APPENDIX A

Three Exhibits Submitted by
David Steinberger,
Attorney for the Highlands Ranch
Neighborhood Coalition

Submitted with an e-mailed letter dated September 10, 2015 as public comments regarding the C-470 Revised Environmental Assessment

Exhibit A

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
910 16th Street Mall, Suite 218
Denver, CO 80202

Memo

Date: June 2, 2015

To: Mr. Larry Graber
Highlands Ranch Neighborhood Coalition (HRNC)
3479 Meadow Creek Way
Highlands Ranch, CO 80126

From: Dana Lodico, PE, INCE Bd. Cert.
Senior Consultant
Illingworth & Rodkin, Inc.

RE: Results of Noise Monitoring Survey, C470 Express Lanes Project, University Boulevard to Quebec Street, Highlands Ranch, CO

A field investigation was conducted in May 2015 to measure noise levels at representative Activity Category B land uses (i.e., residences) that could be subject to traffic noise impacts from the C470 Express Lanes project near Highlands Ranch, Colorado. The focus of the noise survey was on residences located on the south side of C470 between University Boulevard and Quebec Street. Short-term measurement locations were selected to represent each major developed area of interest within the project area. These included the Highlands Ranch neighborhood, Province Center, and Gleneagle. Long-term measurement sites were selected to capture the diurnal traffic noise level patterns in the project area. The pavement through this portion of C470 consists of a large aggregate and highly textured asphalt in dirty but good condition. Measurement locations are illustrated in Figures 1 and 2. Photographs of the measurement sites are provided in Attachment A. Definitions of technical terms are provided in Appendix B.

1.1. Field Measurements

A field noise study was conducted in accordance with recommended procedures in the *Colorado Department of Transportation Noise Analysis and Abatement Guidelines (January 2015).* Noise measurements were made with Larson Davis Model 820 Integrating Sound Level Meters (SLMs) set at "slow" response. The sound level meters were equipped with G.R.A.S. Type 40AQ ½-inch random incidence microphones fitted with windscreens. The sound level meters were calibrated prior to the noise measurements using a Larson Davis Model CAL200 or Model CA250 acoustical calibrator. The response of the system was checked after each measurement session and was always found to be within 0.2 dBA. No calibration adjustments were made to the measured sound levels. At the completion of each monitoring event, the measured interval noise level data were obtained from the SLM using the Larson Davis SLM utility software program.

1.1.1. Meteorology

Spring weather conditions, including periods of rain, thunder, and high winds, occurred during the measurement period. Air temperatures ranged from 42 to 71ºF, with lower temperatures occurring during nighttime periods. Due to the extraneous noise sources generated by thunder and rain, noise levels measured during these periods were excluded from the calculations of the worst-hour traffic noise levels as indicated in the data. Periods where the roads remained wet after the rain had ended were also excluded due to the splash and spray component of the traffic sounds. Although high winds (wind speeds exceeding 11 mph) were identified during the measurement period from available local weather data, these wind speeds were local to the weather station, which is in a more exposed location. Wind speeds at the microphone locations, which were shielded from wind by adjacent residences and foliage, were lower and did not exceed 11 mph. During the short-term measurements, air temperatures were measured locally to be 68 to 71ºF, with wind speeds in the range of 0-4 mph.

1.1.2. Long -Term Measurements

Long-term (LT) reference noise measurements were made at two (2) locations in the project area and vicinity to quantify the diurnal trend in noise levels and to establish the worst-hour traffic noise levels. The noise measurements were made over a six-day period from May 12th to 18th, 2015. Long-term noise measurement locations were selected to generally represent existing noise levels in the vicinity of the selected areas of interest. Care was taken to select sites that were primarily affected by traffic noise and to avoid those sites where extraneous noise sources, such as barking dogs, pool pumps, or air conditioning units, that could contaminate the noise data. After the data was downloaded from the sound level meter, the data was reviewed to identify any time periods possibly contaminated by local noise sources or meteorological conditions, as described above. Data points were excluded from the data set where significant contamination was noted.

Long-term noise measurement LT-1 was made in the open space adjacent to residences on Forest Drive, at a distance of about 400 feet from the center of eastbound C470. This location is elevated by about 25 feet above the freeway with clear line-of-sight to the vehicles traveling along the freeway. The primary noise source at this location was traffic on C470. Worst-hour noise levels at this location ranged from 64 to 69 dBA L_{eq} with higher noise levels occurring during periods with winds blowing from the north. The daily trend in noise levels at LT-1 is shown in Figures 3 to 9.

Long-term noise measurement LT-2 was made in the open space adjacent to homes on South Aberdeen Circle, at a distance of about 490 feet from the center of eastbound C470. This location is elevated significantly above the elevation of the freeway (about 40 feet) and receives partial shielding from intervening terrain. The primary noise source at this location was traffic on C470. Worst-hour noise levels at this location ranged from 60 to 66 dBA L_{eq} with higher noise levels occurring during periods with winds blowing from the north. The daily trend in noise levels at LT-2 is shown in Figures 10 to 16.

1.1.3. Short-Term Measurements

Four (4) short-term (ST) noise measurements were made in representative outdoor use areas at neighborhoods of interest in the vicinity of the project. Short-term measurements were made in concurrent time intervals with the data collected at the long-term reference measurement sites. This method facilitates a direct comparison between both the short-term and long-term noise measurements and allows for the identification of the loudest-hour noise levels at land uses in the project vicinity where long-term noise measurements were not made. Two or more consecutive 10-minute measurements were made at each noise measurement site. At all locations, noise levels were measured five feet above the ground surface and at least 10 feet from structures or barriers. Existing worst-hour traffic noise levels were calculated at each short-term noise measurement location through comparison to the representative long-term location. The results of the short-term measurements are shown in Table 1.

Short-term noise measurement ST-1 was made in the backyard of 8502 Forrest Street, at a distance of about 420 feet from the center of eastbound C470. Eastbound C470 is depressed through this area, which provides partial shielding to residences from tire/pavement noise sources. This location had full line-of-sight to westbound C470. Average noise levels measured at this location between 11:40 am and 12:00 pm ranged from 62 to 63 dBA L_{eq}. The calculated worst hour noise level at this location, based on comparison to data collected simultaneously at LT-1, ranged from 66 to 71 dBA L_{eq}.

Location ST-2 was made in the backyard of 8552 South Mallard Place, at a distance of about 420 feet from the center of eastbound C470. This location was elevated by about 20 feet above C470 with clear line-of-sight the freeway. The average noise level measured at this location between 12:10 and 12:30 pm was 57 dBA L_{eq}. The calculated worst hour noise level at this location, based on comparison to LT-1, ranged from 62 to 67 dBA L_{eq}.

Measurement ST-3 was made in the backyard of 28 Caleridge Court, at a distance of about 490 feet from the center of eastbound C470. This location is partially shielded from the freeway by the intervening terrain. The average noise level measured at this location between 1:00 and 1:20

pm was 59 dBA L_{eq}. The calculated worst hour noise level at this location, based on comparison to LT-2, ranged from 66 to 71 dBA L_{eq}.

Noise measurement ST-4 was made in the front yard of 8602 Canongate Lane, at a distance of about 400 feet from the center of eastbound C470. This location is partially shielded from the freeway by the intervening topography. The average noise level measured at this location between 1:40 and 2:00 pm was 59 dBA L_{eq}. The calculated worst hour noise level at this location, based on comparison to data collected simultaneously at LT-2, ranged from 65 to 70 dBA L_{eq}.

TABLE 1 Summary of Short-Term Noise Measurement Data

Noise Measurement Location	Date/Time	$L_{(1)}$	$L_{(10)}$	$L_{(50)}$	$L_{(90)}$	L_{eq}	Worst Hour Noise Level, L_{eq} dBA
ST-1: Backyard of 8502 Forrest Street	11:40-11:50 am	66	64	61	59	62	66-71
	11:50 am–12:00 pm	66	65	63	60	63	
ST-2: Backyard of 8552 S. Mallard Place	12:10-12:20 pm	61	60	58	56	57	62-67
	12:20-12:30 pm	62	59	57	54	57	
ST-3: Backyard of 28 Caleridge Court	1:00-1:10 pm	62	61	58	56	59	66-71
	1:10-1:20 pm	69	62	59	56	60	
ST-4: Front yard of 8602 Canongate Lane	1:40-1:50 pm	63	60	59	57	59	65-70
	1:50-2:00 pm	63	60	58	57	59	

1.2. Results

As shown in Table 1, the worst-hour noise levels measured at Category B receptors ST-1 through ST-4 ranged from 67 to 71 dBA $L_{eq[h]}$ during free flow peak traffic periods with winds from the north (downwind conditions) and 62 to 66 dBA $L_{eq[h]}$ during upwind conditions (winds blowing from the south). Noise levels approach or exceed the Category B Noise Abatement Criteria (NAC)[1] at all representative noise measurement locations (ST-1 through ST-4) during downwind conditions and continue to approach or exceed the Category B Noise Abatement Criteria (NAC) at many of the receptors under upwind conditions. Daytime hourly average noise levels were about 5 to 8 dB louder

[1] Category B Receptors (i.e., residences) are subject to an approach criterion of 66 dBA worst-hour L_{eq}.

during downwind conditions than during upwind conditions. This is similar to results from prior research[2].

1.3. Conclusions

A noise monitoring survey was conducted from May 12th to 18th, 2015 at residences located on the south side of C470 between University Boulevard and Quebec Street. The monitoring survey included two long-term (6-day) and four short-term (2 x 10-minute) measurements. The following are conclusions resulting from the analysis of the data:

- Worst-hour noise levels at receptors ST-1 through ST-4 ranged from 67 to 71 dBA $L_{eq[h]}$ during free flow peak traffic periods with winds from the north (downwind conditions) and 62 to 66 dBA $L_{eq[h]}$ during upwind conditions (winds blowing from the south);

- Worst-hour noise levels exceeded the NAC at all representative noise measurement locations (ST-1 through ST-4) during downwind conditions and at all but one (ST-2) of the receptors during upwind conditions;

- Daytime hourly average noise levels were about 5 to 8 dB louder during downwind conditions than during upwind conditions; and

- Worst-hour noise levels were calculated at short-term locations based on a comparison between long-term and short-term data. Due to the effects of wind conditions on the data, it was important to be able to compare the short-term data to long-term diurnal measurements in order to calculate the worst-hour noise levels at the short-term locations.

[2] "I-80 Davis OGAC Pavement Noise Study, 12-Year Summary Report", Illingworth & Rodkin, Inc., May 2011.

