



**DATE:** April 19, 2017

**TO:** Gregory Lindstadt, PE – CDM Smith, Inc.

**FROM:** Justin Morgan, INCE – The Greenbusch Group, Inc.  
Drew Savas – The Greenbusch Group, Inc.

**RE:** North Transfer Station –2017 Q1 Noise Monitoring Report

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## INTRODUCTION

The intent of this memorandum is to present the results of sound level measurements conducted on March 21, 2017 to document sound levels from operations at North Transfer Station to determine compliance with applicable regulatory criteria.

## NOMENCLATURE

The auditory response to sound is a complex process that occurs over a wide range of frequencies and intensities. Decibel levels, or “dB,” are a form of shorthand that compresses this broad range of intensities with a convenient numerical scale. The decibel scale is logarithmic. For example, using the decibel scale, a doubling or halving of energy causes the sound level to change by 3 dB; it does not double or halve the sound loudness as might be expected.

The minimum sound level variation perceptible to a human observer is generally around 3 dB. A 5-dB change is clearly perceptible, and an 8 to 10 dB change is associated with a perceived doubling or halving of loudness. The human ear has a unique response to sound pressure. It is less sensitive to those sounds falling outside the speech frequency range. Sound level meters and monitors utilize a filtering system to approximate human perception of sound. Measurements made utilizing this filtering system are referred to as “A weighted” and are called “dBA”.

Common sound pressure levels are presented in Table 1.

**Table 1.** A-weighted Levels of Common Sounds

Sound	Sound Level (dBA)	Approximate Relative Loudness <sup>1</sup>
Jet Plane @ 100 feet	130	128
Rock Music with Amplifier	120	64
Thunder, Danger of Permanent Hearing Loss	110	32
Power Mower	100	16
Food Blender at 3 feet	90	8
Busy Street	80	4
Interior of Department Store	70	2
Ordinary Conversation at 3 feet	60	1
Quiet Car at Low Speed	50	1/2
Average Office	40	1/4
City Residence, Interior	30	1/8
Quiet Country Residence, Interior	20	1/16
Rustle of Leaves	10	1/32
Threshold of Hearing	0	1/64

1. As compared to ordinary conversation at 3 feet.

Source: US Department of Housing and Urban Development, *Aircraft Noise Impact Planning Guidelines for Local Agencies*, November 1972., California Department of Transportation

## Metrics

- Equivalent Sound Level,  $L_{eq}$**   
 $L_{eq}$  is the A-weighted level of a constant sound having the same energy content as the actual time-varying level during a specified interval. The  $L_{eq}$  is used to characterize complex, fluctuating sound levels with a single number. Typical intervals for  $L_{eq}$  are hourly, daily and annually.
- Maximum Sound Level,  $L_{max}$**   
 $L_{max}$  is the maximum recorded root mean square (rms) A-weighted sound level for a given time interval or event.  $L_{max}$  “fast” is defined as a 125-millisecond time-weighted maximum, while  $L_{max}$  “slow” corresponds to a 1-second time-weighted maximum. All values in this report are “fast” time-weight, which corresponds closest to the typical response time of the human ear.
- Sound Pressure Level, SPL**  
Sound pressure level correlates with what is heard by the human ear. SPL is defined as the squared ratio of the sound pressure with reference to 20  $\mu$ Pa. Sound pressure is affected by distance, path, barriers, directivity, etc.

## REGULATORY CRITERIA

The Seattle Municipal Code (SMC) Section 25.08 specifies permissible sound levels within the City of Seattle. SMC 25.08.410 defines allowable exterior sound level limits based on land use zoning, as listed in Table 2 below.

**Table 2.** Exterior Sound Level Limits,  $L_{eq}^1$  ( $L_{max}^2$ )

District of Sound Source	District of Receiving Property		
	Residential	Commercial	Industrial
Residential	55 (70)	57 (72)	60 (75)
Commercial	57 (72)	60 (75)	65 (80)
Industrial	60 (75)	65 (80)	70 (85)

1. Measurement time is 1-minute minimum for a constant sound source, 1-hour for a non-continuous sound source.

2. During measurement intervals,  $L_{max}$  may exceed  $L_{eq}$  limits by no more than 15 dBA.

Source: SMC 25.08.410 Exterior Sound Level Limits

Modifications to the exterior sound level limits set forth in Table 2 above are outlined in SMC 25.08.420. These modifications are for certain times of the day, classification of receiving properties, and the type of sound generated. These modifications to the exterior sound level limits include the following reductions:

- 10 dBA during the nighttime hours between the hours of 10:00 PM and 7:00 AM during weekdays and 10:00 PM and 9:00 AM on weekends and legal holidays when the receiving property is within a Residential district.
- 5 dBA for sources that carry a pure tone component.
- 5 dBA for impulsive sources not measured with an impulse sound level meter.

These modifications are cumulative and independent of one another. Therefore, the permissible nighttime exterior sound level in a Residential district for an impulsive, tonal source would be 20 dBA less than the exterior sound levels described in Table 2 above.

The area surrounding the Transfer Station is a mix of Residential (SF 5000) to the North and East, Commercial (C2) to the North, East and Southwest, and Industrial Commercial (IC-45) to the West and South. The Site is zoned Industrial Buffer, Industrial Commercial as well as Commercial, however the community agreement requires that for the evaluation of compliance with Noise Code, the entire site is considered a Commercial zone. The permissible daytime sound level limits for the Transfer Station at receiving property lines are summarized in Table 3 below.

**Table 3.** Transfer Station Sound Level Limits,  $L_{eq}$  ( $L_{max}$ )

Time Period	Residential	Commercial	Industrial
Daytime	57 (72)	60 (75)	65 (80)
Nighttime	47 (62)	60 (75)	65 (80)

## SOUND LEVEL MEASUREMENTS

Staffed sound level monitoring occurred on March 21, 2017. The monitoring period was selected to capture typical operations at the Transfer Station, including residential and commercial haul vehicle activities. Sound levels were measured concurrently at two residential properties north and east of the Transfer Station. During these measurements, monitoring staff were also stationed on the Transfer Station property to document specific on-site noise events for correlation to property line data. In addition to staffed measurements, data was also collected by the long term noise monitoring terminal located north of the Transfer Station. Measurements of operation noise were conducted in general accordance with the most recent version of ASTM E1503.

### Measurement Equipment

Sound level measurements were conducted using ANSI Type 1 instrumentation that was calibrated by a certified laboratory within one year of the measurement date. The Table below details the equipment utilized during the measurements.

**Table 4.** Measurement Equipment

Make and Model	Description	Serial
<i>Staffed Measurement Equipment</i>		
Brüel & Kjær Type 2270	Sound level analyzer	2679351
Brüel & Kjær ZC0032	Preamplifier	12296
Brüel & Kjær 4189	Microphone	2695414
Brüel & Kjær Type 4231	Acoustic calibrator	3001160
SvanteK 971	Sound level analyzer	51818
SvanteK SV18	Preamplifier	49561
Aco Pacific 7052E	Microphone	62522
Larson Davis CAL200	Acoustic calibrator	9512
<i>Long Term Monitoring Equipment</i>		
SvanteK SV200	Sound level analyzer	39777
MK250	Microphone	10978

