# APPENDIX C:
# Noise Data

| | | | |
|---|---|---|---|
| Site Number: NM-1 | | | |
| Recorded By: Ryan Chiene | | | |
| Job Number: 136991 | | | |
| Date: 8/3/13 | | | |
| Time: 1:31 PM | | | |
| Location: North end of project site, next to Paddle Surf Warehouse, south of W 17th Street | | | |
| Source of Peak Noise: Traffic on W 17th Street, wind, cars pulling out of parking lots in surrounding area. | | | |
| Noise Data | | | |
| Leq (dB) | Lmin (dB) | Lmax (dB) | Peak (dB) |
| 66.4 | 49.4 | 78.9 | 101.5 |

| Equipment | | | | | | |
|---|---|---|---|---|---|---|
| Category | Type | Vendor | Model | Serial No. | Cert. Date | Note |
| Sound | Sound Level Meter | Brüel & Kjær | 2250 | 2548189 | 7/12/2013 | |
| | Microphone | Brüel & Kjær | 4189 | 2543364 | 7/12/2013 | |
| | Preamp | Brüel & Kjær | ZC 0032 | 4265 | 7/12/2013 | |
| | Calibrator | Brüel & Kjær | 4231 | 2545667 | 7/12/2013 | |

| Weather Data | | | |
|---|---|---|---|
| Est. | Duration: 10minutes | Sky: Sunny | |
| | Note: dBA Offset = 0.02 | Sensor Height (ft): 5 ft | |
| | Wind Ave Speed (mph / m/s) | Temperature (degrees Fahrenheit) | Barometer Pressure (inches) |
| | 2.4 | 87 | 29.89 |

## Photo of Measurement Location

## 2250

| | | |
|---|---|---|
| Instrument: | | 2250 |
| Application: | | BZ7225 Version 2.0.2 |
| Start Time: | | 09/03/2013 13:31:52 |
| End Time: | | 09/03/2013 13:41:52 |
| Elapsed Time: | | 00:10:00 |
| Bandwidth: | | 1/3-octave |
| Max Input Level: | | 138.78 |

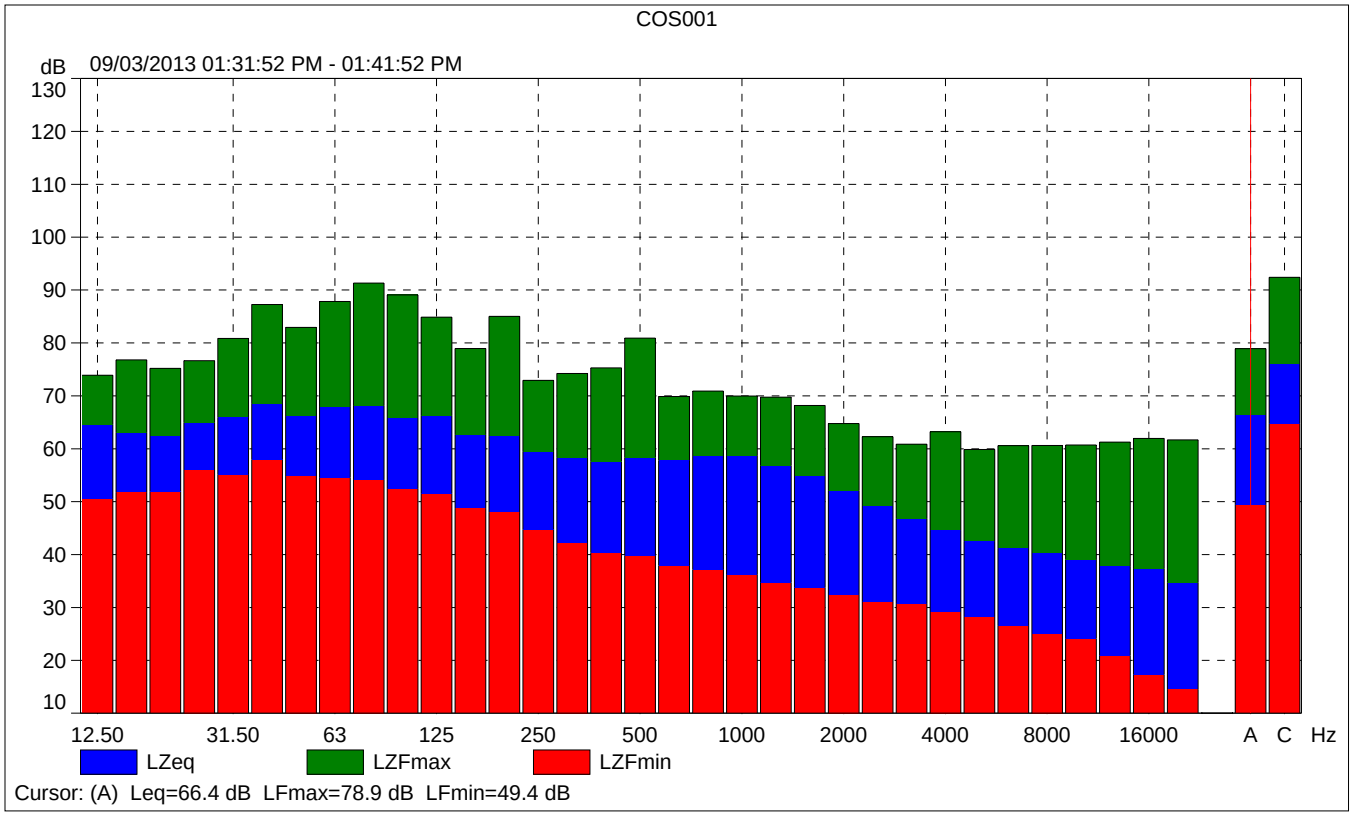
| | Time | Frequency |
|---|---|---|
| Broadband (excl. Peak): | FSI | AC |
| Broadband Peak: | | C |
| Spectrum: | FS | Z |

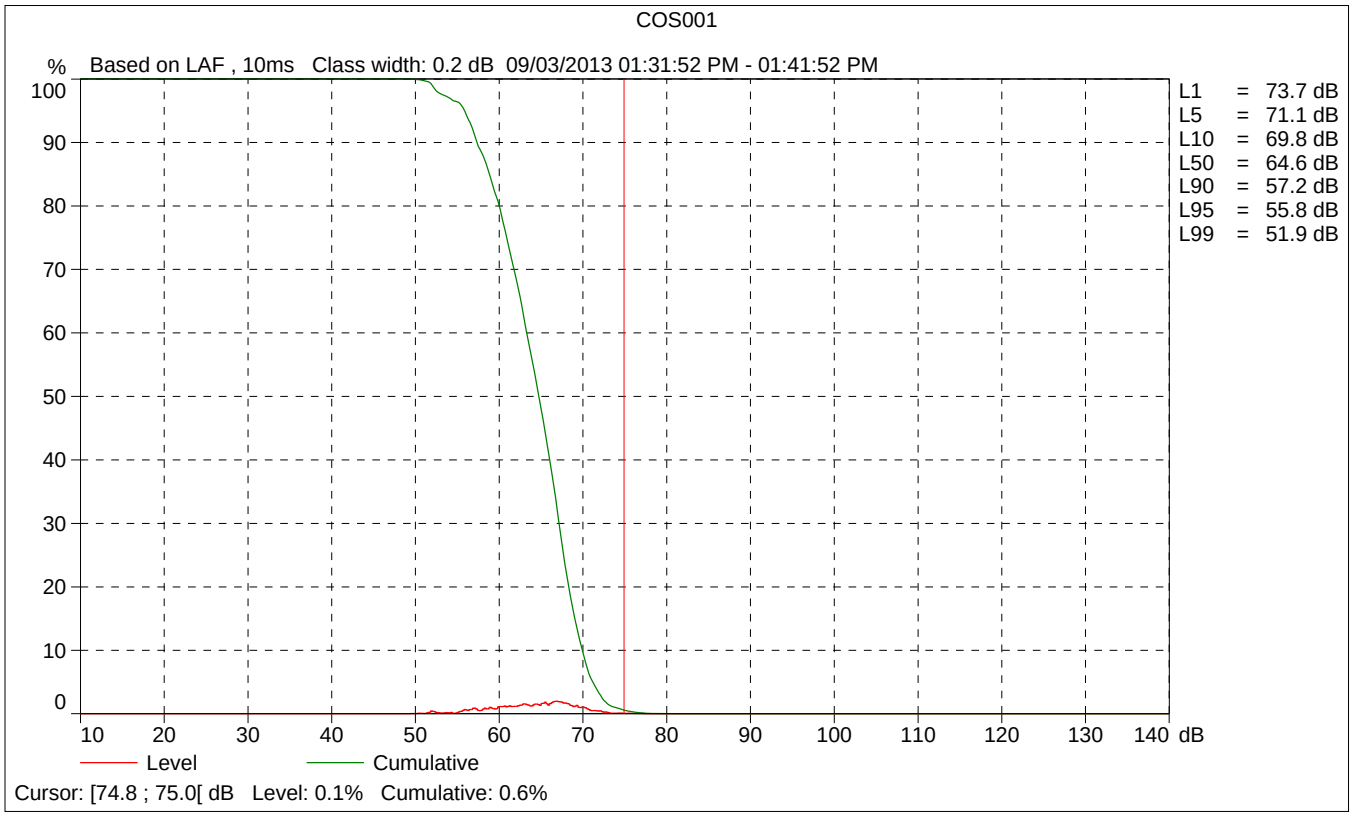
| | | |
|---|---|---|
| Instrument Serial Number: | | 2548189 |
| Microphone Serial Number: | | 2543364 |
| Input: | | Top Socket |
| Windscreen Correction: | | UA-1650 |
| Sound Field Correction: | | Diffuse-field |

