Noise Summary

Table 1: Existing Noise Measurement Locations and Measurements						
Site	**Location**	**Measurement Period**	**Duration**	**Daytime Average (dBA L_{eq})**	**Nighttime Average (dBA L_{eq})**	**24-hour Average (dBA L_{eq})**
ST-1	13650 Gramercy Place	January 28, 2025, 9:48 a.m. - 9:58 a.m.	10 minutes	57.6	–	–
ST-2	Maria Regina Catholic Church parking lot	January 28, 2025, 10:05 a.m. - 10:15 a.m.	10 minutes	56.9	–	–
ST-3	Rowley Park parking lot	January 28, 2025, 10:25 a.m. - 10:35 a.m.	10 minutes	53.3	–	–
LT-1	Northwest corner of the Project site	January 28, 2025, 11:33 a.m. – January 29, 2025, 11:47 a.m.	24 hours	52.0	50.9	51.6
Source: Noise measurements taken by Kimley-Horn and Associates, January 28 to January 29, 2025.						

Table 2: Construction Noise Levels

Construction Phase	Receptor	Direction	Ambient Noise Level (dBA L_{eq})[2]	Without Mufflers				With Mufflers[1]			
				Construction Noise Level (dBA L_{eq})[3, 4]	Ambient + Construction (dBA L_{eq})[5]	Increase Over Ambient	Increase Exceeds 10 dBA?	Construction Noise Level (dBA L_{eq})[3, 4]	Ambient + Construction (dBA L_{eq})[5]	Increase Over Ambient	Increase Exceeds 10 dBA?
Individual Phases											
Demolition	Residential	North	53.3	62.9	63.4	10.1	**Yes**	52.9	56.1	2.8	**No**
Site Preparation	Residential	North	53.3	64.1	64.4	11.1	**Yes**	54.1	56.7	3.4	**No**
Grading	Residential	North	53.3	64.7	65.0	11.7	**Yes**	54.7	57.1	3.8	**No**
Building Construction	Residential	North	53.3	66.0	66.2	12.9	**Yes**	56.0	57.9	4.6	**No**
Infrastructure Improvements	Residential	North	53.3	66.0	66.2	12.9	**Yes**	56	57.9	4.6	**No**
Paving	Residential	North	53.3	62.9	63.4	10.1	**Yes**	52.9	56.1	2.8	**No**
Architectural Coating	Residential	North	53.3	50.1	55.0	1.7	**No**	40.1	53.5	0.2	**No**
Overlapping Phases											
Site Prep + Grading	Residential	North	53.3	67.4	67.5	14.2	**Yes**	57.4	58.8	5.5	**No**
Building Construction + Infrastructure Improvements	Residential	North	53.3	69.1	69.2	15.9	**Yes**	59.1	60.1	6.8	**No**
Building Construction + Infrastructure Improvements + Architectural Coating	Residential	North	53.3	69.1	69.2	15.9	**Yes**	59.1	60.1	6.8	**No**
Building Construction + Architectural Coating + Paving	Residential	North	53.3	67.8	68.0	14.7	**Yes**	57.8	59.2	5.9	**No**

dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level

1. Project construction equipment (including combustion engines), fixed or mobile, will be equipped with noise shielding and muffling devices consistent with manufacturers' standards or the Best Available Control Technology. Mufflers would reduce construction noise levels by a minimum of 10 dBA. Source: Federal Highway Administration, *Special Report - Measurement, Prediction, and Mitigation, Chapter 4 Mitigation*, 2017.
2. The ambient daytime noise levels were obtained by Kimley-Horn and Associates on January 28, 2025. Refer to Table 1 for noise measurement data.
3. Construction equipment was conservatively modeled from the Project site property line to the nearest sensitive receptor property line.
4. Noise levels calculated using the Federal Highway Administration, *Roadway Construction Noise Model*, 2006.
5. Combined noise levels calculated based on the logarithmic addition of decibels.