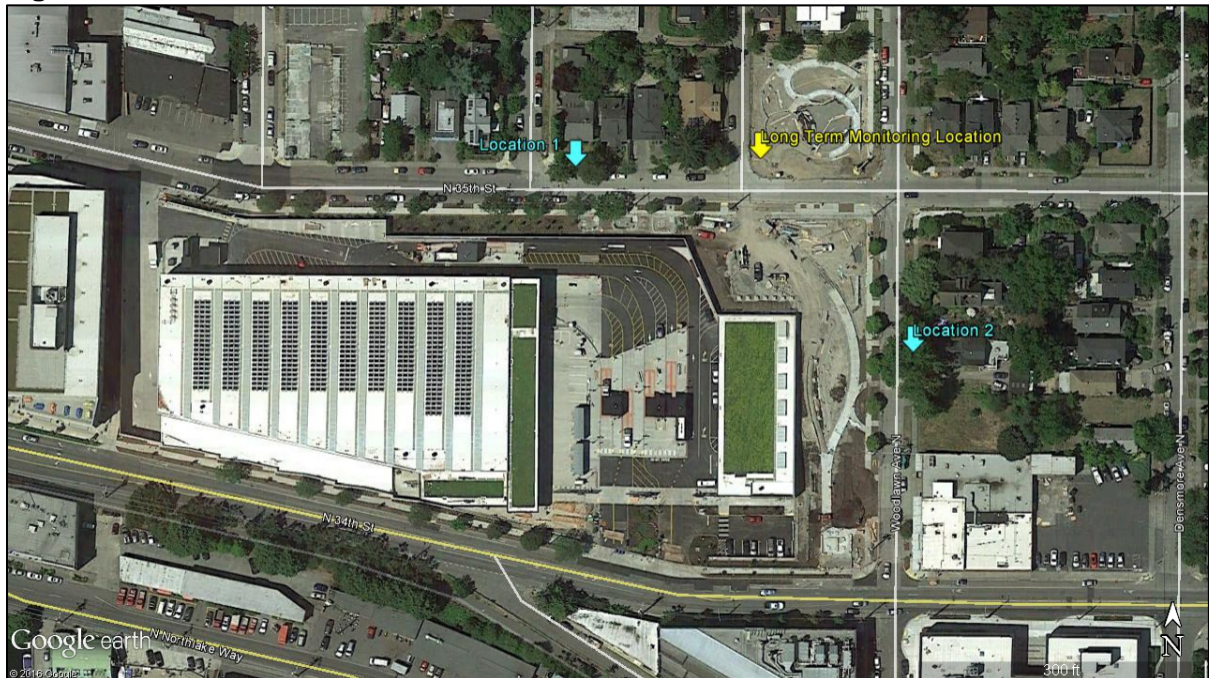
Field calibrations of staffed monitoring equipment were performed immediately before the measurements and verified immediately after the measurements were completed. Continuous audio recordings were made at staffed monitoring locations to allow for sound source identification after the measurements were completed. One-second sound levels and hourly sound levels were collected during the monitoring.

## Measurement Locations

Sound levels were measured at three residential properties near the Transfer Station. Continuous staffed monitoring took place between 9:00 AM and 1:00 PM on March 21, 2017. Microphones were positioned as close to the residential property lines as feasible and were approximately 6 feet above grade at Locations 1 and 2. The microphone at the long term monitoring location is positioned approximately 11-feet above grade. A figure showing the measurement locations as well as the address closest to the monitoring locations are provided below.

- Location 1: 1502 North 35<sup>th</sup> Street
- Location 2: 3420 Woodlawn Avenue North
- Long Term Noise Monitoring Terminal: 1514 North 35<sup>th</sup> Street

**Figure 1. Measurement Locations**



## RESULTS

After the measurements were completed the data was post processed to identify noise events associated with on-site Transfer Station operations. Due to the large number of off-site sound sources at the measurement locations, average sound levels ( $L_{eq}$ ) from the Transfer Station were not able to be determined. Off-site sound sources included pedestrian and vehicle traffic, construction, aircraft, wildlife and off-site maintenance crews. Lists of all off-site sound levels above the SMC  $L_{max}$  limit of 72 dBA and associated noise sources during the measurement period is provided in the Appendix.

Since average sound levels ( $L_{eq}$ ) from the Transfer Station were so far below ambient conditions, this analysis is restricted to hourly maximum sound levels ( $L_{max}$ ). Sound levels from the two staffed monitoring locations were also compared to sound levels measured at the long term monitoring location to verify consistency in measurement data.

$L_{max}$  sound levels from the Transfer Station were below the SMC  $L_{max}$  limit of 72 dBA at all measurement locations. The most frequent audible sound source from the Transfer Station was a tonal backup alarm used by the on-site loader within the station structure. While this backup alarms was noticeably louder when the commercial and residential haul roll-up doors were open, sound levels at the monitoring locations when doors were closed were below ambient conditions so actual levels could not be quantified. This alarm was within SMC sound level limits. Representative  $L_{max}$  sound levels from the Transfer Station are presented in Table 5. Similar sound levels were measured at all monitoring locations. Therefore, data collected at the long term monitoring location appears to be representative of sound levels at nearby properties.

**Table 5. Sound Levels from Transfer Station ( $L_{max}$ ), dBA**

Sound Source	SMC $L_{max}$ Sound Limit	Sound Level at Receiving Property		
		Location 1	Location 2	Long Term Monitor
Backup Alarm	72 daytime 62 nighttime	56	57	57
Moving Trash <sup>1</sup>		58	59	59
Loader		56	56	N/A <sup>2</sup>

1. Either commercial haul vehicles dumping trash or loader pushing trash

2. Noise from loader was unable to be identified due to contributions from off-site sound sources

While the Station is only open for one nighttime hour per week on Saturday morning (8 AM to 9 AM), sample of nighttime data collected by the long term noise monitoring terminal was also reviewed as a part of this quarterly monitoring effort. Hourly sound levels during nighttime hours when the station was not operating typically exceed the SMC hourly  $L_{eq}$  nighttime sound level limit of 47 dBA. Review of audio recordings indicates that buses and vehicle traffic are the dominant sound sources during nighttime hours. In addition to reviewing audio recordings, the bus schedules for King County Metro routes 31 and 32 were used to compare sound levels when buses are in service with times buses are not running (approximately 1:00 AM to 6:00 AM). The hours buses are not in service correspond with the lowest hourly  $L_{eq}$  sound levels measured during the day. It is likely that additional vehicle traffic is responsible for hourly  $L_{eq}$  exceedances during these hours and the Transfer Station does not significantly contribute to the overall hourly  $L_{eq}$  sound levels during the day or night. Sound levels of Station activities shown in Table 5 are below nighttime  $L_{max}$  sound level limits of 62 dBA.

**CONCLUSION**

Measurements at nearby residential receiving property lines indicate that sound emissions from the Transfer Station comply with Seattle Municipal Code sound level limits during daytime and nighttime periods.

Respectfully submitted;



Justin B. Morgan, INCE



Drew Savas

**APPENDIX**

**Table 6.** Location 1  $L_{max}$  Exceedances, dBA

Start Time	$L_{max}$	Source
8:51:06 AM	73	Car on public roadway
8:51:07 AM	80	Car on public roadway
8:51:08 AM	81	Car on public roadway
8:51:15 AM	73	Car on public roadway
8:51:16 AM	73	Car on public roadway
8:51:20 AM	75	Car on public roadway
8:51:21 AM	75	Car on public roadway
8:51:25 AM	73	Car on public roadway
8:51:26 AM	73	Car on public roadway
8:51:32 AM	76	Car on public roadway
8:51:33 AM	80	Car on public roadway
8:51:34 AM	76	Car on public roadway
8:51:45 AM	73	Car on public roadway
8:51:46 AM	82	Car on public roadway
8:51:47 AM	81	Car on public roadway
8:52:01 AM	75	Car on public roadway
8:52:02 AM	75	Car on public roadway
8:52:34 AM	78	Car on public roadway
8:52:35 AM	77	Car on public roadway
8:53:02 AM	73	Bus on public roadway
8:53:04 AM	80	Bus on public roadway
8:53:05 AM	84	Bus on public roadway
8:53:06 AM	84	Bus on public roadway
8:53:07 AM	79	Bus on public roadway
8:53:08 AM	72	Bus on public roadway
8:53:16 AM	73	Car on public roadway
8:53:19 AM	72	Car on public roadway
8:53:20 AM	75	Car on public roadway
8:53:21 AM	72	Car on public roadway
8:54:24 AM	76	Car on public roadway
8:54:25 AM	76	Car on public roadway
8:54:26 AM	74	Car on public roadway
8:54:27 AM	75	Car on public roadway
8:54:32 AM	75	Car on public roadway
8:54:33 AM	72	Car on public roadway
8:54:47 AM	72	Car on public roadway
8:54:48 AM	73	Bus on public roadway