FIGURE 1 Measurement Locations, University Boulevard to Colorado Boulevard

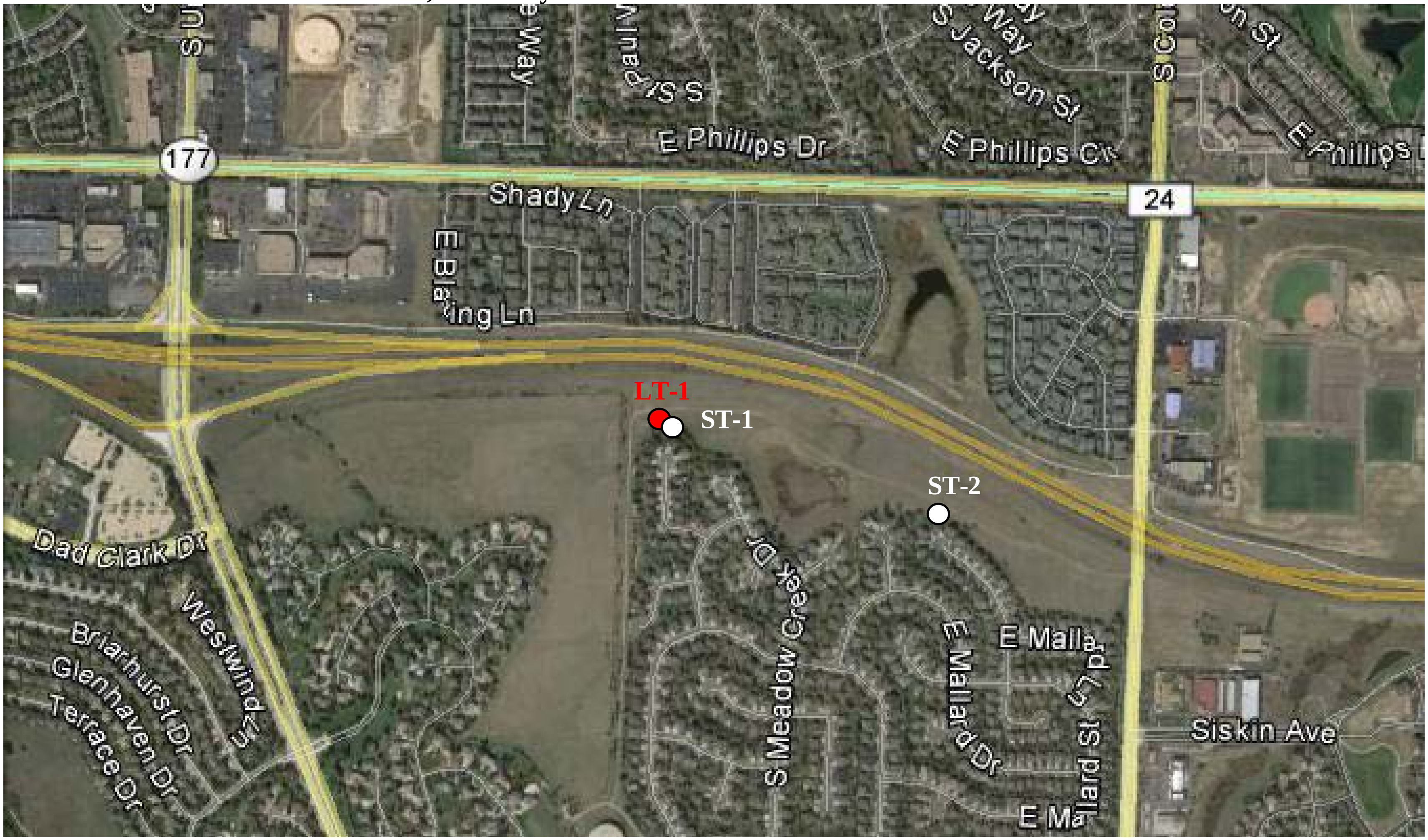
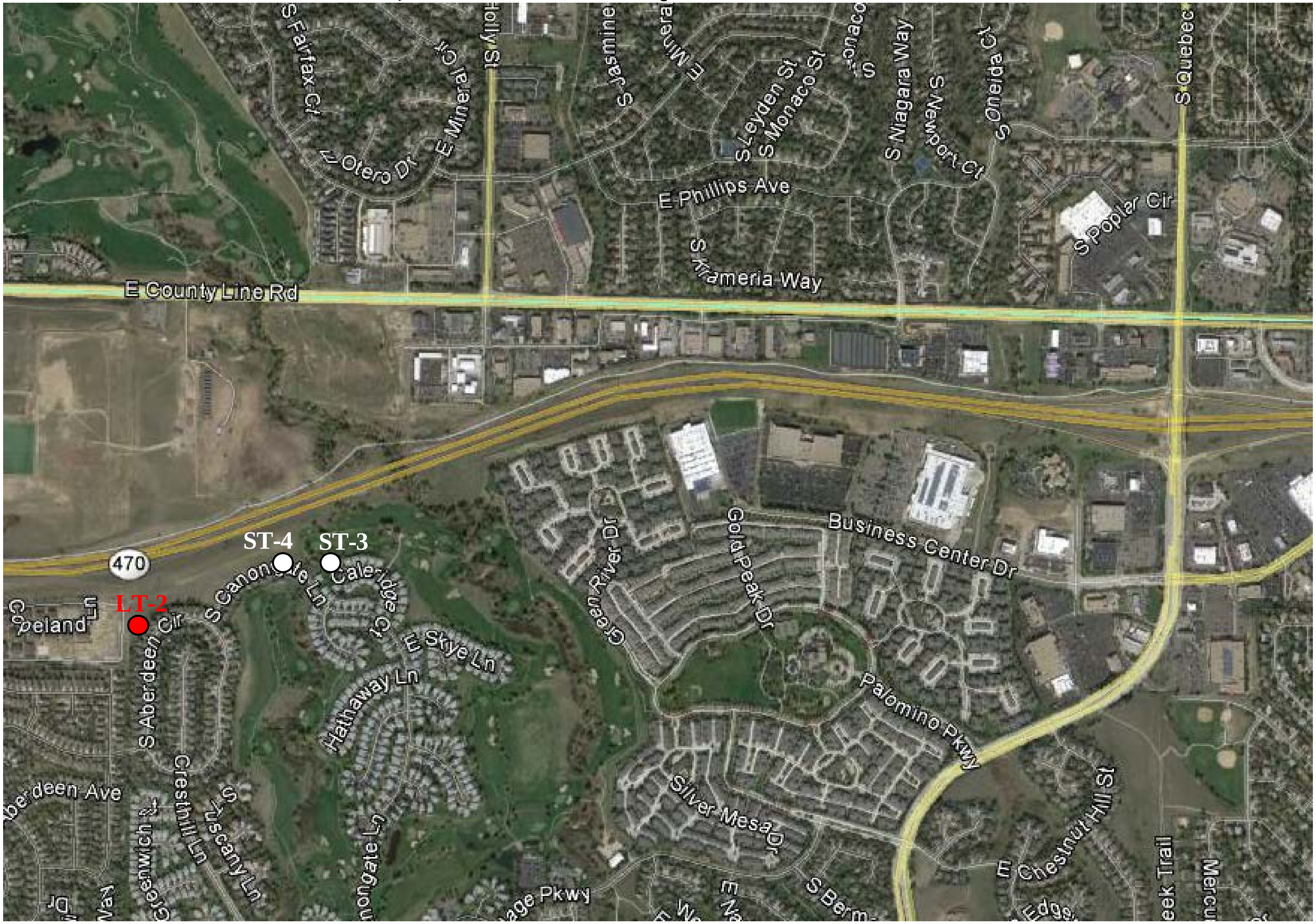