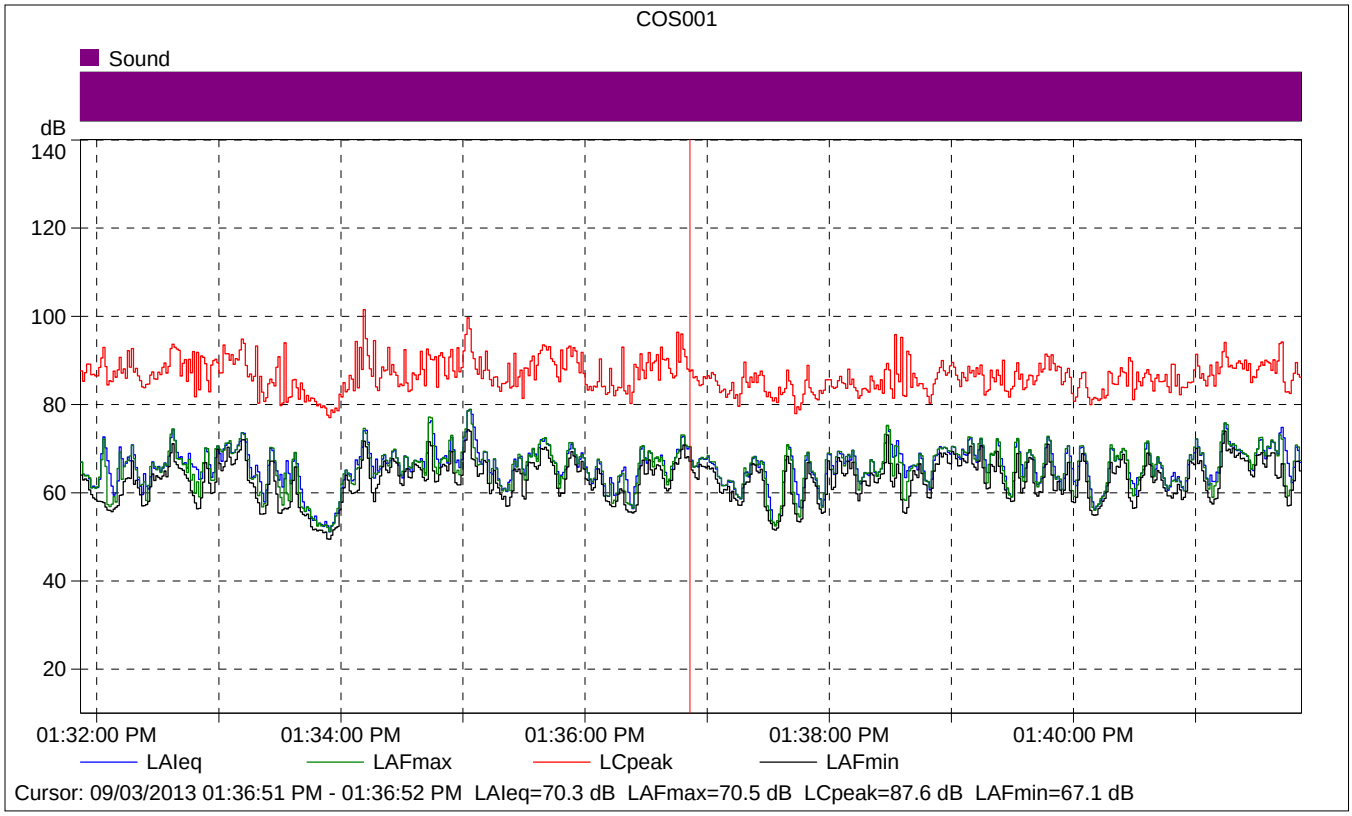
| | | |
|---|---|---|
| Calibration Time: | | 09/03/2013 08:28:13 |
| Calibration Type: | | External reference |
| Sensitivity: | | 64.14 mV/Pa |

## COS001

| | Start time | End time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|---|
| Value | | | | 0.00 | 66.4 | 78.9 | 49.4 |
| Time | 01:31:52 PM | 01:41:52 PM | 0:10:00 | | | | |
| Date | 09/03/2013 | 09/03/2013 | | | | | |

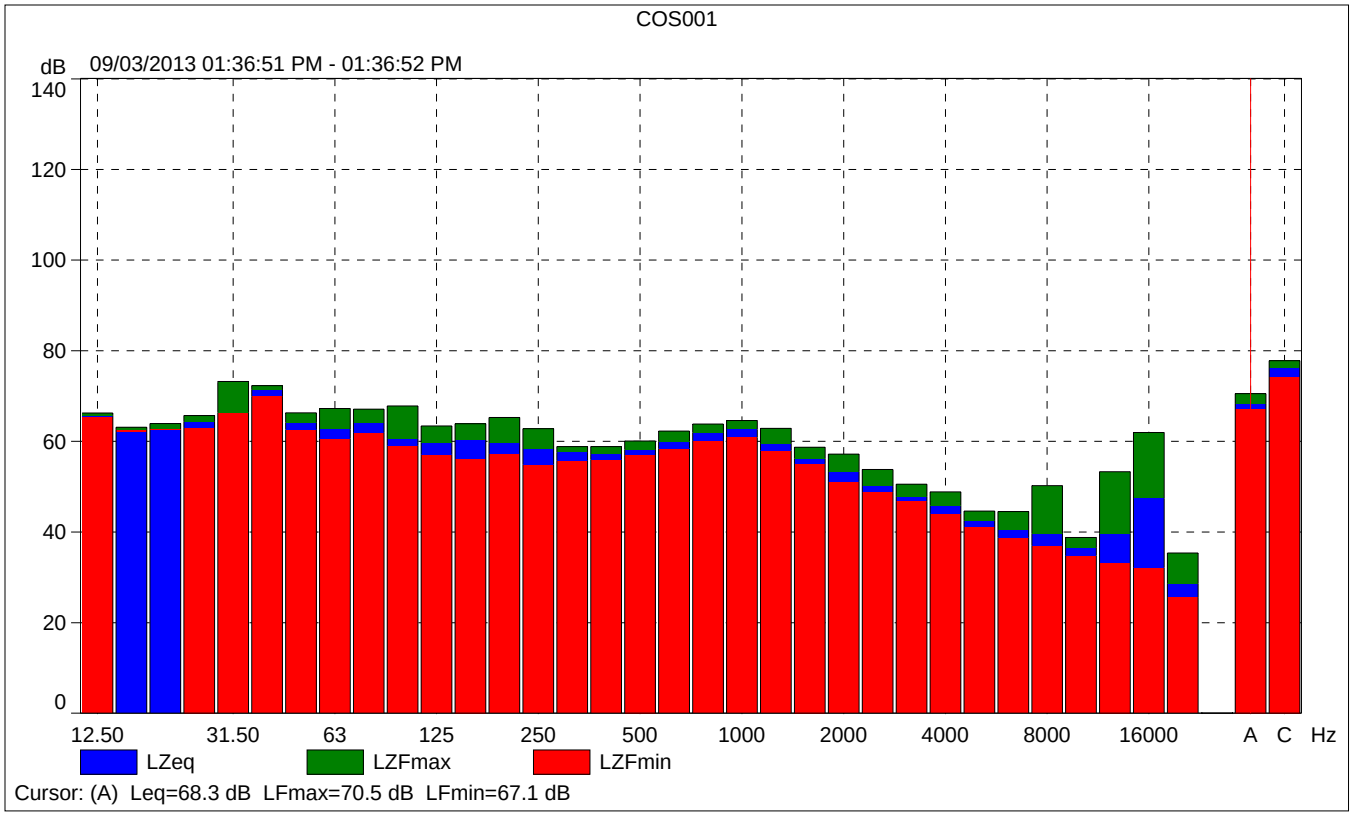

COS001
dB
09/03/2013 01:31:52 PM - 01:41:52 PM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=66.4 dB LFmax=78.9 dB LFmin=49.4 dB