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8:55:23 AM	73	Bus on public roadway
8:55:24 AM	80	Bus on public roadway
8:55:25 AM	81	Bus on public roadway
8:55:26 AM	76	Bus on public roadway
8:56:07 AM	75	Car on public roadway
8:56:08 AM	73	Car on public roadway
8:56:13 AM	75	Car on public roadway
8:56:14 AM	74	Car on public roadway
8:56:22 AM	77	Car on public roadway
8:56:23 AM	76	Car on public roadway
8:56:24 AM	75	Car on public roadway
8:56:27 AM	74	Car on public roadway
8:56:28 AM	75	Car on public roadway
8:56:30 AM	75	Car on public roadway
8:56:31 AM	75	Car on public roadway
8:56:33 AM	77	Car on public roadway
8:56:34 AM	77	Car on public roadway
8:56:57 AM	74	Car on public roadway
8:56:58 AM	73	Car on public roadway
8:56:59 AM	72	Car on public roadway
8:57:25 AM	74	Car on public roadway
8:57:26 AM	75	Car on public roadway
8:57:27 AM	72	Car on public roadway
8:57:56 AM	73	Car on public roadway
8:57:57 AM	73	Car on public roadway
8:58:12 AM	72	Car on public roadway
8:58:15 AM	73	Car on public roadway
8:58:16 AM	73	Car on public roadway
8:58:17 AM	73	Car on public roadway
8:58:36 AM	72	Car on public roadway
8:58:37 AM	74	Car on public roadway
8:58:38 AM	74	Car on public roadway
8:59:33 AM	73	Car on public roadway
8:59:34 AM	76	Car on public roadway
8:59:35 AM	73	Car on public roadway
8:59:45 AM	73	Car on public roadway
8:59:46 AM	74	Car on public roadway
9:01:08 AM	75	Car on public roadway
9:01:09 AM	75	Car on public roadway
9:01:14 AM	73	Car on public roadway



## North Transfer Station – First Quarter Noise Monitoring Report

9:01:17 AM	72	Car on public roadway
9:01:18 AM	74	Car on public roadway
9:01:21 AM	74	Car on public roadway
9:01:22 AM	73	Car on public roadway
9:01:27 AM	74	Car on public roadway
9:01:28 AM	75	Car on public roadway
9:01:55 AM	75	Car on public roadway
9:01:56 AM	75	Car on public roadway
9:02:16 AM	74	Car on public roadway
9:02:17 AM	79	Bus on public roadway
9:02:18 AM	80	Bus on public roadway
9:02:19 AM	76	Bus on public roadway
9:02:25 AM	77	Car on public roadway
9:02:26 AM	77	Car on public roadway
9:02:27 AM	73	Car on public roadway
9:02:54 AM	75	Car on public roadway
9:02:55 AM	80	Car on public roadway
9:02:56 AM	78	Car on public roadway
9:03:06 AM	74	Car on public roadway
9:03:07 AM	75	Car on public roadway
9:03:08 AM	72	Car on public roadway
9:03:09 AM	72	Car on public roadway
9:03:26 AM	73	Car on public roadway
9:03:37 AM	73	Car on public roadway
9:03:38 AM	78	Car on public roadway
9:03:39 AM	78	Car on public roadway
9:03:40 AM	73	Car on public roadway
9:03:54 AM	73	Car on public roadway
9:04:05 AM	76	Bus on public roadway
9:04:06 AM	84	Bus on public roadway
9:04:07 AM	85	Bus on public roadway
9:04:08 AM	79	Bus on public roadway
9:04:09 AM	76	Bus on public roadway
9:04:10 AM	75	Bus on public roadway
9:04:28 AM	75	Car on public roadway
9:04:29 AM	74	Car on public roadway
9:04:45 AM	76	Car on public roadway
9:04:46 AM	77	Car on public roadway
9:04:47 AM	76	Car on public roadway
9:04:57 AM	75	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

9:04:58 AM	75	Car on public roadway
9:05:15 AM	76	Bus on public roadway
9:05:16 AM	84	Bus on public roadway
9:05:17 AM	84	Bus on public roadway
9:05:18 AM	78	Bus on public roadway
9:06:18 AM	72	Car on public roadway
9:06:19 AM	73	Car on public roadway
9:06:20 AM	72	Car on public roadway
9:06:53 AM	76	Car on public roadway
9:06:54 AM	75	Car on public roadway
9:07:24 AM	73	Car on public roadway
9:07:27 AM	75	Car on public roadway
9:07:28 AM	75	Car on public roadway
9:07:29 AM	76	Car on public roadway
9:07:30 AM	76	Car on public roadway
9:07:40 AM	76	Bus on public roadway
9:07:41 AM	78	Bus on public roadway
9:08:18 AM	75	Car on public roadway
9:08:19 AM	74	Car on public roadway
9:08:21 AM	74	Car on public roadway
9:08:22 AM	75	Car on public roadway
9:09:21 AM	75	Bus on public roadway
9:09:22 AM	80	Bus on public roadway
9:09:23 AM	81	Bus on public roadway
9:09:24 AM	78	Bus on public roadway
9:09:25 AM	73	Bus on public roadway
9:09:53 AM	73	Car on public roadway
9:09:54 AM	72	Car on public roadway
9:10:09 AM	72	Car on public roadway
9:10:10 AM	73	Car on public roadway
9:10:21 AM	74	Car on public roadway
9:10:22 AM	78	Car on public roadway
9:10:23 AM	78	Car on public roadway
9:10:51 AM	72	Car on public roadway
9:10:52 AM	76	Car on public roadway
9:10:53 AM	75	Car on public roadway
9:10:54 AM	75	Car on public roadway
9:11:35 AM	78	Car on public roadway
9:11:36 AM	78	Car on public roadway
9:12:03 AM	74	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

9:12:04 AM	79	Car on public roadway
9:12:05 AM	79	Car on public roadway
9:12:06 AM	73	Car on public roadway
9:12:20 AM	73	Car on public roadway
9:12:21 AM	73	Car on public roadway
9:12:22 AM	73	Car on public roadway
9:13:13 AM	73	Car on public roadway
9:13:47 AM	73	Bus on public roadway
9:13:48 AM	82	Bus on public roadway
9:13:49 AM	82	Bus on public roadway
9:13:50 AM	73	Bus on public roadway
9:14:28 AM	73	Car on public roadway
9:14:29 AM	73	Car on public roadway
9:14:31 AM	72	Car on public roadway
9:14:32 AM	73	Car on public roadway
9:14:44 AM	74	Car on public roadway
9:14:45 AM	73	Car on public roadway
9:15:19 AM	74	Bus on public roadway
9:15:20 AM	80	Bus on public roadway
9:15:21 AM	79	Bus on public roadway
9:15:22 AM	74	Bus on public roadway
9:15:46 AM	76	Car on public roadway
9:15:47 AM	75	Car on public roadway
9:15:48 AM	75	Car on public roadway
9:15:49 AM	74	Car on public roadway
9:15:53 AM	76	Car on public roadway
9:15:54 AM	75	Car on public roadway
9:17:03 AM	77	Car on public roadway
9:17:04 AM	77	Car on public roadway
9:17:05 AM	72	Car on public roadway
9:17:06 AM	74	Car on public roadway
9:17:17 AM	73	Car on public roadway
9:17:18 AM	74	Car on public roadway
9:17:19 AM	74	Car on public roadway
9:17:20 AM	75	Car on public roadway
9:17:31 AM	73	Car on public roadway
9:17:32 AM	72	Car on public roadway
9:17:34 AM	72	Car on public roadway
9:17:35 AM	76	Car on public roadway
9:17:36 AM	82	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

9:17:37 AM	83	Car on public roadway
9:17:38 AM	80	Car on public roadway
9:17:39 AM	73	Car on public roadway
9:17:46 AM	72	Car on public roadway
9:17:47 AM	78	Car on public roadway
9:17:48 AM	75	Car on public roadway
9:18:29 AM	74	Car on public roadway
9:18:30 AM	74	Car on public roadway
9:18:46 AM	76	Car on public roadway
9:18:47 AM	75	Car on public roadway
9:19:09 AM	72	Car on public roadway
9:19:47 AM	72	Car on public roadway
9:19:52 AM	75	Car on public roadway
9:21:08 AM	77	Car on public roadway
9:21:09 AM	78	Car on public roadway
9:21:15 AM	77	Car on public roadway
9:21:16 AM	77	Car on public roadway
9:22:04 AM	73	Car on public roadway
9:22:05 AM	76	Car on public roadway
9:22:06 AM	75	Car on public roadway
9:22:07 AM	77	Car on public roadway
9:22:08 AM	76	Car on public roadway
9:22:09 AM	76	Car on public roadway
9:22:33 AM	75	Bus on public roadway
9:22:34 AM	82	Bus on public roadway
9:22:35 AM	82	Bus on public roadway
9:22:36 AM	77	Bus on public roadway
9:24:03 AM	73	Car on public roadway
9:24:04 AM	73	Car on public roadway
9:24:07 AM	76	Car on public roadway
9:24:08 AM	78	Car on public roadway
9:24:09 AM	75	Car on public roadway
9:24:19 AM	77	Car on public roadway
9:24:20 AM	77	Car on public roadway
9:25:07 AM	76	Car on public roadway
9:25:08 AM	78	Car on public roadway
9:25:09 AM	72	Car on public roadway
9:25:10 AM	76	Car on public roadway
9:25:11 AM	75	Car on public roadway
9:25:17 AM	74	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

