

**Appendix G:  
Noise Supporting Information**

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# Noise Appendix Executive Summary

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## PROJECT DESCRIPTION

### Project Location and Setting

The proposed project is located in the City of Riverside, in Riverside County, California. The approximately 13.60-acre project site is located at 1151 Palmyrita Avenue, which is situated on the north side of Palmyrita Avenue and east of Iowa Avenue, corresponding to Assessor's Parcel Numbers (APNs) 247-170-030 and -039. The site is located within the *San Bernadino South, California* United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map.

### Project Description

The proposed project involves the construction of two new warehouse buildings (Building 1 and Building 2) under two scenarios: a 100 percent warehousing scenario (Scenario 1), and a 75 percent warehousing and 25 percent manufacturing scenario (Scenario 2).

#### Scenario 1

Under Scenario 1, Building 1 would total 139,667 square feet, and consist of a 132,167-square-foot warehouse, 4,000-square-foot first floor office, and 3,500-square-foot second floor office. Building 1 would include 125 standard parking stalls, four Americans with Disabilities Act (ADA) standard stalls, two ADA van stalls, one electric vehicle (EV) ADA standard stall, one EV ADA van stall, 16 EV standard stalls, three Clean Air/Vanpool/EV stalls, and 10 parallel parking stalls, for a total of 162 parking stalls.

Building 2 would total 126,091 square feet, and consist of a 116,691-square-foot warehouse, 5,000-square-foot first floor office, and 4,400-square-foot second floor office. Building 2 would include 126 standard parking stalls, four ADA standard stalls, two ADA van stalls, one EV ADA standard stall, one EV ADA van stall, 16 EV standard stalls, and five Clean Air/Vanpool/EV stalls, for a total of 155 stalls. The square footage of both buildings would total 265,758 square feet, with combined parking of 317 parking stalls. Scenario 1 would include 15 trailer parking stalls.

#### Scenario 2

Under Scenario 2, Building 1 would total 122,315 square feet, and consist of an 88,736-square-foot warehouse with 30,579 square feet of manufacturing uses and a 3,000-square-foot first floor office. Building 1 would include 168 standard parking stalls, four ADA, two ADA van stalls, one EV ADA standard stall, one EV ADA van stall, 16 EV standard stalls, and three Clean Air/Vanpool/EV stalls, for a total of 195 stalls.

Building 2 would total 122,127 square feet and consist of an 88,595-square-foot warehouse with 30,532 square feet of manufacturing uses and a 3,000-square-foot first floor office. Building 2 would include 159

standard parking stalls, four ADA, two ADA van stalls, one EV ADA standard stall, one EV ADA van stall, 16 EV standard stalls, and five Clean Air/Vanpool/EV stalls, for a total of 188 stalls. The square footage of both buildings would total 244,442 square feet, with combined parking of 383 parking stalls.

## **Circulation**

Access to the site would be provided via two driveways, one 40-foot-wide driveway and one 30-foot-wide driveway along Palmyrita Avenue, and one 35-foot-wide driveway along Iowa Avenue.

The main freight truck entrance/exit to the proposed warehouse would be from Palmyrita Avenue; the main passenger vehicle entrance would be from Iowa Avenue. It is conservatively assumed the building would operate 24 hours a day, 7 days per week, with the exception of some holidays. The proposed project is anticipated to employ no more than 236 employees. The proposed project would include roadway and frontage improvements along Palmyrita Avenue and Iowa Avenue, as well as the construction of a raised median along Iowa Avenue. Improvements to Palmyrita Avenue and Iowa Avenue would total approximately 0.56 acre.

## **IMPACT ANALYSIS SUMMARY OF FINDINGS**

The noise impact analysis contained in this document has been prepared by FirstCarbon Solutions (FCS) to evaluate short-term (construction) and long-term (operation) noise impacts of the proposed project to satisfy the City's noise impact analysis requirements. The following appendix materials include noise measurement data, construction noise modeling input assumptions and calculations for reasonable worst-case conditions, and truck loading/unloading calculations for reasonable worst-case conditions.