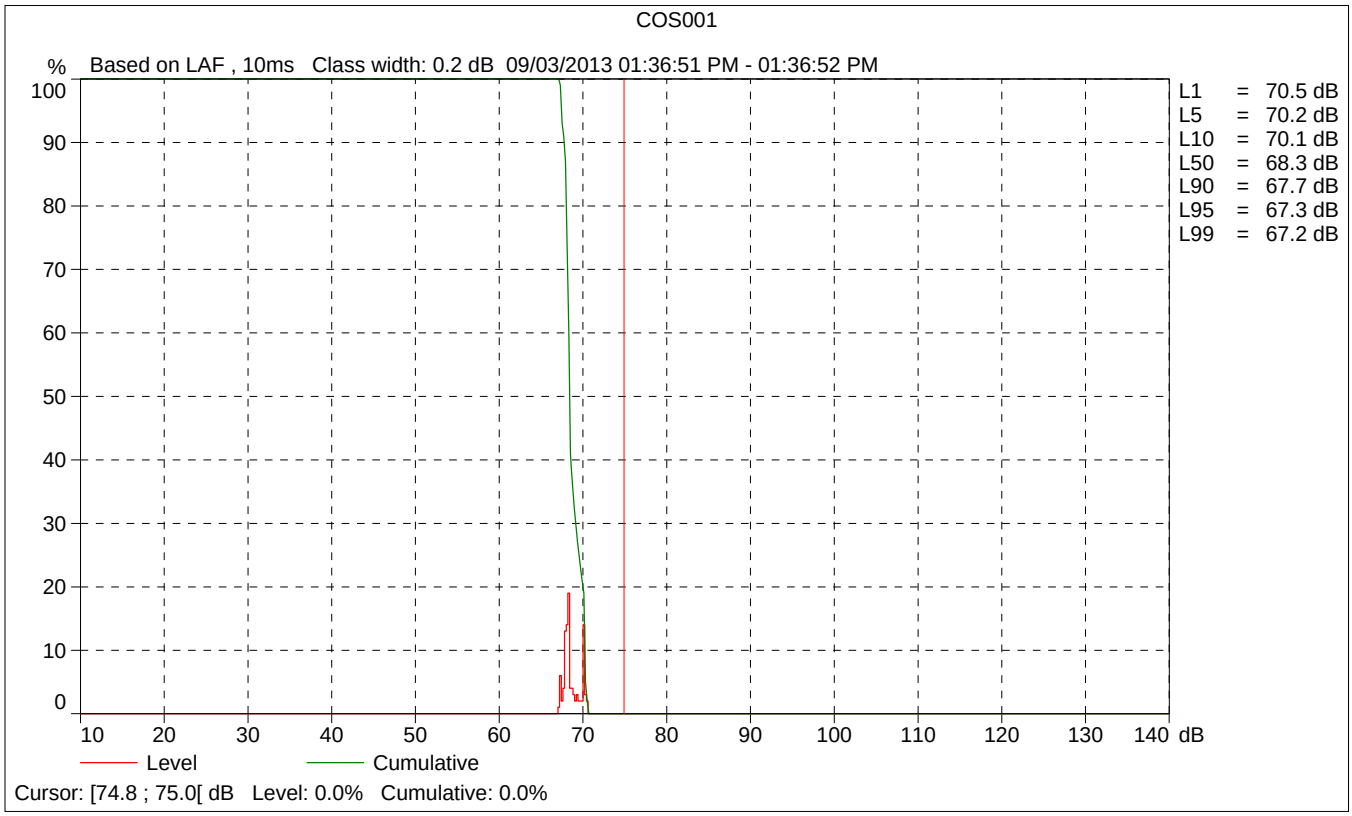

COS001
%
Based on LAF , 10ms Class width: 0.2 dB 09/03/2013 01:31:52 PM - 01:41:52 PM
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 73.7 dB
L5 = 71.1 dB
L10 = 69.8 dB
L50 = 64.6 dB
L90 = 57.2 dB
L95 = 55.8 dB
L99 = 51.9 dB
Level
Cumulative
Cursor: [74.8 ; 75.0[ dB Level: 0.1% Cumulative: 0.6%

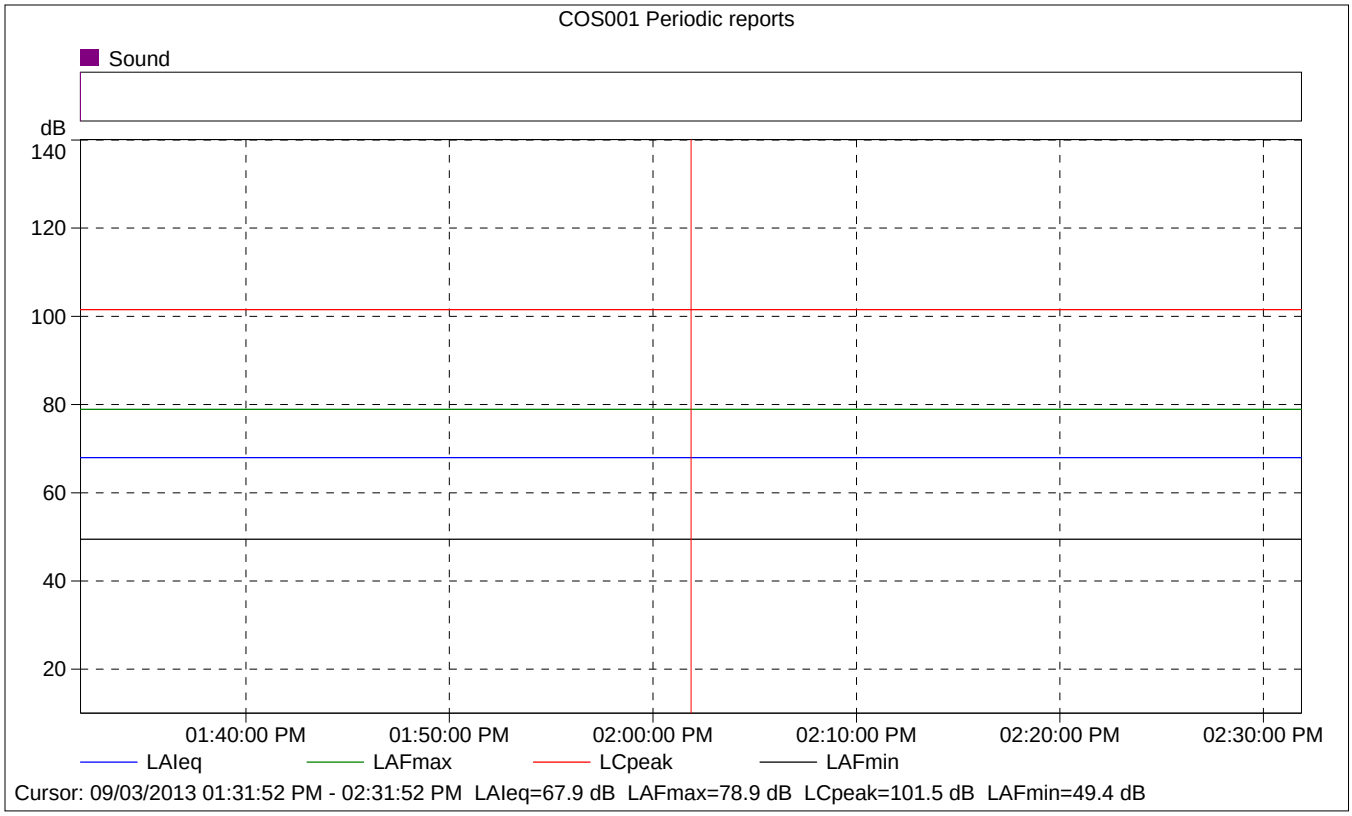



## COS001

| | Start time | Elapsed time | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|
| Value | | | 70.3 | 70.5 | 67.1 |
| Time | 01:36:51 PM | 0:00:01 | | | |
| Date | 09/03/2013 | | | | |

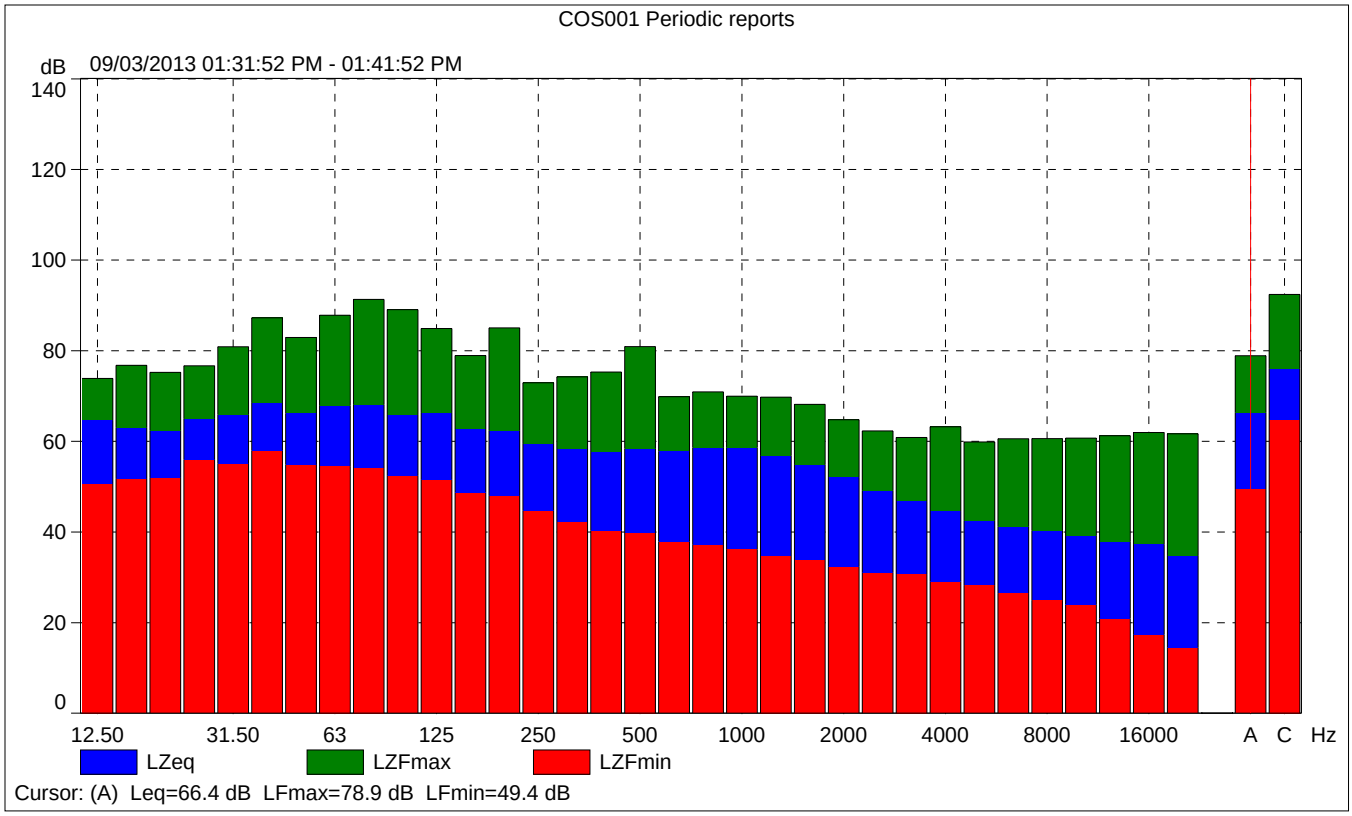

COS001
dB
09/03/2013 01:36:51 PM - 01:36:52 PM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=68.3 dB LFmax=70.5 dB LFmin=67.1 dB