9:25:30 AM	73	Car on public roadway
9:25:38 AM	73	Car on public roadway
9:25:39 AM	73	Car on public roadway
9:26:26 AM	74	Car on public roadway
9:26:27 AM	76	Car on public roadway
9:26:28 AM	72	Car on public roadway
9:26:40 AM	75	Car on public roadway
9:26:41 AM	75	Car on public roadway
9:27:52 AM	73	Car on public roadway
9:27:53 AM	75	Car on public roadway
9:27:54 AM	73	Car on public roadway
9:28:36 AM	73	Car on public roadway
9:28:37 AM	73	Car on public roadway
9:29:06 AM	72	Car on public roadway
9:29:51 AM	73	Car on public roadway
9:29:52 AM	75	Car on public roadway
9:30:20 AM	73	Car on public roadway
9:30:33 AM	76	Car on public roadway
9:30:34 AM	78	Car on public roadway
9:30:35 AM	75	Car on public roadway
9:31:14 AM	74	Car on public roadway
9:31:15 AM	74	Car on public roadway
9:31:49 AM	74	Car on public roadway
9:31:50 AM	73	Car on public roadway
9:32:24 AM	73	Car on public roadway
9:32:25 AM	78	Car on public roadway
9:32:26 AM	77	Car on public roadway
9:32:27 AM	72	Car on public roadway
9:32:50 AM	76	Bus on public roadway
9:32:51 AM	82	Bus on public roadway
9:32:52 AM	83	Bus on public roadway
9:32:53 AM	76	Bus on public roadway
9:33:02 AM	76	Car on public roadway
9:33:03 AM	76	Car on public roadway
9:33:07 AM	74	Car on public roadway
9:33:08 AM	75	Car on public roadway
9:33:17 AM	73	Car on public roadway
9:33:18 AM	77	Car on public roadway
9:33:19 AM	81	Car on public roadway
9:33:20 AM	81	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

9:33:21 AM	80	Car on public roadway
9:33:22 AM	78	Car on public roadway
9:34:31 AM	75	Car on public roadway
9:34:32 AM	75	Car on public roadway
9:36:04 AM	74	Bus on public roadway
9:36:05 AM	81	Bus on public roadway
9:36:06 AM	86	Bus on public roadway
9:36:07 AM	86	Bus on public roadway
9:36:08 AM	81	Bus on public roadway
9:36:09 AM	76	Bus on public roadway
9:36:10 AM	74	Bus on public roadway
9:37:25 AM	75	Car on public roadway
9:37:26 AM	78	Car on public roadway
9:37:27 AM	74	Car on public roadway
9:37:33 AM	74	Car on public roadway
9:37:34 AM	73	Car on public roadway
9:37:46 AM	78	Bus on public roadway
9:37:47 AM	87	Bus on public roadway
9:37:48 AM	89	Bus on public roadway
9:37:49 AM	83	Bus on public roadway
9:37:50 AM	75	Bus on public roadway
9:38:43 AM	72	Car on public roadway
9:39:06 AM	74	Car on public roadway
9:39:07 AM	75	Car on public roadway
9:39:30 AM	72	Car on public roadway
9:39:31 AM	76	Car on public roadway
9:39:32 AM	73	Car on public roadway
9:40:17 AM	77	Car on public roadway
9:40:18 AM	80	Car on public roadway
9:40:19 AM	75	Car on public roadway
9:41:09 AM	76	Car on public roadway
9:41:10 AM	76	Car on public roadway
9:41:17 AM	73	Car on public roadway
9:41:18 AM	75	Car on public roadway
9:41:19 AM	73	Car on public roadway
9:42:03 AM	75	Car on public roadway
9:42:39 AM	75	Car on public roadway
9:42:40 AM	72	Car on public roadway
9:42:45 AM	75	Car on public roadway
9:42:46 AM	76	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

9:42:47 AM	72	Car on public roadway
9:43:43 AM	76	Car on public roadway
9:43:44 AM	77	Car on public roadway
9:43:45 AM	72	Car on public roadway
9:43:49 AM	74	Car on public roadway
9:43:50 AM	74	Car on public roadway
9:44:00 AM	72	Bus on public roadway
9:44:01 AM	79	Bus on public roadway
9:44:02 AM	85	Bus on public roadway
9:44:03 AM	85	Bus on public roadway
9:44:04 AM	76	Bus on public roadway
9:44:05 AM	73	Bus on public roadway
9:44:43 AM	77	Car on public roadway
9:44:44 AM	75	Car on public roadway
9:45:12 AM	75	Car on public roadway
9:45:13 AM	76	Car on public roadway
9:45:48 AM	78	Bus on public roadway
9:45:49 AM	85	Bus on public roadway
9:45:50 AM	83	Bus on public roadway
9:46:06 AM	76	Car on public roadway
9:46:07 AM	76	Car on public roadway
9:46:34 AM	72	Bus on public roadway
9:46:35 AM	75	Bus on public roadway
9:46:36 AM	77	Bus on public roadway
9:46:37 AM	81	Bus on public roadway
9:46:38 AM	87	Bus on public roadway
9:46:39 AM	89	Bus on public roadway
9:46:40 AM	88	Bus on public roadway
9:46:41 AM	80	Bus on public roadway
9:46:42 AM	74	Bus on public roadway
9:46:54 AM	73	Car on public roadway
9:47:53 AM	74	Car on public roadway
9:47:54 AM	74	Car on public roadway
9:47:57 AM	74	Car on public roadway
9:47:58 AM	80	Car on public roadway
9:47:59 AM	79	Car on public roadway
9:48:00 AM	72	Car on public roadway
9:48:20 AM	77	Car on public roadway
9:48:21 AM	77	Car on public roadway
9:49:45 AM	72	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

9:51:00 AM	72	Car on public roadway
9:51:34 AM	74	Car on public roadway
9:51:35 AM	78	Car on public roadway
9:51:36 AM	77	Car on public roadway
9:51:37 AM	74	Car on public roadway
9:52:31 AM	74	Bus on public roadway
9:52:32 AM	79	Bus on public roadway
9:52:33 AM	82	Bus on public roadway
9:52:34 AM	83	Bus on public roadway
9:52:35 AM	77	Bus on public roadway
9:52:44 AM	73	Car on public roadway
9:52:45 AM	73	Car on public roadway
9:52:50 AM	78	Car on public roadway
9:52:51 AM	77	Car on public roadway
9:53:19 AM	76	Bus on public roadway
9:53:20 AM	77	Bus on public roadway
9:53:21 AM	74	Bus on public roadway
9:53:28 AM	77	Car on public roadway
9:53:29 AM	81	Car on public roadway
9:53:30 AM	79	Car on public roadway
9:53:31 AM	72	Car on public roadway
9:54:24 AM	74	Car on public roadway
9:54:25 AM	75	Car on public roadway
9:54:26 AM	75	Car on public roadway
9:54:27 AM	74	Car on public roadway
9:55:56 AM	73	Car on public roadway
9:55:57 AM	73	Car on public roadway
9:56:04 AM	74	Bus on public roadway
9:56:05 AM	79	Bus on public roadway
9:56:06 AM	84	Bus on public roadway
9:56:07 AM	81	Bus on public roadway
9:56:08 AM	73	Bus on public roadway
9:56:10 AM	75	Bus on public roadway
9:56:25 AM	72	siren
9:56:26 AM	73	siren
9:56:28 AM	74	siren
9:56:29 AM	76	siren
9:56:31 AM	76	siren
9:56:32 AM	75	siren
9:56:51 AM	72	Car on public roadway