FIGURE 2 Measurement Locations, Colorado Boulevard to Quebec Street



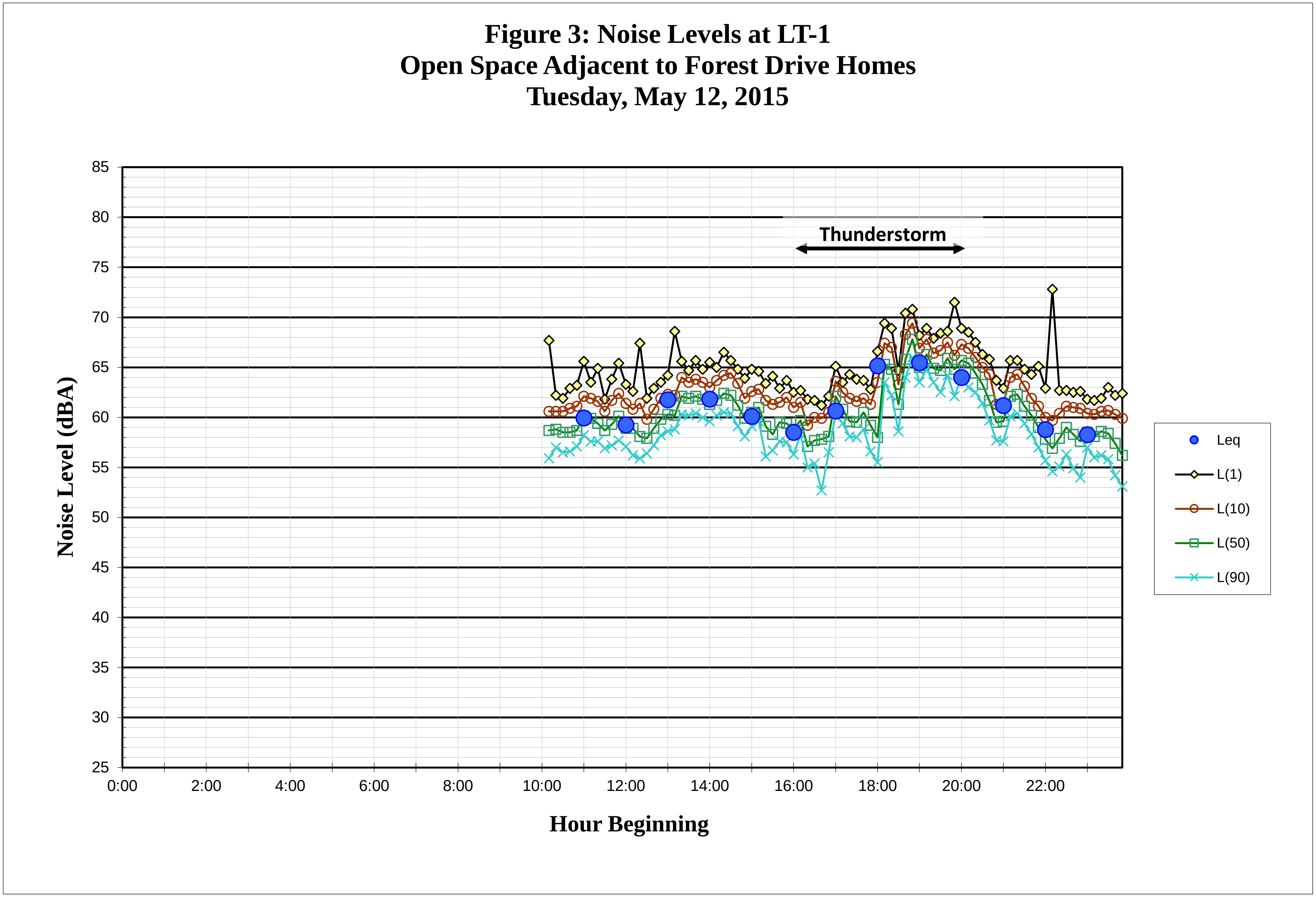
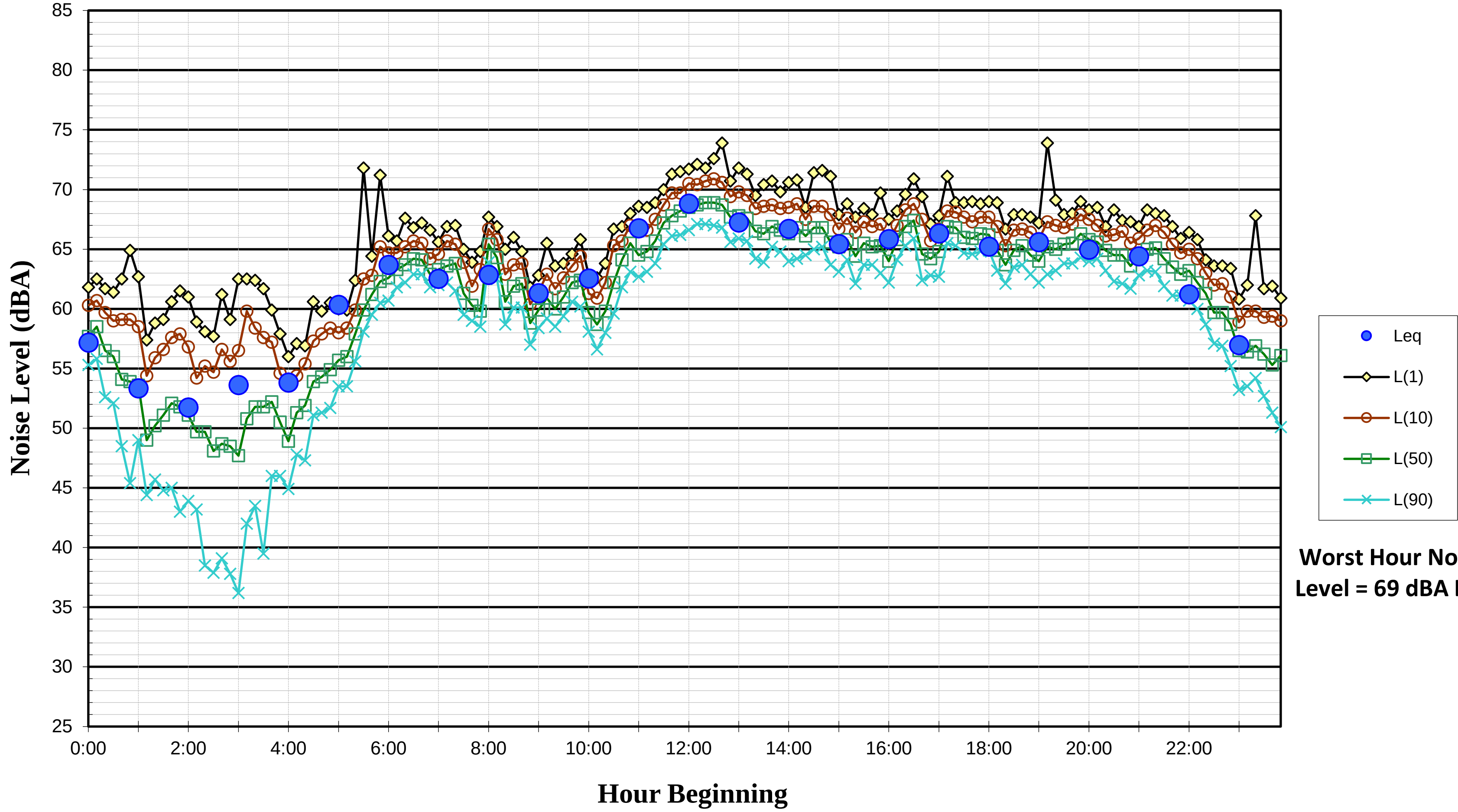


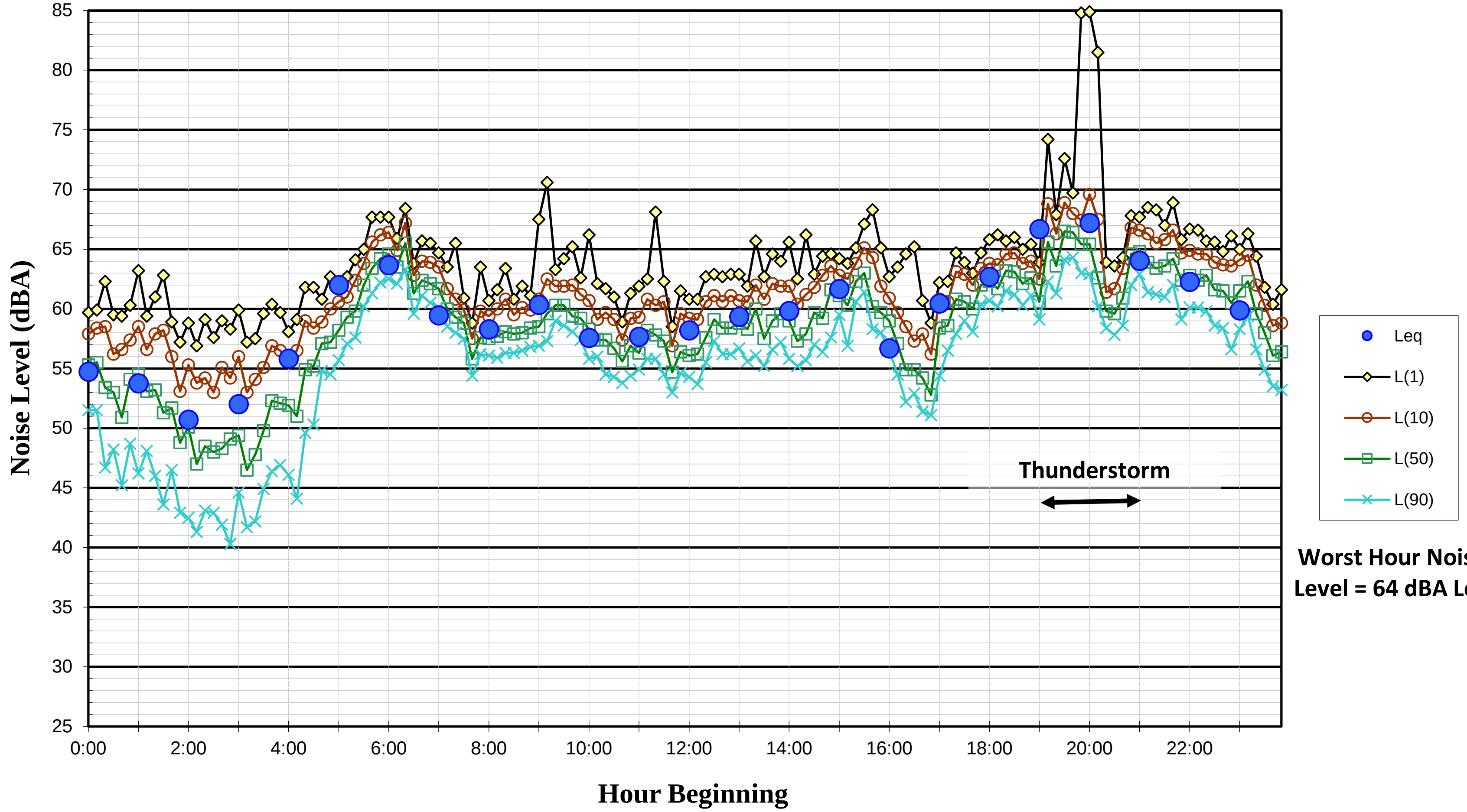
Figure 3: Noise Levels at LT-1
Open Space Adjacent to Forest Drive Homes
Tuesday, May 12, 2015
Thunderstorm
Noise Level (dBA)
Hour Beginning
85
80
75
70
65
60
55
50
45
40
35
30
25
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
22:00
Leq
L(1)
L(10)
L(50)
L(90)

Figure 4: Noise Levels at LT-1
Open Space Adjacent to Forest Drive Homes
Wednesday, May 13, 2015



Worst Hour Noise Level = 69 dBA Leq

Figure 5: Noise Levels at LT-1
Open Space Adjacent to Forest Drive Homes
Thursday, May 14, 2015



