

Sound Level Measurements and Impact Review

Western Avenue Redevelopment & Rapp Road Residential Development Town of Guilderland, New York

October 2019



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1.0 EXISTING CONDITION

1.1 Purpose of Study

B. Laing Associates, Inc. is an environmental consultant firm providing sound/noise analyses services for the proposed Western Avenue Redevelopment and Rapp Toad Residential development (herein referred to as the Project) located in the Town of Guilderland, Albany County, New York. The Project sites consist of the three (3) locations which include : Site 1, west of the Crossgates Mall along Rapp Road, Site 2, located north of Western Avenue and east of the southwestern Crossgates Mall Road as it connects to Western Avenue and Site 3, east of Site 2 along Western Avenue in the Town of Guilderland, Albany County, New York. See attached Figure 1 - Site Location Map. Below, a description of each site and its proposed use is provided in more detail.

Rapp Road Development, LLC proposes construction of 222 one and two bedroom apartments with $\pm 3,900$ SF of commercial space, on the ± 19 acre site on Rapp Road (Site 1 on the attached plan). The northern portion of Site 1 also includes a potential future development area (Site 1A). While no plans currently exist for Site 1A, an additional 90 apartment units will be analyzed for purposes of the DEIS. Applications for site plan and subdivision approval were made in Rapp Road Residential Development in November 2018. The site plan shows two five-story buildings and three two-story buildings with underground and surface parking.

Site 1 (Rapp Road) property was operated as a pig farm for decades. Currently, the site is vacant, occupied by secondary, successional woodland. This ecological condition is the result of the discontinuance of pig farming and subsequent fill-placement decades ago, which substantially altered the original topography.

The second, re-development area (Site 2 on the attached plan) is located on the corner of Crossgates Mall Road and Western Avenue and for purposes of the DEIS will be analyzed for re-development of a $\pm 160,000$ square feet retail building and associated fueling facility (i.e., a Costco) on ± 15 acres. The project area includes re-development of the largely vacant properties on Lawton Terrace, Tiernan Court and Rielton Court and Gabriel Terrace.

Currently, Site 2 is occupied by secondary, successional woodland (on the western two-thirds flanking old Rapp Road¹) and vacant structures mixed with trees and landscape vegetation (on the eastern one-third), though also tending toward secondary succession in places. In addition, the very disturbed ecological condition on the western two-thirds is the result of the westward relocation of Rapp Road decades ago.

A third, re-development area (Site 3 on the attached plan) is located on the remaining ± 11.34 acres of Transportation-Oriented Development (TOD) zoned property located between Site 2 and the existing hotel site. There are no current, specific development plans for this area and a zoning-compliant conceptual plan has been developed and analyzed for purposes of the DEIS. This development will include as possible future development 115,000 SF of retail space, 50,000 SF of office space, and 48 multi-family apartments.

The three development areas were previously evaluated for potential future development as part of the environmental review for the Capital District Transit Authority (CDTA) transit center project at Crossgates. The CDTA analysis of the development potential of these three sites was consistent with the above, and will be further cited in the DEIS.

¹ The roadbed, shoulders, filling and drainage cuts still remain of this property).

The purpose of this analysis is to evaluate sound levels that may occur as a result of the Project. Mitigation and assessment of significant noise impacts, if any, will be addressed accordingly.

1.2 **General Sound Characteristics**

Sound is created when changes of pressure (waves) are produced in the air. These pressure changes are created at many frequencies (i.e., spacing of the waves). Sound is received and perceived when the human ear reacts to these pressure changes. The pressure changes are expressed as decibels (dB) depending upon the power of the source as expressed in watts of power (with a reference of 1 picowatt or 10^{-12} watts). Frequency varies depending upon the rate at which sound pressures fluctuate in a cycle over time. This is measured in hertz (Hz) with one Hz equaling 1 cycle per second. The frequency of the wave (in Hz) determines the perceived pitch of the sound. The average person's ear can detect sounds ranging from 20 to more than 10,000 hertz (Hz). Each frequency is detectable at different pressure levels and so, the system for sound measurement which mimics the human ear is an A-weighted decibel system or dB(A)'s. The human ear can barely detect a 3 dB(A) change in sound levels. A 6 dB(A) increase results in a generally audible change. A 10 dB(a) change in sound levels is approximately a doubling of sound wave pressure. As a point of reference, human conversations at a distance of two to three feet occurs at a sound pressure level (SPL) of 60 dB(A) with a calm voice to 75 dB(A) with a raised voice (USEPA's Community Noise, 1971).

1.3 **Sound Monitoring**

Sound/noise measurements on and around the project site were made using a Cirrus Research plc CR:831C noise meter, which was set to measure A-weighted decibel levels as a mimic of the average human ear. Readings were also measured using 1/1 Octave Band filter. Ambient noise levels were measured from several locations on and adjacent to the project site. Figure 2 represents the mapped measured locations on a current aerial. Table 1 depicts the measured locations.

With regard to the methodology of the ambient noise analysis, there is no specific mathematical methodology that was applied to the existing, ambient noise measurements. The readings are straight forward, taken in 10-minute durations and were monitored at the listed locations for existing ambient conditions. The measurements occurred (i) on Monday, August 12, 2019, during the mid-day and peak PM scenarios in sunny conditions between 0 and 10 miles per hour with a high between 76-83 degree temperatures Fahrenheit (F) and (ii) on Tuesday, August 13, 2019, AM peak in partly sunny conditions with winds between 0 and 5 miles per hour with a high temperature between 67-72 degree Fahrenheit (F). The monitored sound levels are presented in Table 2 (at the rear of the text) and in Appendix A of this report.

The measured levels were generally vehicle noise at locations measured along Rapp Road/Crossgates Mall Road and Western Avenue. Sound measurements were recorded largely during times when existing sound/noise sources were expected to experience the typical averages and "peaks" in the sound/noise environment at mid-day and "rush hour" periods in the AM and PM, respectively.²

² A value referred to as the "equivalent sound level," L_{eq} , averages were computed/determined from the data. In this case, the $L_{(90)}$ and $L_{(10)}$ were also determined for the expected, "peak hour."



FIGURE 1 – PROPOSED SITE IMPROVEMENT LOCATIONS

★ DEPICTS LOCATION



FIGURE 2 – NOISE MONITORING LOCATIONS

★ DEPICTS MEASURED LOCATION

TABLE 1 – MEASURED LOCATIONS

SITE ID	LOCATION	DESCRIPTION
MONITORING LOCATION A	RAPP ROAD	96 METERS SOUTH OF GIPP ROAD, 10 METERS WEST RAPP ROAD
MONITORING LOCATION B	LAWTON TERRACE	30 METERS NORTH ON LAWTON TERRACE FROM WESTERN AVE.
MONITORING LOCATION C	GABRIEL TERRACE	30 METERS NORTH ON GABRIEL TERRACE FROM WESTERN AVE.
MONITORING LOCATION D	MCKOWNVILLE CHURCH/DUNKIN DONUTS	13 METERS NORTH OF WESTERN AVE
Note: Locations are shown on Figure 2.		

Sound levels, in the existing condition, were measured within the site’s property boundaries at Site 1. Sound measurements from the proposed project’s eastern location showed an $L_{(eq)}$ of 55 d(B)A in the **mid-day** peak, August 12, 2019, and varied from 36.9 dB(A) to 69.8 dB(A). The noise measurements at this location were taken at approximately 10 meters west of Rapp Road.

Sound measurements from the proposed project’s eastern location at Monitoring Location A on project Site 1 showed an $L_{(eq)}$ of 54.5 d(B)A in the **PM peak**, August 12, 2019, and varied from 36.7 dB(A) to 66.9 dB(A).

Sound measurements from the proposed project’s eastern location at Monitoring Location A showed an $L_{(eq)}$ of 53.4 d(B)A in the **AM peak**, August 13, 2019, and varied from 36.5 dB(A) to 66.0 dB(A).

The sound levels, at this location, result from the existing traffic on Rapp Road, south of Gipp Road.

Sound levels, in the existing condition, were measured within Site 2’s property boundaries along Western Avenue and Lawton Terrace at Monitoring Location B. The noise measurements at this location were taken at approximately 30 meters northeast from Western Avenue on Lawton Terrace. Noise measurements from the proposed project’s southern location showed an $L_{(eq)}$ of 57.1 in the **mid-day peak**, August 12, 2019, and varied from 43.5 dB(A) to 67 dB(A).

Noise measurements from the proposed project’s southern location showed an $L_{(eq)}$ of 59.1 in the **PM peak**, August 12, 2019, and varied from 39.2 dB(A) to 72.5 dB(A).

Noise measurements from the proposed project’s southern location showed an $L_{(eq)}$ of 61.7 in the **AM peak**, August 13, 2019, and varied from 44.1 dB(A) to 72.1 dB(A).

The sound levels, at this location, result from the existing traffic on Western Avenue. They are considerably higher than those along Rapp Road.

Sound levels, in the existing condition, were measured within the project Site 3's property boundaries along Western Avenue and Gabriel Terrace at Monitoring Location C. The noise measurements at this location were taken at approximately 30 meters northeast from Western Avenue on Gabriel Terrace. Noise measurements from the proposed project's southern location showed an $L_{(eq)}$ of 57.1 in the **mid-day peak**, August 12, 2019, and varied from 43.5 dB(A) to 67.0 dB(A).

Noise measurements from the proposed project's southern location showed an $L_{(eq)}$ of 63.1 in the **PM peak**, August 12, 2019, and varied from 41.7 dB(A) to 81.3 dB(A).

Noise measurements from the proposed project's southern location showed an $L_{(eq)}$ of 65.2 in the **AM peak**, August 13, 2019, and varied from 41.2 dB(A) to 75.4 dB(A).

The sound levels, at this location, result from the existing traffic on Western Avenue. They are higher than those along Rapp Road and slightly higher than those at Site 2.

Sound levels, in the existing condition, were measured at Western Avenue and McKownville Church/Dunkin at Monitoring Location D (not a development site). The noise measurements at this location were taken at approximately 13 meters north from Western Avenue at the receptor. Noise measurements this location showed an $L_{(eq)}$ of 66.1 in the **mid-day peak**, August 12, 2019, and varied from 54.0 dB(A) to 86.0 dB(A).

Noise measurements from the proposed project's southern location showed an $L_{(eq)}$ of 65.8 in the **PM peak**, August 12, 2019, and varied from 58.0 dB(A) to 76.8 dB(A).

Noise measurements from the proposed project's southern location showed an $L_{(eq)}$ of 67.6 in the **AM peak**, August 13, 2019, and varied from 56.6 dB(A) to 89.9 dB(A).

This receptor has an existing sound/noise level typical of a commercial setting and is the highest of the locations monitored for this analysis. The sound levels at this location result from the existing traffic on Western Avenue and the New York State Thruway (I-87). The average measurement for this point was typical for a moderate intensity commercial use (Harris, C.-1998, 3rd edition).

The only two potentially sensitive receptors in the area are the McKownville Church and Westmere Elementary School. However, they are already subjected to higher sound levels due to their proximity to Western Avenue (as recorded above). There are no other "sensitive" noise receptors (e.g., hospitals, libraries, etc.) in the vicinity of the project sites. To the extent receptors of any kind (commercial buildings, etc.) occur, they too are already impacted as described/measured above by noise/sound levels from Western Avenue and the New York State Thruway (I-87).

Results:

On-site results are provided in Table 2. A review of the recorded data reveals that the lowest ambient noise levels occurred along Rapp Road (project Site 1) or Monitoring Location A. Rapp Road and Crossgates Mall Road provide access to the Crossgates Mall via Western Avenue from the south and extends north of the mall to local residential streets and terminates at Washington Avenue Extension. This measured location is furthest from Western Avenue and the New York State Thruway (I-87). Figure 2 depicts the location of these measurements. Measurement reports/data sheets are located at the rear of this analysis.

Monitoring Location B (project Site 2) and Monitoring Location C (project Site 3) sound measurements were directly impacted by existing traffic on Western Avenue. Monitoring Location D measurements were directly impacted by existing traffic on Western Avenue and New York State Thruway (I-87).

Table 2 Noise Monitoring Results (Existing Ambient)			
	Midday Peak (Leq) d(B)A Aug. 12, 19	PM Peak (Leq) d(B)A Aug. 12, 19	AM Peak (Leq) d(B)A Aug. 13, 19
Monitoring Location A: Rapp Road (project Site 1)	55 52.5	54.5 53.9	53.4
Monitoring Location B: Lawton Terrace (project Site 2)	57.1	59.1 61.1	61.7 61.9
Monitoring Location C: Gabriel Terrace (project Site 3)	61.1	63.1 64.1	64.5
Monitoring Location D: McKownville Church/DD	66.1	65.8	67.6

2.0 NOISE REGULATION

2.1 Town of Guilderland Noise Ordinance

The Town of Guilderland regulates noise in Chapter 205 of their Town Code. The noise ordinance contains guidelines and standards that are potentially applicable to the proposed Western Avenue redevelopments and the Rapp Road Development, LLC project. These guidelines may be applicable to the operational noise generating sources such as the loading and unloading, motor vehicles, cooling towers and emergency generators. Chapter 205, §205-7 limits operational noise generated by the proposed projects to no greater than 75 dBA between the hours of 7 a.m. to 10 p.m. and no greater than 50 dBA between the hours of 10 p.m. and 7 a.m.

2.2 Department of Environmental Conservation and FHWA Criteria

The New York State Department of Environmental Conservation (NYSDEC) published, *Assessing and Mitigating Noise Impacts* (October 6, 2000 revised February 2, 2001) to provide guidance and policy on existing and proposed sound levels. This document states that sound level increases of 0 to 5 dB(A) have no appreciable effect on receptors, increases of 5 to 10 dB(A) may have the potential for adverse impact but only in cases where the most sensitive receptors are present. Increases of more than 10 dB(A) may require a closer analysis of impact potential depending on existing noise levels and surrounding land uses, and an increase of 10 dB(A) or more suggests consideration of mitigation measures. It also states that the addition of operational noise sources, in a “non-industrial” setting, should not raise the ambient noise level above a maximum of 65 dB(A). Ambient noise levels in industrial or commercial areas may exceed 65 dB(A) but should not exceed 79 dB(A). Construction noise levels are not specifically addressed by this guidance.

The U.S. Department of Transportation Federal Highway Administration provides noise abatement criteria depicting noise levels for varying land use categories that are used to determine if and where traffic noise impacts occur, as defined in 23 CFR 772.5. Table 3A below depicts each criterion.

Table 3A: FHWA 23 CFR 772.5 Noise Abatement Criteria (NAC) Hourly A-Weighted Sound Level in Decibels (dBA)*			
Activity Category	L_{eq}(h)	L₁₀(h)	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	--	Undeveloped lands.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

* Either L_{eq}(h) or L₁₀(h) (but not both) may be used on a project.

In this case, the majority of the receptors fall in the “non-industrial” category. However, any receptors along Western Avenue (see Section 1.2 above) already have higher sound levels due to the roadway and the New York State Thruway (I-87) and associated entrance and exit ramps.

The FHWA 1995 Highway Traffic Noise Guidance specifies a level of 67 dB(A) or less at most exterior locations for public use such as parks, residences, hotels, churches³, libraries, etc. A level of 72 dB(A) or less for other developed uses (e.g., proposed Site 2 Development – retail and fueling facility). See Table 3

³ It should be noted that the McKnownville church already experiences sounds/noises at these levels in the existing condition.

3.0 PROPOSED ACTION ANALYSIS

3.1 Traffic Noise Analysis

As provided above, proposed project sites Site 2 and 3 experience varied sound levels as a result of traffic from Western Avenue and the New York Thruway (I-87). Noise levels associated with vehicular traffic are a function mainly of traffic speed, vehicle mix (automobiles, medium trucks, heavy trucks) and volume. Posted vehicle traffic speeds will not be affected by the Proposed Action. Vehicle mixes are also anticipated to be essentially the same. Therefore, any changes in traffic related noise will be a function of the change in volume. For example, a doubling of traffic volume (assuming speeds and vehicle mixes do not significantly change) equates to an increase in noise of 3 dBA utilizing this screening type approach. A 3-dBA increase is unnoticed to tolerable according to the NYSDEC noise evaluation guidelines in “Assessing and Mitigating Noise Impacts.” See Table 3B below.

Table 3B
HUMAN REACTION TO INCREASES IN SOUND PRESSURE LEVEL

Increase in Sound Pressure (dB)	Human Reaction
Under 5	Unnoticed to tolerable
5 - 10	Intrusive
10 - 15	Very noticeable
15 - 20	Objectionable
Over 20	Very objectionable to intolerable

(Down and Stocks - 1978)

According to the FHWA, noise impact will occur when projected noise levels approach or exceed abatement criteria (see Table 3A above) or when noise levels substantially exceed existing ambient levels in the area.

Rapp Road (Site 1)

That portion of Rapp Road in the immediate vicinity of project **Site 1** will experience an increase in traffic as a result of the Rapp Road residential development and other background traffic growth. Traffic analyses by Maser Consulting, P.A., were performed at this location, comparing the existing condition to the design year of 2022, and also to the 2025 build year that includes potential but currently unplanned development. When compared to the existing condition, the 2022 build-out predicts increases in traffic levels at varying levels during the various measuring periods. (See Maser Traffic Impact Study, October 2019.) These increases will result in noise level increases of less than 3 dB(A) which are considered unnoticeable to tolerable according to NYSDEC standards shown in Table 3B. No changes are anticipated with vehicle speed or mix that would affect that conclusion.

The Site 1 2022 build-out also predicts increases in traffic levels at varying levels during the various measuring periods along Western Avenue, adjacent to Westmere Terrace. Ambient noise measurements taken at Monitoring Location B (approximately 60 dB(A) during peak PM traffic), along Lawton Terrace, should be considered comparable to ambient levels at Westmere Terrace.

Further, this comparison should be considered conservative as the sound levels at Westmere Terrace would be higher due to proximity to more active commercial and residential uses. The traffic increase will result in noise level increases of less than 3 dB(A) which are considered unnoticeable to tolerable according to NYSDEC standards shown in Table 3B. As such, no significant noise impacts are anticipated to Westmere Terrace.

The Site 1 2022 build-out also predicts minor traffic increases in varying levels during the various measuring periods in the community north of Gipp Road along Rapp and Springsteen Roads. This traffic increase will result in noise level increases of less than 3 dB(A) which are considered unnoticeable to tolerable according to NYSDEC standards shown in Table 3B. As such, no significant noise impacts are anticipated to Rapp and Springsteen Roads, north of Gipp Road.