Table 3: Typical Construction Equipment Vibration Levels			
Equipment	**Reference Level PPV at 25 Feet (in/sec)[1]**	**PPV at 15 Feet (in/sec)[2,3,4]**	**PPV at 755 Feet (in/sec) [2,4]**
Excavator/Caisson Drill	0.089	0.19	<0.01
Building Damage Threshold	-	0.5	0.5
Human Perception Threshold	-	-	0.2
Exceeds Threshold?	-	**No**	**No**

PPV = peak particle velocity

1. Since the FTA does not provide vibration levels for an excavator, the FTA reference vibration level for a large bulldozer was conservatively used as a worst-case scenario.
2. The structure nearest the Project site are the commercial uses to the west. An excavator would be used as close as 15 feet from the commercial uses to the west of the Project site. The sensitive receptor nearest the Project site are the residential uses located 755 feet to the north. It is unknown how close the excavator would be used from the northern Project site property line. It is conservatively assumed the excavator would be used at the northern Project site property line, approximately 755 feet from the nearest sensitive receptors.
3. The commercial uses to the west of the Project site are not considered sensitive receptors; therefore, the human perception threshold is not applicable.
4. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from *Table 7-4 of the Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual*, 2018; D = the distance from the equipment to the receiver.

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018

Table 4: Operational Noise Levels

Receptor	Direction	Distance (feet)[1]	Reference Noise Level at 50 ft (dBA)	Noise Level at Receiver (dBA)[2]	Daytime Ambient Noise Level (dBA)[3]	Daytime Exterior Threshold[4]	Nighttime Ambient Noise Level (dBA)[3]	Nighttime Exterior Threshold[4]	Exceed Threshold?[5]
Mechanical Equipment									
Residential	North	775	52.0[6]	28.2	53.3	55	50.9	50	**No**
Truck and Loading Docks									
Residential	North	778	64.4[7]	40.6	53.3	55	N/A[8]	N/A[8]	**No**
Cargo Forklifts									
Residential	North	778	60.6[9]	36.8	53.3	55	N/A[8]	N/A[8]	**No**
Back-up Alarms									
Residential	North	778	73.3[10]	49.5	53.3	55	N/A[8]	N/A[8]	**No**
Parking									
Residential	North	775	61.0[11]	37.2	53.3	55	N/A[8]	N/A[8]	**No**
Composite Noise Level (Mechanical Equipment + Truck and Loading Docks + Cargo Forklifts + Back-up Alarms + Parking)									
Residential	North	N/A[12]	74.3[13]	50.4	53.3	55	N/A[8]	N/A[8]	**No**

dBA = A-weighted decibels; N/A = not applicable.

1. Distance measured from the noise source location to the nearest sensitive receptor.
2. Noise levels were calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1+20Log(d_1/d_2)$, where dBA_2 = estimated noise level at receptor; dBA_1 = reference noise level; d_1 = reference distance; d_2 = receptor location distance.
3. The ambient noise levels were taken by Kimley-Horn and Associates, January 28 to January 29, 2025. Refer to Table 1 for noise measurement data.
4. The City's Municipal Code Section 8.36.040 establishes the exterior residential daytime (55 dBA) and nighttime (50 dBA) noise standard. Pursuant to the City's Municipal Code Section 8.36.040, the ambient noise level shall become the noise standard where the ambient noise level exceeds the established noise standards.
5. The higher noise level between the City's established exterior noise standard and the measured ambient noise level becomes the significance threshold.
6. Mechanical equipment reference noise level from Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.
7. Loading dock reference noise level measurements conducted by Kimley-Horn on December 18, 2018.
8. Pursuant to the City's Municipal Code Section 8.36.070, the noise sources associated with loading and unloading activities (i.e., truck and loading dock, cargo forklifts, back-up alarms, and parking) would cease at 10:00 p.m. Therefore, the City's exterior nighttime noise standard would only apply to the mechanical equipment.
9. Cargo forklift reference noise level from Noise Testing Workplace Noise Consultants, *Warehouse & Forklift Workplace Noise Levels*, https://www.noisetesting.info/blog/warehouse-forklift-workplace-noise-levels/, accessed February 2025.
10. Back-up beeper reference noise level from Environmental Health Perspectives, *Vehicle Motion Alarms: Necessity, Noise Pollution, or Both?*, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3018517/, accessed February 2025.
11. Parking reference noise level from Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.
12. A composite noise source distance is not applicable because the operational noise sources would be located at various locations throughout the Project site and from different distances to the nearest sensitive receptors.
13. The composite reference noise level was calculated based on the logarithmic decibel scale and the reference noise levels for mechanical equipment, truck and loading docks, cargo forklifts, back-up beepers, and parking noise levels identified above.