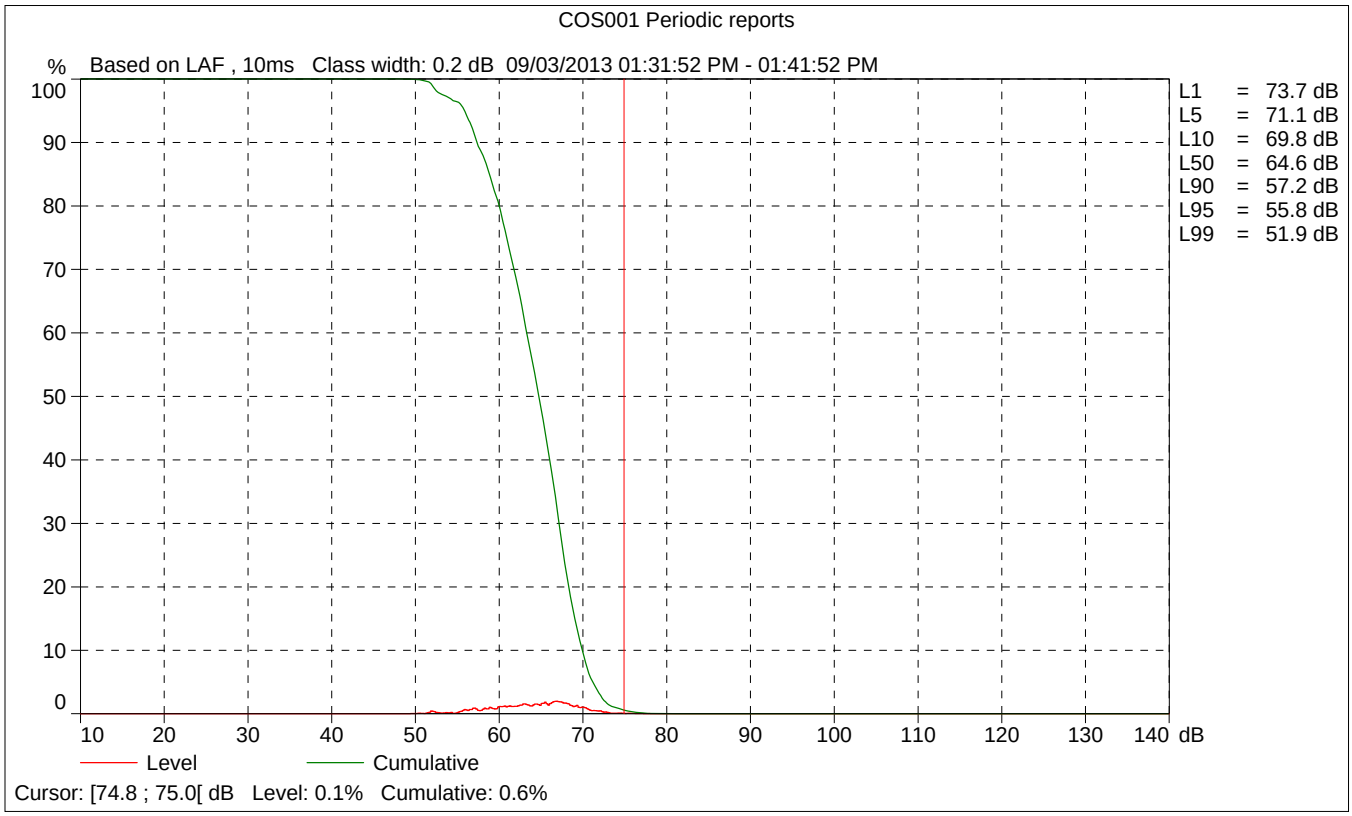

COS001
%
Based on LAF , 10ms Class width: 0.2 dB 09/03/2013 01:36:51 PM - 01:36:52 PM
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 70.5 dB
L5 = 70.2 dB
L10 = 70.1 dB
L50 = 68.3 dB
L90 = 67.7 dB
L95 = 67.3 dB
L99 = 67.2 dB
Level
Cumulative
Cursor: [74.8 ; 75.0[ dB Level: 0.0% Cumulative: 0.0%

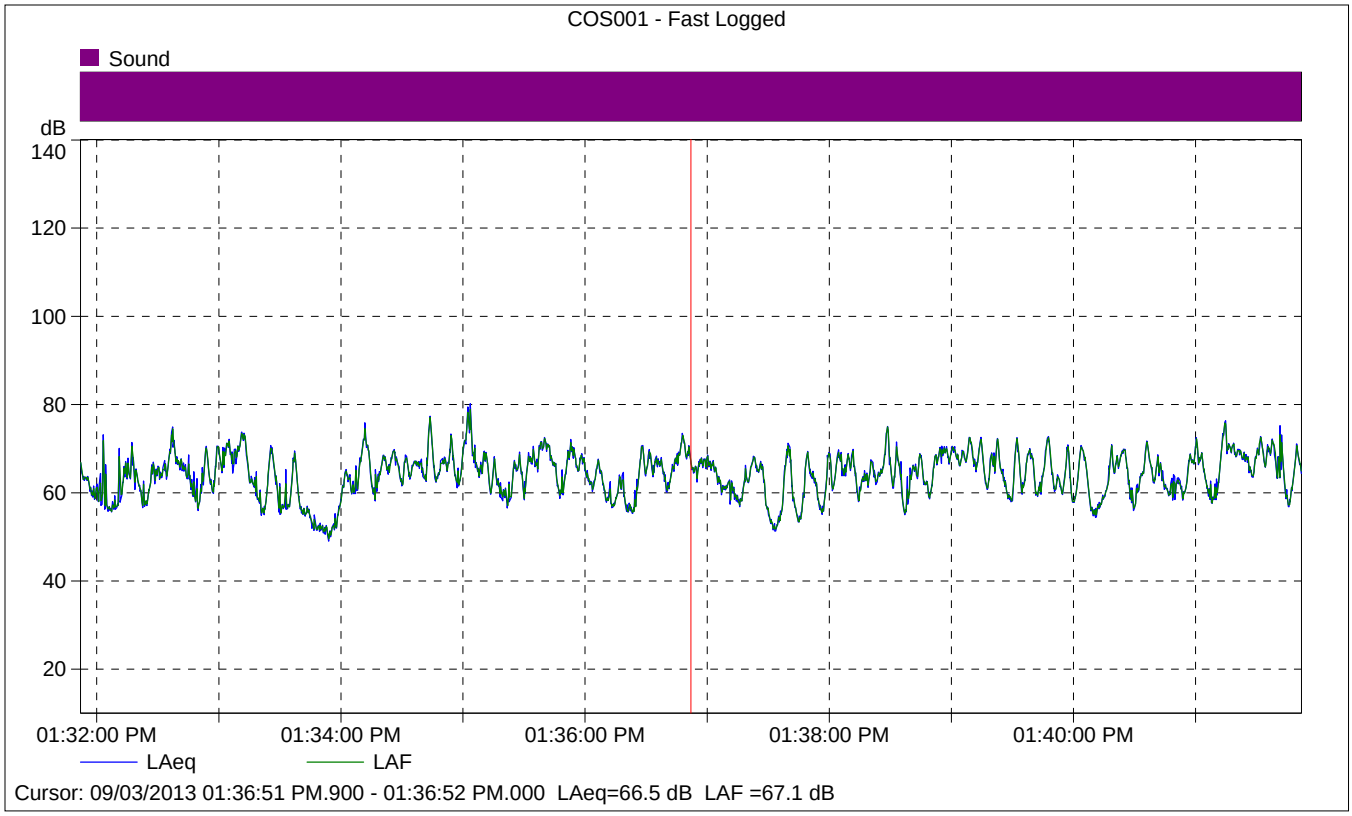



## COS001 Periodic reports

| | Start time | Elapsed time | Overload [%] | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|
| Value | | | 0.00 | 67.9 | 78.9 | 49.4 |
| Time | 01:31:52 PM | 0:10:00 | | | | |
| Date | 09/03/2013 | | | | | |


COS001 Periodic reports
dB
09/03/2013 01:31:52 PM - 01:41:52 PM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=66.4 dB LFmax=78.9 dB LFmin=49.4 dB


COS001 Periodic reports
%
Based on LAF , 10ms Class width: 0.2 dB 09/03/2013 01:31:52 PM - 01:41:52 PM
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 73.7 dB
L5 = 71.1 dB
L10 = 69.8 dB
L50 = 64.6 dB
L90 = 57.2 dB
L95 = 55.8 dB
L99 = 51.9 dB
Level
Cumulative
Cursor: [74.8 ; 75.0[ dB Level: 0.1% Cumulative: 0.6%