### **Land Use/Noise Compatibility**

The noise measurement results provided in this appendix show The noise measurement results show that the project site's existing ambient noise environment (from all noise sources) experiences daytime hourly average noise levels up to 68.8 A-weighted decibel (dBA) equivalent continuous sound level ( $L_{eq}$ ), and 24-hour average noise levels of up to 66.9 dBA Community Noise Equivalent Level (CNEL). These measured noise levels demonstrate that the existing ambient noise environment is below 70 dBA CNEL. The City considers these noise levels as normally acceptable for new industrial land use development. Therefore, the proposed project would not conflict with the City's Noise/Land Use Noise Compatibility Criteria and this impact would be less than significant.

### **Temporary Construction Noise Impacts**

The construction noise level calculations provided in this appendix show that reasonable worst-case project construction activity would not exceed even the City's night noise performance threshold of 45 dBA  $L_{eq}$ . As such, they would not be considered a substantial temporary increase in ambient noise levels compared to noise levels existing without the project. Therefore, project construction noise levels would be less than significant and no mitigation would be required.

## Traffic Noise Impacts

The analysis demonstrates that project trips would not result in a doubling of existing traffic volumes along adjacent roadway segments, and therefore project traffic would not result in a substantial increase of more than 3 dBA above existing noise levels. In fact, implementation of the proposed project would result in less than a 1 dBA increase in traffic noise levels on any of the local roadways in the project vicinity. Therefore, project-related traffic noise would not result in as substantial permanent increase in ambient noise levels above established standards and the impact would be less than significant and no mitigation would be required.

## Stationary Source Noise Impacts

The proposed project would include new stationary noise sources such as mechanical ventilation equipment operation and truck loading activities. The analysis in this document demonstrates that noise generated by proposed mechanical ventilation equipment would attenuate to less than 29 dBA  $L_{eq}$  at the nearest sensitive receptor. These noise levels would not exceed even the City's night noise performance threshold of 45 dBA  $L_{eq}$ . Therefore, proposed project mechanical equipment operations would not result in as substantial permanent increase in ambient noise levels above established standards and the impact would be less than significant and no mitigation would be required.

As shown in the modeling results provide in this appendix, reasonable worst-case truck loading/unloading activity would attenuate to below 39 dBA  $L_{max}$  and below 35 dBA  $L_{eq}$  at the nearest noise-sensitive receptor. These noise levels would not exceed even the City's night noise performance threshold of 45 dBA  $L_{eq}$ . Therefore, project truck loading/unloading activities would not result in as substantial permanent increase in ambient noise levels above established standards and the impact would be less than significant and no mitigation would be required.

## Groundborne Vibration Impacts

The analysis in this document demonstrates that construction-related groundborne vibration levels would range up to 0.12 peak particle velocity (PPV) from operation of the types of equipment that would produce the highest vibration levels. This is below the established construction vibration impact criteria of 0.3 PPV for the closest structure, a building of engineered concrete and masonry construction. Therefore, proposed project construction activities would not generate groundborne vibration levels in excess of established impact criteria, and impacts would be considered less than significant as measured at the nearest receiving structures in the project vicinity. Project construction-related groundborne vibration impacts would be less than significant and no mitigation would be required.

Furthermore, the analysis demonstrates that implementation of the proposed project would not include any permanent sources that would generate groundborne vibration levels that could be noticeable without instruments at the lot line of the project site. Therefore, implementation of the proposed project's groundborne vibration or noise impacts would be less than significant and no mitigation would be required.

## CONCLUSIONS

Based on the analysis contained in this document, implementation of the proposed project would not result in a substantial temporary or permanent increase in ambient noise levels in excess of established standards and this impact would be less than significant and no mitigation would be required.