Table 5: Existing and Existing Plus Project Traffic Noise Levels				
Roadway Segment	**dBA CNEL[1]**		**Incremental Increase (dBA CNEL)**	**Significant Impact?[2]**
	Existing	**Existing with Project**		
139th Street				
West of the East Project Driveway to the East Project Driveway	56.9	57.3	0.4	**No**
East Project Driveway to West Project Driveway	56.9	57.5	0.6	**No**
West Project Driveway to Western Avenue	56.9	57.1	0.2	**No**
Western Avenue to East of Western Avenue	55.2	55.2	0.0	**No**
Western Avenue				
North of the Project Driveway to the Project Driveway	64.6	64.6	0.1	**No**
Project Driveway to 139th Street	64.6	64.6	0.0	**No**
139th Street to South of 139th Street	64.9	64.9	0.0	**No**
ADT = average daily trips; dBA = A-weighted decibels; CNEL = day-night noise level 1. Noise level at 100 feet from the roadway centerline. 2. A 3-dBA increase is considered a "barely perceptible" difference and is used as the significance threshold.				
Source: Based on traffic data within the Terreno Gardena Traffic Assessment Report prepared by Armen Hovanessian Transportation Consulting, March 2025. Average daily traffic (ADT) volumes were calculated assuming PM peak hour * 10.				

Table 6: Cumulative Plus Project Buildout Conditions Traffic Noise Levels						
Roadway Segment	**dBA CNEL[1]**			**Combined Effects**	**Incremental Effects**	**Cumulatively Significant Impact?[2]**
	Existing	**Cumulative without Project**	**Cumulative with Project**	**Difference: Existing and Cumulative with Project (dBA CNEL)**	**Difference: Cumulative without and with Project (dBA CNEL)**	
139th Street						
West of the East Project Driveway to the East Project Driveway	56.9	57.1	57.5	0.6	0.4	**No**
East Project Driveway to West Project Driveway	56.9	57.1	57.6	0.8	0.5	**No**
West Project Driveway to Western Avenue	56.9	57.1	57.3	0.4	0.2	**No**
Western Avenue to East of Western Avenue	55.2	55.4	55.4	0.3	0.0	**No**
Western Avenue						
North of the Project Driveway to the Project Driveway	64.6	64.8	64.8	0.3	0.1	**No**
Project Driveway to 139th Street	64.6	64.9	64.9	0.3	0.0	**No**
139th Street to South of 139th Street	64.9	65.3	65.3	0.4	0.0	**No**
ADT = average daily trips; dBA = A-weighted decibels; CNEL = day-night noise level 1. Noise level at 100 feet from the roadway centerline. 2. A significant impact would result only if both the combined and incremental effects significance threshold has been exceeded. A 3-dBA increase is considered a "barely perceptible" difference and is used as the significance threshold.						
Source: Based on traffic data within the Terreno Gardena Traffic Assessment Report prepared by Armen Hovanessian Transportation Consulting, March 2025. Average daily traffic (ADT) volumes were calculated assuming PM peak hour * 10.						