## COS001 - Fast Logged

| | Start time | Elapsed time | LAeq [dB] |
|---|---|---|---|
| Value | | | 66.5 |
| Time | 01:36:51 PM.900 | 0:00:00.100 | |
| Date | 09/03/2013 | | |

| | | | |
|---|---|---|---|
| **Site Number:** NM-2 | | | |
| **Recorded By:** Ryan Chiene | | | |
| **Job Number:** 136991 | | | |
| **Date:** 8/3/13 | | | |
| **Time:** 1:49 PM | | | |
| **Location:** Southern boundary of vacant lot, north of Superior Avenue, across street from Ramada Inn. | | | |
| **Source of Peak Noise:** Traffic on Superior Avenue, vans and trucks driving on Superior Avenue, wind, two bicyclists on sidewalk. | | | |
| Noise Data | | | |
| Leq (dB) | Lmin (dB) | Lmax (dB) | Peak (dB) |
| 68.1 | 52.4 | 81.9 | 106.2 |

| Equipment | | | | | | |
|---|---|---|---|---|---|---|
| Category | Type | Vendor | Model | Serial No. | Cert. Date | Note |
| Sound | Sound Level Meter | Brüel & Kjær | 2250 | 2548189 | 7/12/2013 | |
| | Microphone | Brüel & Kjær | 4189 | 2543364 | 7/12/2013 | |
| | Preamp | Brüel & Kjær | ZC 0032 | 4265 | 7/12/2013 | |
| | Calibrator | Brüel & Kjær | 4231 | 2545667 | 7/12/2013 | |

| Weather Data | | | |
|---|---|---|---|
| Est. | **Duration:** 10minutes | | **Sky:** Sunny |
| | **Note:** dBA Offset = 0.02 | | **Sensor Height (ft):** 5 ft |
| | Wind Ave Speed (mph / m/s) | Temperature (degrees Fahrenheit) | Barometer Pressure (inches) |
| | 3.5 | 86 | 29.89 |

## Photo of Measurement Location

## 2250

| | | |
|---|---|---|
| Instrument: | | 2250 |
| Application: | | BZ7225 Version 2.0.2 |
| Start Time: | | 09/03/2013 13:49:47 |
| End Time: | | 09/03/2013 13:59:47 |
| Elapsed Time: | | 00:10:00 |
| Bandwidth: | | 1/3-octave |
| Max Input Level: | | 138.78 |

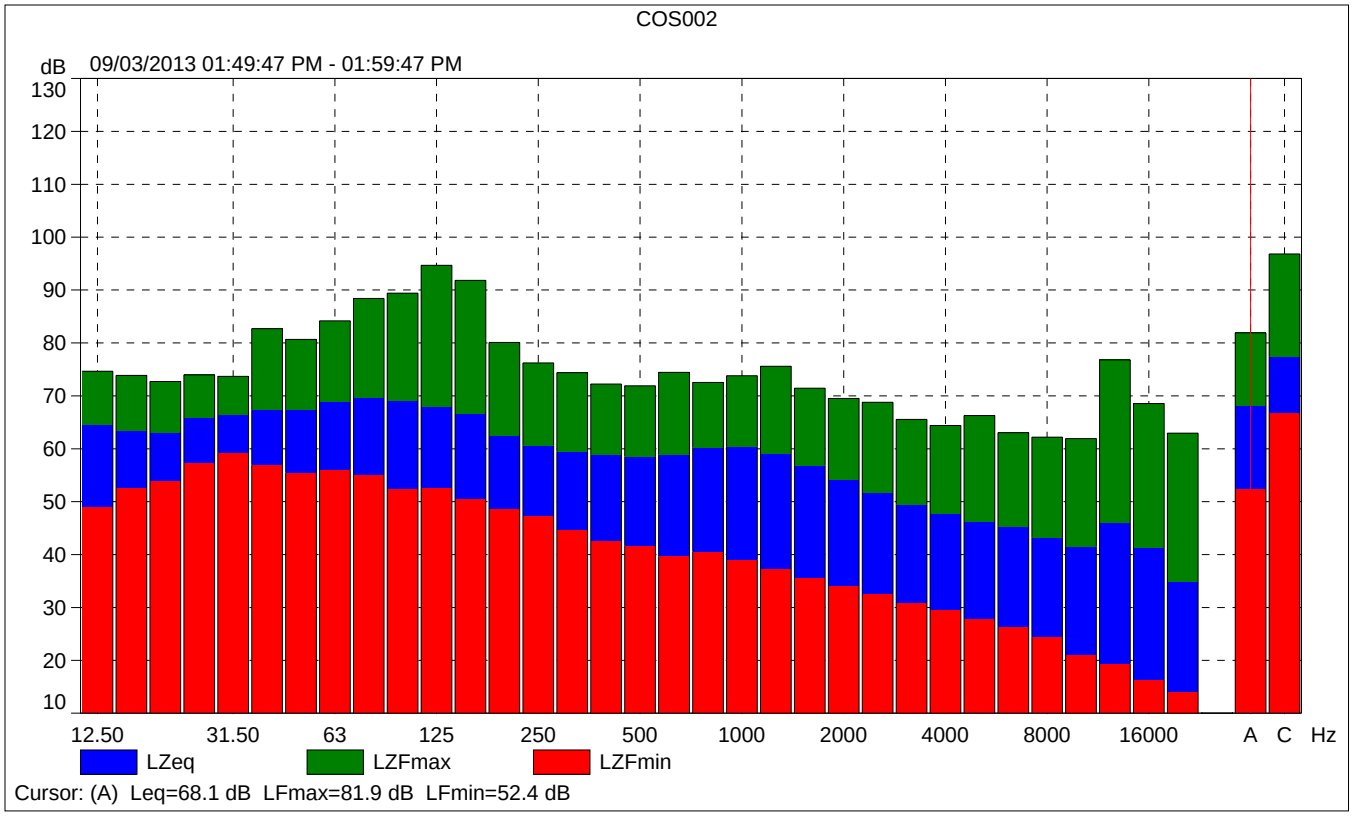
| | Time | Frequency |
|---|---|---|
| Broadband (excl. Peak): | FSI | AC |
| Broadband Peak: | | C |
| Spectrum: | FS | Z |

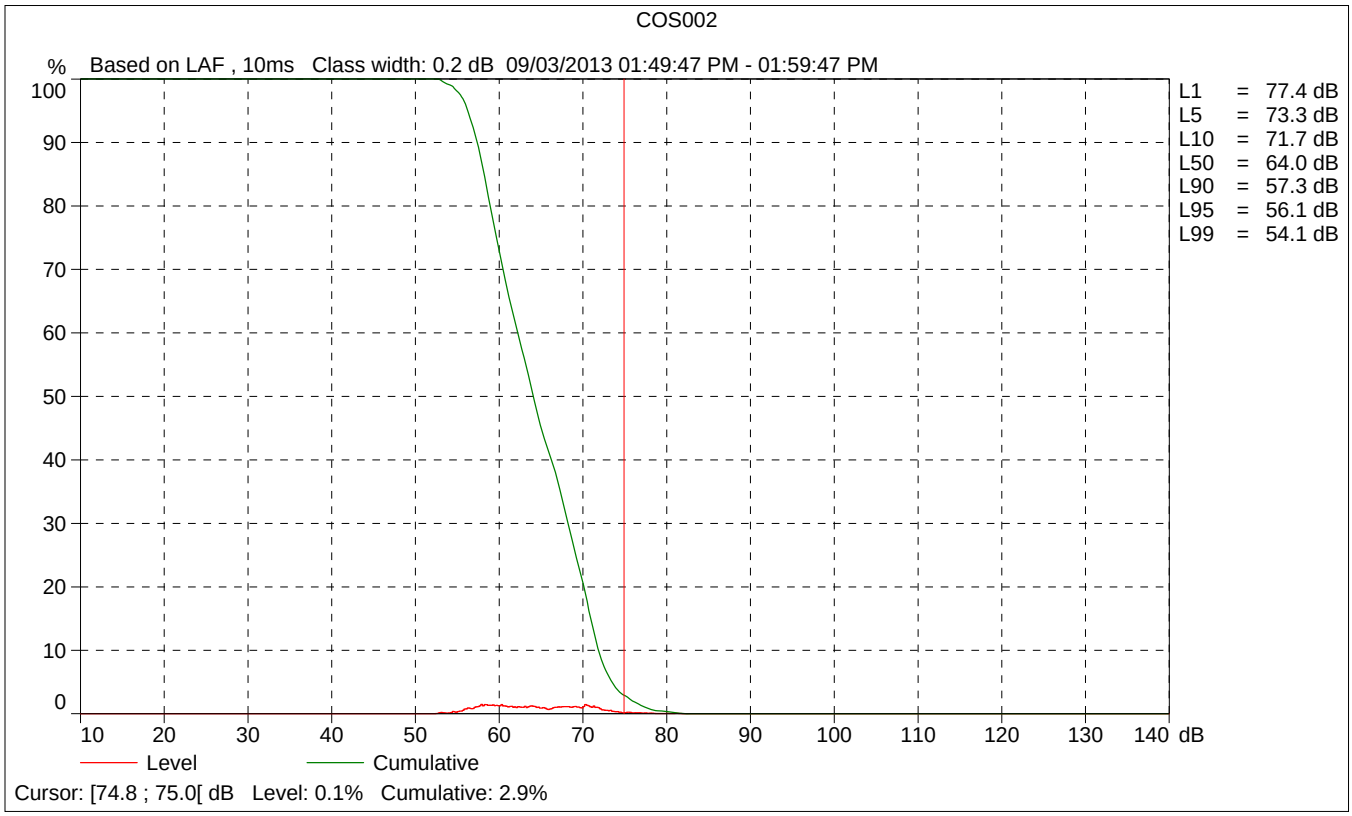
| | | |
|---|---|---|
| Instrument Serial Number: | | 2548189 |
| Microphone Serial Number: | | 2543364 |
| Input: | | Top Socket |
| Windscreen Correction: | | UA-1650 |
| Sound Field Correction: | | Diffuse-field |