## North Transfer Station – First Quarter Noise Monitoring Report

9:56:52 AM	72	Car on public roadway
9:57:17 AM	81	Bus on public roadway
9:57:18 AM	82	Bus on public roadway
9:57:19 AM	81	Bus on public roadway
9:57:20 AM	78	Bus on public roadway
9:57:21 AM	73	Bus on public roadway
9:58:36 AM	73	Car on public roadway
9:58:37 AM	73	Car on public roadway
10:00:07 AM	74	Car on public roadway
10:00:08 AM	74	Car on public roadway
10:01:06 AM	75	Car on public roadway
10:01:07 AM	75	Car on public roadway
10:02:35 AM	74	Car on public roadway
10:02:36 AM	76	Car on public roadway
10:02:37 AM	72	Car on public roadway
10:02:43 AM	72	Car on public roadway
10:02:44 AM	73	Car on public roadway
10:03:24 AM	77	Bus on public roadway
10:03:25 AM	76	Bus on public roadway
10:03:52 AM	72	Car on public roadway
10:03:53 AM	77	Car on public roadway
10:03:54 AM	76	Car on public roadway
10:04:55 AM	76	Car on public roadway
10:04:56 AM	74	Car on public roadway
10:05:21 AM	75	Car on public roadway
10:05:22 AM	77	Car on public roadway
10:05:23 AM	78	Car on public roadway
10:05:26 AM	74	Car on public roadway
10:05:27 AM	78	Car on public roadway
10:05:28 AM	75	Car on public roadway
10:05:48 AM	73	Car on public roadway
10:06:01 AM	76	Car on public roadway
10:06:02 AM	74	Car on public roadway
10:06:40 AM	74	Car on public roadway
10:06:41 AM	73	Car on public roadway
10:07:13 AM	73	Car on public roadway
10:07:14 AM	74	Car on public roadway
10:07:48 AM	72	Car on public roadway
10:07:49 AM	75	Car on public roadway
10:07:50 AM	73	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

10:08:33 AM	75	Car on public roadway
10:08:34 AM	76	Car on public roadway
10:08:37 AM	77	Car on public roadway
10:08:38 AM	79	Car on public roadway
10:09:04 AM	73	Car on public roadway
10:09:05 AM	74	Car on public roadway
10:09:06 AM	72	Car on public roadway
10:09:07 AM	75	Car on public roadway
10:09:08 AM	75	Car on public roadway
10:09:24 AM	74	Car on public roadway
10:09:25 AM	75	Car on public roadway
10:09:46 AM	76	Car on public roadway
10:09:47 AM	76	Car on public roadway
10:10:34 AM	72	Bus on public roadway
10:10:35 AM	78	Bus on public roadway
10:10:36 AM	78	Bus on public roadway
10:10:37 AM	73	Bus on public roadway
10:10:56 AM	73	Bus on public roadway
10:10:57 AM	82	Bus on public roadway
10:10:58 AM	82	Bus on public roadway
10:10:59 AM	77	Bus on public roadway
10:11:09 AM	74	Car on public roadway
10:11:10 AM	74	Car on public roadway
10:12:01 AM	72	Car on public roadway
10:12:02 AM	73	Car on public roadway
10:13:12 AM	72	Bus on public roadway
10:13:13 AM	77	Bus on public roadway
10:13:14 AM	81	Bus on public roadway
10:13:15 AM	80	Bus on public roadway
10:13:16 AM	76	Bus on public roadway
10:13:17 AM	74	Bus on public roadway
10:13:18 AM	73	Bus on public roadway
10:13:38 AM	74	Car on public roadway
10:14:27 AM	73	Car on public roadway
10:14:28 AM	76	Car on public roadway
10:14:29 AM	74	Car on public roadway
10:14:30 AM	73	Car on public roadway
10:15:02 AM	77	Car on public roadway
10:15:03 AM	77	Car on public roadway
10:15:41 AM	74	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

10:15:42 AM	73	Car on public roadway
10:16:00 AM	74	Car on public roadway
10:16:01 AM	73	Car on public roadway
10:16:05 AM	80	Car on public roadway
10:16:06 AM	82	Car on public roadway
10:16:07 AM	78	Car on public roadway
10:16:19 AM	73	Car on public roadway
10:17:20 AM	74	Car on public roadway
10:17:21 AM	79	Car on public roadway
10:17:22 AM	77	Car on public roadway
10:18:00 AM	74	Car on public roadway
10:18:01 AM	78	Car on public roadway
10:18:02 AM	77	Car on public roadway
10:18:03 AM	72	Car on public roadway
10:18:10 AM	73	Car on public roadway
10:18:11 AM	73	Car on public roadway
10:19:40 AM	75	Car on public roadway
10:19:41 AM	76	Car on public roadway
10:19:42 AM	75	Car on public roadway
10:19:45 AM	72	Car on public roadway
10:19:46 AM	74	Car on public roadway
10:19:47 AM	77	Car on public roadway
10:19:48 AM	79	Car on public roadway
10:19:49 AM	81	Car on public roadway
10:19:50 AM	82	Car on public roadway
10:19:51 AM	82	Car on public roadway
10:19:52 AM	81	Car on public roadway
10:19:53 AM	77	Car on public roadway
10:19:54 AM	74	Car on public roadway
10:19:55 AM	74	Car on public roadway
10:20:22 AM	76	Car on public roadway
10:20:23 AM	79	Car on public roadway
10:20:24 AM	76	Car on public roadway
10:20:35 AM	73	Car on public roadway
10:20:36 AM	73	Car on public roadway
10:20:37 AM	76	Car on public roadway
10:20:38 AM	76	Car on public roadway
10:22:29 AM	75	Car on public roadway
10:22:30 AM	74	Car on public roadway
10:22:37 AM	75	Car on public roadway

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North Transfer Station – First Quarter Noise Monitoring Report

10:22:38 AM	77	Car on public roadway
10:22:39 AM	74	Car on public roadway
10:25:05 AM	74	Car on public roadway
10:25:06 AM	75	Car on public roadway
10:25:12 AM	72	Car on public roadway
10:25:34 AM	75	Car on public roadway
10:25:35 AM	77	Car on public roadway
10:25:36 AM	74	Car on public roadway
10:25:43 AM	76	Car on public roadway
10:25:44 AM	77	Car on public roadway
10:27:07 AM	77	Bus on public roadway
10:27:08 AM	83	Bus on public roadway
10:27:09 AM	82	Bus on public roadway
10:27:10 AM	76	Bus on public roadway
10:27:55 AM	73	Bus on public roadway
10:27:56 AM	79	Bus on public roadway
10:27:57 AM	83	Bus on public roadway
10:27:58 AM	81	Bus on public roadway
10:27:59 AM	73	Bus on public roadway
10:28:08 AM	73	Car on public roadway
10:28:09 AM	73	Car on public roadway
10:29:06 AM	72	Car on public roadway
10:29:07 AM	73	Car on public roadway
10:29:24 AM	73	Car on public roadway
10:29:25 AM	74	Car on public roadway
10:29:26 AM	74	Car on public roadway
10:29:27 AM	74	Car on public roadway
10:30:42 AM	74	Car on public roadway
10:30:53 AM	73	Car on public roadway
10:31:32 AM	77	Pedestrian voices
10:31:33 AM	75	Pedestrian voices
10:31:36 AM	72	Pedestrian voices
10:31:38 AM	77	Pedestrian voices
10:31:39 AM	74	Pedestrian voices
10:31:45 AM	74	Car on public roadway
10:37:08 AM	73	Car on public roadway
10:37:09 AM	76	Car on public roadway
10:37:10 AM	72	Car on public roadway
10:37:49 AM	73	Car on public roadway
10:37:58 AM	73	Car on public roadway

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North Transfer Station – First Quarter Noise Monitoring Report

