0	Significant and Unavoidable
D31	2	280	57.4	54.0	54.0	56.0	Less than Significant
D32	2	55	61.6	62.0	61.0	59.0	Significant and Unavoidable
D33	2	115	59.4	58.0	58.0	57.0	Significant and Unavoidable
D34	2	275	57.4	54.0	54.0	56.0	Less than Significant
D35	2	55	61.6	62.0	61.0	59.0	Significant and Unavoidable
D36	2	115	59.4	58.0	58.0	57.0	Significant and Unavoidable
D37	2	275	57.4	54.0	54.0	56.0	Less than Significant
D38	2	55	61.6	62.0	61.0	59.0	Significant and Unavoidable
D39	2	115	59.4	58.0	58.0	57.0	Significant and Unavoidable
D40	2	275	57.4	55.0	54.0	56.0	Less than Significant

Trench Option Combined Freight Track Relocation and Light Rail Noise No Quiet Zone							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
D41	2	55	63.0	62.0	62.0	60.0	Significant and Unavoidable
D42	2	115	61.4	58.0	58.0	59.0	Less than Significant
D43	2	275	61.0	54.0	54.0	58.0	Less than Significant
D44	2	55	63.0	64.0	62.0	60.0	Significant and Unavoidable
D45	2	115	61.4	59.0	58.0	59.0	Less Than Significant With Mitigation
D46	2	275	61.0	54.0	54.0	58.0	Less than Significant
F1	3	70	59.7	73.0	73.0	63.0	Significant and Unavoidable
F2	2	25	64.0	64.0	64.0	60.0	Significant and Unavoidable
F3	2	30	63.7	64.0	64.0	60.0	Significant and Unavoidable
F4	2	30	63.7	64.0	64.0	60.0	Significant and Unavoidable
F5	2	185	57.0	56.0	56.0	56.0	Significant and Unavoidable
F6	2	295	56.6	54.0	54.0	56.0	Less than Significant
F7	2	35	63.2	63.0	63.0	60.0	Significant and Unavoidable
F8	2	200	56.9	55.0	55.0	56.0	Less than Significant
F9	2	305	56.6	53.0	53.0	56.0	Less than Significant
F10	2	63	61.1	61.0	61.0	58.0	Significant and Unavoidable
F11	2	75	60.6	60.0	60.0	58.0	Significant and Unavoidable
F12	2	170	58.7	56.0	56.0	57.0	Less than Significant
F13	2	295	56.6	54.0	54.0	56.0	Less than Significant
F14	2	65	60.9	60.0	60.0	58.0	Significant and Unavoidable
F15	2	120	59.4	58.0	58.0	57.0	Significant and Unavoidable
F16	2	265	56.6	54.0	54.0	56.0	Less than Significant
F17	2	65	60.7	60.0	60.0	58.0	Significant and Unavoidable
F18	2	240	56.7	54.0	54.0	56.0	Less than Significant
F19	2	365	56.4	53.0	53.0	56.0	Less than Significant
F20	3	100	59.5	71.0	71.0	63.0	Significant and Unavoidable
G1	2	100	59.7	60.0	59.0	58.0	Significant and Unavoidable
G2	2	270	56.6	54.0	54.0	56.0	Less than Significant
G3	2	300	56.6	54.0	54.0	56.0	Less than Significant
G4	2	305	55.9	47.0	47.0	56.0	Less than Significant

Trench Option Combined Freight Track Relocation and Light Rail Noise No Quiet Zone							
Cluster No.	Land Use Category	Relocated Freight Track Distance (Feet)	Noise Level (Cat 2 dBA, L _{dn} or Cat 3 dBA, L _{eq})				Impact
			Existing	Unmitigated Freight and LRT Combined	Unmitigated Freight and Mitigated LRT Combined	Impact Threshold	
G5	2	150	56.2	57.0	52.0	56.0	Less Than Significant With Mitigation
G6	2	260	56.0	55.0	50.0	56.0	Less than Significant
G7	2	45	56.9	61.0	54.0	56.0	Less Than Significant With Mitigation
G8	2	120	56.0	53.0	48.0	56.0	Less than Significant
G9	2	195	55.9	51.0	47.0	56.0	Less than Significant
G10	2	270	55.9	46.0	45.0	56.0	Less than Significant
G11	2	110	56.3	53.0	51.0	56.0	Less than Significant
G12	2	45	57.0	56.0	54.0	56.0	Less Than Significant With Mitigation
G13	2	145	56.2	52.0	50.0	56.0	Less than Significant
G14	2	195	56.1	51.0	49.0	56.0	Less than Significant
G15	2	150	74.9	53.0	51.0	65.0	Less than Significant
G16	2	260	61.4	58.0	53.0	59.0	Less than Significant
G17	2	215	61.4	59.0	55.0	59.0	Less Than Significant With Mitigation
G18	2	140	61.4	60.0	55.0	59.0	Less Than Significant With Mitigation
G19	2	240	61.4	58.0	53.0	59.0	Less than Significant
G20	2	120	61.5	64.0	56.0	59.0	Less Than Significant With Mitigation
G21	2	200	61.4	61.0	56.0	59.0	Less Than Significant With Mitigation
G22	2	300	61.4	59.0	54.0	59.0	Less Than Significant With Mitigation
G23	2	290	61.4	59.0	54.0	59.0	Less Than Significant With Mitigation
G24	2	390	61.3	53.0	53.0	59.0	Less than Significant
G25	2	362	61.4	53.0	53.0	59.0	Less than Significant
G26	2	402	61.3	52.0	52.0	59.0	Less than Significant
G27	2	75	61.5	70.0	56.0	59.0	Less Than Significant With Mitigation
G28	2	105	61.5	68.0	56.0	59.0	Less Than Significant With Mitigation
G29	2	172	61.4	69.0	54.0	59.0	Less Than Significant With Mitigation
G30	2	275	61.4	66.0	51.0	59.0	Less Than Significant With Mitigation

Note: This table only includes clusters affected by freight track relocation.

Source: TAHA, 2023.