Appendix G:

Noise Impact Analysis

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Mobile Construction Activity Noise Calculation

Receptor:	Receiving residential property line	Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
		Reference (dBA) 50 ft		Usage	Distance to	Ground	Shielding	Calculated (dBA)		
No.	Equipment Description	Lmax	Quantity	factor[1]	Receptor	Effect[2]	(dBA)[3]	Lmax	Leq	Energy
1	Grader	85	1	40	230	1	3	68.7	58.1	651308.1254
2	Front End Loader	80	1	40	250	1	3	63.0	52.1	160379.9148
3	Backhoe	80	1	40	270	1	3	62.4	51.0	127314.7471
4										
5										
6										
7										
8										
9										
10										
							Lmax[4]	69	Leq	60

Notes:

[1] Percentage of time activity occurs each hour

[2] Soft ground terrain between project site and receptor.

[3] Shielding due to terrain or structures

[4] Calculated Lmax is the Loudest value.

Mechanical Equipment Noise Calculation

Receptor:	Receiving residential property line	Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
		Reference (dBA) 25 ft		Usage	Distance to	Ground	Shielding	Calculated (dBA)		
No.	Equipment Description	Lmax	Quantity	factor[1]	Receptor	Effect[2]	(dBA)[3]	Lmax	Leq	Energy
1	Commercial grade mechanical ventilation equipment	60	1	100	285	1	3	35.9	25.3	338.287107
2	Commercial grade mechanical ventilation equipment	60	1	100	310	1	3	35.1	24.2	262.8663195
3	Commercial grade mechanical ventilation equipment	60	1	100	235	1	3	37.5	27.8	603.4154687
4	Commercial grade mechanical ventilation equipment	60	1	100	360	1	3	33.8	22.2	167.8465905
5										
6										
7										
8										
9										
10										
							Lmax[4]	38	Leq	31

Notes:

[1] Percentage of time activity occurs each hour

[2] Soft ground terrain between project site and receptor.

[3] Shielding due to rooftop parapet and soundwall shielding

[4] Calculated Lmax is the Loudest value.

Parking Lot Activity Noise Calculation

Receptor:	Receiving residential property line									
		Reference (dBA) 50 ft		Usage	Distance to	Ground	Shielding	Calculated (dBA)		
No.	Equipment Description	Lmax	Quantity	factor[1]	Receptor	Effect[2]	(dBA)[3]	Lmax	Leq	Energy
1	parking lot activity	70	5	1	220	1	3	54.1	34.7	2941.792083
2	parking lot activity	70	6	1	270	1	3	52.4	32.8	1909.721207
3	parking lot activity	70	6	1	320	1	3	50.9	30.6	1147.126542
4										
5										
6										
7										
8										
9										
10										
							Lmax[4]	54	Leq	38

Notes:

[1] Percentage of time activity occurs each hour

[2] Soft ground terrain between project site and receptor.

[3] Shielding due to terrain or structures.

[4] Calculated Lmax is the Loudest value.

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