Commercial Sites 2 (Costco) and 3

As described in the existing conditions section above, there are only two “sensitive” noise receptors in the vicinity of the proposed project Sites 2 and 3. They are the McKownville Church and Westmere Elementary School. The McKownville Church is already experiencing sound pressure levels of 65.8 to 67.6 dB(A). To the extent this receptor and receptors of any kind (commercial buildings, etc.) occur, they too are already impacted as described/measured above by noise/sound levels from Western Avenue and New York State Thruway (I-87.) Traffic generated by the proposed projects will not increase the traffic levels on Western Avenue such that they will produce sound pressure level increases above 3 dB(A), which will be unnoticeable. In addition, Westmere Elementary School is situated on Johnston Road, on the opposite side of Western Avenue. This receptor would also already be impacted as described above by the noise/sound levels from Western Avenue and would experience sound pressure level increases of less than 3 dB(A) which will be unnoticeable.

Per the Traffic Impact Analysis prepared by Maser Consulting, not all vehicular trips to proposed project **Sites 2 and 3** would be “new” to the adjacent roadway system and a significant portion would be “interplay” between the Crossgates Mall Road and as “pass-by” traffic from the existing traffic stream along Western Avenue, Rapp Road and Crossgates Mall Road. Thus, a significant increase in traffic is not anticipated for Sites 2 and 3. Increased vehicular traffic associated with the project on Western Avenue will create a less than 3 dB(A) increase from that existing sound/noise levels. Using the NYSDEC impact criterion discussed above, no significant adverse noise impacts would be expected from the project’s traffic. Given the above combination of “typical” sound/noise levels projected to occur on site and virtually no expected impact (0 to 1 decibel) on off-site receptor (as they are already impacted by Western Avenue) sound levels are not anticipated to be intrusive. In addition, as above, no significant noise impacts are anticipated to Westmere Terrace due to the proposed action at Sites 2 and 3.

3.2 **Operational Analysis**

Rapp Road (Site 1)

The Rapp Road site will have standard commercial Heating, Ventilation-Air Conditioning (HVAC) units for climate control on the interior of the various residential buildings. These HVAC units will be at ground level. For the 2 story, western buildings, the HVAC units will be on their northern end. These will be placed a minimum of 150 feet from the western property line with residences on Paden Circle. The HVAC units will be enclosed by a 6-foot-high fence which

will have a decibel reduction effect of at least 9 dB(A). Further, a berm now occurs between the buildings with their HVAC units which will add at least an additional 10 dB(A) attenuation. As a result of the project HVAC units, the property line with Paden Circle properties (which already experience an ambient noise measurement between 50-55 dB(A)) will experience a 37 dB(A) sound level. This is well below the Town's 50 dB(A) sound level as specified in Section 205-5.

For the 5 story, eastern buildings, the HVAC units will be on the northern side of the northern building and on the southern side of the southern building. These will occur a minimum of 150 feet from the southern property line with residences on Westmere Terrace. The HVAC units will be grouped in banks of 4 (which adds some 9 dB(A) to the source level) and enclosed by a 6-foot-high fence which will have a decibel reduction effect of at least 9 dB(A). Further, a 20-foot-high berm will be constructed between the buildings with their HVAC units and Westmere Terrace, which will add at least an additional 10 dB(A) attenuation. As a result of the project HVAC units, the property line with Westmere Terrace properties will experience a 40 dB(A) sound level. This will be well below the Town's 50 dB(A) sound level as specified in Section 205-5.

The residential buildings in Site 1 will not have generators.

Commercial Sites 2 (Costco) and 3

For the Costco building, the HVAC units will be on the roof toward the northern side of the building. These will occur a minimum of 150 feet from the northern property line with the Crossgates Mall Road. The HVAC units will be grouped in banks of 4 (which adds some 9 dB(A) to the source level) and enclosed by a 4 to 6-foot-high "fence" which will have a decibel reduction effect of at least 9 dB(A). As a result of the above, the property line with Crossgates Mall Road will experience a 46 dB(A) sound level. This will be well below the Town's 50 dB(A) sound level as specified in Section 205-5.

The emergency generator for the Costco facilities will be contained within the building.

The development on Site 3 will mimic Sites 1 and 2.

4.0 MITIGATION

4.1 Mitigation Measures

The analysis revealed that no significant noise impact will occur as a result of the proposed action. Therefore, no mitigative measures are proposed.

APPENDIX A

Measurement Reports

Measurement Report

Measurement Details

Date and Time: 8/12/2019 11:42 AM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:07:27

Range: 40-110 dB

Overload: no

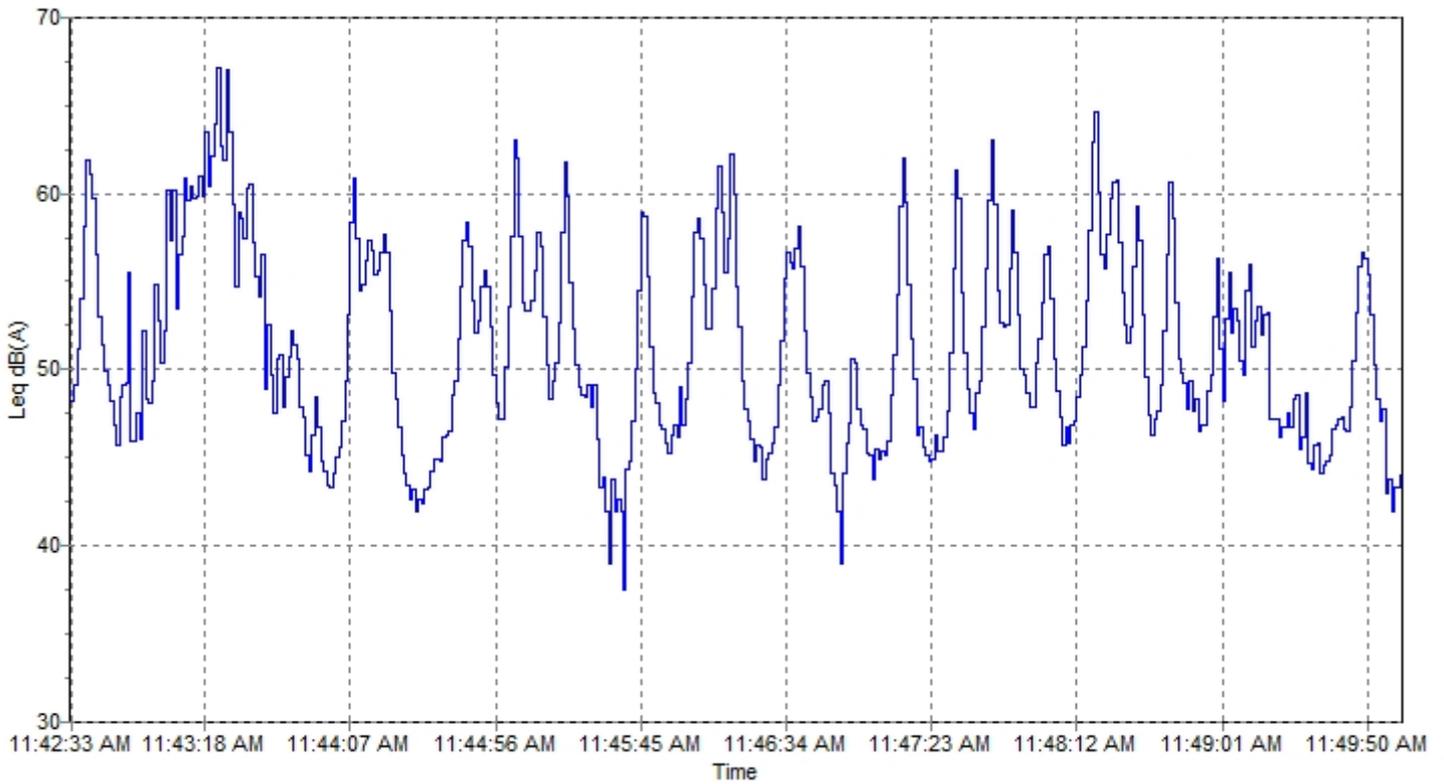
Location: Rapp Road- Midday Peak

Notes:

- 10 meters away from white shoulder line
- 76 degrees fahrenheit, sunny
- 11:51 AM siren in distance

Data

Leq	55.0 dBA	L1.0	63.3 dBA
Lepd	36.9 dBA	L5.0	60.8 dBA
LAE	81.3 dBA	L10.0	58.7 dBA
LAFmax	69.8 dBA	L50.0	49.5 dBA
Peak	89.8 dBC	L90.0	44.1 dBA
		Lmin	39.7 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 11:50 AM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:05:00

Range: 40-110 dB

Overload: no

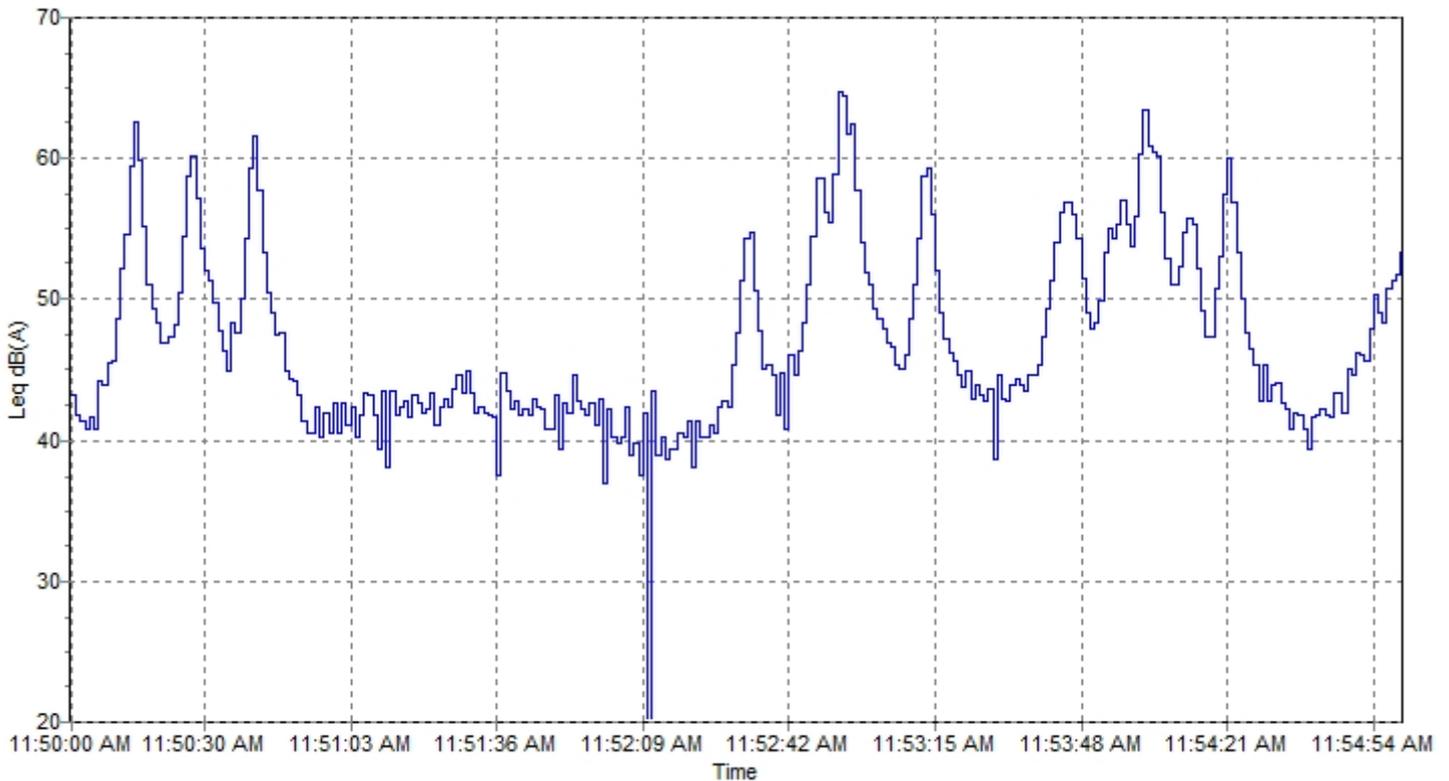
Location: Rapp Road Midday Peak

Notes:

- 10 meters away from white shoulder line
- 76 degrees fahrenheit, sunny
- 11:51 AM siren in distance

Data

Leq	52.5 dBA	L1.0	61.9 dBA
Lepd	32.7 dBA	L5.0	58.9 dBA
LAE	77.0 dBA	L10.0	56.1 dBA
LAFmax	66.8 dBA	L50.0	44.2 dBA
Peak	86.7 dBC	L90.0	40.2 dBA
		Lmin	37.5 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 12:00 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:01:32
Range: 40-110 dB
Location: Rapp Road - Midday Peak

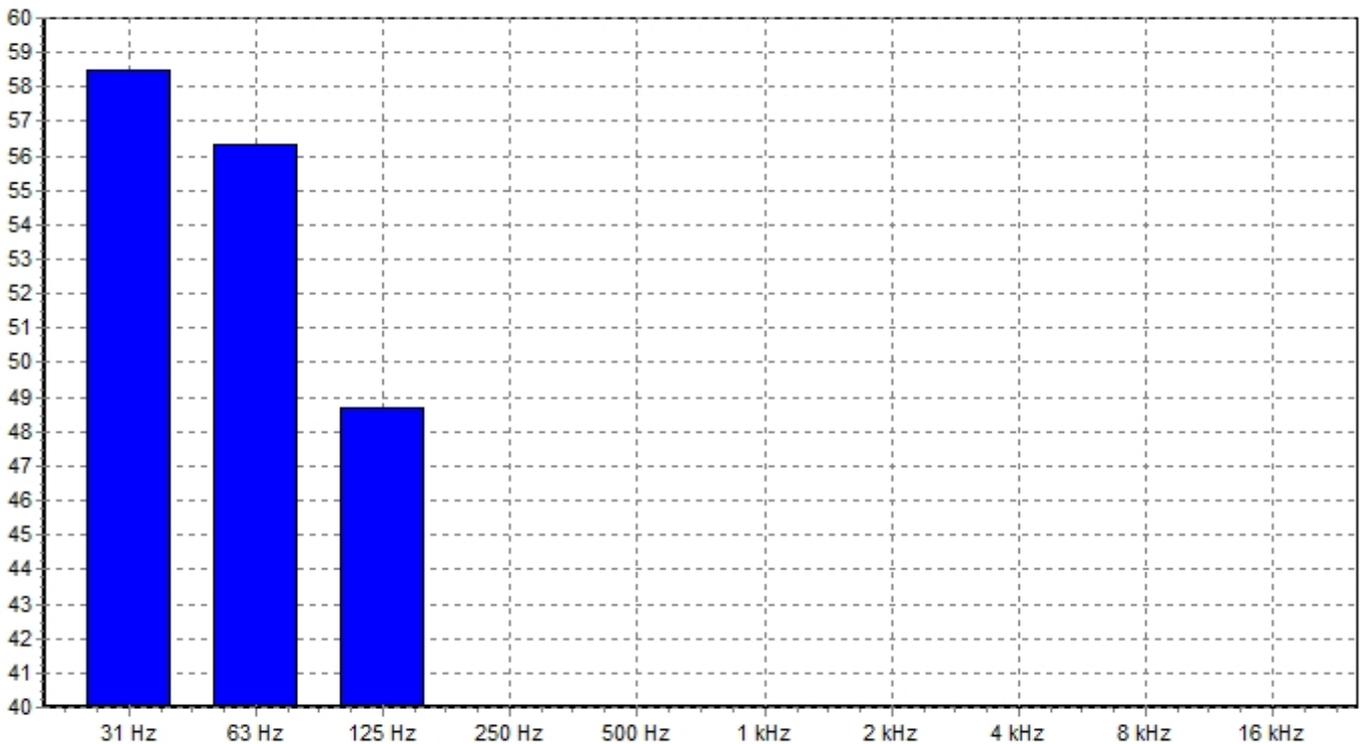
Notes:
- 30 feet away from white shoulder line
- 76 degrees fahrenheit, sunny

Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	58.5 dB	45		1 kHz	dB		
63 Hz	56.3 dB	45		2 kHz	dB		
125 Hz	48.7 dB	2		4 kHz	dB		
250 Hz	dB			8 kHz	dB		
500 Hz	dB			16 kHz	dB		

Band	Leq,t	Time s	Overload
LAeq	dBA		
LCeq	dB(C)		
LZeq	dBZ		

NR value: 31
NC value: 35



Measurement Report

Measurement Details

Date and Time: 8/12/2019 12:02 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:07:40
Range: 40-110 dB
Location: Rapp Road- Midday Peak