Furthermore, implementation of the proposed project's groundborne vibration or noise impacts would be less than significant and no mitigation would be required. And finally, implementation of the proposed project would not expose people residing or working in the project area to excessive noise levels related to airport activity and there would be no impact and no mitigation would be required.

# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.490	Computer's File Name	20220923_161313.ldbin
Meter	LxT2		
Firmware	2.206		
User		Location	
Description			
Note			
Start Time	17-08-2022 12:40:24	Duration	22:43:36.1
End Time	18-08-2022 11:24:00	Run Time	22:43:36.1
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	61.6 dB		
LAE	110.7 dB	SEA	--- dB
EA	13.2 mPa²h		
EA8	4.6 mPa²h		
EA40	23.2 mPa²h		
LAS <sub>peak</sub>	106.8 dB	17-08-2022 21:57:57	
LAS <sub>max</sub>	94.3 dB	18-08-2022 10:27:50	
LAS <sub>min</sub>	41.7 dB	17-08-2022 23:55:07	
LA <sub>eq</sub>	61.6 dB		
LC <sub>eq</sub>	71.3 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	9.6 dB
LAI <sub>eq</sub>	64.0 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	2.4 dB

### Exceedances

	Count	Duration
LAS > 85.0 dB	4	0:00:12.5
LAS > 115.0 dB	0	0:00:00.0
LAS <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LAS <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LAS <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

LDN	LDay	LNight	
66.5 dB	62.6 dB	0.0 dB	
LDEN	LDay	LEve	LNight
66.9 dB	62.8 dB	61.5 dB	59.6 dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	61.6 dB		--- dB		--- dB	
LS <sub>(max)</sub>	94.3 dB	18-08-2022 10:27:50	--- dB		--- dB	
LS <sub>(min)</sub>	41.7 dB	17-08-2022 23:55:07	--- dB		--- dB	
L <sub>Peak(max)</sub>	106.8 dB	17-08-2022 21:57:57	--- dB		--- dB	

### Overloads

Count	Duration
0	0:00:00.0

### Statistics

LAS 5.0	65.9 dB
LAS 10.0	63.7 dB
LAS 33.3	59.4 dB
LAS 50.0	56.7 dB
LAS 66.6	53.9 dB
LAS 90.0	48.3 dB



Project Number: \_\_\_\_\_ Sheet \_\_\_ of \_\_\_  
 Project Name: \_\_\_\_\_  
 Test Personnel: \_\_\_\_\_

**NOISE MEASUREMENT SURVEY**

Site Number: \_\_\_\_\_ Date: \_\_\_\_\_ Time: From \_\_\_\_\_ To \_\_\_\_\_

Site Location: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Primary Noise Sources: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Measurement Results*

	dBA
L <sub>eq</sub>	
L <sub>max</sub>	
L <sub>min</sub>	
L <sub>peak</sub>	
L <sub>5</sub>	
L <sub>10</sub>	
L <sub>50</sub>	
L <sub>90</sub>	
SEL	

*Observed Noise Sources/Events*

Time	Noise Source/Event	dBA

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Equipment: \_\_\_\_\_ Measured Difference: \_\_\_\_\_ dBA  
 Settings: A-Weighted  Other  \_\_\_\_\_ Slow  Fast  Windscreen

*Atmospheric Conditions:*

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
Comments:				





# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.486	Computer's File Name	20220923_161212.lbin
Meter	LxT2		
Firmware	2.206		
User		Location	
Description			
Note			
Start Time	17-08-2022 11:08:51	Duration	0:15:03.2
End Time	17-08-2022 11:23:54	Run Time	0:15:03.2
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	65.2 dB		
LAE	94.8 dB	SEA	--- dB
EA	334.5 $\mu\text{Pa}^2\text{h}$		
EA8	10.7 $\text{mPa}^2\text{h}$		
EA40	53.3 $\text{mPa}^2\text{h}$		
LA <sub>Speak</sub>	92.8 dB	17-08-2022 11:23:05	
LA <sub>Smax</sub>	77.4 dB	17-08-2022 11:12:40	
LA <sub>Smin</sub>	47.9 dB	17-08-2022 11:20:22	
LA <sub>eq</sub>	65.2 dB		
LC <sub>eq</sub>	72.1 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	6.9 dB
LAI <sub>eq</sub>	66.4 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	1.1 dB

### Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LASpeak > 135.0 dB	0	0:00:00.0
LASpeak > 137.0 dB	0	0:00:00.0
LASpeak > 140.0 dB	0	0:00:00.0

### Community Noise

LDN	LDay	LNight	
65.2 dB	65.2 dB	0.0 dB	
LDEN	LDay	LEve	LNight
65.2 dB	65.2 dB	--- dB	--- dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	65.2 dB		--- dB		--- dB	
L <sub>S(max)</sub>	77.4 dB	17-08-2022 11:12:40	--- dB		--- dB	
L <sub>S(min)</sub>	47.9 dB	17-08-2022 11:20:22	--- dB		--- dB	
L <sub>Peak(max)</sub>	92.8 dB	17-08-2022 11:23:05	--- dB		--- dB	

### Overloads

Count	Duration
0	0:00:00.0

### Statistics

LAS 5.0	71.4 dB
LAS 10.0	69.5 dB
LAS 33.3	64.4 dB
LAS 50.0	61.0 dB
LAS 66.6	56.7 dB
LAS 90.0	50.6 dB



Project Number: 4996.0017  
Project Name: Palyrita Avenue Warehouse Project  
Test Personnel: Spencer Churchill

Sheet 1 of 4

## NOISE MEASUREMENT SURVEY

Site Number: 1      Date: 17 August 2022      Time: From 11:08:51 To 11:23:54

Site Location: Along Palmyrita Avenue on the sidewalk adjacent to the project site. Located in the middle of the southern edge of the project site on the outside of the surrounding chain-link fence.

Primary Noise Sources: Traffic along Palmyrita Ave, air conditioning unit on the eastern edge of the warehouse.

### Measurement Results

	dBA
L <sub>eq</sub>	65.2 db
L <sub>max</sub>	77.4 db
L <sub>min</sub>	49.7 db
L <sub>peak</sub>	64.3 db
L <sub>5</sub>	71.4 db
L <sub>10</sub>	69.5 db
L <sub>50</sub>	61.0 db
L <sub>90</sub>	50.6 db
SEL	

### Observed Noise Sources/Events

Time	Noise Source/Event	dBA
	n/a	

Comments: IxT\_Data.486

Equipment: Larson Davis SLM      Measured Difference: \_\_\_\_\_ dBA  
Settings: A-Weighted  Other  \_\_\_\_\_      Slow  Fast       Windscreen

### Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
	5 mph	91 F	22%	UV 8
Comments:				



# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.487	Computer's File Name	20220923_161238.lbin
Meter	LxT2		
Firmware	2.206		
User		Location	
Description			
Note			
Start Time	17-08-2022 11:30:36	Duration	0:15:00.7
End Time	17-08-2022 11:45:36	Run Time	0:15:00.7
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	68.8 dB		
LAE	98.3 dB	SEA	--- dB
EA	759.4 $\mu\text{Pa}^2\text{h}$		
EA8	24.3 $\text{mPa}^2\text{h}$		
EA40	121.4 $\text{mPa}^2\text{h}$		
LAS <sub>peak</sub>	101.8 dB	17-08-2022 11:41:01	
LAS <sub>max</sub>	81.1 dB	17-08-2022 11:41:01	
LAS <sub>min</sub>	49.9 dB	17-08-2022 11:45:31	
LA <sub>eq</sub>	68.8 dB		
LC <sub>eq</sub>	77.9 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	9.1 dB
LAI <sub>eq</sub>	70.0 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	1.2 dB

### Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LAS <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LAS <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LAS <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

LDN	LDay	LNight	
68.8 dB	68.8 dB	0.0 dB	
LDEN	LDay	LEve	LNight
68.8 dB	68.8 dB	--- dB	--- dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	68.8 dB		--- dB		--- dB	
LS <sub>(max)</sub>	81.1 dB	17-08-2022 11:41:01	--- dB		--- dB	
LS <sub>(min)</sub>	49.9 dB	17-08-2022 11:45:31	--- dB		--- dB	
L <sub>Peak(max)</sub>	101.8 dB	17-08-2022 11:41:01	--- dB		--- dB	

### Overloads

Count	Duration
0	0:00:00.0

### Statistics

LAS 5.0	74.5 dB
LAS 10.0	72.2 dB
LAS 33.3	67.7 dB
LAS 50.0	65.0 dB
LAS 66.6	62.0 dB
LAS 90.0	57.1 dB



Project Number: 4996.0017  
Project Name: Palyrita Avenue Warehouse Project  
Test Personnel: Spencer Churchill

Sheet 2 of 4

## NOISE MEASUREMENT SURVEY

Site Number: 2      Date: 17 August 2022      Time: From 11:30:36 To 11:45:36

Site Location: Along Iowa Avenue on the sidewalk adjacent to the project site. Located in the middle of the western edge of the project site on the sidewalk.

Primary Noise Sources: Traffic along Iowa Avenue.

### Measurement Results

	dB(A)
L <sub>eq</sub>	68.8 db
L <sub>max</sub>	81.1 db
L <sub>min</sub>	49.9 db
L <sub>peak</sub>	101.8 db
L <sub>5</sub>	75.5 db
L <sub>10</sub>	72.2 db
L <sub>50</sub>	65.0 db
L <sub>90</sub>	57.1 db
SEL	

### Observed Noise Sources/Events

Time	Noise Source/Event	dB(A)
	n/a	

Comments: IxT\_Data.487

Equipment: Larson Davis SLM      Measured Difference: \_\_\_\_\_ dB(A)  
Settings: A-Weighted  Other  \_\_\_\_\_      Slow  Fast       Windscreen

### Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
	5 mph	91 F	22%	UV 8
Comments:				

# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.489	Computer's File Name	20220923_161255.lbin
Meter	LxT2		
Firmware	2.206		
User		Location	
Description			
Note			
Start Time	17-08-2022 12:04:04	Duration	0:15:00.8
End Time	17-08-2022 12:19:05	Run Time	0:15:00.8
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	56.6 dB		
LAE	86.1 dB	SEA	--- dB
EA	45.8 $\mu\text{Pa}^2\text{h}$		
EA8	1.5 $\text{mPa}^2\text{h}$		
EA40	7.3 $\text{mPa}^2\text{h}$		
LA <sub>Speak</sub>	104.6 dB	17-08-2022 12:04:14	
LA <sub>Smax</sub>	69.2 dB	17-08-2022 12:04:14	
LA <sub>Smin</sub>	54.5 dB	17-08-2022 12:05:39	
LA <sub>eq</sub>	56.6 dB		
LC <sub>eq</sub>	70.4 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	13.8 dB
LAI <sub>eq</sub>	59.2 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	2.6 dB

### Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LASpeak > 135.0 dB	0	0:00:00.0
LASpeak > 137.0 dB	0	0:00:00.0
LASpeak > 140.0 dB	0	0:00:00.0

### Community Noise

LDN	LDay	LNight	
56.6 dB	56.6 dB	0.0 dB	
LDEN	LDay	LEve	LNight
56.6 dB	56.6 dB	--- dB	--- dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	56.6 dB		--- dB		--- dB	
L <sub>S(max)</sub>	69.2 dB	17-08-2022 12:04:14	--- dB		--- dB	
L <sub>S(min)</sub>	54.5 dB	17-08-2022 12:05:39	--- dB		--- dB	
L <sub>Peak(max)</sub>	104.6 dB	17-08-2022 12:04:14	--- dB		--- dB	