Noise Measurement Field Data

Project:	Terreno Industrial	**Job Number:**	194091014
Site No.:	ST-1	**Date:**	1/28/2025
Analyst:	Dharma Truong and Jun Kim	**Time:**	9:48-9:58 AM
Location:	13650 Gramercy Place		
Noise Sources:	fire truck w/ emergency sirens, people talking, roadway traffic, car activity (starting, closing doors, lock beep), music, helicopter, and industrial back-up beepers		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
57.6	46.9	75.5	90.7

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	53
Wind (mph):	2
Sky:	Partly Cloudy
Bar. Pressure:	30.11
Humidity:	67%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	ST-1.118.s	Computer's File Name	LxTse_0007061-20250128 094847-ST-1.118.ldbin
Meter	LxT SE 0007061	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2025-01-28 09:48:47	Duration	0:10:00.0		
End Time	2025-01-28 09:58:47	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2024-07-11 10:35:45	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	57.6 dB		
LAE	85.4 dB	SEA	--- dB
EA	38.4 µPa²h		
LA_{peak}	90.7 dB	2025-01-28 09:49:55	
LAS_{max}	75.5 dB	2025-01-28 09:49:55	
LAS_{min}	46.9 dB	2025-01-28 09:48:47	
LA_{eq}	57.6 dB		
LC_{eq}	69.5 dB	LC_{eq} - LA_{eq}	11.9 dB
LAI_{eq}	60.2 dB	LAI_{eq} - LA_{eq}	2.6 dB

Exceedances

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

Community Noise

LDN	LDay	LNight
57.6 dB	57.6 dB	0.0 dB

LDEN	LDay	LEve	LNight
57.6 dB	57.6 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	57.6 dB		69.5 dB		--- dB	
$LS_{(max)}$	75.5 dB	2025-01-28 09:49:55	--- dB	None	--- dB	None
$LS_{(min)}$	46.9 dB	2025-01-28 09:48:47	--- dB	None	--- dB	None
$L_{Peak(max)}$	90.7 dB	2025-01-28 09:49:55	--- dB	None	--- dB	None

Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	64.2 dB
LAS 10.0	60.3 dB
LAS 33.3	52.3 dB
LAS 50.0	49.9 dB
LAS 66.6	48.9 dB
LAS 90.0	47.9 dB

Noise Measurement Field Data

Project:	Terreno Industrial	**Job Number:**	19491014
Site No.:	ST-2	**Date:**	1/28/2025
Analyst:	Dharma Truong and Jun Kim	**Time:**	10:05-10:15 AM
Location:	Maria Regina Catholic Church parking lot		
Noise Sources:	roadway traffic, car door closing, and kids playing (basket ball bouncing and screaming)		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
56.9	46.9	69.8	89.8

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	54
Wind (mph):	3
Sky:	Partly Cloudy
Bar. Pressure:	30.1
Humidity:	65%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	ST-1.120.s	Computer's File Name	LxTse_0007061-20250128 100556-ST-1.120.ldbin
Meter	LxT SE 0007061	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2025-01-28 10:05:56	Duration	0:10:00.0		
End Time	2025-01-28 10:15:56	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2024-07-11 10:35:45	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	56.9 dB		
LAE	84.7 dB	SEA	--- dB
EA	32.7 µPa²h		
LA_{peak}	89.8 dB	2025-01-28 10:15:30	
LAS_{max}	69.8 dB	2025-01-28 10:12:32	
LAS_{min}	46.9 dB	2025-01-28 10:10:24	
LA_{eq}	56.9 dB		
LC_{eq}	69.0 dB	LC_{eq} - LA_{eq}	12.1 dB
LAI_{eq}	58.6 dB	LAI_{eq} - LA_{eq}	1.7 dB

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

Community Noise	LDN	LDay	LNight
	56.9 dB	56.9 dB	0.0 dB

	LDEN	LDay	LEve	LNight
	56.9 dB	56.9 dB	--- dB	--- dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	56.9 dB		69.0 dB		--- dB	
$Ls_{(max)}$	69.8 dB	2025-01-28 10:12:32	--- dB	None	--- dB	None
$LS_{(min)}$	46.9 dB	2025-01-28 10:10:24	--- dB	None	--- dB	None
$L_{Peak(max)}$	89.8 dB	2025-01-28 10:15:30	--- dB	None	--- dB	None

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	60.6 dB
LAS 10.0	59.6 dB
LAS 33.3	56.6 dB
LAS 50.0	55.3 dB
LAS 66.6	53.9 dB
LAS 90.0	51.2 dB