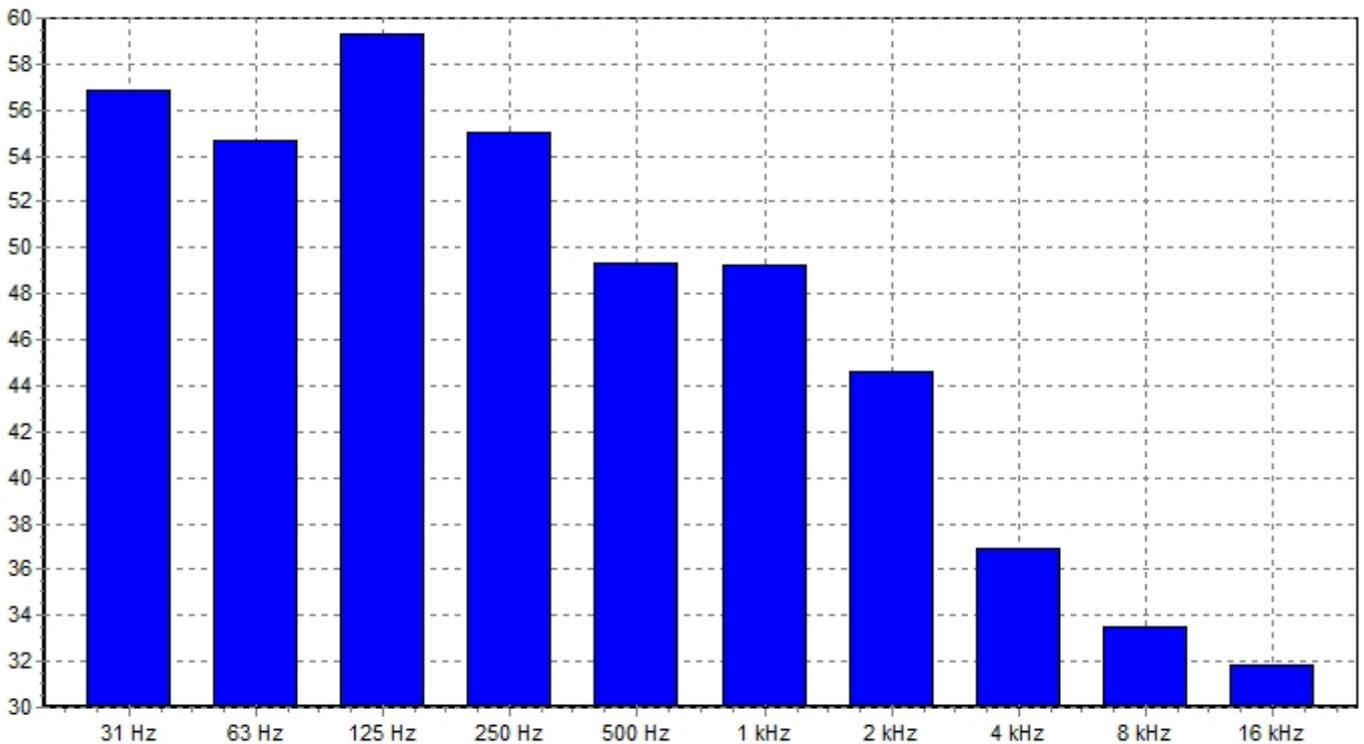
Notes:
- 30 feet away from white shoulder line
- 76 degrees fahrenheit, sunny

Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	56.8 dB	45		1 kHz	49.2 dB	45	
63 Hz	54.7 dB	45		2 kHz	44.6 dB	45	
125 Hz	59.3 dB	45		4 kHz	37.0 dB	45	
250 Hz	55.0 dB	45		8 kHz	33.5 dB	45	
500 Hz	49.3 dB	45		16 kHz	31.8 dB	45	

Band	Leq,t	Time s	Overload
LAeq	51.6 dBA	10	
LCeq	dBC		
LZeq	dBZ		

NR value: 50
NC value: 50



Measurement Report

Measurement Details

Date and Time: 8/12/2019 12:30 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:44

Range: 40-110 dB

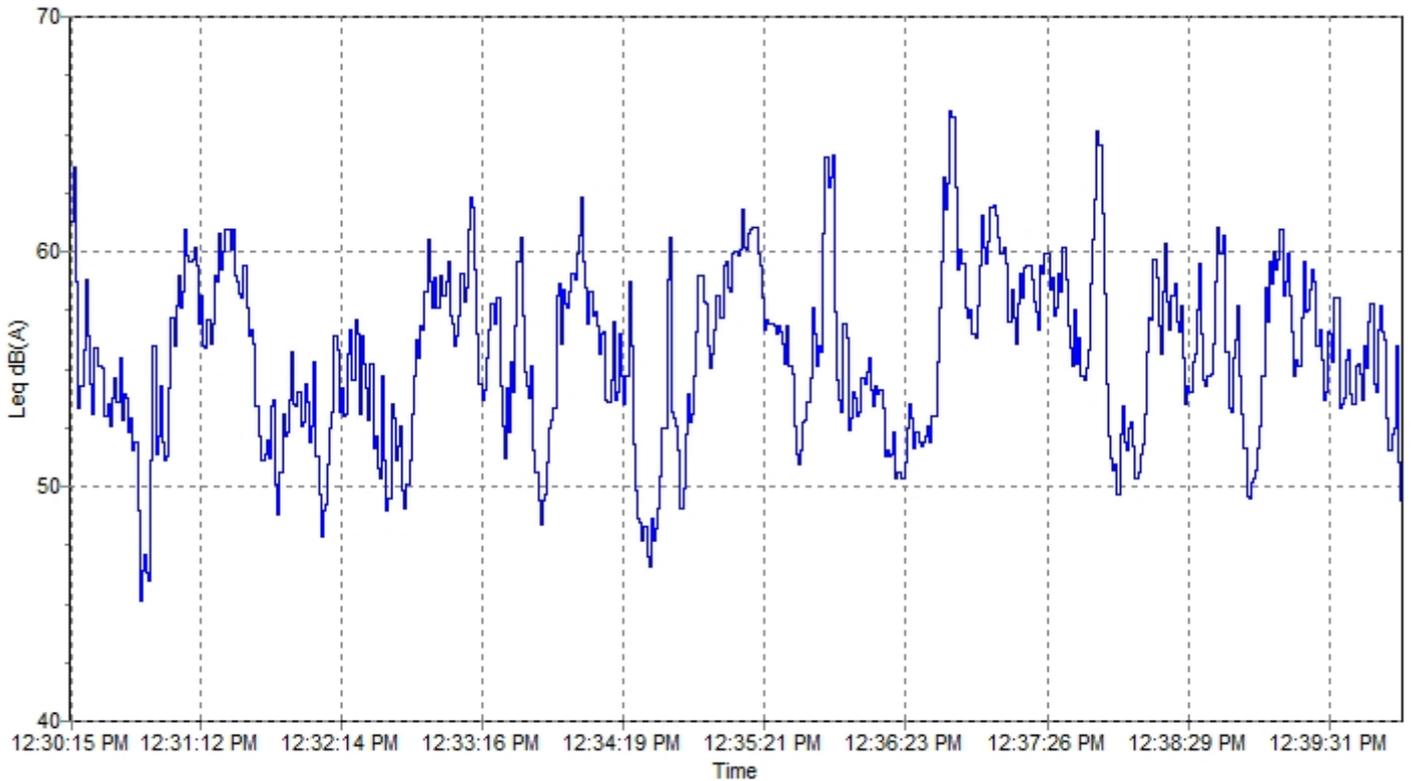
Overload: no

Location: Lawton Terrace- Midday Peak

Notes:
- 30 meters from roadway
- 84 degrees fahrenheit, sunny

Data

Leq	57.1 dBA	L1.0	63.6 dBA
Lepd	40.2 dBA	L5.0	61.0 dBA
LAE	84.5 dBA	L10.0	59.9 dBA
LAFmax	67.0 dBA	L50.0	55.2 dBA
Peak	95.5 dBC	L90.0	50.4 dBA
		Lmin	43.5 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 12:41 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:45
Range: 40-110 dB
Location: Lawton Terrace

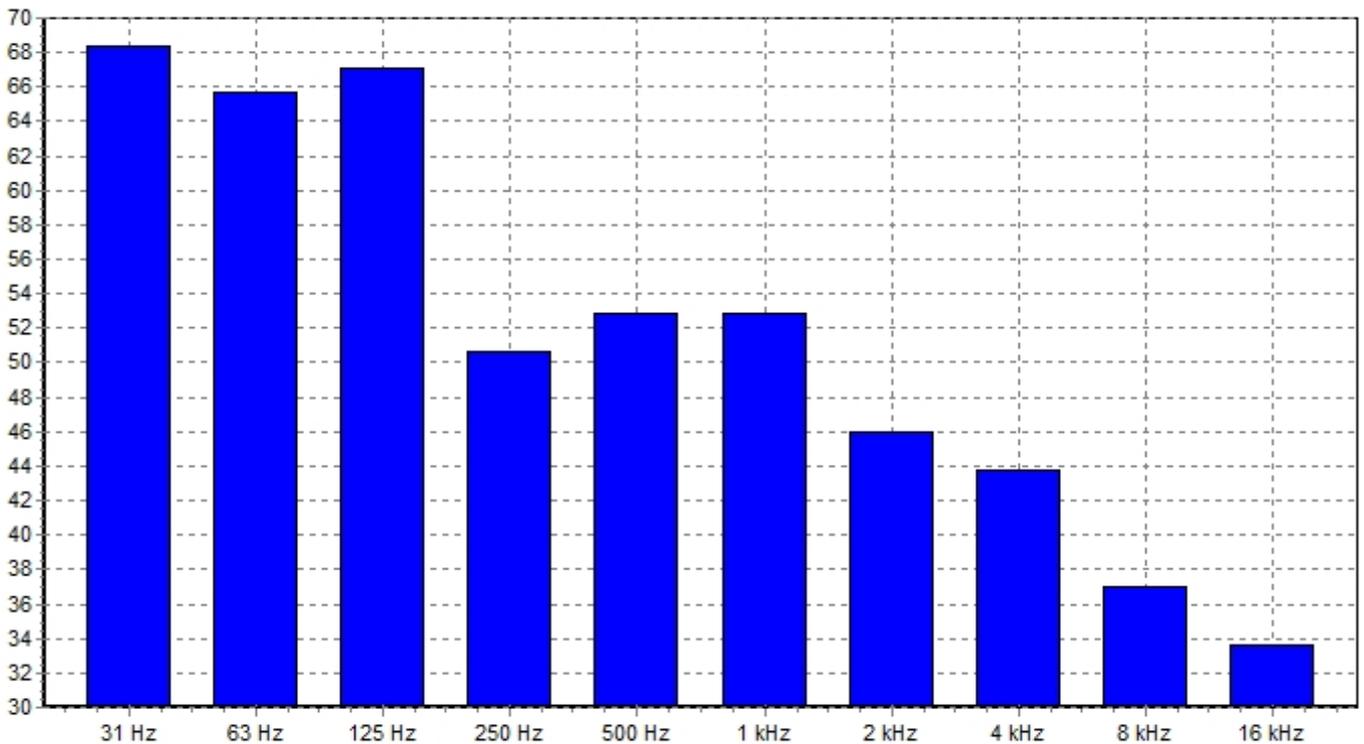
Notes:
- 30 meters from roadway
-84 degrees fahrenheit, sunny

Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	68.4 dB	45		1 kHz	52.9 dB	45	
63 Hz	65.7 dB	45		2 kHz	46.0 dB	45	
125 Hz	67.1 dB	45		4 kHz	43.8 dB	45	
250 Hz	50.6 dB	45		8 kHz	37.0 dB	45	
500 Hz	52.9 dB	45		16 kHz	33.6 dB	45	

Band	Leq,t	Time s	Overload
LAeq	64.6 dBA	45	
LCeq	72.9 dBC	45	
LZeq	74.8 dBZ	45	

NR value: 53
NC value: 60



Measurement Report

Measurement Details

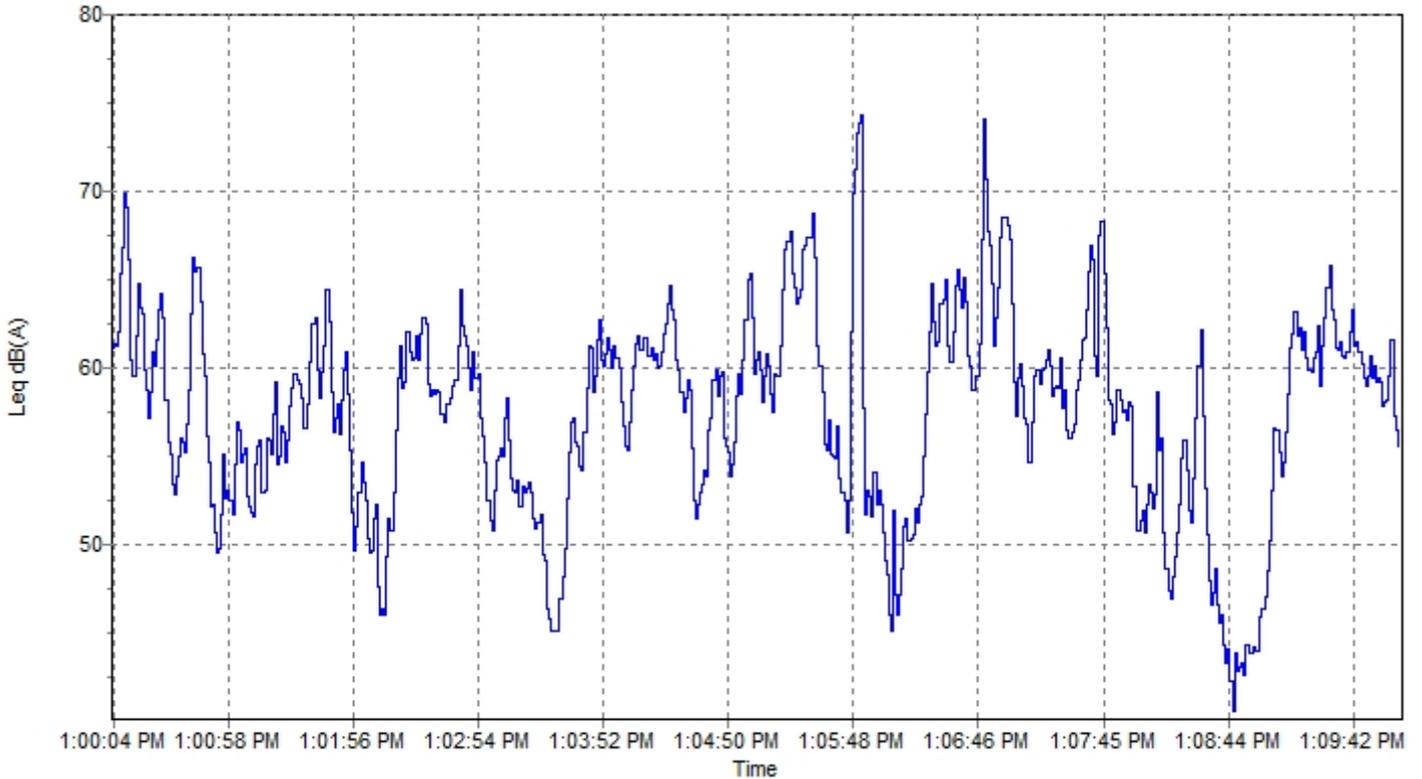
Date and Time: 8/12/2019 1:00 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:59
Range: 40-110 dB
Overload: no
Location: Gabriel Terrace

Notes:
- 30 meters from Western Ave
-84 degrees Fahrenheit, partially cloud, 8mph winds

Data

Leq	61.1 dBA	L1.0	77.9 dBA
Lepd	44.3 dBA	L5.0	77.9 dBA
LAE	88.7 dBA	L10.0	73.3 dBA
LAFmax	77.9 dBA	L50.0	59.3 dBA
Peak	100.5 dBC	L90.0	46.5 dBA
		Lmin	40.9 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 1:11 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:46

Range: 40-110 dB

Location: Gabriel Terrace- Midday Peak

Notes:

- 30 meters from Western Ave
-84 degrees Fahrenheit, partially cloud, 8mph winds

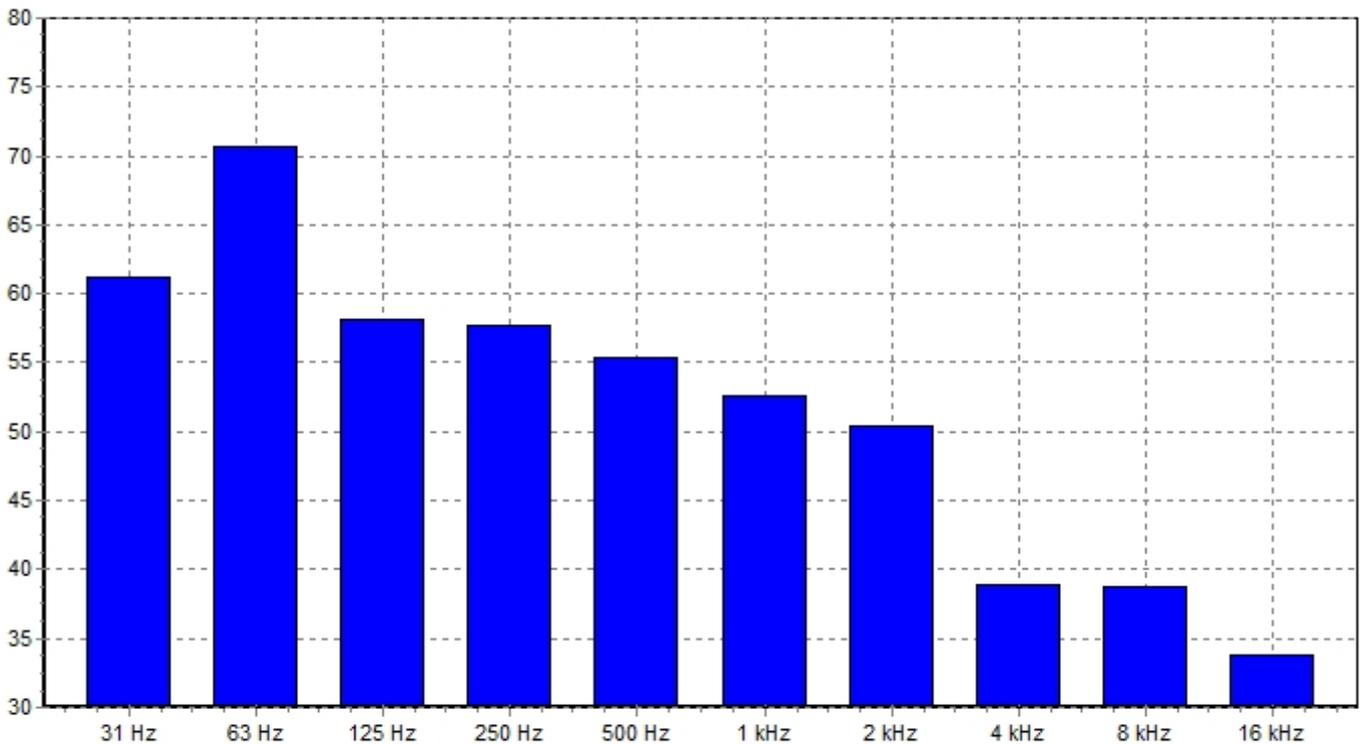
Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	61.2 dB	45		1 kHz	52.6 dB	45	
63 Hz	70.7 dB	45		2 kHz	50.4 dB	45	
125 Hz	58.1 dB	45		4 kHz	38.9 dB	45	
250 Hz	57.7 dB	45		8 kHz	38.7 dB	46	
500 Hz	55.4 dB	45		16 kHz	33.8 dB	45	