Worst Hour Noise Level = 64 dBA Leq

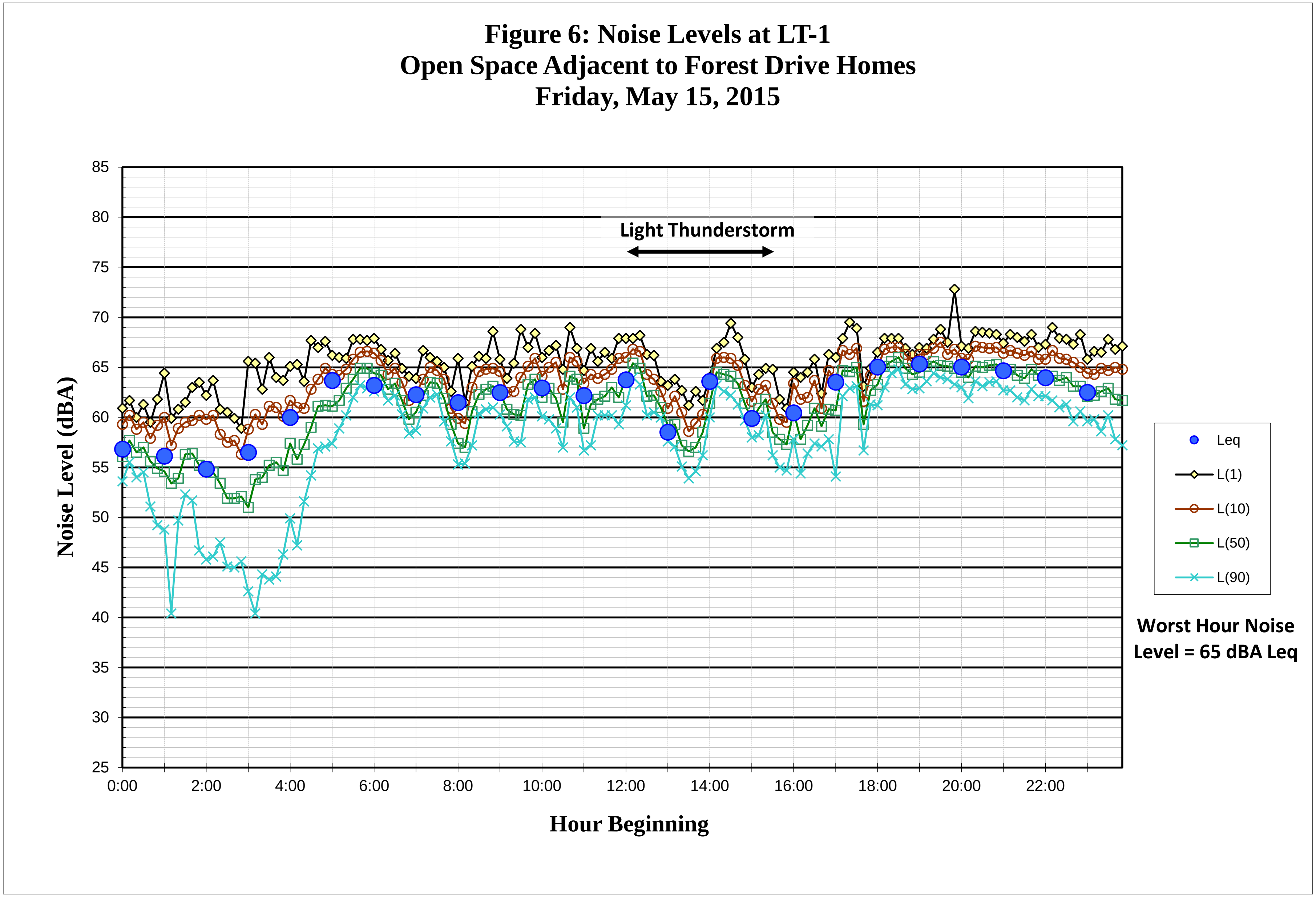
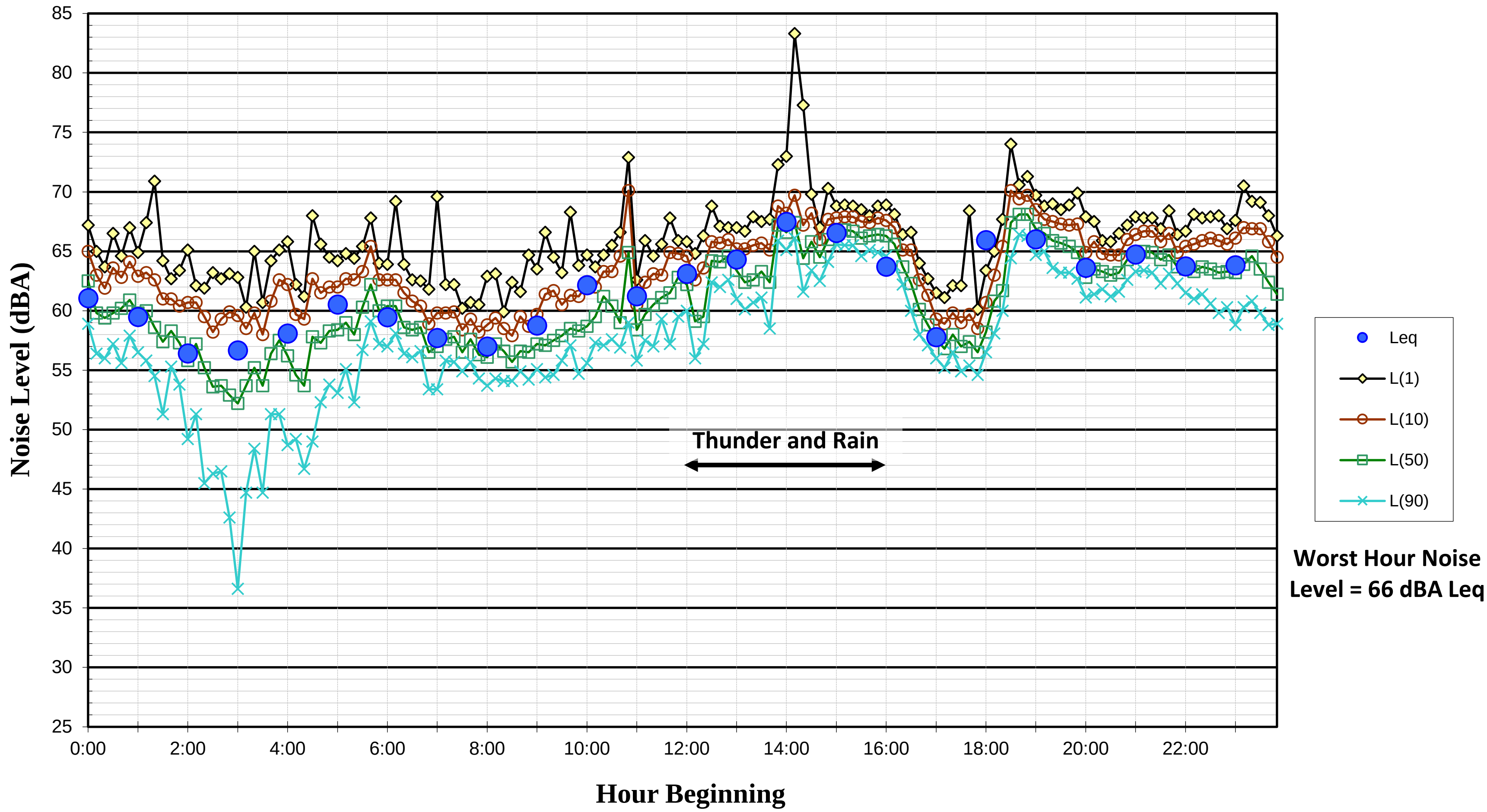


Figure 6: Noise Levels at LT-1
Open Space Adjacent to Forest Drive Homes
Friday, May 15, 2015
Light Thunderstorm
Noise Level (dBA)
85
80
75
70
65
60
55
50
45
40
35
30
25
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
22:00
Hour Beginning
Leq
L(1)
L(10)
L(50)
L(90)
Worst Hour Noise Level = 65 dBA Leq

Figure 7: Noise Levels at LT-1
Open Space Adjacent to Forest Drive Homes
Saturday, May 16, 2015



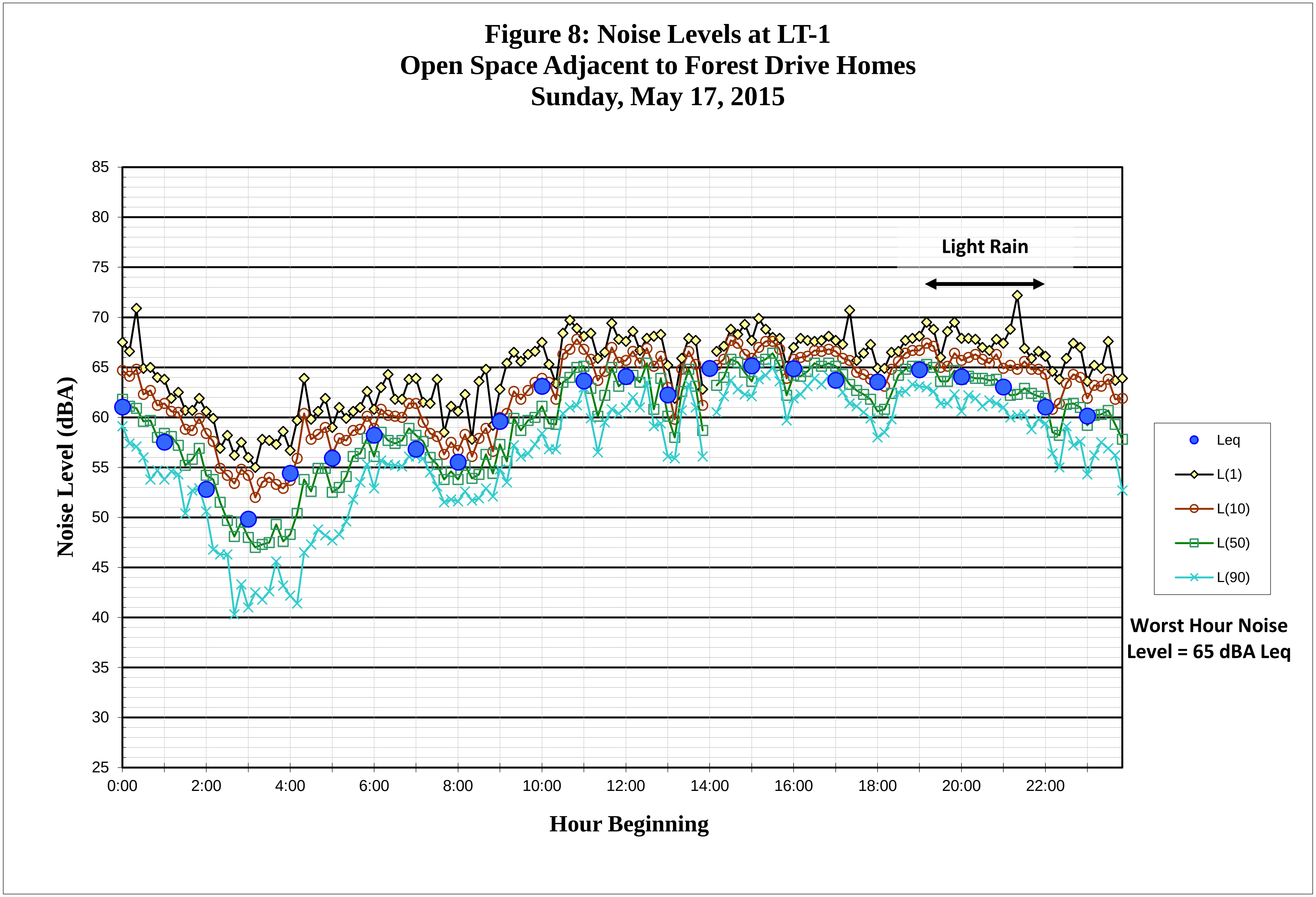


Figure 8: Noise Levels at LT-1
Open Space Adjacent to Forest Drive Homes
Sunday, May 17, 2015
Light Rain
Noise Level (dBA)
85
80
75
70
65
60
55
50
45
40
35
30
25
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
22:00
Hour Beginning
Leq
L(1)
L(10)
L(50)
L(90)
Worst Hour Noise Level = 65 dBA Leq