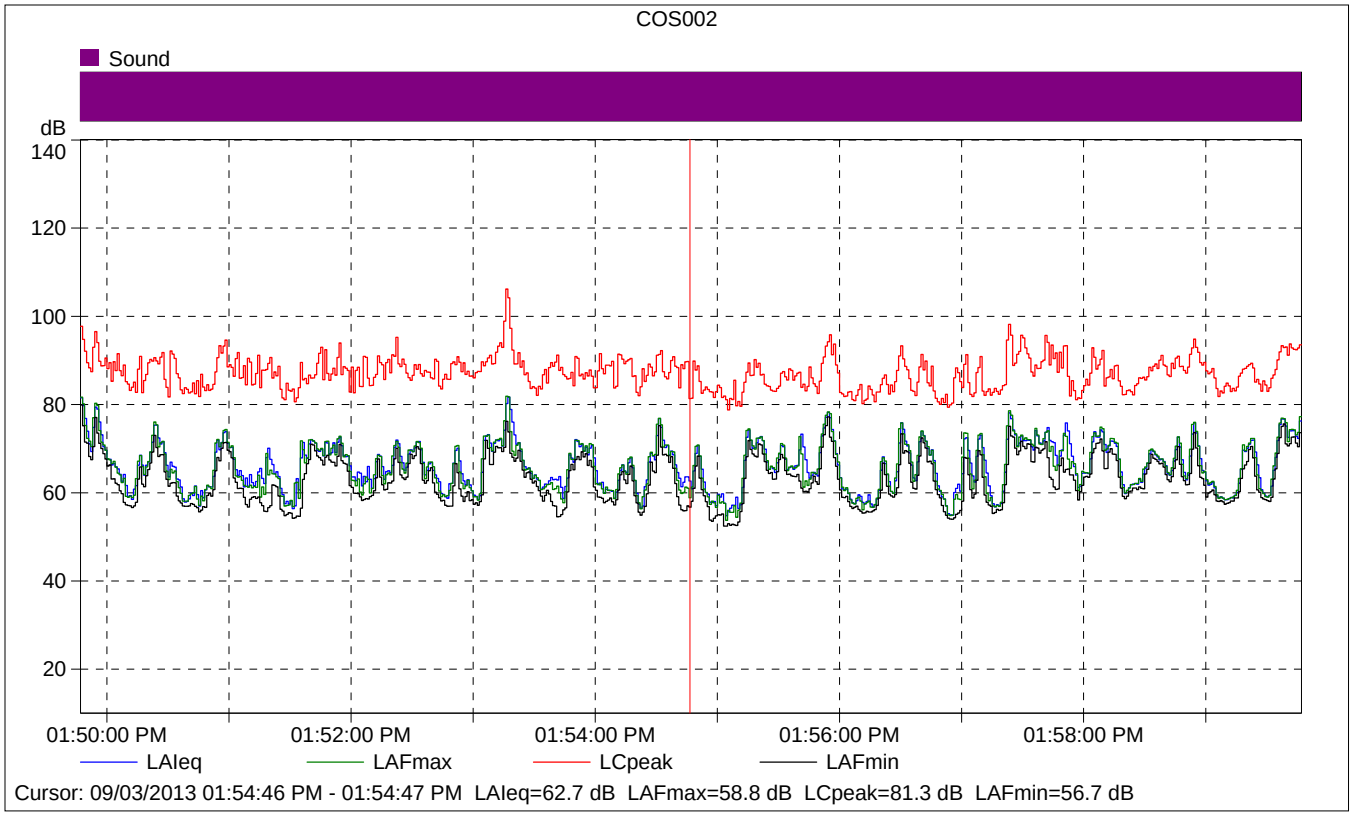
| | | |
|---|---|---|
| Calibration Time: | | 09/03/2013 08:28:13 |
| Calibration Type: | | External reference |
| Sensitivity: | | 64.14 mV/Pa |

## COS002

| | Start time | End time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|---|
| Value | | | | 0.00 | 68.1 | 81.9 | 52.4 |
| Time | 01:49:47 PM | 01:59:47 PM | 0:10:00 | | | | |
| Date | 09/03/2013 | 09/03/2013 | | | | | |

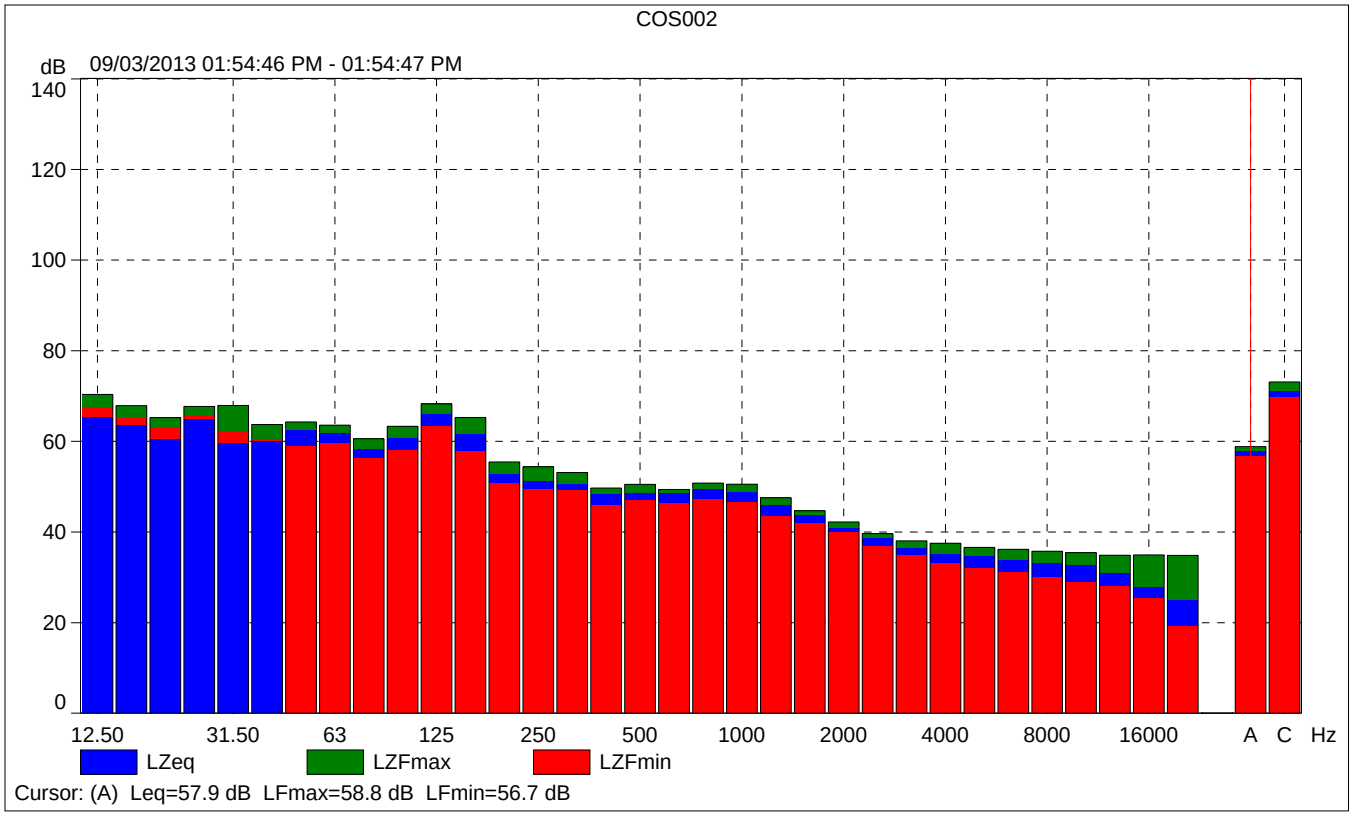

COS002
dB
09/03/2013 01:49:47 PM - 01:59:47 PM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=68.1 dB LFmax=81.9 dB LFmin=52.4 dB