Band	Leq,t	Time s	Overload
LAeq	63.8 dBA	45	
LCeq	76.6 dBC	45	
LZeq	77.0 dBZ	45	

NR value: 54

NC value: 55



Measurement Report

Measurement Details

Date and Time: 8/12/2019 1:30 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:57

Range: 40-110 dB

Overload: yes

Location: McKnownville Church- Midday Peak

Notes:

13 meters from Western Avenue
-84 degrees Fahrenheit, partially cloudy, 8mph winds

Data

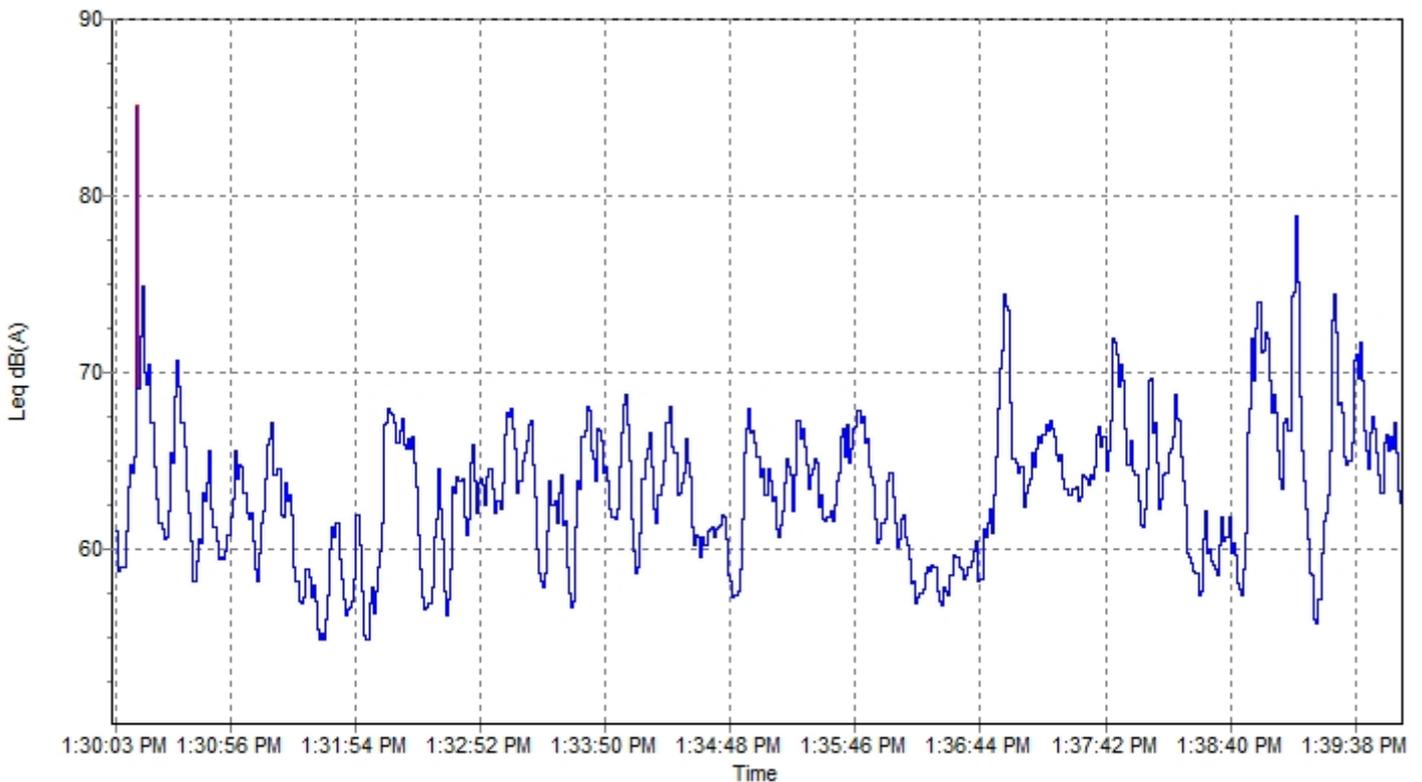
Leq	66.1 dBA	L1.0	74.2 dBA
Lepd	49.2 dBA	L5.0	69.9 dBA
LAE	93.6 dBA	L10.0	67.9 dBA
LAFmax	94.3 dBA	L50.0	63.1 dBA
Peak	119.1 dBC	L90.0	57.8 dBA
		Lmin	54.0 dBA

cursor 1:
1:30:03 PM
61.0dB

between cursors:
interval 00:07:45
Leq 65.4dB

remainder:
interval 00:02:15
Leq 67.6dB

cursor 2:
1:37:47 PM
71.0dB



Measurement Report

Measurement Details

Date and Time: 8/12/2019 1:40 PM
 Sound Level Meter: Cirrus Research plc

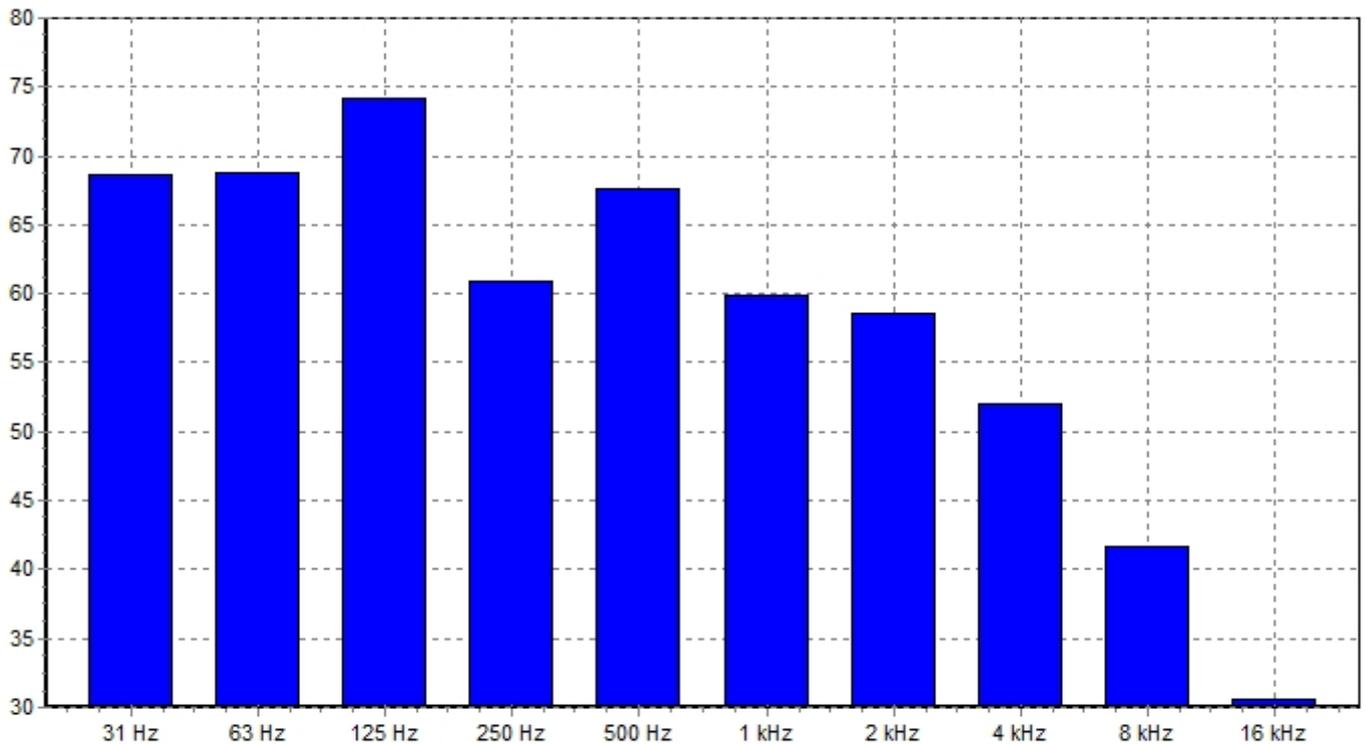
Run Duration: 00:09:45
 Range: 40-110 dB
 Location: McKnownville Church- Midday Peak

Notes:
 13 meters from Western Avenue
 -84 degrees Fahrenheit, partially cloudy, 8mph winds

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	68.7 dB	45		1 kHz	59.9 dB	45	
63 Hz	68.8 dB	45		2 kHz	58.5 dB	45	
125 Hz	74.2 dB	45		4 kHz	52.0 dB	45	
250 Hz	60.9 dB	45		8 kHz	41.7 dB	45	
500 Hz	67.6 dB	45		16 kHz	30.6 dB	45	

Band	Leq,t	Time s	Overload
LAeq	62.1 dBA	45	
LCeq	76.4 dBC	45	
LZeq	80.7 dBZ	45	

NR value: 65
 NC value: 65



Measurement Report

Measurement Details

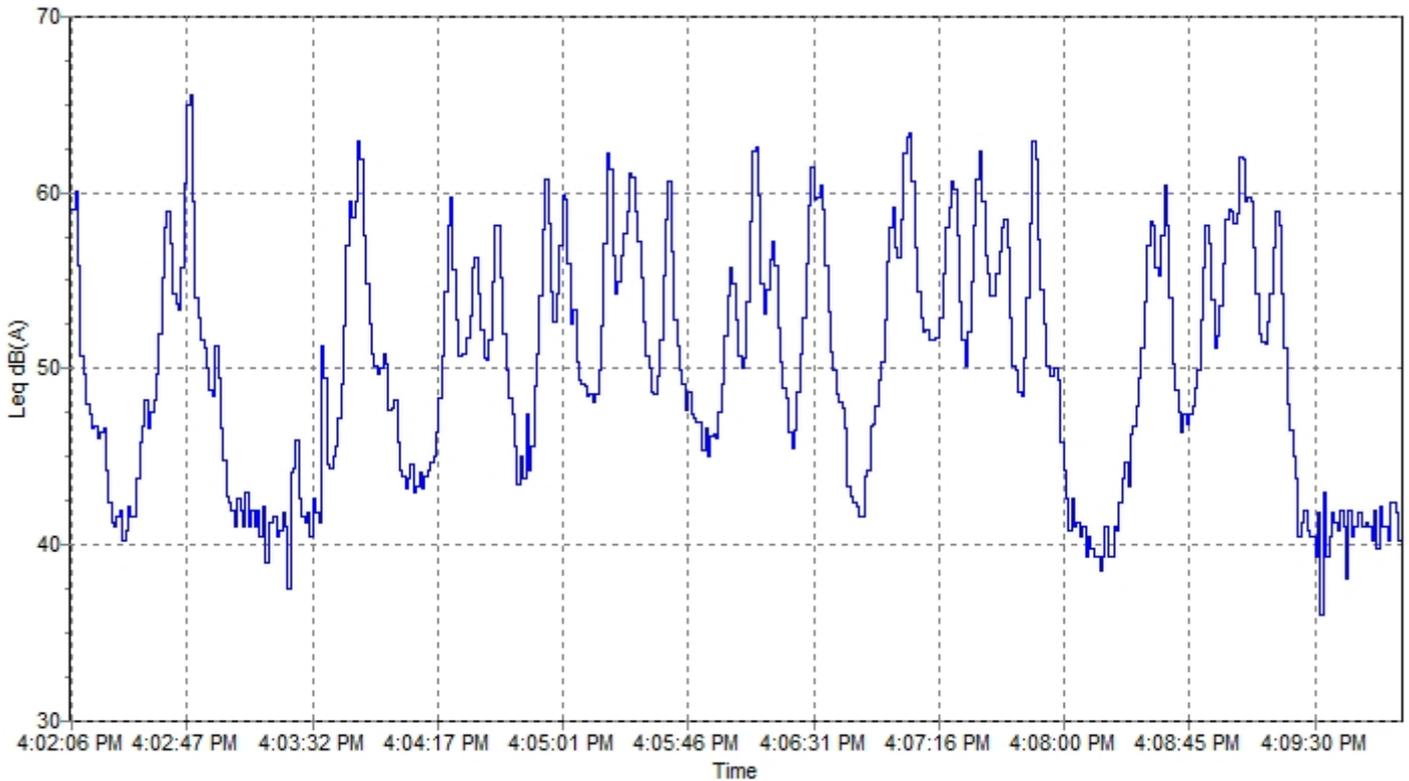
Date and Time: 8/12/2019 4:02 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:07:53
Range: 40-110 dB
Overload: no
Location: Rapp Road PM Peak

Notes:
- 10 meters from white line in roadway
-83 degrees fahrenheit , cloudy

Data

Leq	54.5 dBA	L1.0	62.8 dBA
Lepd	36.7 dBA	L5.0	60.2 dBA
LAE	81.1 dBA	L10.0	58.8 dBA
LAFmax	66.9 dBA	L50.0	49.4 dBA
Peak	89.2 dBC	L90.0	40.5 dBA
		Lmin	37.7 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 4:10 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:05:00

Range: 40-110 dB

Overload: no

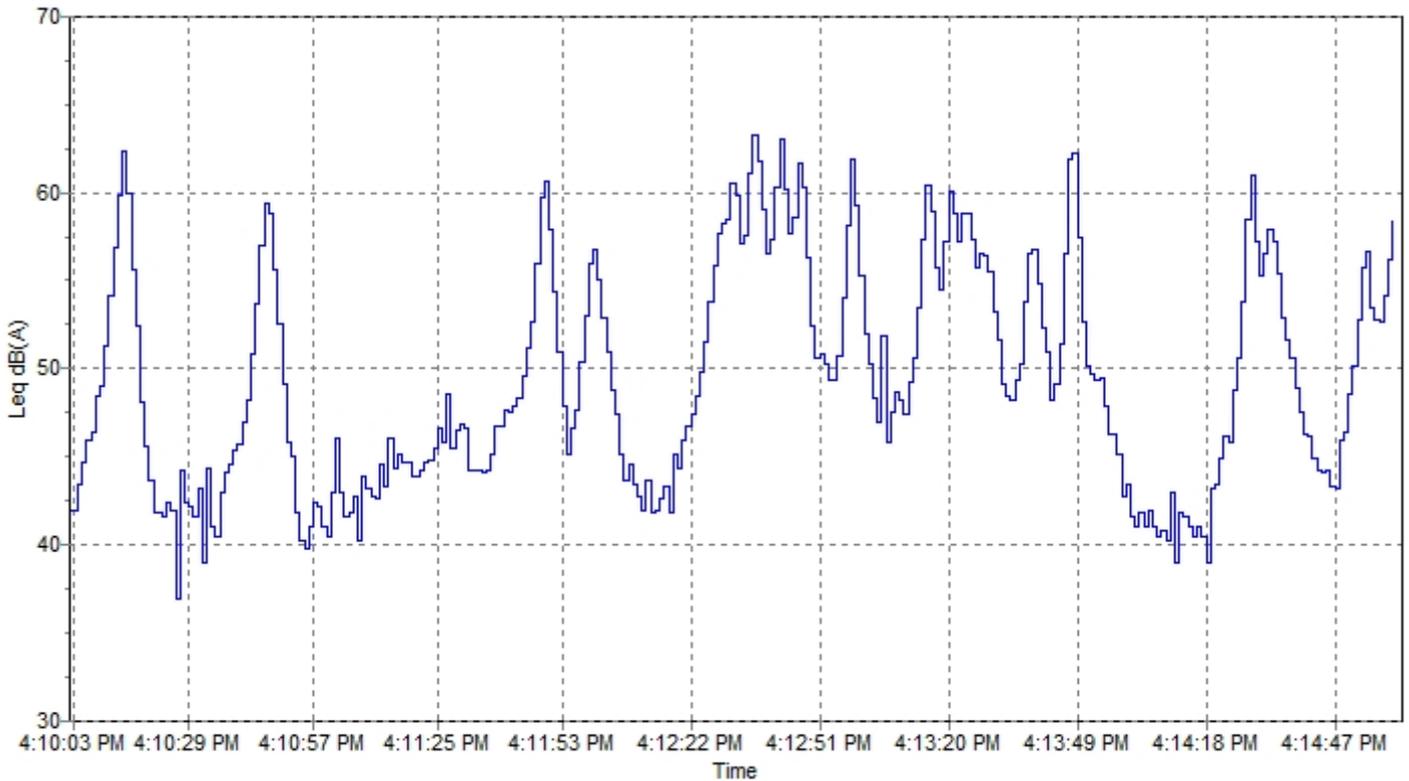
Location: Rapp Road PM Peak

Notes

- 10 meters from white line in roadway
- 83 degrees fahrenheit , cloudy

Data

Leq	53.9 dBA	L1.0	62.2 dBA
Lepd	34.1 dBA	L5.0	60.0 dBA
LAE	78.5 dBA	L10.0	58.1 dBA
LAFmax	64.0 dBA	L50.0	47.6 dBA
Peak	84.7 dBC	L90.0	41.0 dBA
		Lmin	38.6 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 4:15 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:46
Range: 40-110 dB
Location: Rapp Road PM Peak