10:38:32 AM	76	Car on public roadway
10:38:33 AM	76	Car on public roadway
10:38:34 AM	75	Car on public roadway
10:39:09 AM	72	Car on public roadway
10:39:58 AM	74	Bus on public roadway
10:39:59 AM	75	Bus on public roadway
10:40:00 AM	84	Bus on public roadway
10:40:01 AM	89	Bus on public roadway
10:40:02 AM	87	Bus on public roadway
10:40:03 AM	77	Bus on public roadway
10:40:46 AM	74	Bus on public roadway
10:41:25 AM	75	Car on public roadway
10:41:26 AM	76	Car on public roadway
10:42:05 AM	74	Bus on public roadway
10:42:06 AM	79	Bus on public roadway
10:42:07 AM	78	Bus on public roadway
10:44:06 AM	75	Car on public roadway
10:44:07 AM	73	Car on public roadway
10:44:21 AM	73	Car on public roadway
10:44:24 AM	73	Car on public roadway
10:44:25 AM	73	Car on public roadway
10:45:33 AM	72	Car on public roadway
10:48:31 AM	76	Car on public roadway
10:48:32 AM	76	Car on public roadway
10:49:05 AM	73	Car on public roadway
10:49:06 AM	77	Car on public roadway
10:49:15 AM	74	Car on public roadway
10:49:16 AM	73	Car on public roadway
10:51:28 AM	72	Car on public roadway
10:51:40 AM	73	Car on public roadway
10:51:41 AM	73	Car on public roadway
10:54:33 AM	75	Car on public roadway
10:54:34 AM	78	Car on public roadway
10:54:35 AM	77	Car on public roadway
10:54:46 AM	72	Bus on public roadway
10:54:47 AM	79	Bus on public roadway
10:54:48 AM	78	Bus on public roadway
10:54:49 AM	72	Bus on public roadway
10:56:15 AM	76	Bus on public roadway
10:56:16 AM	81	Bus on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

10:56:17 AM	82	Bus on public roadway
10:56:18 AM	78	Bus on public roadway
10:56:19 AM	74	Bus on public roadway
10:57:41 AM	76	Bus on public roadway
10:57:42 AM	79	Bus on public roadway
10:57:43 AM	81	Bus on public roadway
10:57:44 AM	79	Bus on public roadway
10:57:45 AM	73	Bus on public roadway
10:58:29 AM	73	Car on public roadway
10:58:45 AM	74	Car on public roadway
10:58:46 AM	74	Car on public roadway
10:59:46 AM	72	Car on public roadway
10:59:47 AM	74	Car on public roadway
11:00:07 AM	79	Bus on public roadway
11:00:08 AM	84	Bus on public roadway
11:00:09 AM	80	Bus on public roadway
11:00:10 AM	75	Bus on public roadway
11:00:37 AM	75	Car on public roadway
11:00:38 AM	75	Car on public roadway
11:03:40 AM	72	Aircraft
11:03:41 AM	76	Aircraft
11:03:42 AM	78	Aircraft
11:03:43 AM	81	Aircraft
11:03:44 AM	81	Aircraft
11:03:45 AM	83	Aircraft
11:03:46 AM	81	Aircraft
11:03:47 AM	80	Aircraft
11:03:48 AM	77	Aircraft
11:03:49 AM	75	Aircraft
11:03:50 AM	73	Aircraft
11:03:51 AM	72	Aircraft
11:04:15 AM	72	Car on public roadway
11:04:16 AM	77	Car on public roadway
11:04:17 AM	74	Car on public roadway
11:04:42 AM	74	Car on public roadway
11:05:37 AM	72	Car on public roadway
11:05:38 AM	72	Car on public roadway
11:06:34 AM	75	Car on public roadway
11:06:35 AM	77	Car on public roadway
11:06:36 AM	76	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

11:06:37 AM	72	Car on public roadway
11:07:00 AM	76	Car on public roadway
11:07:13 AM	78	Car on public roadway
11:07:14 AM	73	Car on public roadway
11:09:08 AM	74	Car on public roadway
11:09:44 AM	74	Car on public roadway
11:09:45 AM	74	Car on public roadway
11:10:44 AM	73	Car on public roadway
11:10:45 AM	74	Car on public roadway
11:11:41 AM	77	Car on public roadway
11:11:42 AM	78	Car on public roadway
11:11:48 AM	73	Car on public roadway
11:11:49 AM	73	Car on public roadway
11:11:57 AM	72	Bus on public roadway
11:11:58 AM	76	Bus on public roadway
11:11:59 AM	77	Bus on public roadway
11:12:00 AM	83	Bus on public roadway
11:12:01 AM	84	Bus on public roadway
11:12:02 AM	79	Bus on public roadway
11:12:03 AM	73	Bus on public roadway
11:12:32 AM	75	Car on public roadway
11:12:33 AM	76	Car on public roadway
11:12:38 AM	73	Car on public roadway
11:13:06 AM	72	Car on public roadway
11:13:43 AM	73	Bus on public roadway
11:13:44 AM	81	Bus on public roadway
11:13:45 AM	82	Bus on public roadway
11:13:46 AM	77	Bus on public roadway
11:14:34 AM	73	Car on public roadway
11:14:35 AM	72	Car on public roadway
11:14:42 AM	73	Car on public roadway
11:15:24 AM	73	Car on public roadway
11:15:25 AM	75	Car on public roadway
11:15:26 AM	73	Car on public roadway
11:15:54 AM	72	Car on public roadway
11:17:26 AM	73	Car on public roadway
11:17:48 AM	73	Car on public roadway
11:17:49 AM	75	Car on public roadway
11:19:51 AM	74	Car on public roadway
11:20:03 AM	76	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

11:20:04 AM	73	Car on public roadway
11:21:12 AM	74	Car on public roadway
11:21:13 AM	73	Car on public roadway
11:22:54 AM	74	Car on public roadway
11:22:55 AM	77	Car on public roadway
11:22:56 AM	76	Car on public roadway
11:25:08 AM	72	Car on public roadway
11:25:09 AM	74	Car on public roadway
11:25:20 AM	72	Car on public roadway
11:25:57 AM	73	Car on public roadway
11:26:59 AM	73	Car on public roadway
11:27:00 AM	75	Car on public roadway
11:27:23 AM	76	Bus on public roadway
11:27:24 AM	77	Bus on public roadway
11:27:25 AM	75	Bus on public roadway
11:27:47 AM	72	Car on public roadway
11:28:11 AM	75	Car on public roadway
11:28:12 AM	77	Car on public roadway
11:29:29 AM	72	Car on public roadway
11:29:30 AM	74	Car on public roadway
11:29:31 AM	72	Car on public roadway
11:29:32 AM	74	Car on public roadway
11:29:42 AM	74	Car on public roadway
11:29:43 AM	73	Car on public roadway
11:30:25 AM	75	Car on public roadway
11:30:26 AM	73	Car on public roadway
11:31:13 AM	75	Car on public roadway
11:31:52 AM	80	Bus on public roadway
11:31:53 AM	87	Bus on public roadway
11:31:54 AM	85	Bus on public roadway
11:31:55 AM	77	Bus on public roadway
11:32:36 AM	74	Car on public roadway
11:32:37 AM	76	Car on public roadway
11:32:38 AM	74	Car on public roadway
11:33:45 AM	73	Car on public roadway
11:34:43 AM	73	Car on public roadway
11:34:44 AM	77	Car on public roadway
11:34:45 AM	78	Car on public roadway
11:34:46 AM	76	Car on public roadway
11:35:36 AM	75	Car on public roadway



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North Transfer Station – First Quarter Noise Monitoring Report

11:35:37 AM	75	Car on public roadway
11:35:53 AM	74	Car on public roadway
11:35:54 AM	74	Car on public roadway
11:36:59 AM	74	Bus on public roadway
11:37:00 AM	80	Bus on public roadway
11:37:01 AM	76	Bus on public roadway
11:37:02 AM	75	Bus on public roadway
11:37:03 AM	73	Bus on public roadway
11:37:13 AM	73	Pedestrian whistling
11:37:14 AM	72	Pedestrian whistling
11:38:26 AM	73	Car on public roadway
11:38:27 AM	72	Car on public roadway
11:38:30 AM	74	Car on public roadway
11:38:31 AM	76	Car on public roadway
11:38:32 AM	73	Car on public roadway
11:39:22 AM	76	Car on public roadway
11:39:23 AM	75	Car on public roadway
11:40:03 AM	73	Car on public roadway
11:40:04 AM	79	Car on public roadway
11:40:05 AM	81	Car on public roadway
11:40:06 AM	76	Car on public roadway
11:40:08 AM	75	Car on public roadway
11:40:19 AM	74	Bus on public roadway
11:40:20 AM	79	Bus on public roadway
11:40:21 AM	79	Bus on public roadway
11:40:22 AM	73	Bus on public roadway
11:40:26 AM	74	Car on public roadway
11:41:30 AM	75	Car on public roadway
11:41:31 AM	74	Car on public roadway
11:41:59 AM	73	Car on public roadway
11:42:00 AM	74	Car on public roadway
11:42:46 AM	75	Bus on public roadway
11:42:47 AM	84	Bus on public roadway
11:42:48 AM	86	Bus on public roadway
11:42:49 AM	80	Bus on public roadway
11:42:50 AM	73	Bus on public roadway
11:43:59 AM	76	Car on public roadway
11:44:00 AM	74	Car on public roadway
11:44:01 AM	72	Car on public roadway
11:44:02 AM	72	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