Noise Measurement Field Data

Project:	Terreno Industrial	**Job Number:**	19491014
Site No.:	ST-3	**Date:**	1/28/2025
Analyst:	Dharma Truong and Jun Kim	**Time:**	10:25-10:35 AM
Location:	Rowley Park parking lot		
Noise Sources:	birds chirping, roadway traffic, and helicopter		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
53.3	42.1	65.0	90.7

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	54
Wind (mph):	3
Sky:	Partly Cloudy
Bar. Pressure:	30.1
Humidity:	63%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	ST-1.121.s	Computer's File Name	LxTse_0007061-20250128 102501-ST-1.121.ldbin
Meter	LxT SE 0007061	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2025-01-28 10:25:01	Duration	0:10:00.0		
End Time	2025-01-28 10:35:01	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2024-07-11 10:35:45	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	53.3 dB		
LAE	81.1 dB	SEA	--- dB
EA	14.3 µPa²h		
LA_{peak}	90.7 dB	2025-01-28 10:25:35	
LAS_{max}	65.0 dB	2025-01-28 10:31:13	
LAS_{min}	42.1 dB	2025-01-28 10:32:16	
LA_{eq}	53.3 dB		
LC_{eq}	64.6 dB	LC_{eq} - LA_{eq}	11.3 dB
LAI_{eq}	55.9 dB	LAI_{eq} - LA_{eq}	2.6 dB

Exceedances

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

Community Noise

LDN	LDay	LNight
53.3 dB	53.3 dB	0.0 dB

LDEN	LDay	LEve	LNight
53.3 dB	53.3 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	53.3 dB		64.6 dB		--- dB	
$LS_{(max)}$	65.0 dB	2025-01-28 10:31:13	--- dB	None	--- dB	None
$LS_{(min)}$	42.1 dB	2025-01-28 10:32:16	--- dB	None	--- dB	None
$L_{Peak(max)}$	90.7 dB	2025-01-28 10:25:35	--- dB	None	--- dB	None

Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	60.8 dB
LAS 10.0	57.6 dB
LAS 33.3	49.8 dB
LAS 50.0	47.6 dB
LAS 66.6	46.1 dB
LAS 90.0	44.1 dB

Noise Measurement Field Data

Project:	Terreno Industrial	**Job Number:**	19491014
Site No.:	LT-1	**Date:**	1/28/2025 - 1/29/2025
Analyst:	Dharma Truong and Jun Kim	**Time:**	1/28/25 11:33 AM - 1/29/2025 11:47 AM
Location:	Northwest corner of the Project site		
Noise Sources:	industrial and commercial use operations		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
51.6	83.3	81.4	105.2

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LT_1.022.s	Computer's File Name	LxTse_0007061-20250128 113308-LT_1.022.ldbin
Meter	LxT SE 0007061	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2025-01-28 11:33:08	Duration	24:14:14.8		
End Time	2025-01-29 11:47:23	Run Time	24:14:14.8	Pause Time	0:00:00.0
Pre-Calibration	2025-01-28 11:23:42	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	51.6 dB		
LAE	101.0 dB	SEA	--- dB
EA	1.4 mPa²h		
LA_{peak}	105.2 dB	2025-01-28 11:35:43	
LAS_{max}	81.4 dB	2025-01-29 11:24:04	
LAS_{min}	43.3 dB	2025-01-29 11:19:51	
LA_{eq}	51.6 dB		
LC_{eq}	64.4 dB	LC_{eq} - LA_{eq}	12.8 dB
LAI_{eq}	54.8 dB	LAI_{eq} - LA_{eq}	3.2 dB

Exceedances

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

Community Noise

LDN	LDay	LNight
57.5 dB	52.0 dB	0.0 dB

LDEN	LDay	LEve	LNight
57.6 dB	52.6 dB	48.0 dB	50.9 dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	51.6 dB		64.4 dB		--- dB	
$LS_{(max)}$	81.4 dB	2025-01-29 11:24:04	--- dB	None	--- dB	None
$LS_{(min)}$	43.3 dB	2025-01-29 11:19:51	--- dB	None	--- dB	None
$L_{Peak(max)}$	105.2 dB	2025-01-28 11:35:43	--- dB	None	--- dB	None

Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	55.1 dB
LAS 10.0	53.7 dB
LAS 33.3	50.0 dB
LAS 50.0	48.8 dB
LAS 66.6	47.9 dB
LAS 90.0	46.4 dB

Construction Noise Impact on Sensitive Receptors w/o Mufflers

Parameters

Construction Hours:	Daytime hours (7 am to 7 pm)	8
	Evening hours (7 pm to 10 pm)	0
	Nighttime hours (10 pm to 7 am)	0
Leq to L10 factor		3

	Receptor (Land Use)	Average Distance (feet)	Distance to Property Line (feet)	Shielding	Direction
1	Residential	-	755		North

Construction Phase	Equipment Type	No. of Equip.	Acoustical Usage Factor	Reference Noise Level at 50ft per Unit, Lmax	RECEPTOR 1 Distance (feet)	Noise Level at Receptor 1, Lmax	Noise Level at Receptor 1, Leq
Demolition							
	Concrete Saw	1	20%	89.6	755	66.0	59.0
	Dozer	2	40%	81.7	755	61.1	57.2
	Excavator	3	40%	80.7	755	61.9	57.9
	Combined LEQ						**62.9**
Site Prep							
	Tractor	4	40%	84	755	66.4	62.5
	Dozer	3	40%	81.7	755	62.9	58.9
	Combined LEQ						**64.1**
Grading							
	Grader	1	40%	85	755	61.4	57.4
	Tractor	2	40%	84	755	63.4	59.5
	Scraper	2	40%	83.6	755	63.0	59.1
	Dozer	1	40%	81.7	755	58.1	54.1
	Excavator	2	40%	80.7	755	60.1	56.2
	Combined LEQ						**64.6**
Infrastructure Improvements							
	All Other Equipment > 5 HP	3	50%	85	755	66.2	63.2
	Tractor	3	40%	84	755	65.2	61.2
	Concrete Pump Truck	2	20%	81.4	755	60.8	53.8
	Generator	1	50%	80.6	755	57.0	54.0
	Crane	1	16%	80.6	755	57.0	49.1
	Welder/Torch	1	40%	74	755	50.4	46.4
	Combined LEQ						**66.0**
Building Construction							
	All Other Equipment > 5 HP	3	50%	85	755	66.2	63.2
	Tractor	3	40%	84	755	65.2	61.2
	Concrete Pump Truck	2	20%	81.4	755	60.8	53.8
	Generator	1	50%	80.6	755	57.0	54.0
	Crane	1	16%	80.6	755	57.0	49.1
	Welder/Torch	1	40%	74	755	50.4	46.4
	Combined LEQ						**66.0**
Paving							
	Pavement Scarafier	2	20%	89.5	755	68.9	61.9
	Paver	2	50%	77.2	755	56.6	53.6
	Roller	2	20%	80	755	59.4	52.4
	Combined LEQ						**62.9**
Architectural Coating							
	Compressor (air)	1	40%	77.7	755	54.1	50.1
	Combined LEQ						**50.1**
Overlapping Phases							
Site Prep + Grading							67.4
Building Construction + Infrastructure Improvements							69.1
Building Construction + Infrastructure Improvements + Architectural Coating							69.1
Building Construction + Architectural Coating + Paving							67.8
Maximum Noise Level							**69.1**

Source for Ref. Noise Levels: RCNM, 2005

Construction Noise Impact on Sensitive Receptors w/ Mufflers

Parameters

Construction Hours:	Daytime hours (7 am to 7 pm)	8
	Evening hours (7 pm to 10 pm)	0
	Nighttime hours (10 pm to 7 am)	0
Leq to L10 factor		3

	Receptor (Land Use)	Average Distance (feet)	Distance to Property Line (feet)	Shielding	Direction
1	Residential	-	755	10	North