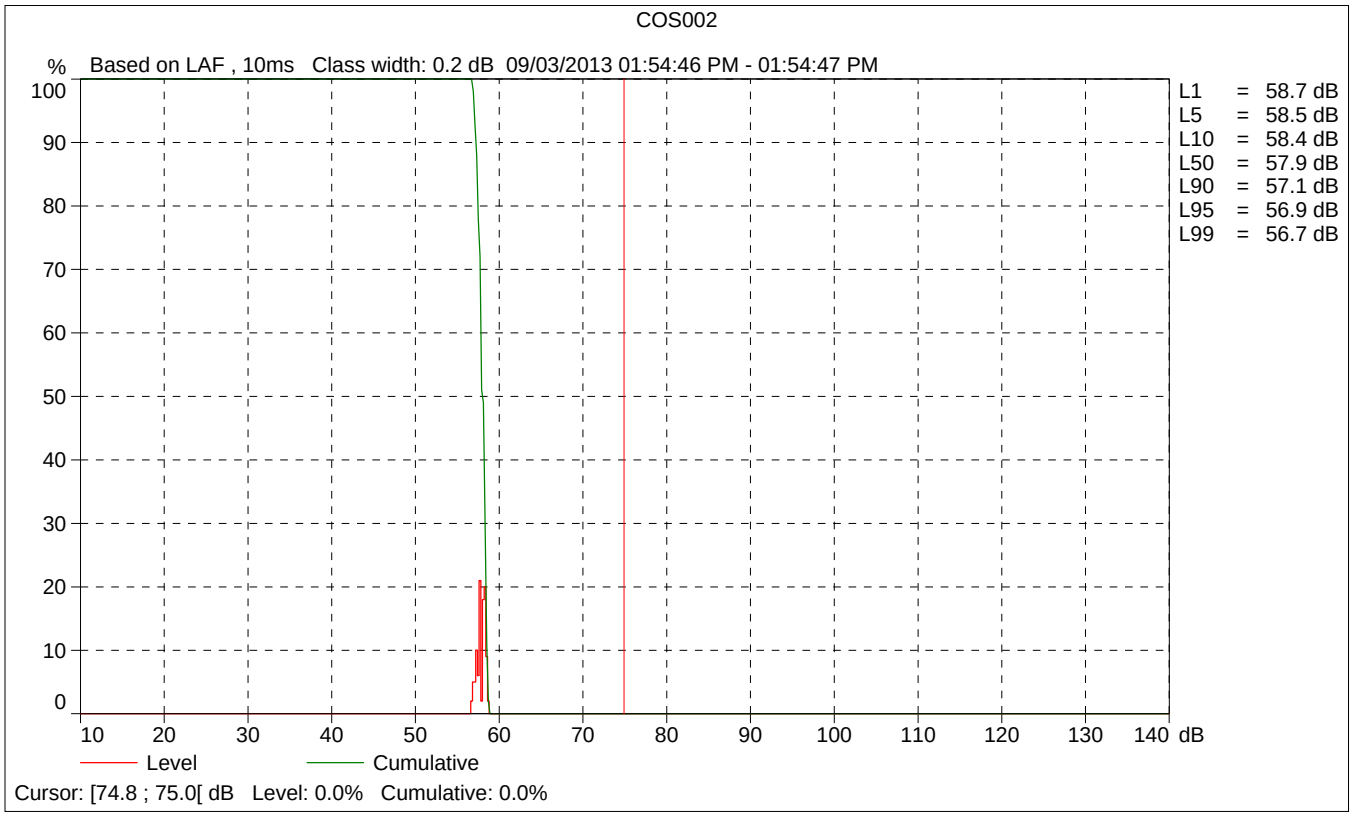

COS002
%
Based on LAF , 10ms Class width: 0.2 dB 09/03/2013 01:49:47 PM - 01:59:47 PM
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 77.4 dB
L5 = 73.3 dB
L10 = 71.7 dB
L50 = 64.0 dB
L90 = 57.3 dB
L95 = 56.1 dB
L99 = 54.1 dB
Level
Cumulative
Cursor: [74.8 ; 75.0[ dB Level: 0.1% Cumulative: 2.9%

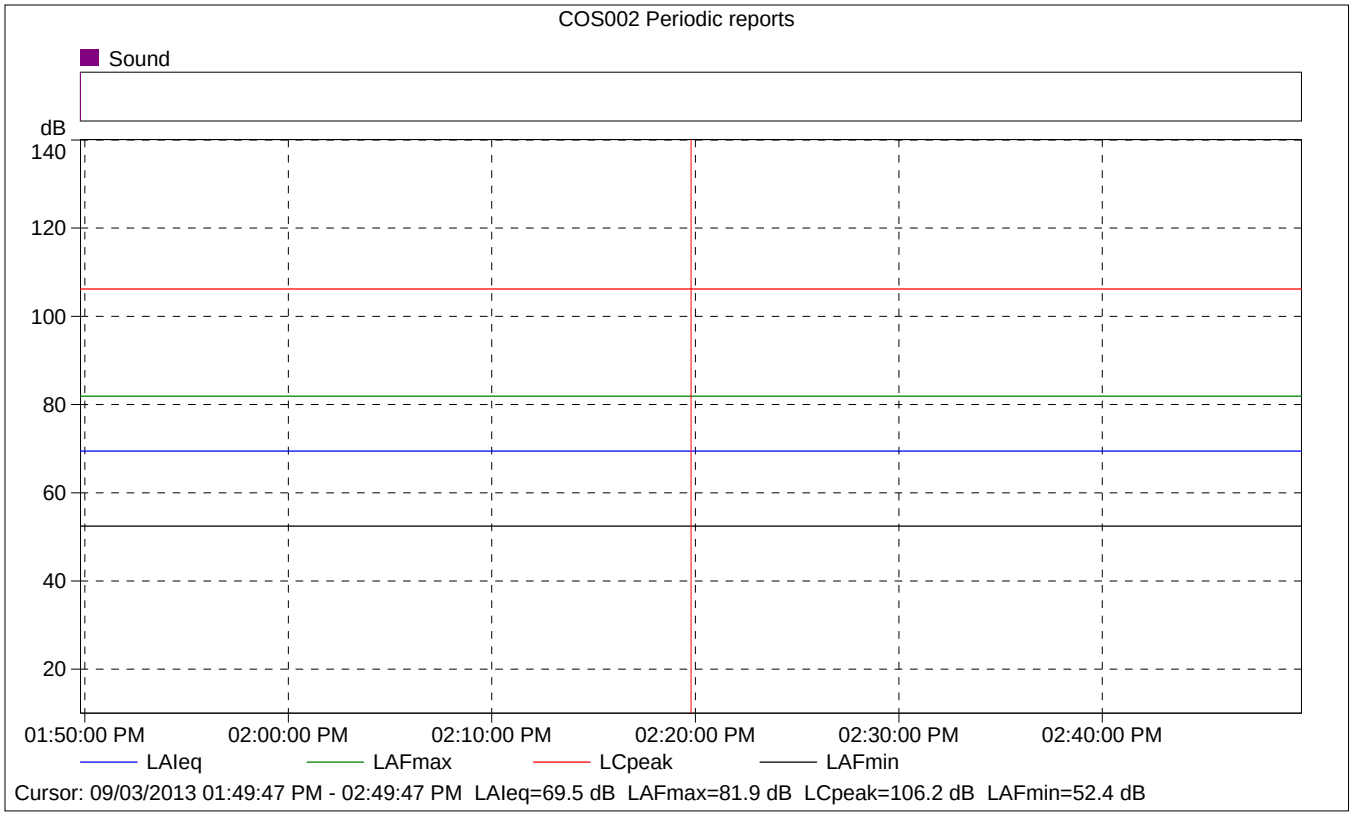



## COS002

| | Start time | Elapsed time | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|
| Value | | | 62.7 | 58.8 | 56.7 |
| Time | 01:54:46 PM | 0:00:01 | | | |
| Date | 09/03/2013 | | | | |

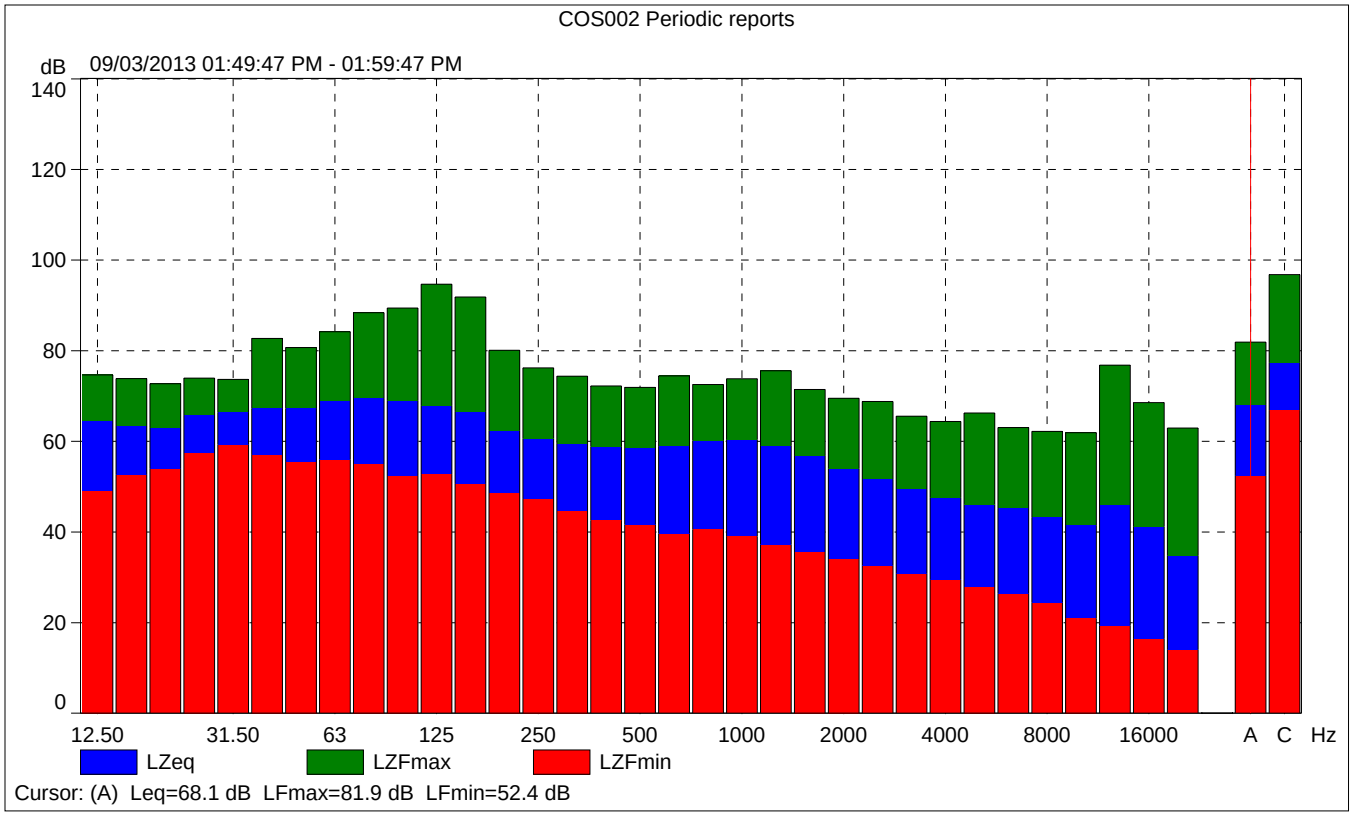

COS002
dB
09/03/2013 01:54:46 PM - 01:54:47 PM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=57.9 dB LFmax=58.8 dB LFmin=56.7 dB