11:44:06 AM	74	Car on public roadway
11:45:25 AM	75	Car on public roadway
11:45:53 AM	75	Car on public roadway
11:45:54 AM	74	Car on public roadway
11:47:46 AM	75	Car on public roadway
11:47:52 AM	72	Car on public roadway
11:50:07 AM	74	Car on public roadway
11:51:41 AM	73	Car on public roadway
11:51:42 AM	72	Car on public roadway
11:51:59 AM	76	Car on public roadway
11:52:00 AM	77	Car on public roadway
11:52:01 AM	75	Car on public roadway
11:54:19 AM	75	Car on public roadway
11:54:32 AM	75	Bus on public roadway
11:54:33 AM	80	Bus on public roadway
11:54:34 AM	81	Bus on public roadway
11:54:35 AM	74	Bus on public roadway
11:54:46 AM	73	Car on public roadway
11:54:47 AM	72	Car on public roadway
11:55:43 AM	73	Car on public roadway
11:55:48 AM	76	Car on public roadway
11:56:25 AM	73	Car on public roadway
11:57:11 AM	77	Bus on public roadway
11:57:12 AM	82	Bus on public roadway
11:57:13 AM	83	Bus on public roadway
11:57:14 AM	85	Bus on public roadway
11:57:15 AM	77	Bus on public roadway
11:57:16 AM	73	Bus on public roadway
11:57:17 AM	74	Bus on public roadway
11:57:39 AM	72	Bus on public roadway
11:57:40 AM	76	Bus on public roadway
11:57:41 AM	80	Bus on public roadway
11:57:42 AM	82	Bus on public roadway
11:57:43 AM	82	Bus on public roadway
11:57:44 AM	80	Bus on public roadway
11:57:45 AM	77	Bus on public roadway
11:57:46 AM	75	Bus on public roadway
11:57:57 AM	74	Car on public roadway
11:57:58 AM	78	Car on public roadway
11:57:59 AM	75	Car on public roadway

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North Transfer Station – First Quarter Noise Monitoring Report

11:58:07 AM	74	Car on public roadway
11:58:08 AM	76	Car on public roadway
11:58:51 AM	73	Car on public roadway
11:59:14 AM	72	Car on public roadway
11:59:39 AM	74	Car on public roadway
12:00:38 PM	74	Car on public roadway
12:01:23 PM	72	Bus on public roadway
12:01:24 PM	76	Bus on public roadway
12:01:25 PM	82	Bus on public roadway
12:01:26 PM	79	Bus on public roadway
12:02:27 PM	74	Car on public roadway
12:02:28 PM	76	Car on public roadway
12:03:17 PM	74	Pedestrian voices
12:03:18 PM	74	Pedestrian voices
12:03:30 PM	78	Car on public roadway
12:03:31 PM	81	Car on public roadway
12:03:32 PM	76	Car on public roadway
12:03:42 PM	72	Pedestrian voices
12:03:43 PM	72	Pedestrian voices
12:03:44 PM	74	Pedestrian voices
12:03:56 PM	72	Car on public roadway
12:03:57 PM	77	Car on public roadway
12:03:58 PM	75	Car on public roadway
12:04:23 PM	74	Car on public roadway
12:04:32 PM	75	Car on public roadway
12:04:33 PM	72	Car on public roadway
12:05:44 PM	74	Car on public roadway
12:05:45 PM	77	Car on public roadway
12:10:09 PM	72	Bus on public roadway
12:11:34 PM	75	Car on public roadway
12:13:04 PM	74	Car on public roadway
12:13:05 PM	74	Car on public roadway
12:13:24 PM	75	Car on public roadway
12:13:25 PM	72	Car on public roadway
12:14:42 PM	74	Bus on public roadway
12:14:43 PM	82	Bus on public roadway
12:14:44 PM	84	Bus on public roadway
12:14:45 PM	79	Bus on public roadway
12:14:46 PM	74	Bus on public roadway
12:15:07 PM	74	Car on public roadway

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North Transfer Station – First Quarter Noise Monitoring Report

12:15:08 PM	73	Car on public roadway
12:15:44 PM	74	Car on public roadway
12:15:45 PM	75	Car on public roadway
12:16:06 PM	76	Car on public roadway
12:16:07 PM	75	Car on public roadway
12:17:23 PM	76	Car on public roadway
12:17:24 PM	73	Car on public roadway
12:17:48 PM	73	Car on public roadway
12:17:49 PM	72	Car on public roadway
12:18:35 PM	77	Car on public roadway
12:18:36 PM	78	Car on public roadway
12:18:37 PM	73	Car on public roadway
12:20:44 PM	74	Car on public roadway
12:20:45 PM	72	Car on public roadway
12:22:06 PM	74	Truck on public roadway
12:22:07 PM	77	Truck on public roadway
12:22:08 PM	77	Truck on public roadway
12:22:09 PM	74	Truck on public roadway
12:22:10 PM	73	Truck on public roadway
12:23:49 PM	73	Car on public roadway
12:26:39 PM	77	Bus on public roadway
12:26:40 PM	82	Bus on public roadway
12:26:41 PM	81	Bus on public roadway
12:26:42 PM	74	Bus on public roadway
12:27:31 PM	77	Car on public roadway
12:27:32 PM	80	Car on public roadway
12:27:33 PM	77	Car on public roadway
12:27:52 PM	72	Car on public roadway
12:27:53 PM	80	Car on public roadway
12:27:54 PM	74	Car on public roadway
12:28:00 PM	73	Car on public roadway
12:28:01 PM	73	Car on public roadway
12:28:02 PM	74	Car on public roadway
12:28:18 PM	74	Car on public roadway
12:28:19 PM	74	Car on public roadway
12:29:44 PM	73	Car on public roadway
12:31:29 PM	75	Bus on public roadway
12:31:30 PM	77	Bus on public roadway
12:31:31 PM	76	Bus on public roadway
12:33:33 PM	73	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

12:33:36 PM	72	Car on public roadway
12:34:50 PM	74	Car on public roadway
12:35:03 PM	73	Car on public roadway
12:35:07 PM	74	Car on public roadway
12:35:51 PM	73	Bus on public roadway
12:35:52 PM	79	Bus on public roadway
12:35:53 PM	80	Bus on public roadway
12:35:54 PM	77	Bus on public roadway
12:35:59 PM	73	Car on public roadway
12:36:16 PM	74	Car on public roadway
12:36:17 PM	74	Car on public roadway
12:38:07 PM	75	Car on public roadway
12:38:08 PM	76	Car on public roadway
12:39:40 PM	74	Car on public roadway
12:39:58 PM	74	Bus on public roadway
12:39:59 PM	79	Bus on public roadway
12:40:00 PM	80	Bus on public roadway
12:40:01 PM	76	Bus on public roadway
12:40:03 PM	73	Bus on public roadway
12:40:05 PM	73	Bus on public roadway
12:41:09 PM	74	Car on public roadway
12:41:10 PM	75	Car on public roadway
12:41:11 PM	73	Car on public roadway
12:42:15 PM	76	Bus on public roadway
12:42:16 PM	78	Bus on public roadway
12:42:17 PM	76	Bus on public roadway
12:42:21 PM	72	Car on public roadway
12:42:22 PM	73	Car on public roadway
12:43:46 PM	73	Car on public roadway
12:45:09 PM	74	Car on public roadway
12:46:23 PM	75	Car on public roadway
12:46:24 PM	73	Car on public roadway
12:46:41 PM	73	Car on public roadway
12:46:42 PM	75	Car on public roadway
12:47:05 PM	75	Car on public roadway
12:47:06 PM	73	Car on public roadway
12:48:00 PM	74	Car on public roadway
12:48:01 PM	73	Car on public roadway
12:48:18 PM	73	Car on public roadway
12:48:19 PM	73	Car on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