Figure 9: Noise Levels at LT-1
Open Space Adjacent to Forest Drive Homes
Monday, May 18, 2015

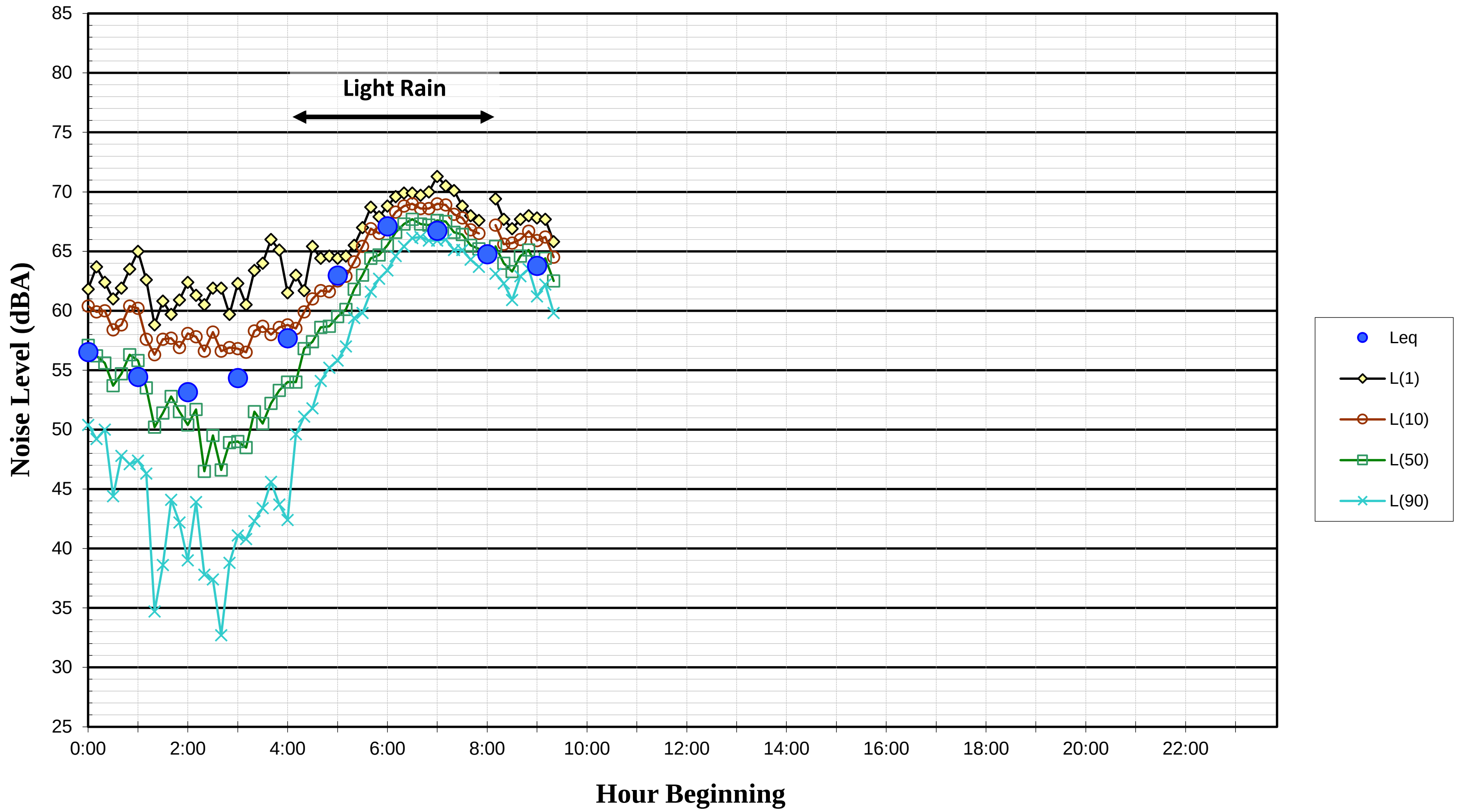
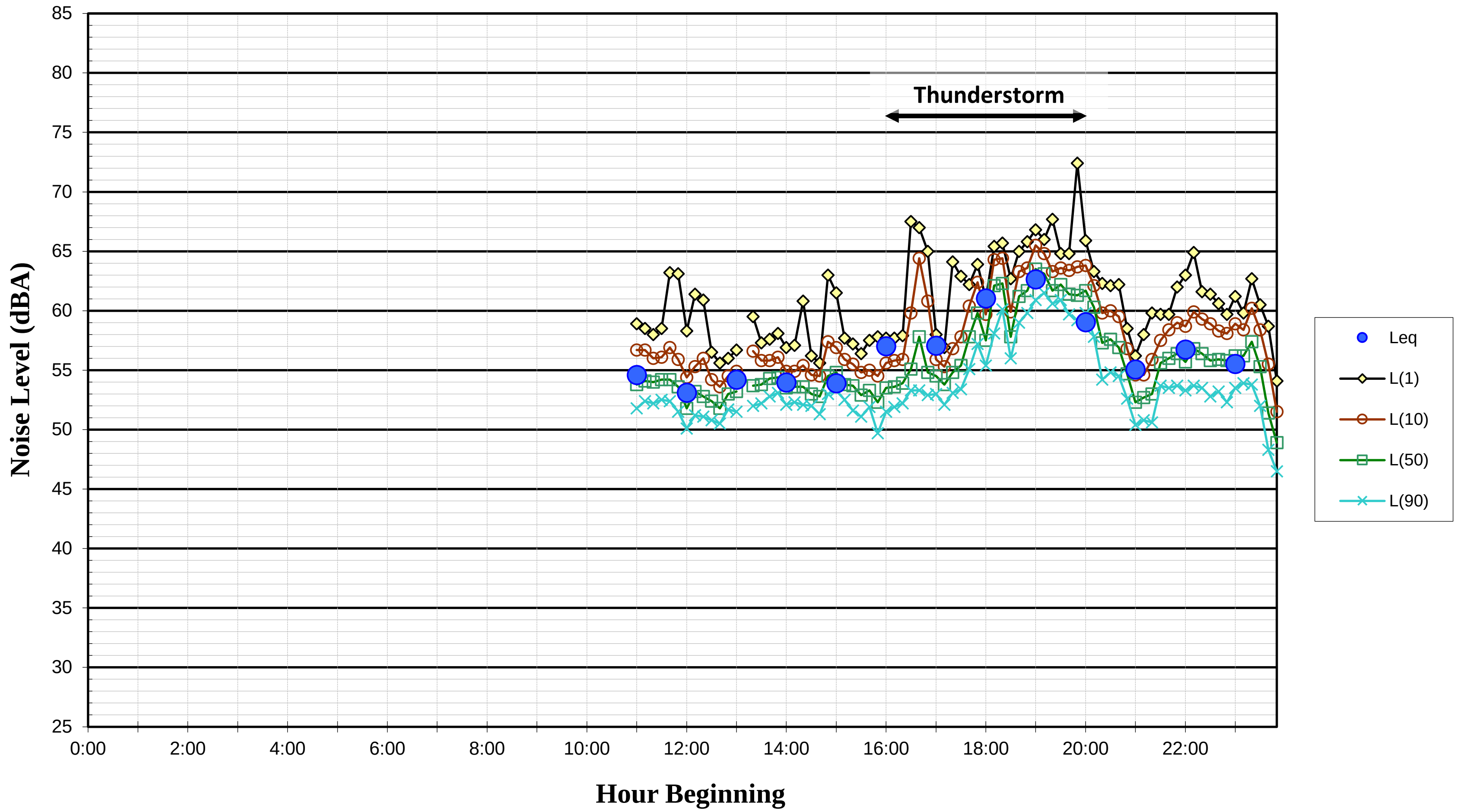


Figure 10: Noise Levels at LT-2
Open Space Adjacent to Aberdeen Circle Homes
Tuesday, May 12, 2015