### Overloads

Count	Duration
0	0:00:00.0

### Statistics

LAS 5.0	58.4 dB
LAS 10.0	57.5 dB
LAS 33.3	56.5 dB
LAS 50.0	56.1 dB
LAS 66.6	55.8 dB
LAS 90.0	55.4 dB



Project Number: 4996.0017 Sheet 3 of 4  
 Project Name: Palyrita Avenue Warehouse Project  
 Test Personnel: Spencer Churchill

**NOISE MEASUREMENT SURVEY**

Site Number: 3 Date: 17 August 2022 Time: From 12:04:04 To 12:19:05

Site Location: Within the project side on the eastern edge. Along the chain link fence abutting the train tracks. Next to an operational warehouse

Primary Noise Sources: Air conditioning units from the warehouse, traffic along Palmyrita, distant train whistle and helicopter

*Measurement Results*

	dBA
L <sub>eq</sub>	56.6 db
L <sub>max</sub>	69.2 db
L <sub>min</sub>	54.5 db
L <sub>peak</sub>	104.6 db
L <sub>5</sub>	58.4 db
L <sub>10</sub>	57.5 db
L <sub>50</sub>	56.1 db
L <sub>90</sub>	55.44 db
SEL	

*Observed Noise Sources/Events*

Time	Noise Source/Event	dBA
	n/a	

Comments: IxT\_Data.489

Equipment: Larson Davis SLM Measured Difference: \_\_\_\_\_ dBA  
 Settings: A-Weighted  Other  \_\_\_\_\_ Slow  Fast  Windscreen

*Atmospheric Conditions:*

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
	7 mph	94 F	22%	UV 8
Comments:				

### Mobile Construction Activity Noise Calculation

Receptor:		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
Receiving residential property line		Reference (dBA) 50 ft	Quantity	Usage factor[1]	Distance to Receptor	Ground Effect[2]	Shielding (dBA)[3]	Calculated (dBA)		Energy	
No.	Equipment Description	Lmax						Lmax	Leq		
1	Backhoe	80	1	40	900	1	3	51.9	35.4	3437.498173	
2	Front End Loader	80	1	40	900	1	3	51.9	35.4	3437.498173	
3	Scraper	85	1	40	925	1	3	56.7	40.0	10012.5525	
4	Rubber Tired Dozer	85	1	40	925	1	3	56.7	40.0	10012.5525	
5	Front End Loader	80	1	40	925	1	3	51.7	35.0	3166.247108	
6											
7											
8											
9											
10											
								Lmax[4]	57	Leq	45

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.

### Loading/Unloading Noise Calculation

Receptor: Receiving residential property line		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
No.	Equipment Description	Reference (dBA) 50 ft	Quantity	Usage factor[1]	Distance to Receptor	Ground Effect[2]	Shielding (dBA)[3]	Calculated (dBA)		Energy	
		Lmax						Leq	Lmax		Leq
1	Loading/Unloading Noise Calculation	70	2	25	1190	0.5	3	39.5	29.6	906.8336177	
2	Loading/Unloading Noise Calculation	70	2	25	1214	0.5	3	39.3	29.4	862.6771568	
3	Loading/Unloading Noise Calculation	70	2	25	1238	0.5	3	39.1	29.1	821.4732076	
4	Loading/Unloading Noise Calculation	70	2	25	1262	0.5	3	39.0	28.9	782.9727147	
5											
6											
7											
8											
9											
10											
Notes:								Lmax[4]	39	Leq	35

[1] Percentage of time activity occurs each hour

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

[3] Shielding due to terrain or structures (6-foot high soundwall along western property line)

[4] Calculated Lmax is the Loudest value.