Construction Phase	Equipment Type	No. of Equip.	Acoustical Usage Factor	Reference Noise Level at 50ft per Unit, Lmax	RECEPTOR 1 Distance (feet)	Noise Level at Receptor 1, Lmax	Noise Level at Receptor 1, Leq
Demolition							
	Concrete Saw	1	20%	89.6	755	56.0	49.0
	Dozer	2	40%	81.7	755	51.1	47.2
	Excavator	3	40%	80.7	755	51.9	47.9
	Combined LEQ						**52.9**
Site Prep							
	Tractor	4	40%	84	755	56.4	52.5
	Dozer	3	40%	81.7	755	52.9	48.9
	Combined LEQ						**54.1**
Grading							
	Grader	1	40%	85	755	51.4	47.4
	Tractor	2	40%	84	755	53.4	49.5
	Scraper	2	40%	83.6	755	53.0	49.1
	Dozer	1	40%	81.7	755	48.1	44.1
	Excavator	2	40%	80.7	755	50.1	46.2
	Combined LEQ						**54.6**
Infrastructure Improvements							
	All Other Equipment > 5 HP	3	50%	85	755	56.2	53.2
	Tractor	3	40%	84	755	55.2	51.2
	Concrete Pump Truck	2	20%	81.4	755	50.8	43.8
	Generator	1	50%	80.6	755	47.0	44.0
	Crane	1	16%	80.6	755	47.0	39.1
	Welder/Torch	1	40%	74	755	40.4	36.4
	Combined LEQ						**56.0**
Building Construction							
	All Other Equipment > 5 HP	3	50%	85	755	56.2	53.2
	Tractor	3	40%	84	755	55.2	51.2
	Concrete Pump Truck	2	20%	81.4	755	50.8	43.8
	Generator	1	50%	80.6	755	47.0	44.0
	Crane	1	16%	80.6	755	47.0	39.1
	Welder/Torch	1	40%	74	755	40.4	36.4
	Combined LEQ						**56.0**
Paving							
	Pavement Scarafier	2	20%	89.5	755	58.9	51.9
	Paver	2	50%	77.2	755	46.6	43.6
	Roller	2	20%	80	755	49.4	42.4
	Combined LEQ						**52.9**
Architectural Coating							
	Compressor (air)	1	40%	77.7	755	44.1	40.1
	Combined LEQ						**40.1**
Overlapping Phases							
Site Prep + Grading							57.4
Building Construction + Infrastructure Improvements							59.1
Building Construction + Infrastructure Improvements + Architectural Coating							59.1
Building Construction + Architectural Coating + Paving							57.8
Maximum Noise Level							**59.1**

Source for Ref. Noise Levels: RCNM, 2005

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Scenario: Existing
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

									Vehicle Mix		Distance from Centerline of Roadway			
#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Medium Trucks	Heavy Trucks	CNEL at 100 Feet	Distance to Contour 70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	139th Street	West of the East Project Driveway to the East Project Driveway	2	12	4,180	35	0	2.0%	1.0%	56.9	-	-	49	154
2	139th Street	East Project Driveway to West Project Driveway	2	12	4,180	35	0	2.0%	1.0%	56.9	-	-	49	154
3	139th Street	West Project Driveway to Western Avenue	2	12	4,180	35	0	2.0%	1.0%	56.9	-	-	49	154
4	139th Street	Western Avenue to East of Western Avenue	2	0	2,830	35	0	2.0%	1.0%	55.2	-	-	33	104
5	Western Avenue	North of the Project Driveway to the Project Driveway	4	12	17,860	40	0	2.0%	1.0%	64.6	-	91	286	906
6	Western Avenue	Project Driveway to 139th Street	4	12	17,860	40	0	2.0%	1.0%	64.6	-	91	286	906
7	Western Avenue	139th Street to South of 139th Street	4	12	19,310	40	0	2.0%	1.0%	64.9	-	98	310	979

Notes:
Based on traffic data within the Terreno Gardena Traffic Assessment Report prepared by Armen Hovanessian Transportation Consulting, March 2025.
Average daily traffic (ADT) volumes were calculated assuming PM peak hour * 10.