12:48:27 PM	72	Car on public roadway
12:48:28 PM	72	Car on public roadway
12:49:15 PM	75	Car on public roadway
12:49:16 PM	72	Car on public roadway
12:49:17 PM	76	Car on public roadway
12:49:18 PM	75	Car on public roadway
12:49:54 PM	74	Bus on public roadway
12:49:55 PM	74	Bus on public roadway
12:49:56 PM	72	Bus on public roadway
12:50:40 PM	72	Car on public roadway
12:50:41 PM	73	Car on public roadway
12:51:31 PM	75	Car on public roadway
12:51:32 PM	76	Car on public roadway
12:51:47 PM	74	Car on public roadway
12:51:48 PM	74	Car on public roadway
12:52:05 PM	76	Car on public roadway
12:52:06 PM	76	Car on public roadway
12:52:44 PM	74	Car on public roadway
12:52:45 PM	73	Car on public roadway
12:53:23 PM	72	Car on public roadway
12:53:24 PM	74	Car on public roadway
12:53:27 PM	74	Car on public roadway
12:53:28 PM	73	Car on public roadway
12:53:38 PM	77	Bus on public roadway
12:53:39 PM	82	Bus on public roadway
12:53:40 PM	81	Bus on public roadway
12:53:41 PM	74	Bus on public roadway
12:54:29 PM	76	Bus on public roadway
12:54:30 PM	76	Bus on public roadway
12:54:41 PM	74	Bus on public roadway
12:54:42 PM	80	Bus on public roadway
12:54:43 PM	81	Bus on public roadway
12:54:44 PM	74	Bus on public roadway
12:54:45 PM	72	Bus on public roadway
12:54:46 PM	74	Bus on public roadway
12:55:16 PM	75	Car on public roadway
12:55:17 PM	74	Car on public roadway
12:55:25 PM	75	Car on public roadway
12:55:47 PM	74	Bus on public roadway
12:55:48 PM	74	Bus on public roadway

## North Transfer Station – First Quarter Noise Monitoring Report

12:55:49 PM	75	Bus on public roadway
12:55:50 PM	75	Bus on public roadway
12:55:55 PM	74	Car on public roadway
12:55:57 PM	74	Car on public roadway
12:56:06 PM	74	Bus on public roadway
12:56:07 PM	77	Bus on public roadway
12:56:08 PM	82	Bus on public roadway
12:56:09 PM	86	Bus on public roadway
12:56:10 PM	86	Bus on public roadway
12:56:11 PM	76	Bus on public roadway
12:56:40 PM	78	brakes on off-site vehicle
12:56:41 PM	80	brakes on off-site vehicle
12:57:29 PM	72	Car on public roadway
12:57:46 PM	73	Car on public roadway
12:57:47 PM	73	Car on public roadway
12:58:20 PM	74	Car on public roadway
12:58:24 PM	73	Car on public roadway
12:58:25 PM	74	Car on public roadway
12:58:26 PM	74	Car on public roadway
1:00:16 PM	72	Car on public roadway
1:00:33 PM	74	Car on public roadway
1:00:34 PM	73	Car on public roadway
1:00:56 PM	73	Car on public roadway
1:01:10 PM	75	Car on public roadway
1:01:11 PM	75	Car on public roadway
1:01:26 PM	75	Car on public roadway
1:01:27 PM	80	Car on public roadway
1:01:28 PM	80	Car on public roadway
1:01:29 PM	74	Car on public roadway
1:01:30 PM	73	Car on public roadway
1:01:31 PM	73	Car on public roadway
1:02:28 PM	74	Car on public roadway
1:02:29 PM	77	Car on public roadway
1:02:30 PM	72	Car on public roadway
1:02:31 PM	74	Car on public roadway
1:02:32 PM	75	Car on public roadway
1:03:10 PM	72	Car on public roadway
1:03:46 PM	73	Car on public roadway
1:03:47 PM	73	Car on public roadway
1:03:48 PM	72	Car on public roadway

1:03:50 PM	73	Car on public roadway
1:03:51 PM	73	Car on public roadway

**Table 7.** Location 2  $L_{max}$  Exceedances, dBA

Time	$L_{max}$	Source
8:53:05	74	Bus on public roadway
8:59:25	73	Bus on public roadway
8:59:26	72	Bus on public roadway
9:09:49	73	Car on public roadway
9:09:50	76	Car on public roadway
9:15:59	76	Car horn off-site
9:16:05	73	Car on public roadway
9:32:47	75	Car on public roadway
9:32:48	74	Car on public roadway
9:45:21	75	Car on public roadway
9:45:22	73	Car on public roadway
9:56:27	73	Siren
9:56:28	76	Siren
9:56:29	76	Siren
9:56:30	75	Siren
9:56:31	76	Siren
9:56:32	74	Siren
9:57:03	76	Siren
9:57:04	80	Siren
9:57:05	81	Siren
9:57:06	80	Siren
9:57:07	79	Siren
9:57:08	75	Siren
10:12:28	73	Car on public roadway
10:14:42	72	Car on public roadway
10:16:28	74	Car on public roadway
10:16:29	73	Car on public roadway
10:22:34	83	Car door off-site
10:22:35	79	Car door off-site
10:22:59	74	Hammering (not from site)
10:23:25	73	Hammering (not from site)
10:38:24	75	Bus on public roadway
10:38:25	75	Bus on public roadway
10:45:06	74	Car door off-site
10:45:12	73	Car horn off-site



## North Transfer Station – First Quarter Noise Monitoring Report

10:56:21	75	Backup alarm-not from site
10:56:23	77	Backup alarm-not from site
10:56:24	73	Backup alarm-not from site
10:56:25	72	Backup alarm-not from site
10:56:30	74	Backup alarm-not from site
10:56:31	73	Backup alarm-not from site
11:03:41	72	Aircraft
11:03:42	77	Aircraft
11:03:43	82	Aircraft
11:03:44	83	Aircraft
11:03:45	83	Aircraft
11:03:46	81	Aircraft
11:03:47	79	Aircraft
11:03:48	75	Aircraft
11:03:49	73	Aircraft
11:03:50	72	Aircraft
11:13:12	73	Bus on public roadway
11:13:13	77	Bus on public roadway
11:13:14	82	Bus on public roadway
11:13:15	82	Bus on public roadway
11:13:16	83	Bus on public roadway
11:13:17	78	Bus on public roadway
11:13:18	75	Bus on public roadway
11:13:19	78	Bus on public roadway
11:13:20	78	Bus on public roadway
11:13:21	77	Bus on public roadway
11:13:22	78	Bus on public roadway
11:13:23	79	Bus on public roadway
11:13:24	79	Bus on public roadway
11:13:25	76	Bus on public roadway
11:13:26	73	Bus on public roadway
11:16:36	79	Child yelling
11:16:37	74	Child yelling
11:33:49	73	Car on public roadway
11:34:55	75	Door slamming off-site
11:34:56	73	Door slamming off-site
11:49:46	72	Pedestrians
11:49:47	73	Pedestrians
11:50:13	72	Car on public roadway
11:51:12	73	Car on public roadway

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11:54:56	73	Bus or car on public roadway
11:54:57	72	Bus or car on public roadway
12:27:19	72	Bus on public roadway
12:27:20	73	Bus on public roadway
12:49:12	73	Backup alarms and engine (not from site)
12:49:42	80	Backup alarms and engine (not from site)
12:49:43	73	Backup alarms and engine (not from site)
12:49:46	82	Backup alarms and engine (not from site)
12:49:59	72	Backup alarms and engine (not from site)
12:50:00	72	Backup alarms and engine (not from site)
12:50:01	73	Backup alarms and engine (not from site)
12:50:02	73	Backup alarms and engine (not from site)
12:50:03	73	Backup alarms and engine (not from site)
12:50:05	73	Backup alarms and engine (not from site)
12:50:06	73	Backup alarms and engine (not from site)
12:50:07	73	Backup alarms and engine (not from site)
12:50:09	73	Backup alarms and engine (not from site)
12:50:10	74	Backup alarms and engine (not from site)
12:55:14	72	Car door off-site
12:57:13	73	Squealing tires off-site
13:02:50	72	Car door off-site
13:03:16	73	Car starting off-site
13:06:23	86	Car horn off-site