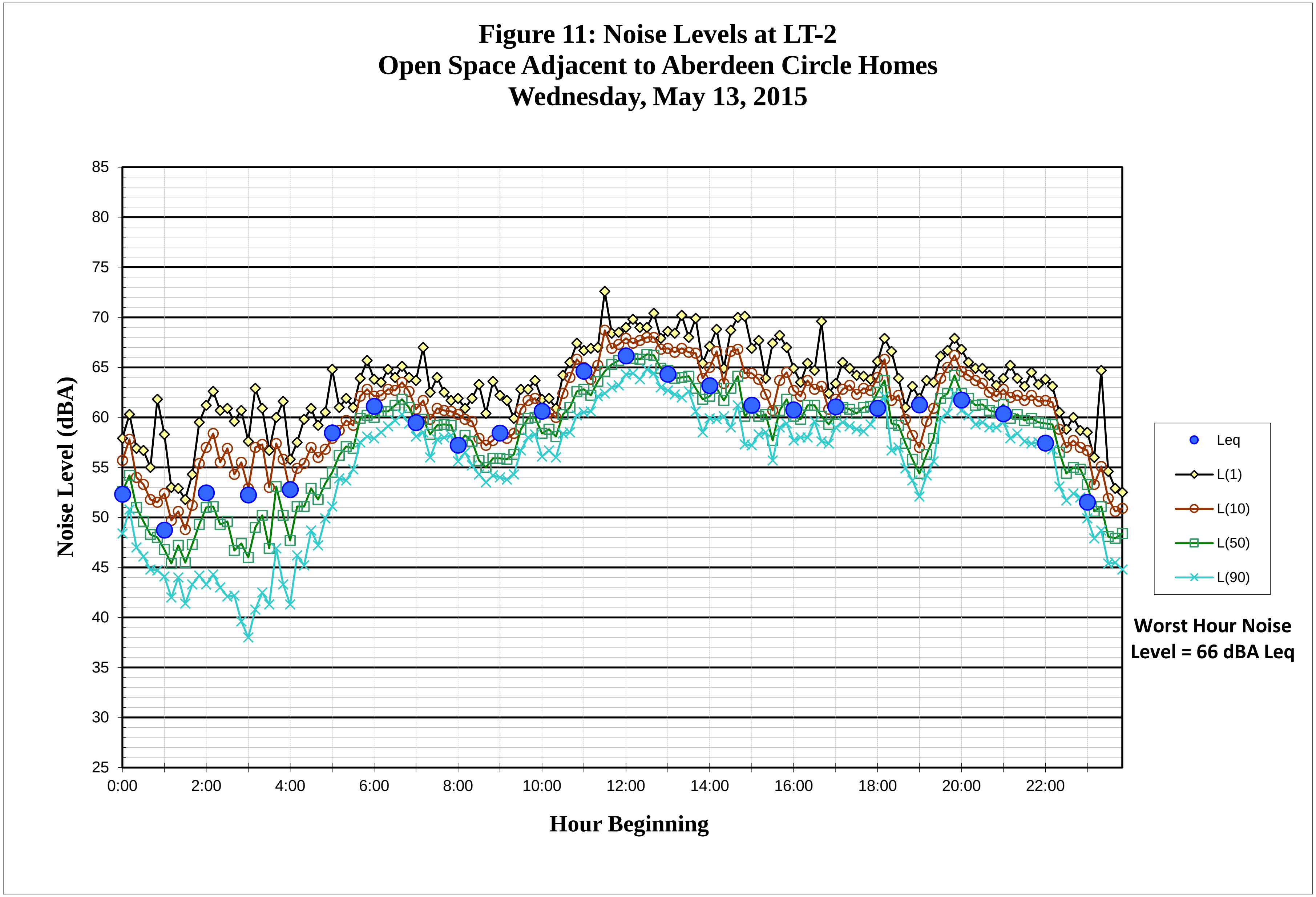


Figure 11: Noise Levels at LT-2
Open Space Adjacent to Aberdeen Circle Homes
Wednesday, May 13, 2015
Noise Level (dBA)
85
80
75
70
65
60
55
50
45
40
35
30
25
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
22:00
Hour Beginning
Leq
L(1)
L(10)
L(50)
L(90)
Worst Hour Noise Level = 66 dBA Leq

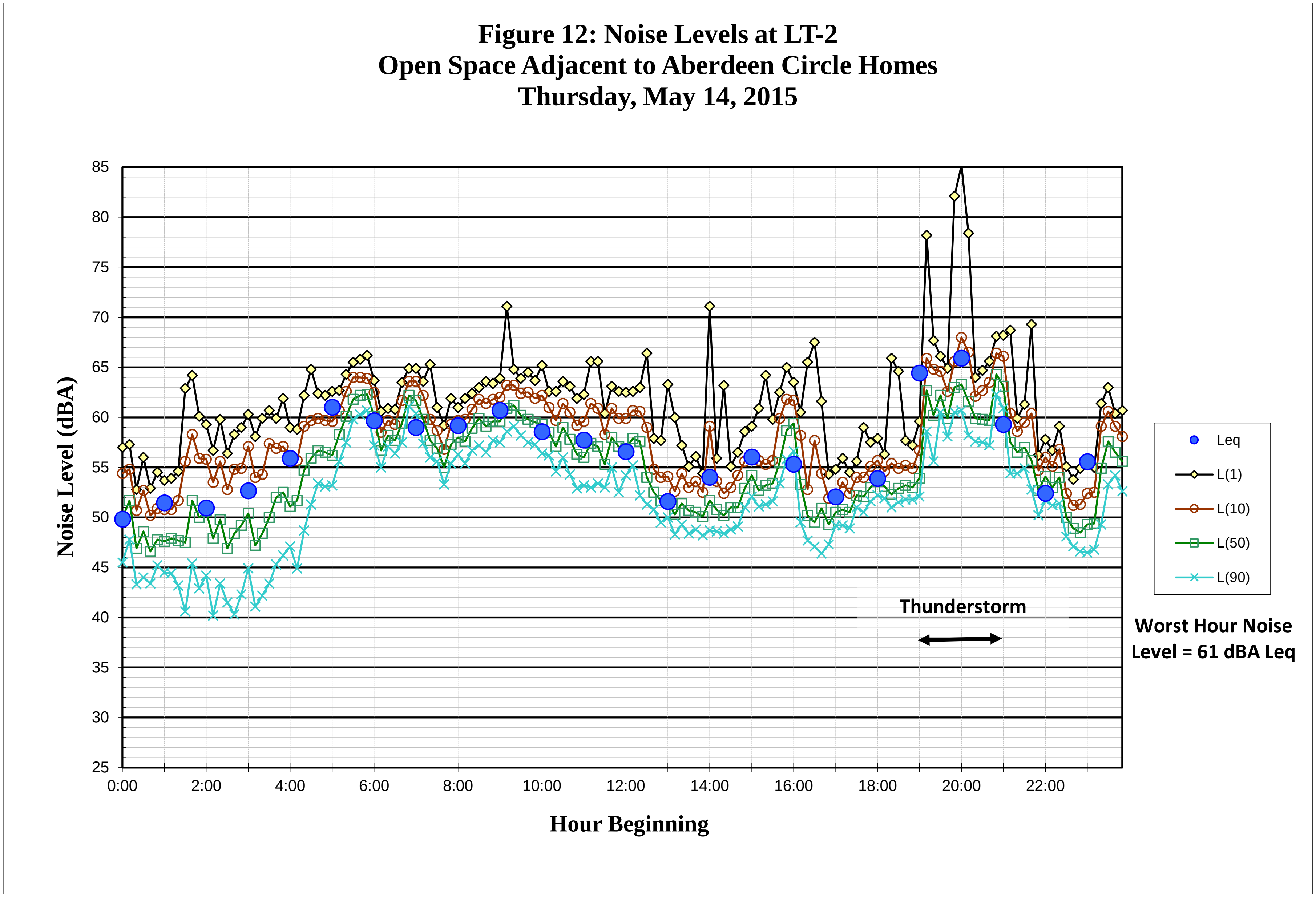


Figure 12: Noise Levels at LT-2
Open Space Adjacent to Aberdeen Circle Homes
Thursday, May 14, 2015
Noise Level (dBA)
85
80
75
70
65
60
55
50
45
40
35
30
25
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
22:00
Hour Beginning
Thunderstorm
Leq
L(1)
L(10)
L(50)
L(90)
Worst Hour Noise Level = 61 dBA Leq

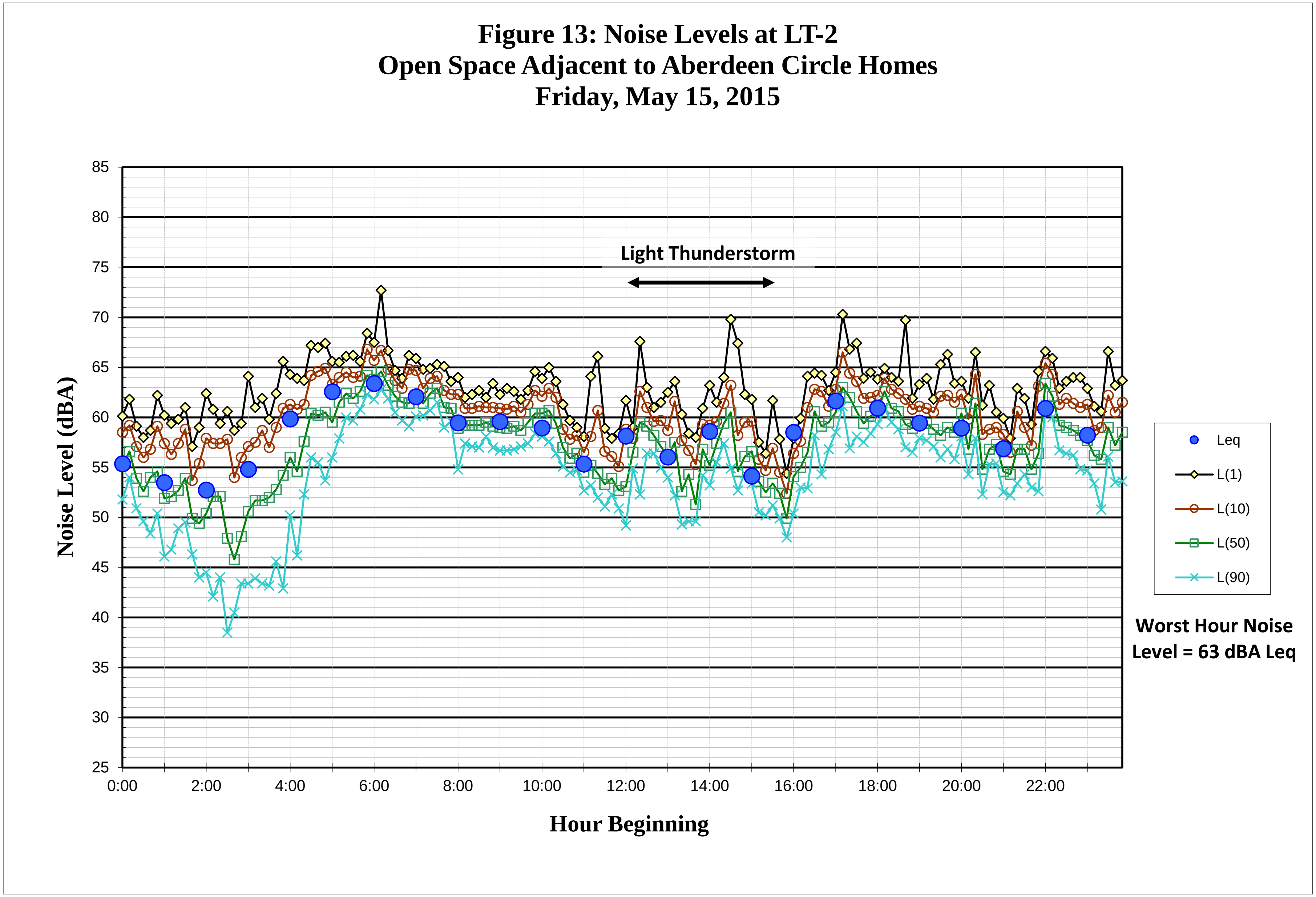


Figure 13: Noise Levels at LT-2
Open Space Adjacent to Aberdeen Circle Homes
Friday, May 15, 2015
Light Thunderstorm
Noise Level (dBA)
85
80
75
70
65
60
55
50
45
40
35
30
25
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
22:00
Hour Beginning
Leq
L(1)
L(10)
L(50)
L(90)
Worst Hour Noise Level = 63 dBA Leq