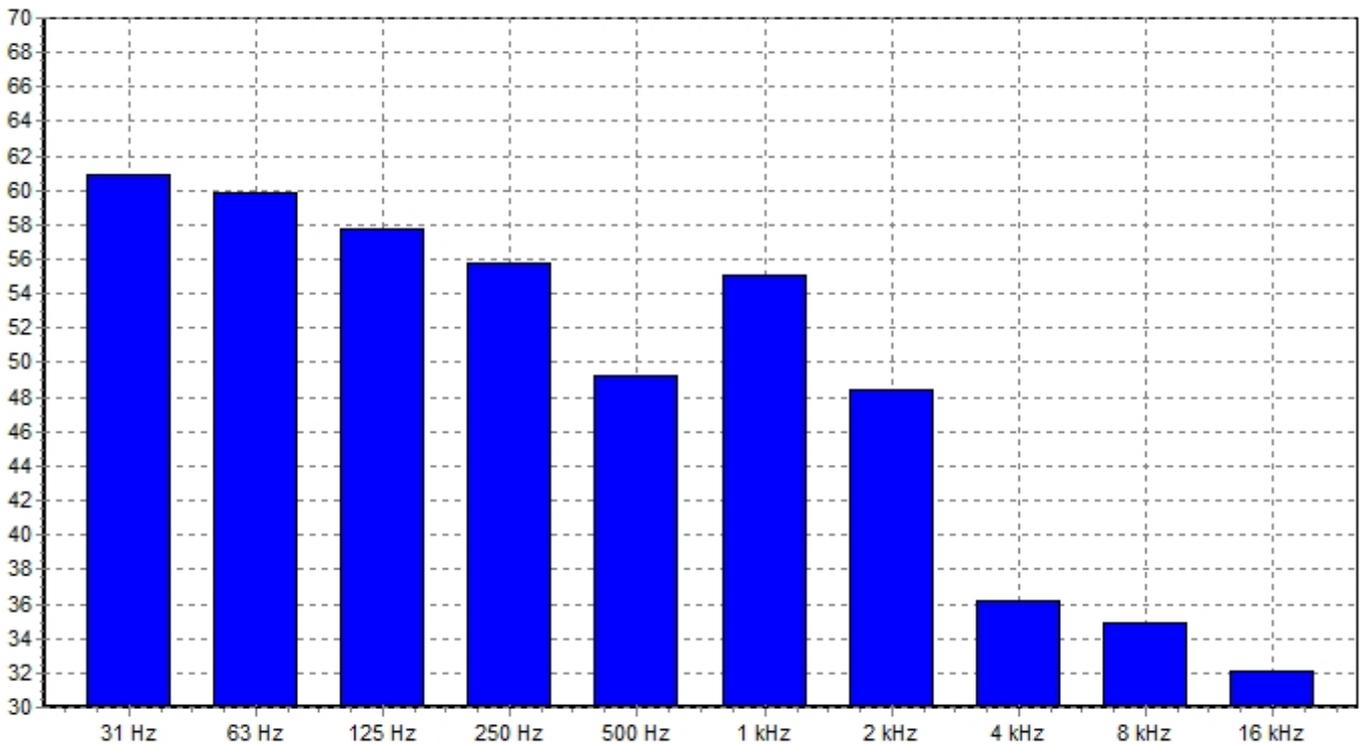
Notes:
- 10 meters from white line in roadway
-83 degrees fahrenheit , cloudy

Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	60.9 dB	45		1 kHz	55.1 dB	46	
63 Hz	59.9 dB	45		2 kHz	48.5 dB	45	
125 Hz	57.7 dB	45		4 kHz	36.2 dB	45	
250 Hz	55.8 dB	45		8 kHz	34.9 dB	45	
500 Hz	49.3 dB	45		16 kHz	32.1 dB	45	

Band	Leq,t	Time s	Overload
LAeq	54.6 dBA	45	
LCeq	72.1 dBC	45	
LZeq	74.8 dBZ	45	

NR value: 56
NC value: 55



Measurement Report

Measurement Details

Date and Time: 8/12/2019 4:35 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:04:58 hh:mm:ss

Range: 40-110 dB

Overload: no

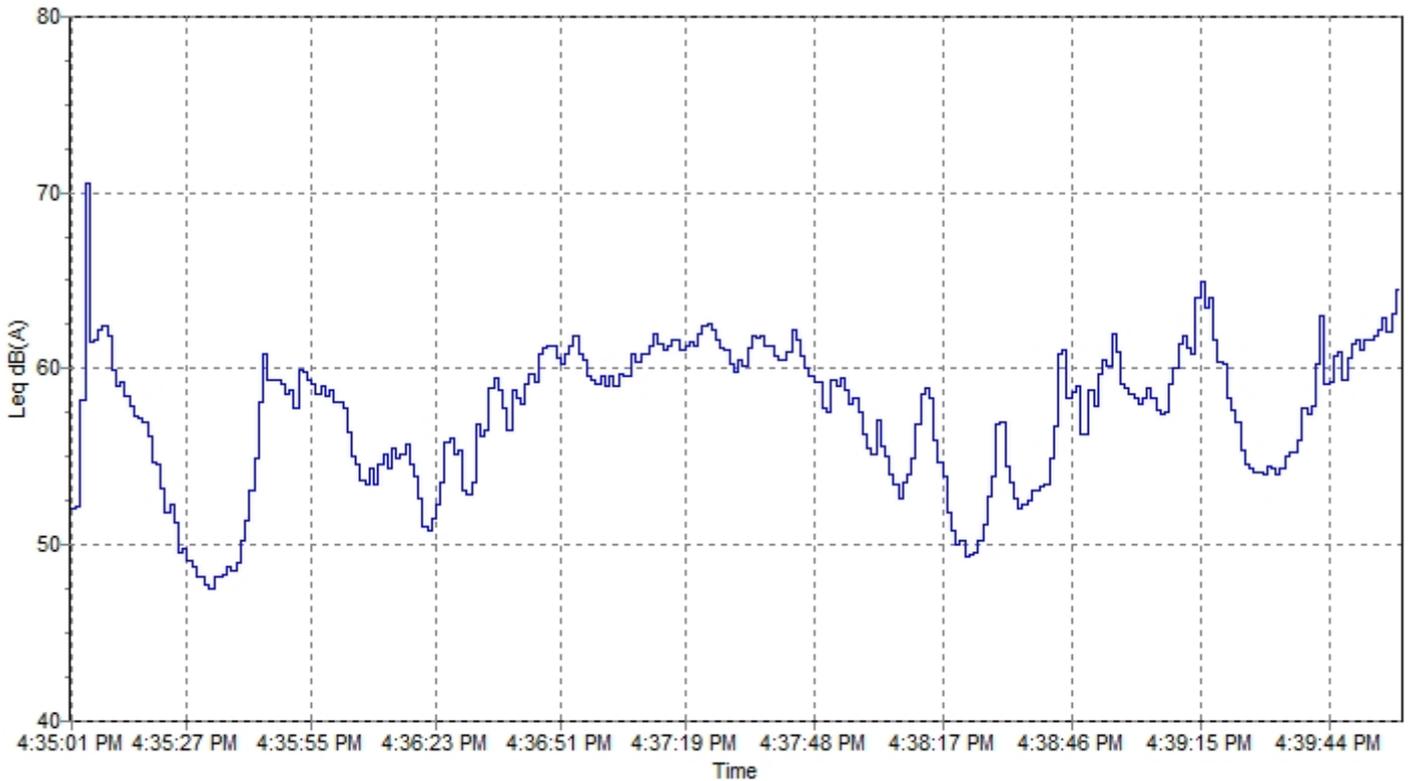
Location: Lawton Terrace PM Peak

Notes

- 30 meters from Western Avenue
- 83 degrees fahrenheit , cloudy

Data

Leq	59.1 dBA	L1.0	64.0 dBA
Lepd	39.2 dBA	L5.0	62.2 dBA
LAE	83.7 dBA	L10.0	61.7 dBA
LAFmax	78.3 dBA	L50.0	58.1 dBA
Peak	103.6 dBC	L90.0	51.6 dBA
		Lmin	46.5 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 4:40 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:10:00

Range: 40-110 dB

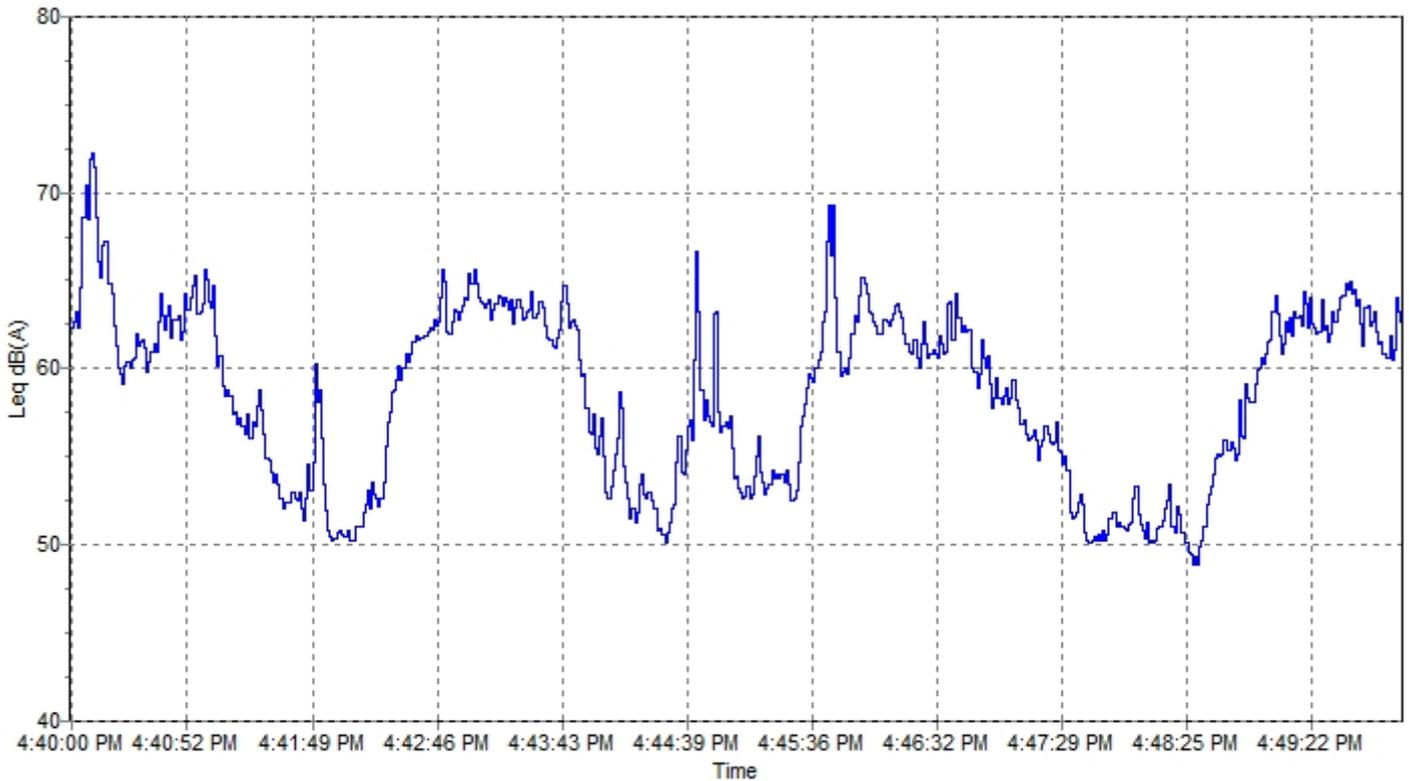
Overload: no

Location: Lawton Terrace PM Peak

Notes:
- 30 meters from Western Avenue
- 83 degrees fahrenheit , cloudy

Data

Leq	61.1 dBA	L1.0	68.4 dBA
Lepd	44.3 dBA	L5.0	64.8 dBA
LAE	88.7 dBA	L10.0	63.9 dBA
LAFmax	72.5 dBA	L50.0	59.3 dBA
Peak	96.5 dBC	L90.0	50.9 dBA
		Lmin	48.2 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 4:50 PM
 Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:45
 Range: 40-110 dB
 Location: Lawton Terrace PM Peak

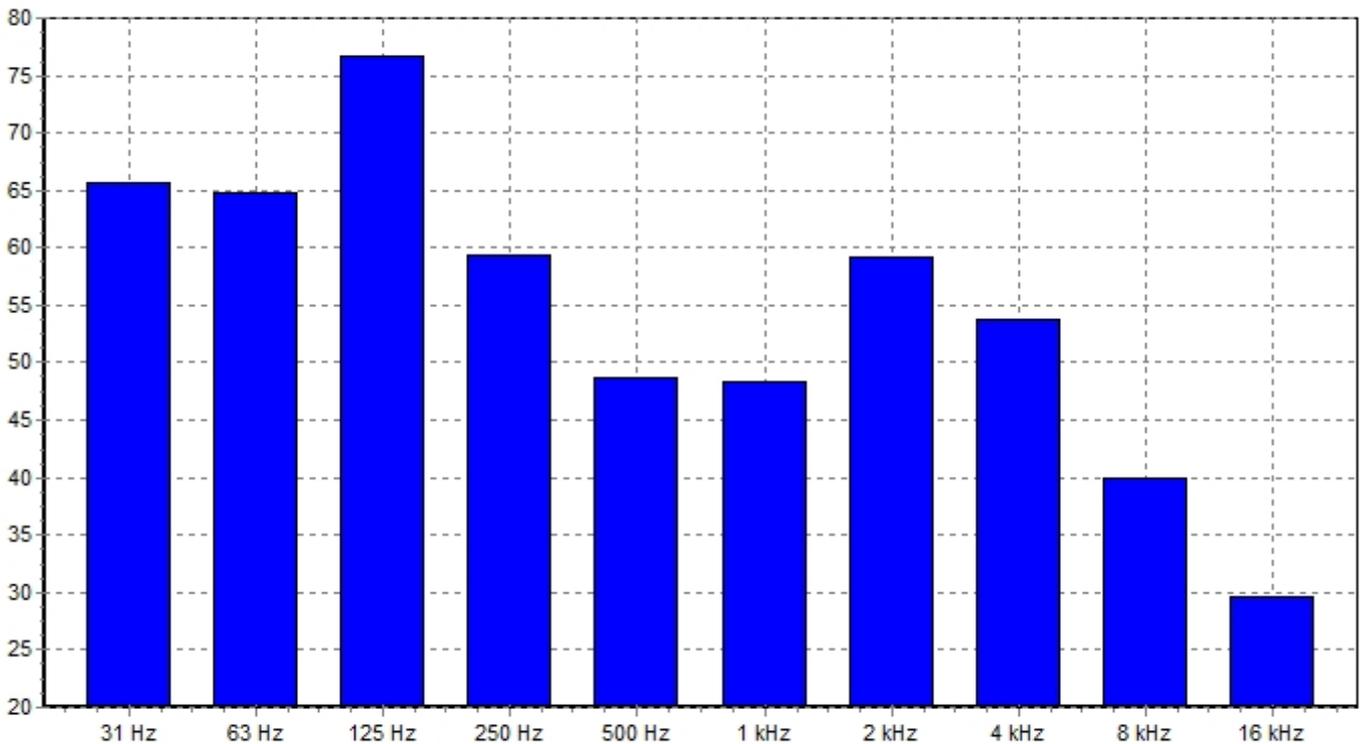
Notes:
 - 30 meters from Western Avenue
 -83 degrees fahrenheit , cloudy

Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	65.7 dB	45		1 kHz	48.4 dB	45	
63 Hz	64.8 dB	45		2 kHz	59.2 dB	45	
125 Hz	76.7 dB	45		4 kHz	53.7 dB	45	
250 Hz	59.3 dB	45		8 kHz	40.0 dB	45	
500 Hz	48.7 dB	45		16 kHz	29.6 dB	45	

Band	Leq,t	Time s	Overload
LAeq	61.0 dBA	45	
LCeq	74.8 dBC	45	
LZeq	75.1 dBZ	45	

NR value: 64
 NC value: 70



Measurement Report

Measurement Details

Date and Time: 8/12/2019 5:03 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:06:44

Range: 40-110 dB

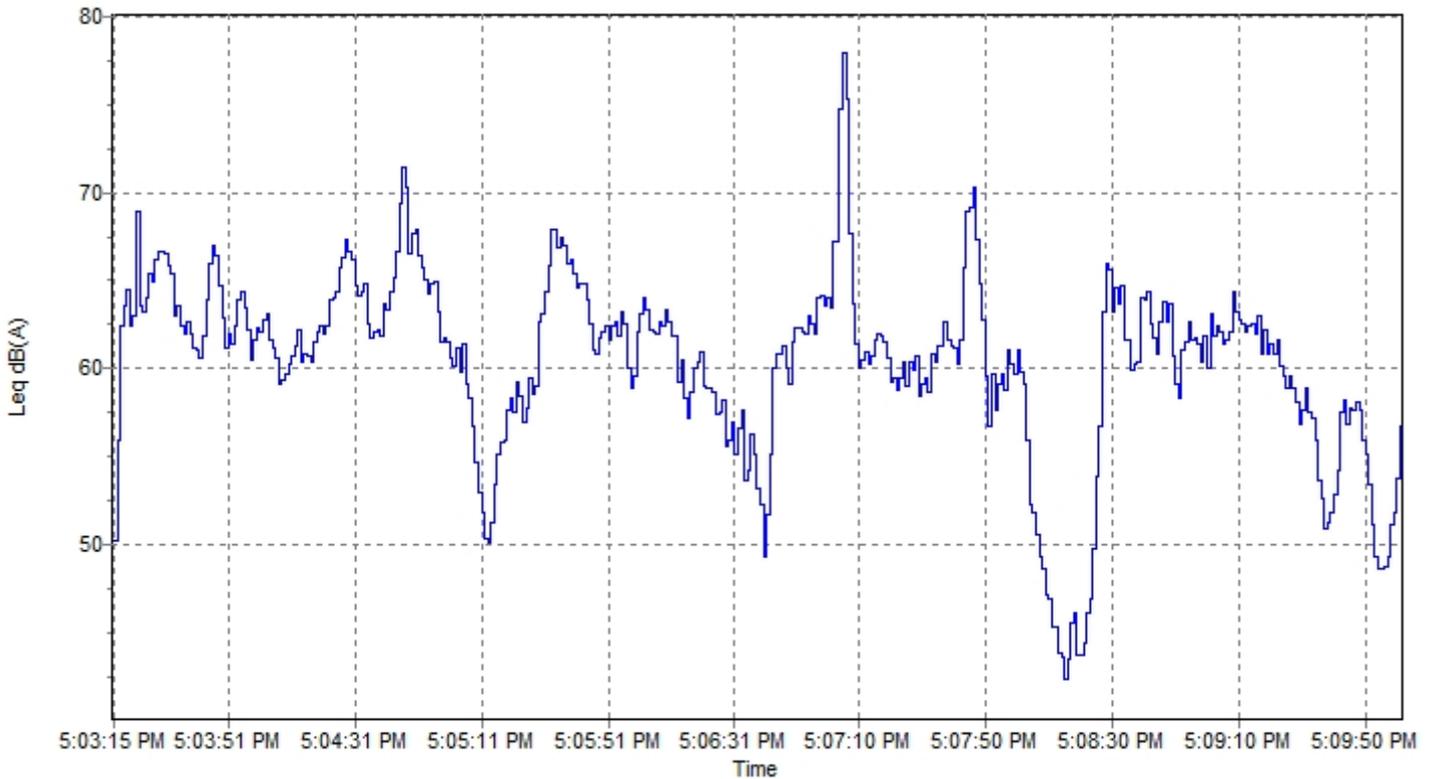
Overload: no

Location: Gabriel Terrace PM Peak

Notes:
- 30 meters from Western Avenue
- 83 degrees fahrenheit , cloudy

Data

Leq	63.1 dBA	L1.0	81.3 dBA
Lepd	44.5 dBA	L5.0	81.3 dBA
LAE	89.0 dBA	L10.0	81.3 dBA
LAFmax	81.3 dBA	L50.0	61.7 dBA
Peak	101.2 dBC	L90.0	48.3 dBA
		Lmin	41.7 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 5:10 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:05:00