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Scenario: Existing Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

									Vehicle Mix		Distance from Centerline of Roadway			
#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Medium Trucks	Heavy Trucks	CNEL at 100 Feet	Distance to Contour 70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	139th Street	West of the East Project Driveway to the East Project Driveway	2	12	4,550	35	0	2.0%	1.0%	57.3	-	-	53	168
2	139th Street	East Project Driveway to West Project Driveway	2	12	4,760	35	0	2.0%	1.0%	57.5	-	-	56	176
3	139th Street	West Project Driveway to Western Avenue	2	12	4,360	35	0	2.0%	1.0%	57.1	-	-	51	161
4	139th Street	Western Avenue to East of Western Avenue	2	0	2,830	35	0	2.0%	1.0%	55.2	-	-	33	104
5	Western Avenue	North of the Project Driveway to the Project Driveway	4	12	18,140	40	0	2.0%	1.0%	64.6	-	92	291	920
6	Western Avenue	Project Driveway to 139th Street	4	12	17,980	40	0	2.0%	1.0%	64.6	-	91	288	912
7	Western Avenue	139th Street to South of 139th Street	4	12	19,340	40	0	2.0%	1.0%	64.9	-	98	310	981

Notes:
Based on traffic data within the Terreno Gardena Traffic Assessment Report prepared by Armen Hovanessian Transportation Consulting, March 2025.
Average daily traffic (ADT) volumes were calculated assuming PM peak hour * 10.

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FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Scenario: Horizon Year
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

									Vehicle Mix		Distance from Centerline of Roadway			
#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Medium Trucks	Heavy Trucks	CNEL at 100 Feet	Distance to Contour 70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	139th Street	West of the East Project Driveway to the East Project Driveway	2	12	4,400	35	0	2.0%	1.0%	57.1	-	-	51	162
2	139th Street	East Project Driveway to West Project Driveway	2	12	4,400	35	0	2.0%	1.0%	57.1	-	-	51	162
3	139th Street	West Project Driveway to Western Avenue	2	12	4,420	35	0	2.0%	1.0%	57.1	-	-	52	163
4	139th Street	Western Avenue to East of Western Avenue	2	0	3,010	35	0	2.0%	1.0%	55.4	-	-	35	111
5	Western Avenue	North of the Project Driveway to the Project Driveway	4	12	18,770	40	0	2.0%	1.0%	64.8	-	95	301	952
6	Western Avenue	Project Driveway to 139th Street	4	12	19,180	40	0	2.0%	1.0%	64.9	-	97	308	972
7	Western Avenue	139th Street to South of 139th Street	4	12	21,170	40	0	2.0%	1.0%	65.3	-	107	339	1,073

Notes:
Based on traffic data within the Terreno Gardena Traffic Assessment Report prepared by Armen Hovanessian Transportation Consulting, March 2025.
Average daily traffic (ADT) volumes were calculated assuming PM peak hour * 10.

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FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Scenario: Horizon Year Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		Distance from Centerline of Roadway				
#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Medium Trucks	Heavy Trucks	CNEL at 100 Feet	Distance to Contour 70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	139th Street	West of the East Project Driveway to the East Project Driveway	2	12	4,770	35	0	2.0%	1.0%	57.5	-	-	56	176
2	139th Street	East Project Driveway to West Project Driveway	2	12	4,980	35	0	2.0%	1.0%	57.6	-	-	58	184
3	139th Street	West Project Driveway to Western Avenue	2	12	4,600	35	0	2.0%	1.0%	57.3	-	-	54	170
4	139th Street	Western Avenue to East of Western Avenue	2	0	3,010	35	0	2.0%	1.0%	55.4	-	-	35	111
5	Western Avenue	North of the Project Driveway to the Project Driveway	4	12	19,050	40	0	2.0%	1.0%	64.8	-	97	305	966
6	Western Avenue	Project Driveway to 139th Street	4	12	19,300	40	0	2.0%	1.0%	64.9	-	98	309	979
7	Western Avenue	139th Street to South of 139th Street	4	12	21,200	40	0	2.0%	1.0%	65.3	-	107	340	1,075

Notes:
Based on traffic data within the Terreno Gardena Traffic Assessment Report prepared by Armen Hovanessian Transportation Consulting, March 2025.
Average daily traffic (ADT) volumes were calculated assuming PM peak hour * 10.

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"-" = contour is located within the roadway right-of-way.