Figure 14: Noise Levels at LT-2
Open Space Adjacent to Aberdeen Circle Homes
Saturday, May 16, 2015

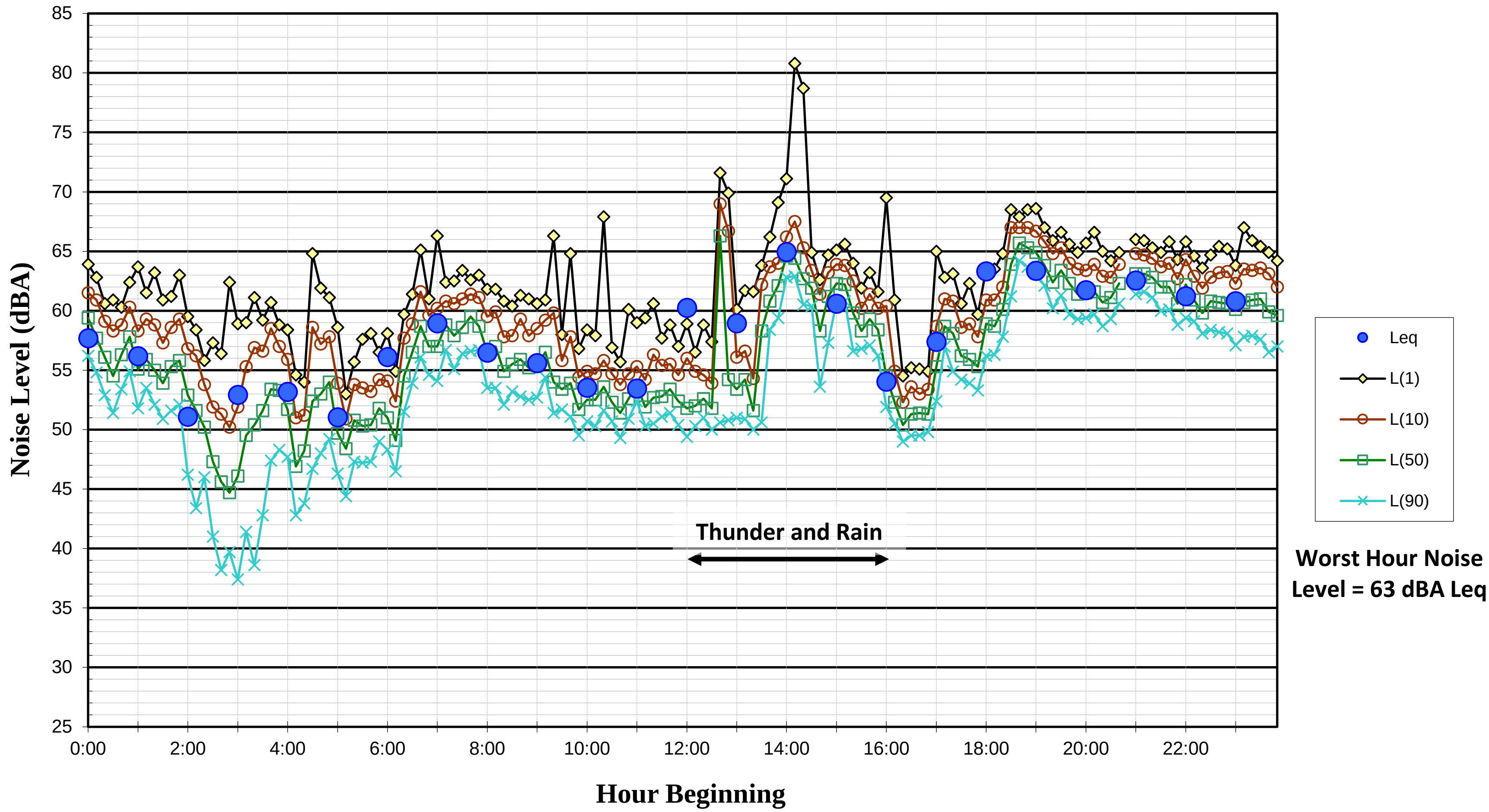


Figure 15: Noise Levels at LT-2
Open Space Adjacent to Aberdeen Circle Homes
Sunday, May 17, 2015

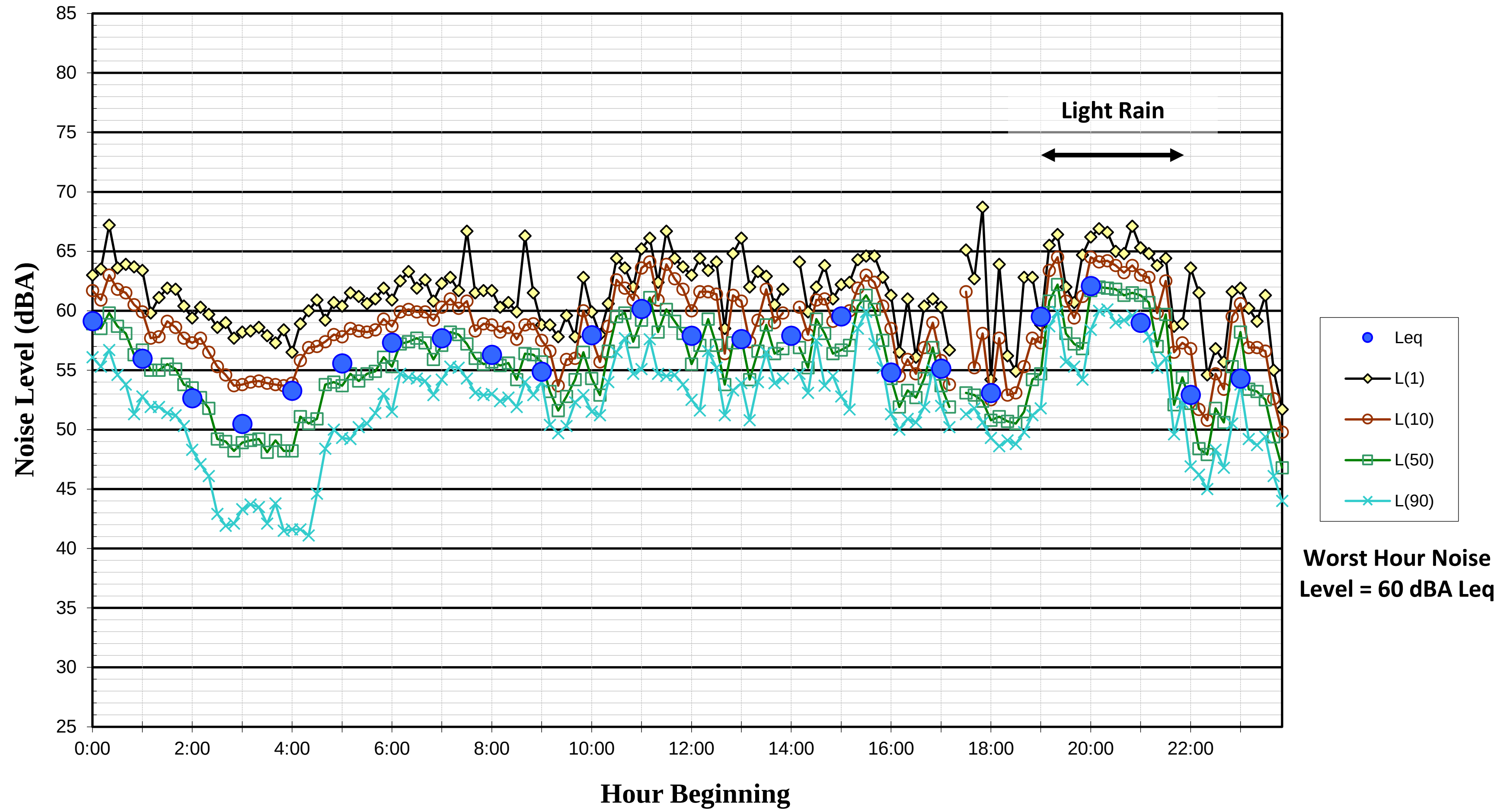
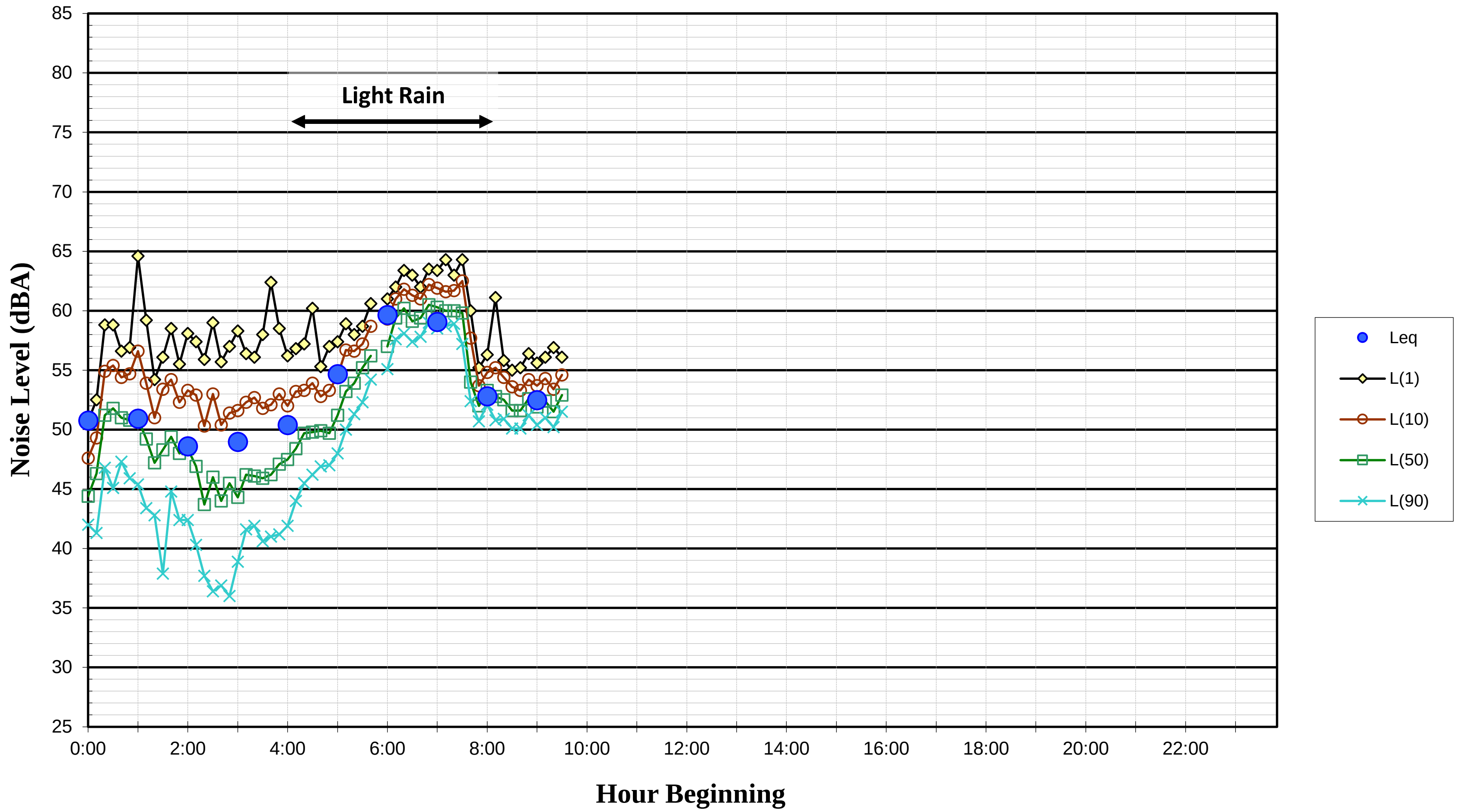