Range: 40-110 dB

Overload: no

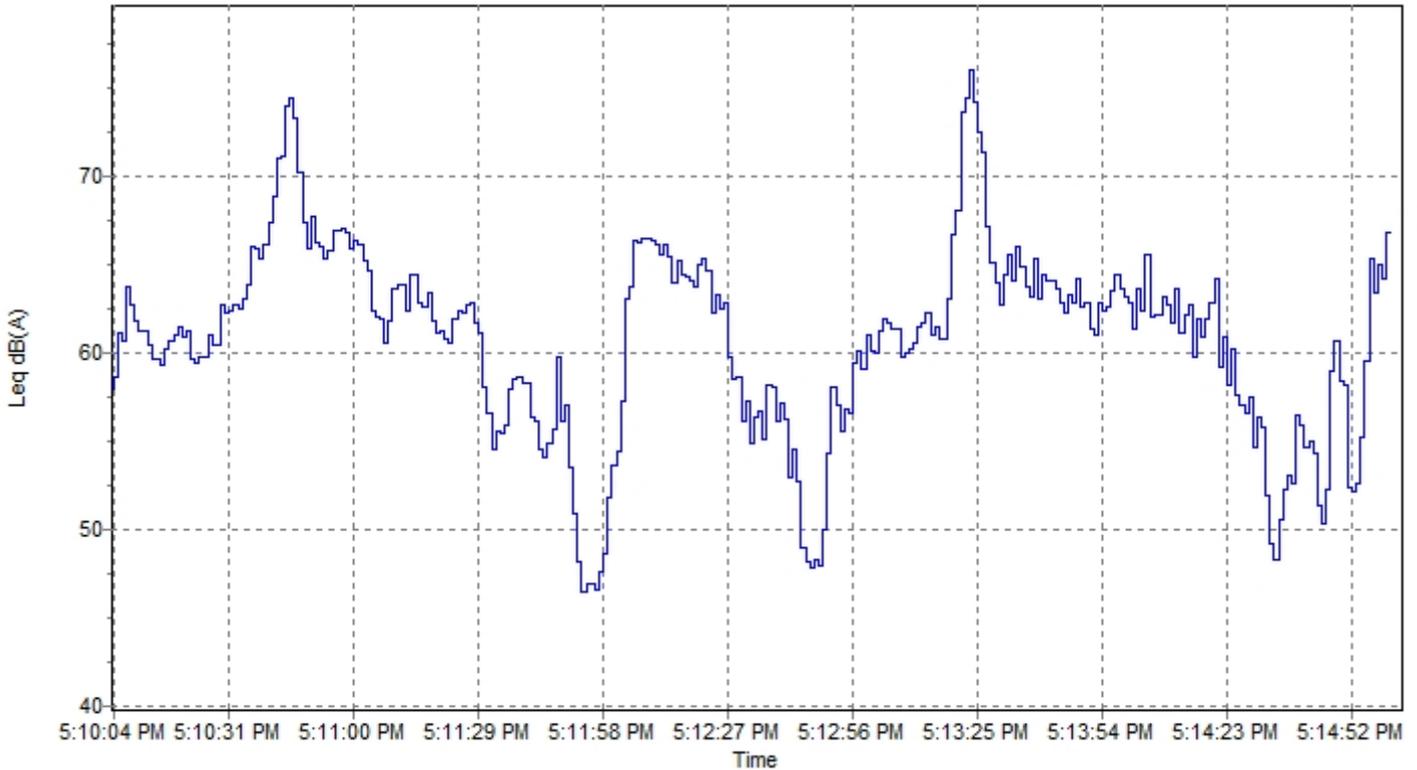
Location: Gabriel Terrace PM Peak

Notes

- 30 meters from Western Avenue
-83 degrees fahrenheit , cloudy

Data

Leq	64.1 dBA	L1.0	73.7 dBA
Lepd	44.3 dBA	L5.0	67.4 dBA
LAE	88.6 dBA	L10.0	66.2 dBA
LAFmax	77.5 dBA	L50.0	61.3 dBA
Peak	99.8 dBC	L90.0	52.9 dBA
		Lmin	45.5 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 5:15 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:46
Range: 40-110 dB
Location: Gabriel Terrace PM Peak

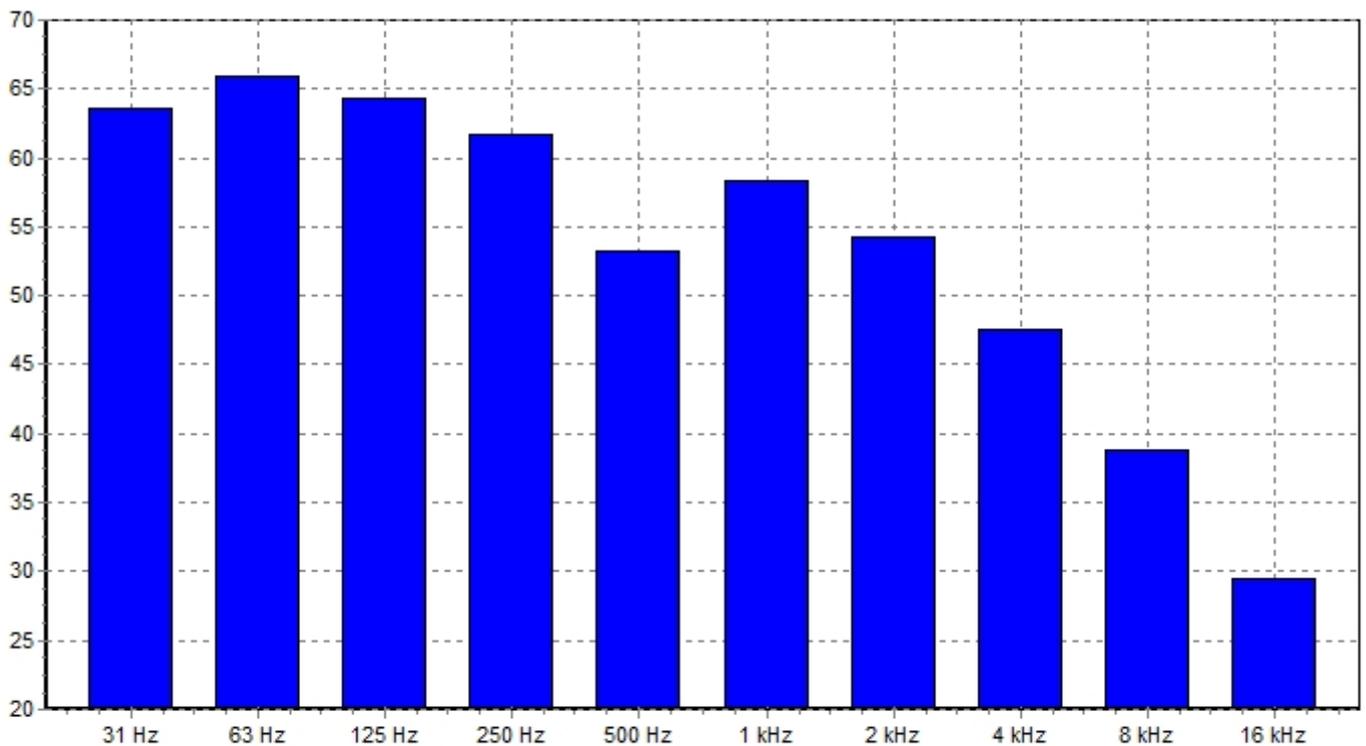
Notes:
- 30 meters from Western Avenue
-83 degrees fahrenheit , cloudy

Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	63.6 dB	45		1 kHz	58.4 dB	45	
63 Hz	66.0 dB	45		2 kHz	54.3 dB	45	
125 Hz	64.3 dB	45		4 kHz	47.5 dB	45	
250 Hz	61.8 dB	45		8 kHz	38.8 dB	45	
500 Hz	53.3 dB	46		16 kHz	29.5 dB	45	

Band	Leq,t	Time s	Overload
LAeq	61.3 dBA	45	
LCeq	74.5 dBC	45	
LZeq	75.3 dBZ	45	

NR value: 59
NC value: 60



Measurement Report

Measurement Details

Date and Time: 8/12/2019 5:31 PM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:08:22

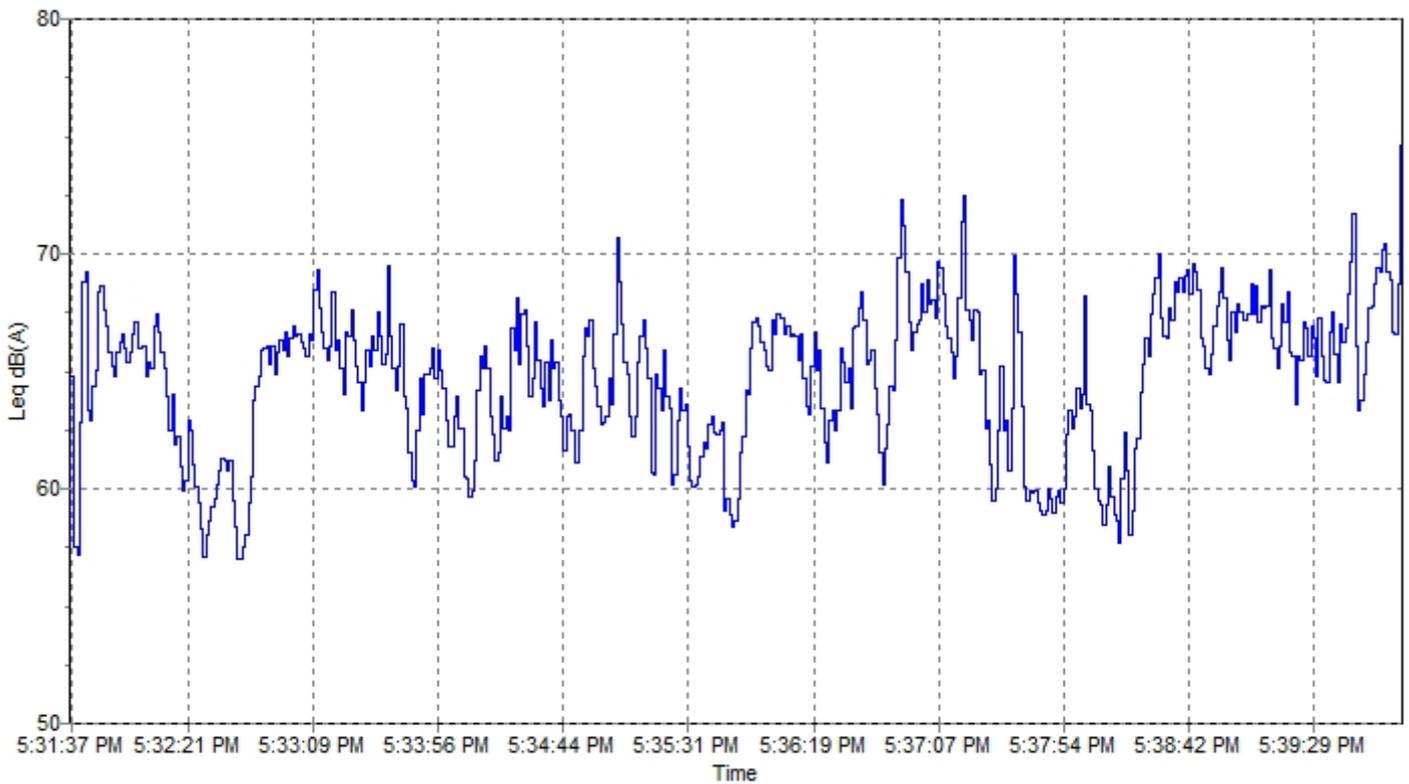
Range: 40-110 dB

Overload: no

Location: McKnownville Church PM Peak

Data

Leq	65.8 dBA	L1.0	76.8 dBA
Lepd	48.2 dBA	L5.0	76.8 dBA
LAE	92.6 dBA	L10.0	76.8 dBA
LAFmax	76.8 dBA	L50.0	65.7 dBA
Peak	97.0 dBC	L90.0	58.0 dBA
		Lmin	53.4 dBA



Measurement Report

Measurement Details

Date and Time: 8/12/2019 5:41 PM
Sound Level Meter: Cirrus Research plc

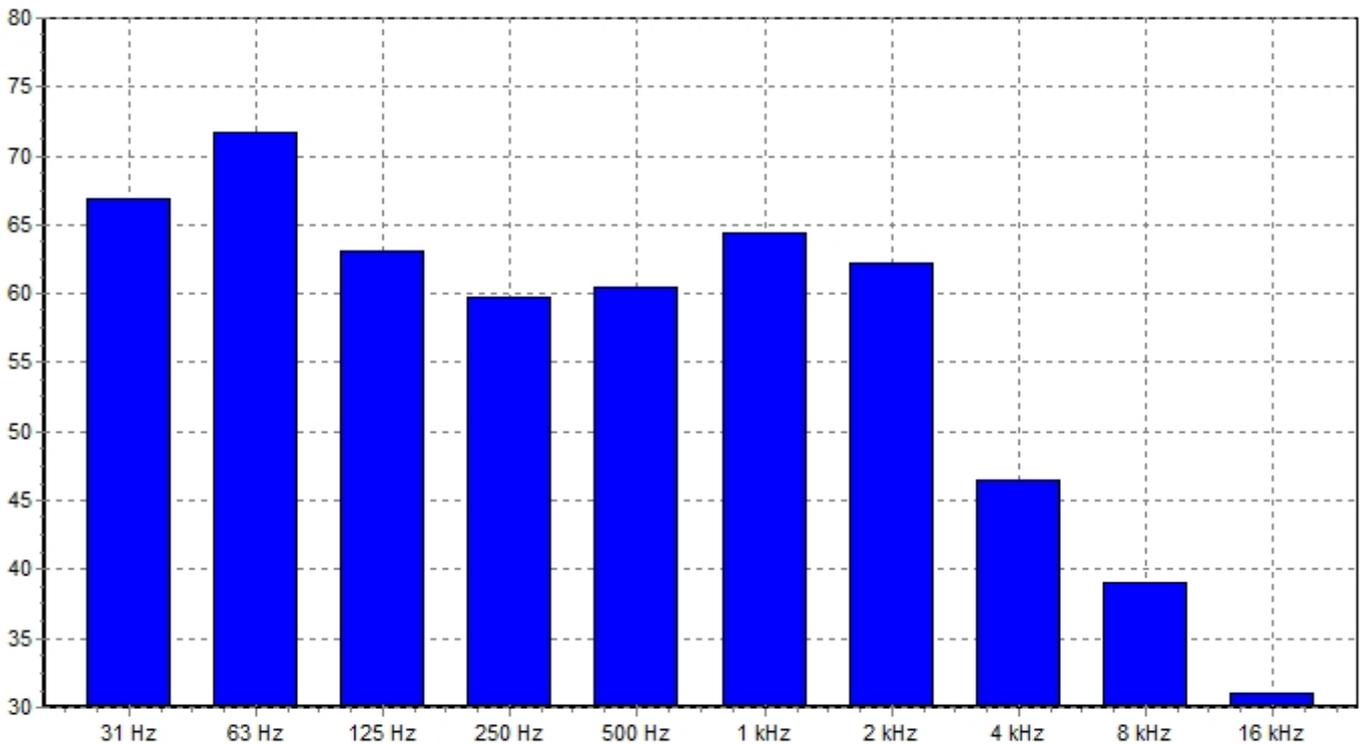
Run Duration: 00:09:47
Range: 40-110 dB
Location: McKnownville Church PM Peak

Notes:
- 13 meters from Western Avenue
-83 degrees fahrenheit , cloudy

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	66.8 dB	45		1 kHz	64.4 dB	46	
63 Hz	71.7 dB	45		2 kHz	62.3 dB	45	
125 Hz	63.0 dB	45		4 kHz	46.5 dB	45	
250 Hz	59.8 dB	46		8 kHz	39.0 dB	45	
500 Hz	60.5 dB	45		16 kHz	31.0 dB	45	

Band	Leq,t	Time s	Overload
LAeq	68.6 dBA	45	
LCeq	78.4 dBC	45	
LZeq	77.2 dBZ	45	

NR value: 66
NC value: 65



Measurement Report

Measurement Details

Date and Time: 8/13/2019 7:10 AM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:39

Range: 40-110 dB

Overload: no

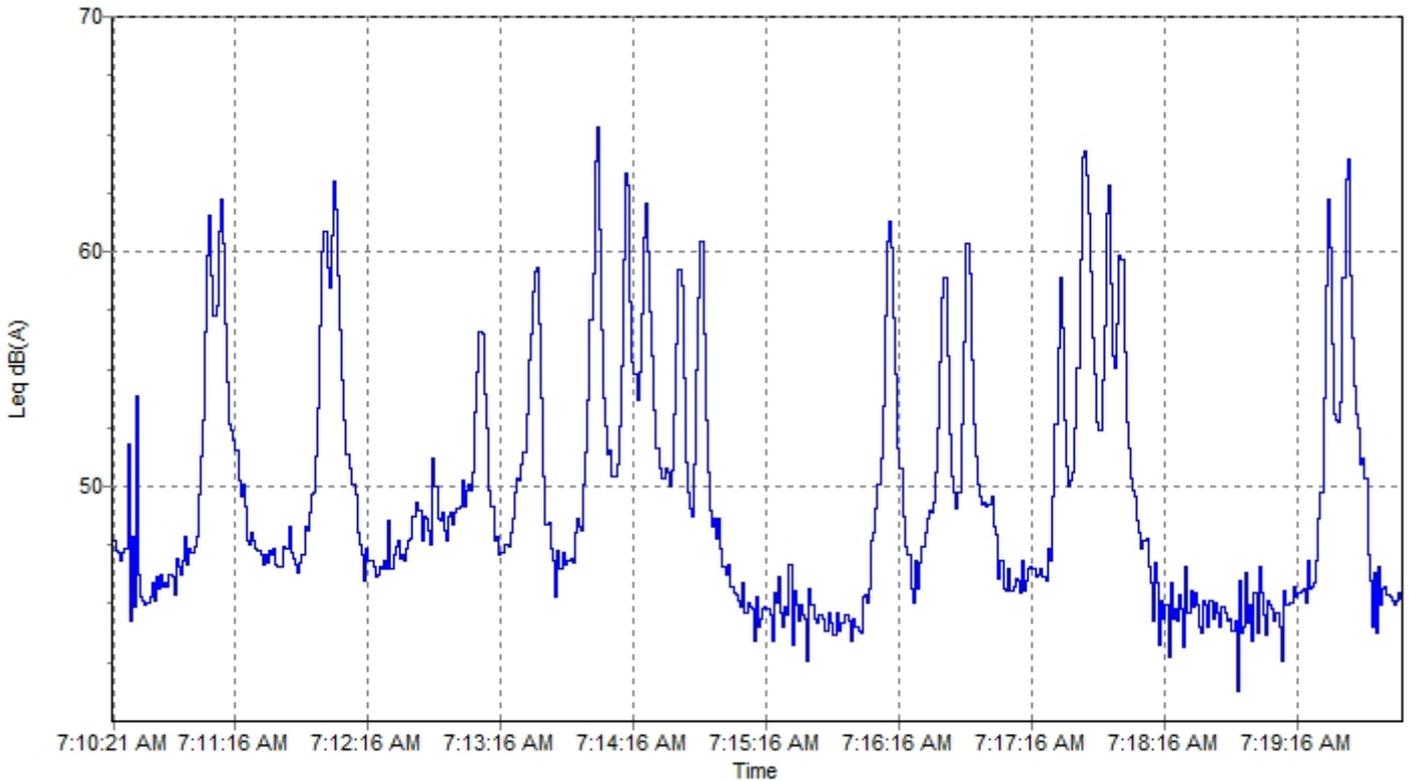
Location: Rapp Road AM Peak

Notes

-10 meters away from white line on shoulder
- 68 degrees Fahrenheit, 2mph winds, 86% humidity