Figure 16: Noise Levels at LT-2
Open Space Adjacent to Aberdeen Circle Homes
Monday, May 18, 2015



Appendix A Site Photographs


LT-1: Open Space Adjacent to Forrest Drive Homes


LT-2: Open Space Adjacent to Aberdeen Circle Homes


ST-1: Backyard of 8502 Forrest Street


ST-2: Backyard of 8552 S. Mallard Place


ST-3: Backyard of 28 Caleridge Court


ST-4: Front Yard of 8602 Canongate Lane

Appendix B Definition of Technical Terms

Term	Definition
Decibel, dB	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro-Pascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 p.m. and 7:00 a.m.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels measured in the night between 10:00 p.m. and 7:00 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurements and Noise Control, Harris, 1998.

Exhibit B

	2015 EA dB Results Compared to HRNC Results	Worst Hour					
CDOT Modeled Receptor ID	Address	CDOT 2006 Measured Worst Hour dB(A)	CDOT 2013 Existing dB(A) Model	HRNC 2015 Measured Worst Hour dB(A)	Existing Difference CDOT - HRNC dB(A)	2035 CDOT Proposed Action dB(A) Model	Predicted Difference to Existing CDOT - HRNC dB(A)
5	8502 Forrest St. (High Gate) (420' from C-470)	71	64.9	71	-6.1	69.0	-2.0
28	8552 S. Mallard PL (Summerhill) (425' from C-470)		60.5	67	-6.5	63.4	-3.6
33	28 Caleridge CT (GEV) (490' from C-470)		63.0	71	-8.0	67.9	-3.1
28	8602 Canongate LN (GEV Gate) (400' from C-470)		60.1	70	-9.9	65.1	-4.9

CDOT Existing Modeled noise levels are 6 - 10 dB(A) less than HRNC measured worst hour noise levels.
CDOT Future noise levels in 2035 are less than HRNC 2015 existing measured worst hour noise levels.

Benefitted Receptors Comparison	2006	2015	Difference	% Reduction
Venneford Ranch	115	22	-93	-80%
GEV	61	9	-52	-85%

Notes:

2006

CDOT measured long-term noise levels for 24 hours for one week at 11 locations at actual residences
STAMINA under predicted noise levels for locations east of Kipling. CDOT used a correction factor of +3dB(A) added to each location

2015

CDOT only measured short term noise levels at the HR sign 200' from the highway and at David Lorenz Park and not at actual residences
CDOT Research Study: CDOT -2005-21 concludes that TNM is under predicting and average of 2 to 3 dB at distances of 300' - 500' from the road and under predicting by 2 to 6 DB at distances between 500' and 1,000' from the roadway

HRNC measured short-term noise levels at four actual residences
HRNC measured long-term noise levels at two locations for 24 hours for six days.
HRNC monitored traffic and speed results during short term measurements

CDOT changed the noise measurement methodology from 2006 to 2015 and obtained immensely different results
CDOT protocol for use of the TNM can be found in the Traffic noise Model User's guide for Colorado DOT Projects (2006)
Section 4.0 Noise Model Validation: L-T Measurements: 3-4 days of data is required at a minimum and one week of data is desired.

Exhibit C

From: Carter Sales [mailto:csales3@aol.com]
Sent: Friday, August 21, 2015 9:33 AM
To: Larry Graber <LRGraber@swissenergy.com>
Subject: FW: C-470- HRNC Cover Letter & Technical Response

Hi Larry I received this from Mr. Chesser.

From: Chesser - CDOT, Jonathon [mailto:jonathon.chesser@state.co.us]
Sent: Friday, August 21, 2015 9:19 AM
To: Carter Sales <csales3@aol.com>
Cc: Estes - CDOT, Jerome <jerome.estes@state.co.us>; Michael Lewis - CDOT <michael.p.lewis@state.co.us>; Paul Jesaitis - CDOT <paul.jesaitis@state.co.us>; Carrie DeJiacomo - CDOT <carrie.dejiacomo@state.co.us>; Art Griffith <AGriffit@douglas.co.us>; Melinda Urban (FHWA) <melinda.urban@dot.gov>
Subject: Re: C-470- HRNC Cover Letter & Technical Response

All,

A couple of notes regarding Mr. Sales' email:

1. His email admits that although they did collect vehicle traffic counts at the time of field measurements, they have not presented or used this information as they did not develop and calibrate their own traffic model. Per 2015 CDOT guidance, the use of traffic data and field measurements to calibrate a noise model is **required** as part of the process for assessing noise impacts and mitigation recommendations. Therefore, they did not follow current CDOT guidance in the development of their impact numbers. The fact that they did follow guidance in the collection of field measurements is only part of the required process.

2. The impact numbers Mr. Sales is using for comparison to CDOT's model results are not supported by their raw data. The numbers have been inflated and the inflation assumptions are not presented in the report or his email. For example, 71 db(A) is used in two if the four measurements, yet no actual raw data measurement exceeds 69 db(A) for Station 1 and 66 db(A) for the Station 2. For station 1, 69 was hit once over five days and all other readings were below 66. For station 2, 66 was hit only once and all other readings were below 63. This is for the worst reading of the day over 5 days. So how they conclude and use worst hour readings of 71, 71 and 70 as stated in their documentation is not explained.

3. Because HRNC did not develop a calibrated noise model using traffic data associated with the field measurements, their existing data and future impact results are not per guidance and therefore not applicable to this project.

4. Challenging Larry Sly's credentials as a noise specialist is no problem to us. If deemed appropriate by CDOT management, Wilson can provide Larry's resume which outlines his extensive experience in this field.

5. Final conclusion - a) HRNC has admitted to not following all of CDOT's guidance for developing noise impacts. The only part they followed was in the collection of field measurements, which is only part of the required process. b) They have not explained the inflation in their stated noise measurements when compared to their own raw data provided in the consultant report. c) CDOT's responses remain true and valid as Mr. Sales' email provides no new information on their conclusions.

Please let me know if you would like to discuss any of this in further detail. Thank you.

Jon

Jon Chesser
Environmental Program Manager

CDOT COLORADO Department of Transportation
Office of Major Project Development

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On Fri, Aug 21, 2015 at 8:41 AM, Carter Sales <csales3@aol.com> wrote:

Dear Jerome: I am in receipt of your letter. Please be aware that we did monitor the vehicle traffic counts and vehicle speed data via video camera and speed gun at the same day and time periods that we took our short-term noise readings. We have this data archived and have not used it since we did not develop or validate our own TNM.

Our noise monitoring survey was preformed according to FHWA and CDOT guidelines and was done to compare the results of the CDOT TNM model in the study areas. Logically a valid TNM model would confirm our actual noise data from actual residences and this is not the case. Now that we have the modeled noise results from the CDOT noise technical report, we have compared our existing noise readings at the actual residences to the corresponding identified receptor sites. At every location, our noise readings exceed the noise modeling for both Existing 2013/2035 No-Action sites and Proposed Action 2035 sites. Our existing noise levels exceed the modeled Existing 2013/2035 No-Action levels by 6 to 10 dB(A) and Proposed Action 2035 sites by 2 to 5 dB(A). Our results are also supported by the CDOT-2005-21 study which concludes that the TNM 2.5 under predicts noise levels by more than 2dB at distances greater than 300 feet from the roadway. Note all of our residences are greater than 300 feet from the roadway. The compilation of the CDOT noise data and TNM translates into the enormous reductions in benefitted receptors from 2006 compared to 2015 and the consequential failure of the “reasonable” test. Please see the attached comparison of our noise results to CDOT modeled results.

It is also our understanding that Wilson & Co performed the noise study “in house” by Larry E. Sly as the noise engineer. I am not able to find any information on Wilson & Co.’s web site citing their expertise in highway noise studies and noise modeling experience. Please forward Larry’s resume and supporting information relating to Wilson & Co.’s direct highway noise consulting and modeling experience by COB 8/24.

Attached is our engineer, Dana Lodico’s, resume. Please visit Illingworth & Rodkin, Inc. for their expertise in highway noise consulting.

We stand by our statement that we have offered substantive evidence that the TNM is flawed and we will continue to pursue our challenge to the noise abatement issue by utilizing all available means.

Sincerely, Carter

From: Estes - CDOT, Jerome [mailto:jerome.estes@state.co.us]
Sent: Thursday, August 20, 2015 10:42 AM
To: Carter Sales <csales3@aol.com>
Cc: Michael Lewis - CDOT <michael.p.lewis@state.co.us>; Paul Jesaitis - CDOT <paul.jesaitis@state.co.us>; Carrie DeJiacomo - CDOT <carrie.dejiacomo@state.co.us>; Jonathon Chesser - CDOT <jonathon.chesser@state.co.us>; AGriffit@douglas.co.us; melinda.urban@dot.gov
Subject: C-470- HRNC Cover Letter & Technical Response

Hello Carter,

Please find attached as requested.

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Best regards,

Jerome Estes, P.E.

Project Director

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