Data

Leq	53.4 dBA	L1.0	63.3 dBA
Lepd	36.5 dBA	L5.0	60.2 dBA
LAE	80.8 dBA	L10.0	57.7 dBA
LAFmax	66.0 dBA	L50.0	47.4 dBA
Peak	91.0 dBC	L90.0	44.3 dBA
		Lmin	42.8 dBA



Measurement Report

Measurement Details

Date and Time: 8/13/2019 7:20 AM
 Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:47
 Range: 40-110 dB
 Location: Rapp Road AM Peak

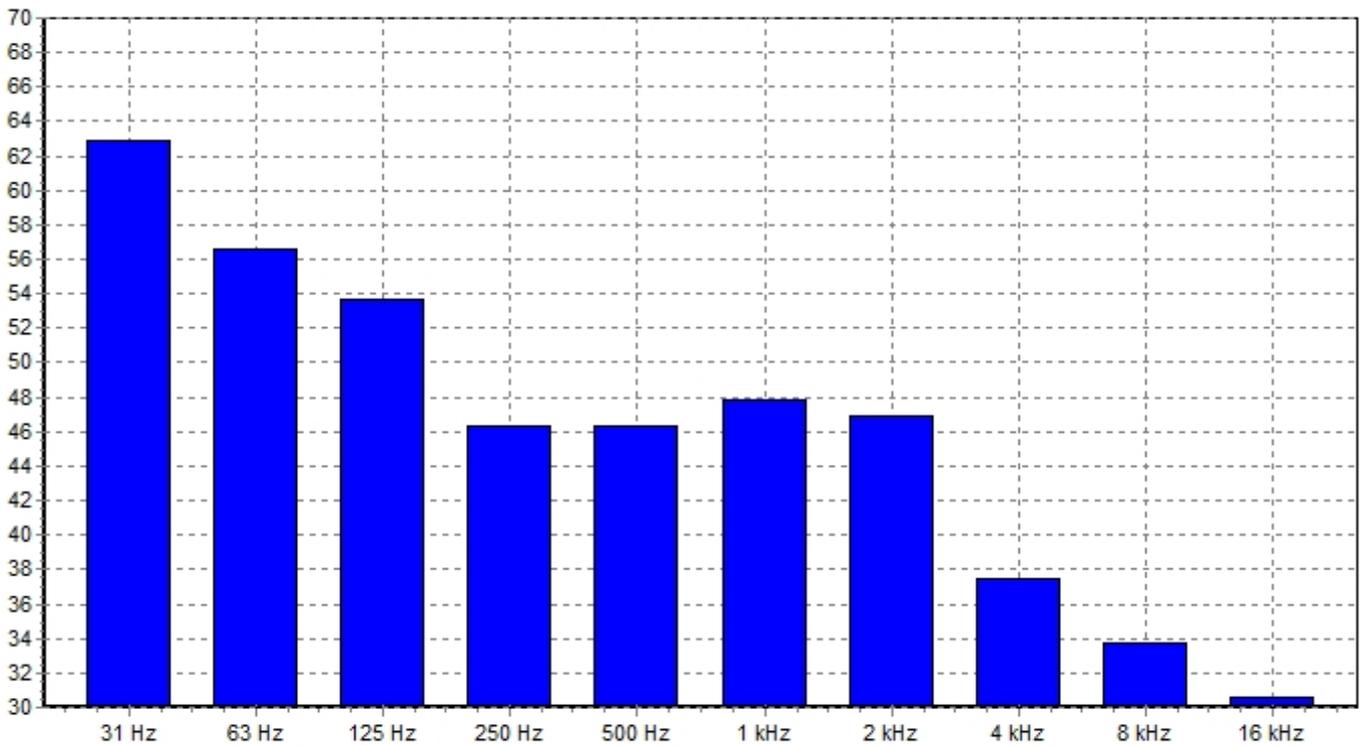
Notes:
 -10 meters away from white shoulder line
 - 68 degrees Fahrenheit, 2mph winds, 86% humidity

Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	62.9 dB	45		1 kHz	47.8 dB	45	
63 Hz	56.6 dB	45		2 kHz	46.9 dB	45	
125 Hz	53.7 dB	45		4 kHz	37.4 dB	45	
250 Hz	46.4 dB	45		8 kHz	33.8 dB	45	
500 Hz	46.3 dB	45		16 kHz	30.5 dB	45	

Band	Leq,t	Time s	Overload
LAeq	55.6 dBA	45	
LCeq	72.5 dBC	45	
LZeq	74.0 dBZ	47	

NR value: 50
 NC value: 50



Measurement Report

Measurement Details

Date and Time: 8/13/2019 7:41 AM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:08:19

Range: 40-110 dB

Overload: no

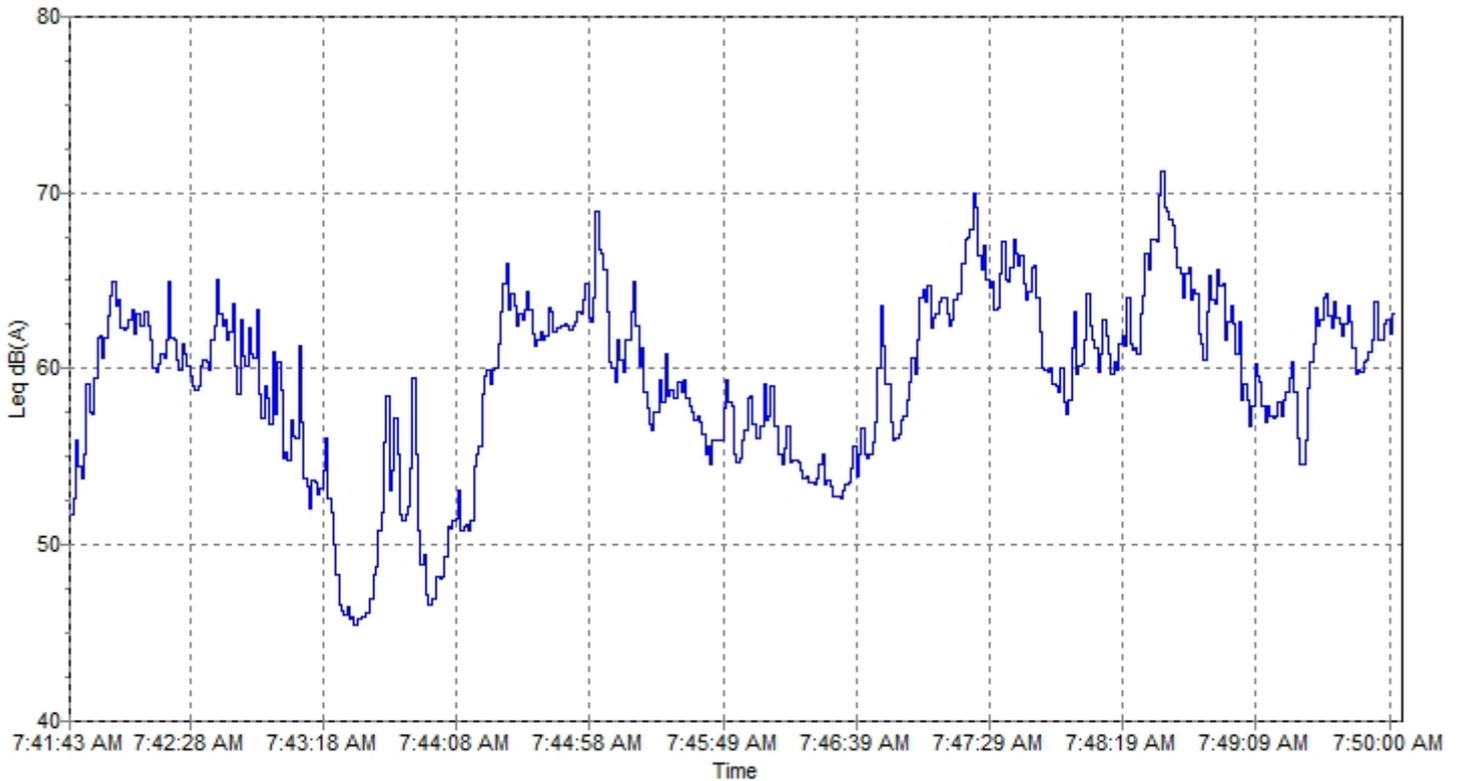
Location: Lawton Terrace AM Peak

Notes

-30 meters away from Western Ave
- 68 degrees Fahrenheit, 2mph winds, 86% humidity

Data

Leq	61.7 dBA	L1.0	68.8 dBA
Lepd	44.1 dBA	L5.0	66.3 dBA
LAE	88.5 dBA	L10.0	64.8 dBA
LAFmax	72.1 dBA	L50.0	59.9 dBA
Peak	95.5 dBC	L90.0	52.3 dBA
		Lmin	44.9 dBA



Measurement Report

Measurement Details

Date and Time: 8/13/2019 7:50 AM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:05:02 hh:mm:ss

Range: 40-110 dB

Overload: no

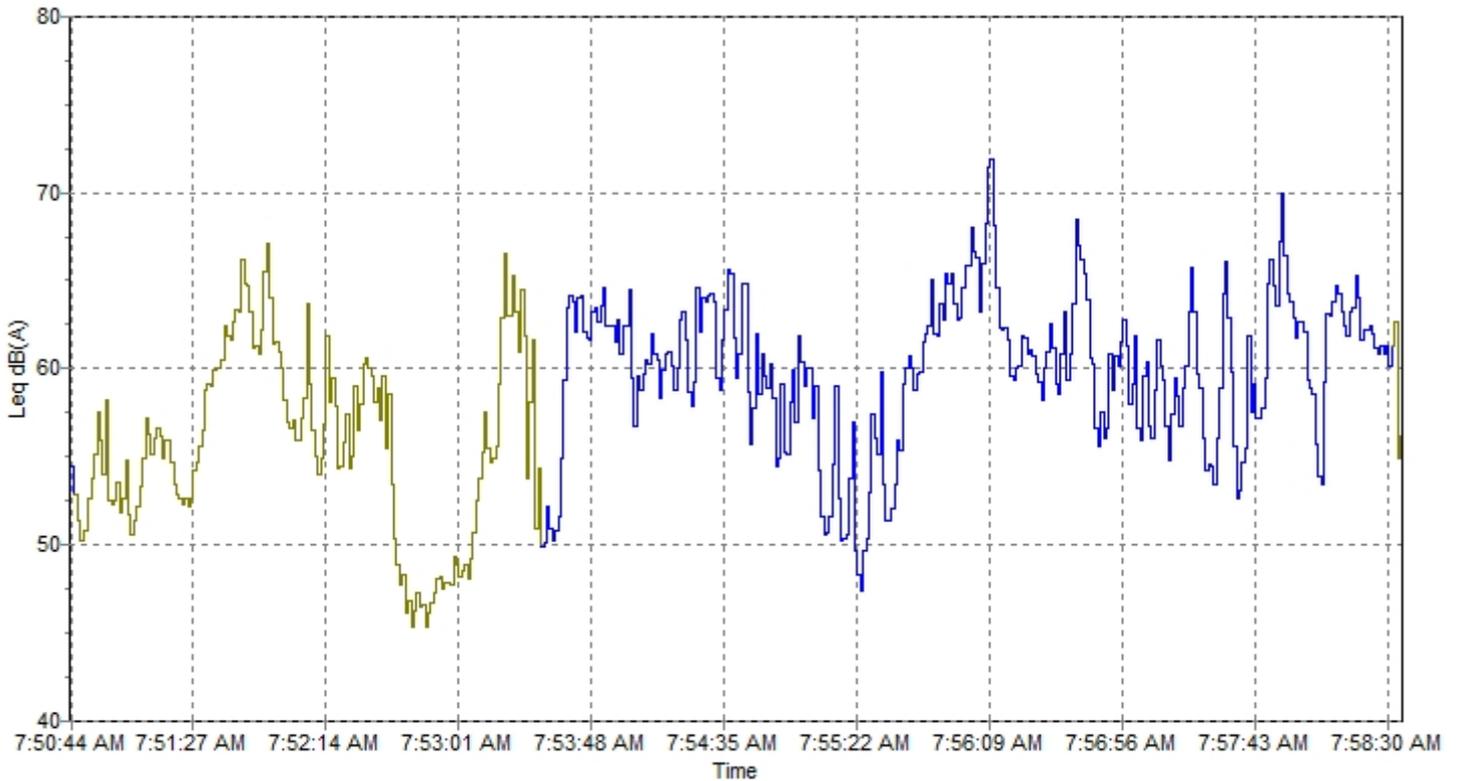
Location: Lawton Terrace AM Peak

Notes

-30 meters away from Western Ave
- 68 degrees Fahrenheit, 2mph winds, 86% humidity

Data

Leq	61.9 dBA	L1.0	69.1 dBA
Lepd	42.1 dBA	L5.0	66.1 dBA
LAE	86.5 dBA	L10.0	64.7 dBA
LAFmax	72.8 dBA	L50.0	60.4 dBA
Peak	99.5 dBC	L90.0	53.3 dBA
		Lmin	46.9 dBA



Measurement Report

Measurement Details

Date and Time: 8/13/2019 7:59 AM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:46
Range: 40-110 dB
Location: Lawton Terrace AM Peak

Notes:
-30 meters away from Western Ave
- 68 degrees Fahrenheit, 2mph winds, 86% humidity
- 8:06 AM plane overhead

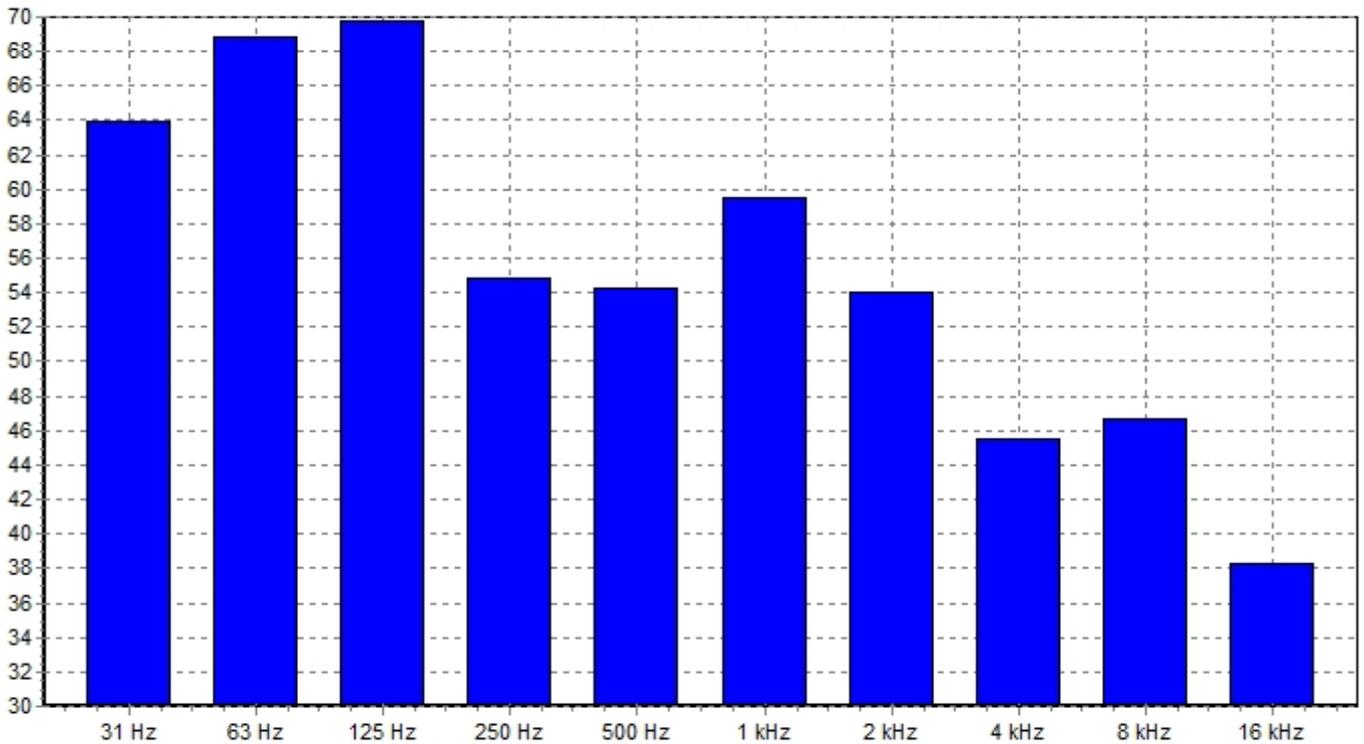
Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	64.0 dB	45		1 kHz	59.5 dB	45	
63 Hz	68.8 dB	45		2 kHz	54.0 dB	45	
125 Hz	69.7 dB	46		4 kHz	45.5 dB	45	
250 Hz	54.8 dB	45		8 kHz	46.6 dB	45	
500 Hz	54.3 dB	45		16 kHz	38.3 dB	45	

Band	Leq,t	Time s	Overload
LAeq	57.3 dBA	45	
LCeq	74.5 dBC	45	
LZeq	74.5 dBZ	45	

NR value: 60

NC value: 60



Measurement Report

Measurement Details

Date and Time: 8/13/2019 8:15 AM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:05:00

Range: 40-110 dB

Overload: no

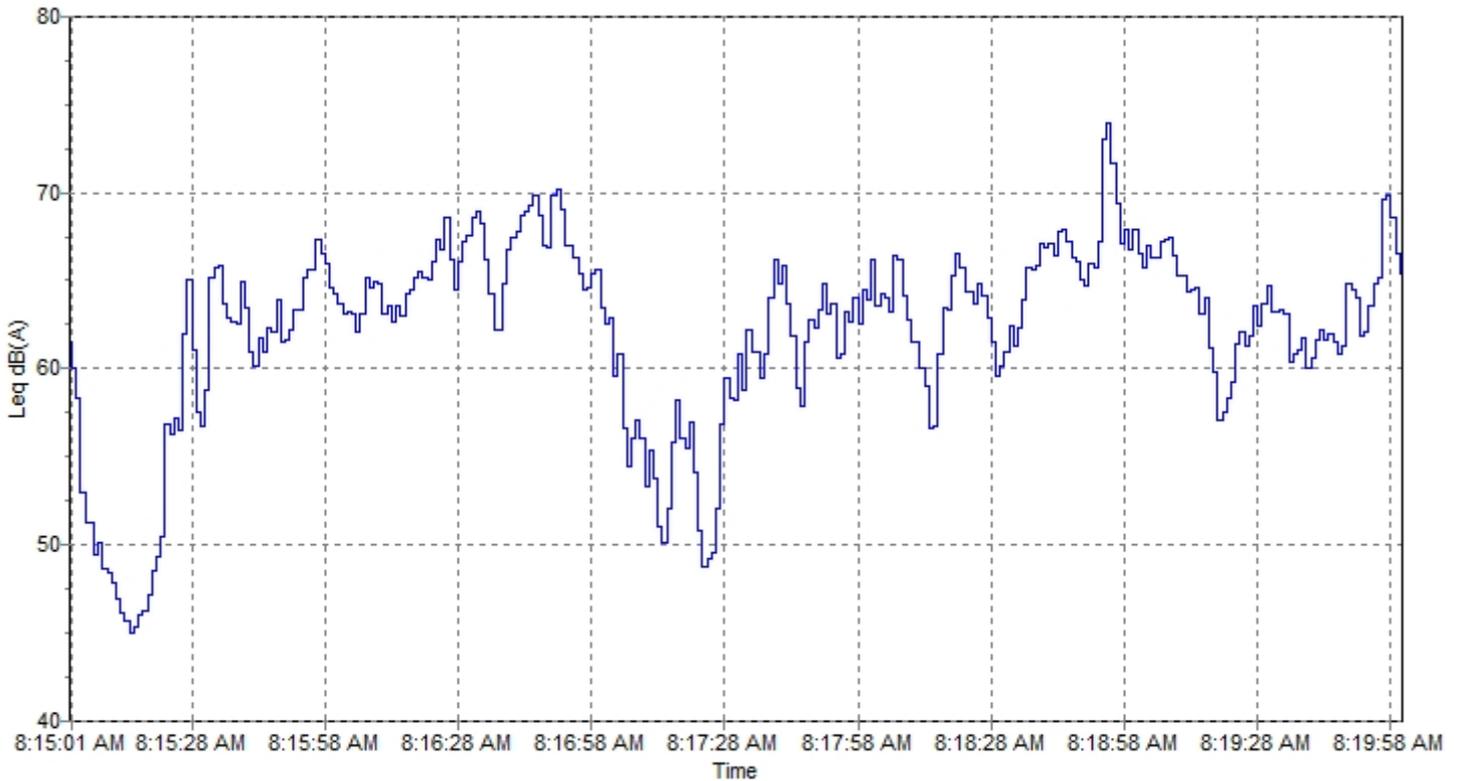
Location: Gabriel Terrace AM Peak

Notes

-30 meters away from Western Ave
- 68 degrees Fahrenheit, 2mph winds, 86% humidity

Data

Leq	64.5 dBA	L1.0	75.4 dBA
Lepd	44.7 dBA	L5.0	75.4 dBA
LAE	89.0 dBA	L10.0	75.4 dBA
LAFmax	75.4 dBA	L50.0	63.2 dBA
Peak	91.8 dBC	L90.0	49.8 dBA
		Lmin	44.2 dBA



Measurement Report

Measurement Details

Date and Time: 8/13/2019 8:20 AM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:04:58

Range: 40-110 dB

Overload: no

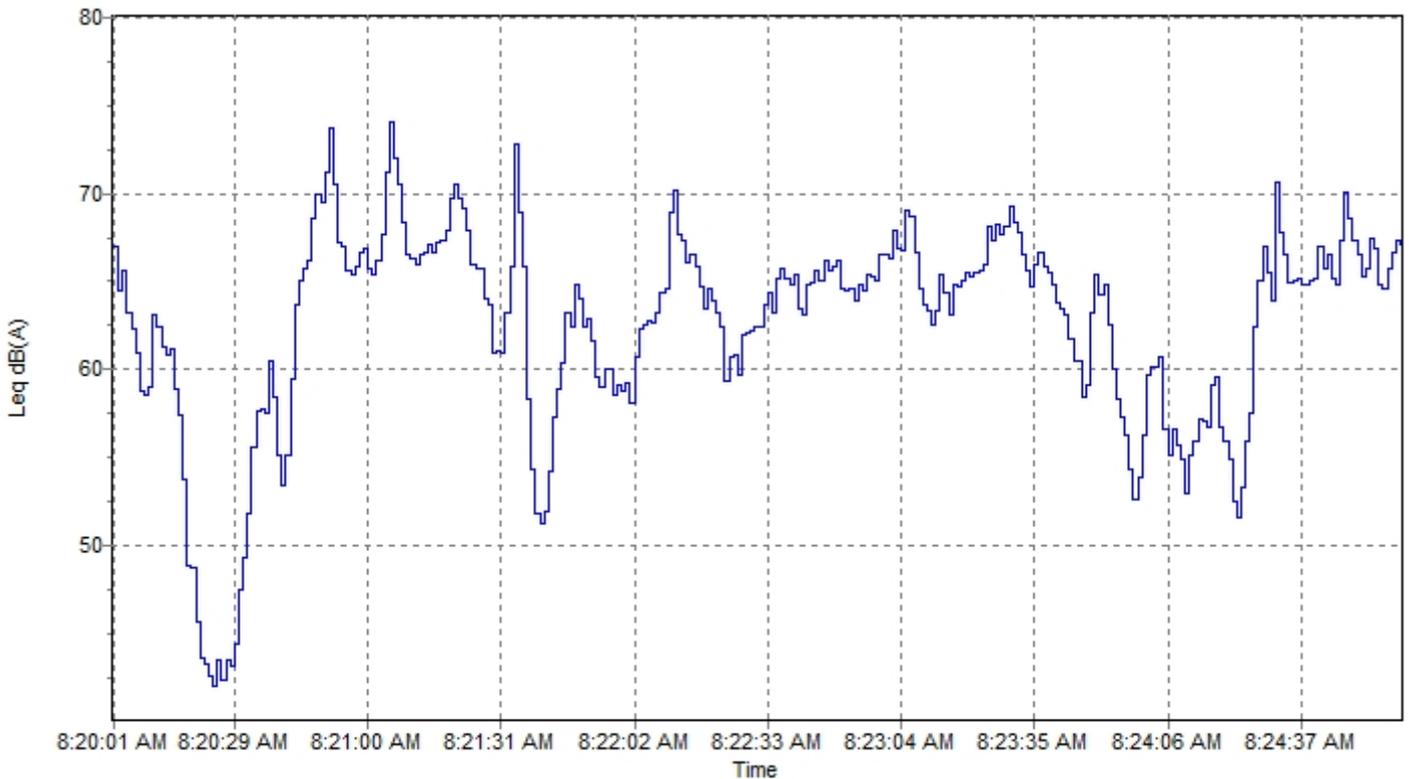
Location: Gabriel Terrace AM Peak

Notes:

-30 meters away from Western Ave
- 68 degrees Fahrenheit, 2mph winds, 86% humidity

Data

Leq	65.2 dBA	L1.0	68.1 dBA
Lepd	45.3 dBA	L5.0	67.4 dBA
LAE	89.7 dBA	L10.0	66.8 dBA
LAFmax	76.4 dBA	L50.0	63.1 dBA
Peak	92.0 dBC	L90.0	43.7 dBA
		Lmin	41.2 dBA



Measurement Report

Measurement Details

Date and Time: 8/13/2019 8:26 AM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:45
Range: 40-110 dB
Location: Gabriel Terrace AM Peak

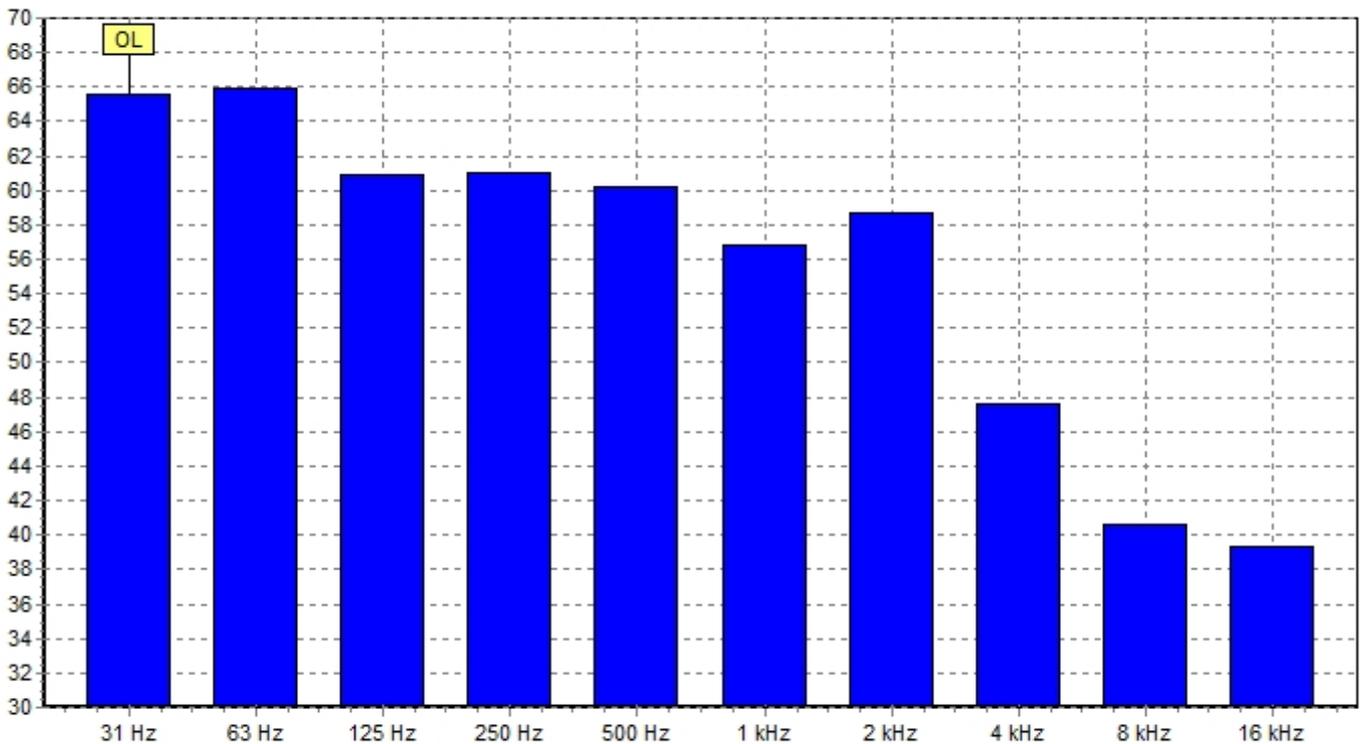
Notes:
-30 meters away from Western Ave
- 68 degrees Fahrenheit, 2mph winds, 86% humidity

Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	65.6 dB	45	yes	1 kHz	56.8 dB	45	
63 Hz	65.9 dB	45		2 kHz	58.7 dB	45	
125 Hz	60.9 dB	45		4 kHz	47.6 dB	45	
250 Hz	61.1 dB	45		8 kHz	40.6 dB	45	
500 Hz	60.2 dB	45		16 kHz	39.3 dB	45	

Band	Leq,t	Time s	Overload
LAeq	62.7 dBA	45	
LCeq	73.2 dBC	45	
LZeq	76.0 dBZ	45	

NR value: 62
NC value: 60



Measurement Report

Measurement Details

Date and Time: 8/13/2019 8:40 AM
Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:55

Range: 40-110 dB

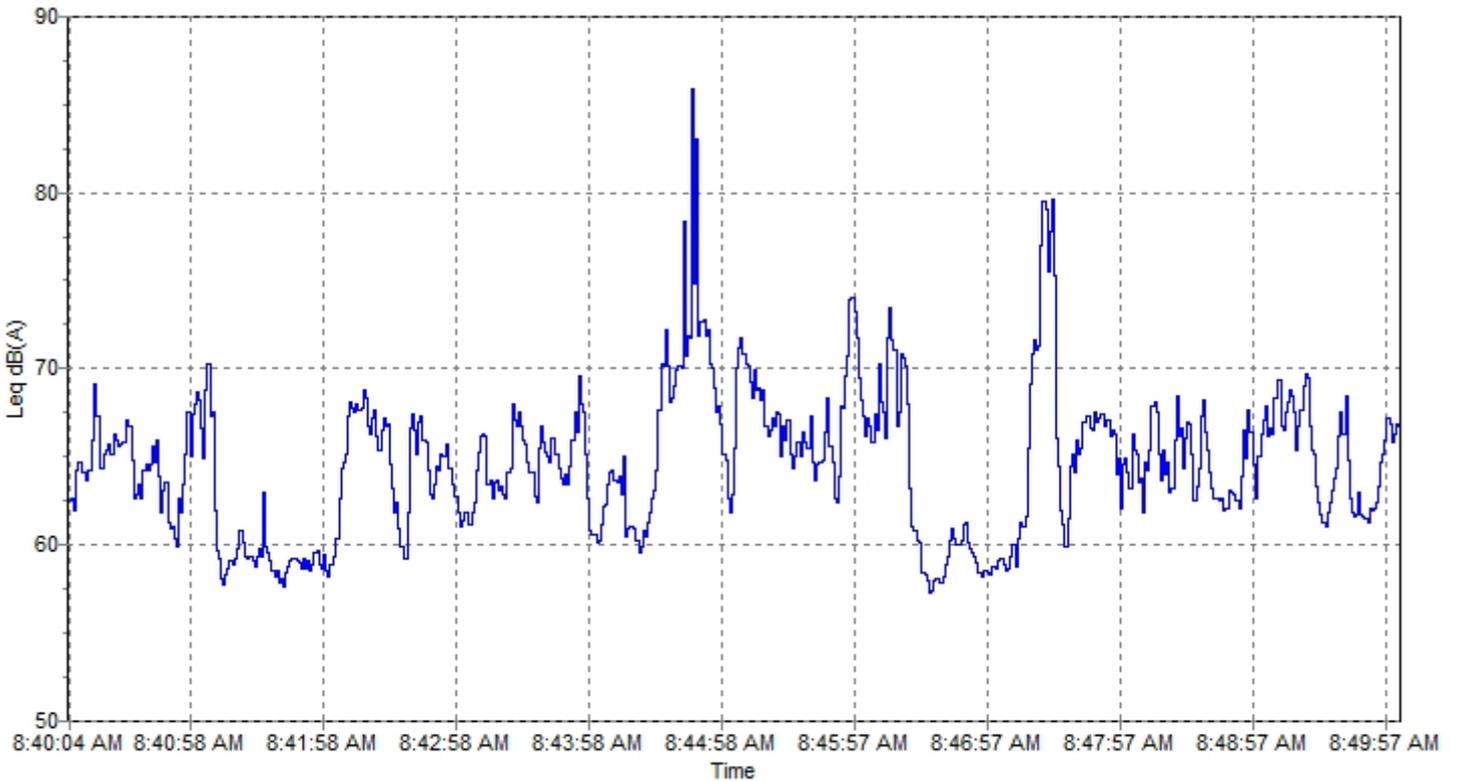
Overload: no

Location: McKnownville Church AM Peak

Notes:
-13 meters away from Western Ave
- Cloudy, partially sunny, 72 degrees fahrenheit , 1mph winds, high humidity

Data

Leq	67.6 dBA	L1.0	89.9 dBA
Lepd	50.8 dBA	L5.0	89.9 dBA
LAE	95.2 dBA	L10.0	89.9 dBA
LAFmax	89.9 dBA	L50.0	65.5 dBA
Peak	102.1 dBC	L90.0	59.0 dBA
		Lmin	56.6 dBA



Measurement Report

Measurement Details

Date and Time: 8/13/2019 8:56 AM
 Sound Level Meter: Cirrus Research plc

Run Duration: 00:09:45
 Range: 40-110 dB
 Location: McKnownville Church AM Peak

Notes:
 -13 meters away from Western Ave
 - Cloudy, partially sunny, 72 degrees fahrenheit , 1mph winds, high humidity

Data

Band	LZeq,t	Time s	Overload	Band	LZeq,t	Time s	Overload
31 Hz	67.8 dB	45		1 kHz	57.7 dB	45	
63 Hz	68.0 dB	45		2 kHz	59.1 dB	45	
125 Hz	59.6 dB	45		4 kHz	50.2 dB	45	
250 Hz	63.4 dB	45		8 kHz	43.5 dB	45	
500 Hz	61.2 dB	45		16 kHz	34.6 dB	45	

Band	Leq,t	Time s	Overload
LAeq	62.4 dBA	45	
LCeq	73.9 dBC	45	
LZeq	77.2 dBZ	45	

NR value: 63
 NC value: 65