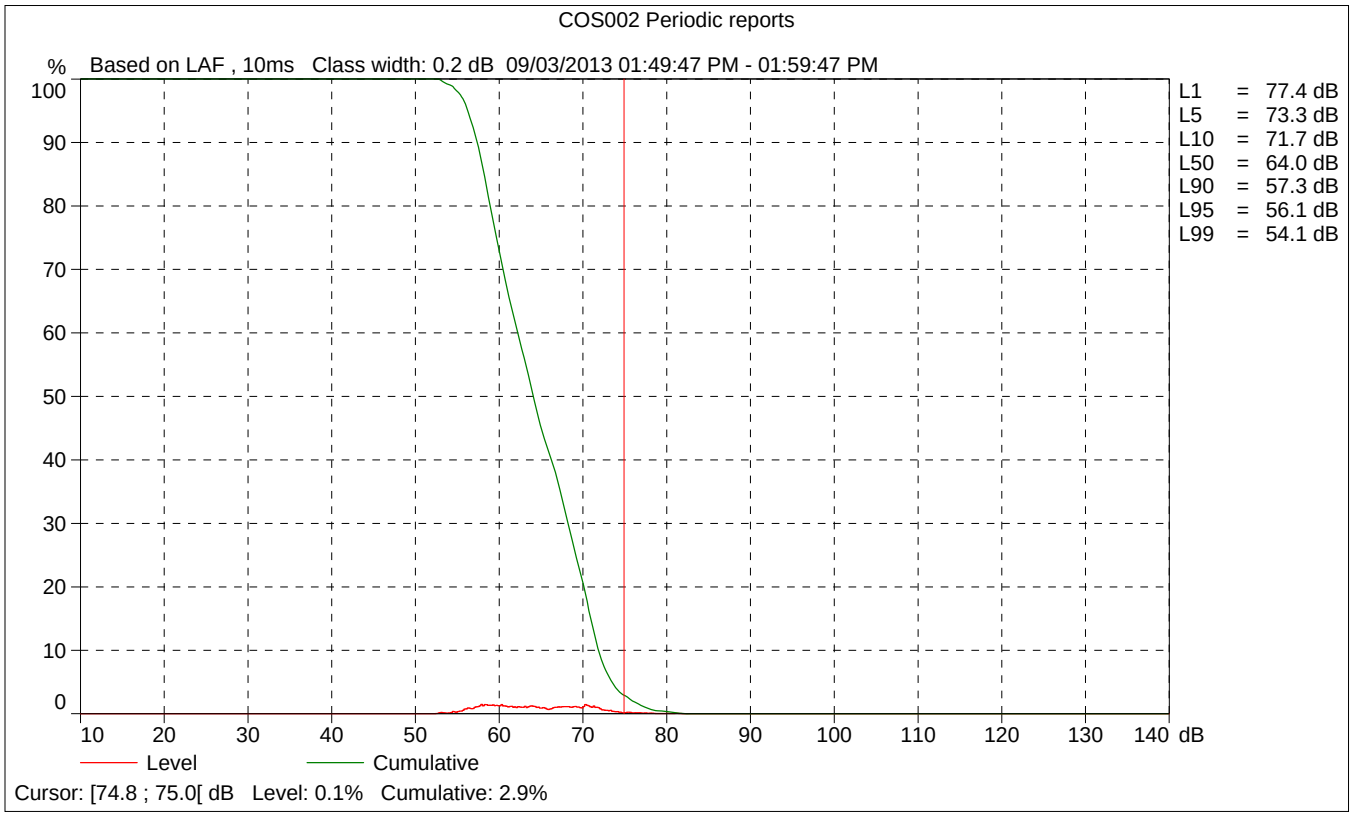

COS002
%
Based on LAF , 10ms Class width: 0.2 dB 09/03/2013 01:54:46 PM - 01:54:47 PM
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 58.7 dB
L5 = 58.5 dB
L10 = 58.4 dB
L50 = 57.9 dB
L90 = 57.1 dB
L95 = 56.9 dB
L99 = 56.7 dB
Level
Cumulative
Cursor: [74.8 ; 75.0[ dB Level: 0.0% Cumulative: 0.0%

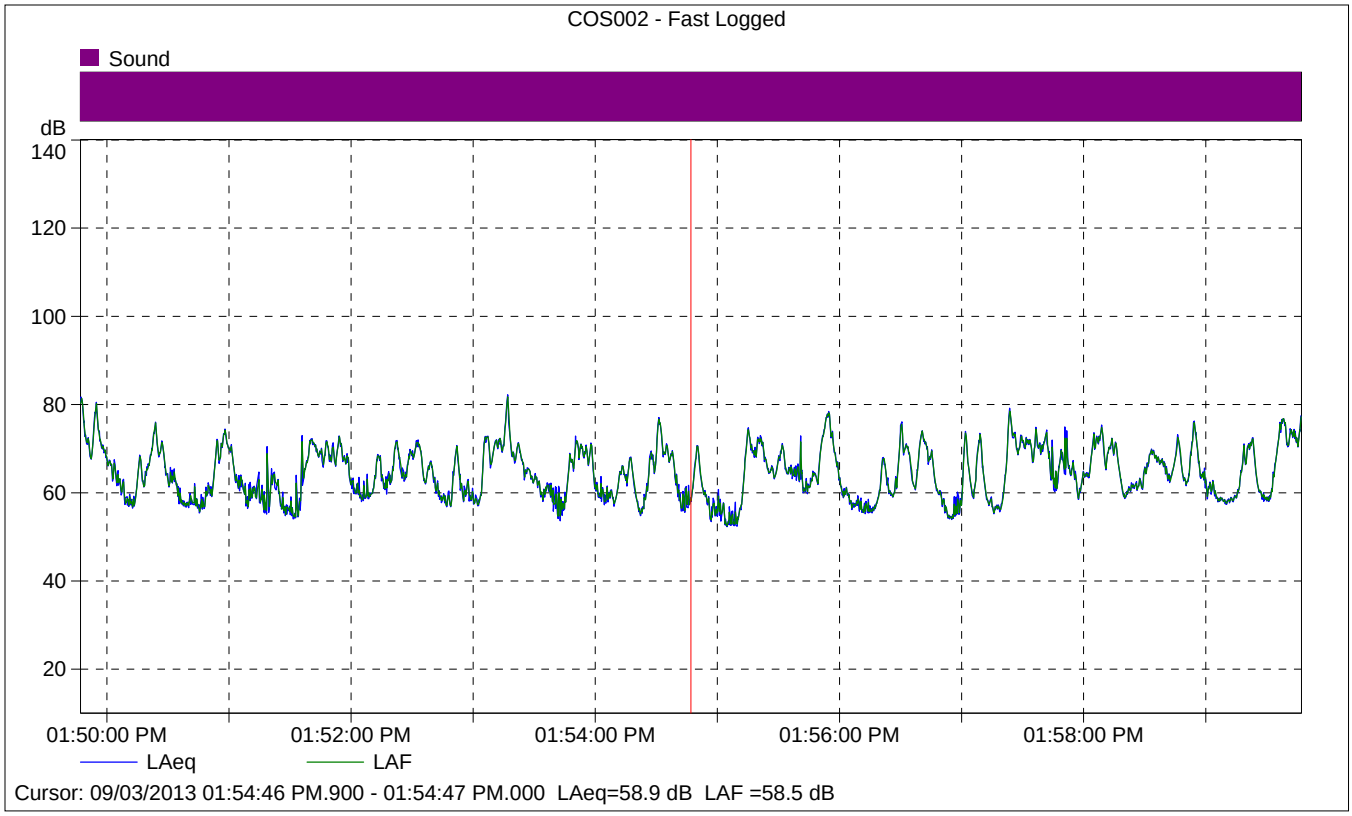



## COS002 Periodic reports

| | Start time | Elapsed time | Overload [%] | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|
| Value | | | 0.00 | 69.5 | 81.9 | 52.4 |
| Time | 01:49:47 PM | 0:10:00 | | | | |
| Date | 09/03/2013 | | | | | |


COS002 Periodic reports
dB
09/03/2013 01:49:47 PM - 01:59:47 PM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=68.1 dB LFmax=81.9 dB LFmin=52.4 dB


COS002 Periodic reports
%
Based on LAF , 10ms Class width: 0.2 dB 09/03/2013 01:49:47 PM - 01:59:47 PM
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 77.4 dB
L5 = 73.3 dB
L10 = 71.7 dB
L50 = 64.0 dB
L90 = 57.3 dB
L95 = 56.1 dB
L99 = 54.1 dB
Level
Cumulative
Cursor: [74.8 ; 75.0[ dB Level: 0.1% Cumulative: 2.9%




## COS002 - Fast Logged

| | Start time | Elapsed time | LAeq [dB] |
|---|---|---|---|
| Value | | | 58.9 |
| Time | 01:54:46 PM.900 | 0:00:00.100 | |
| Date | 09/03/2013 | | |

| | | | |
|---|---|---|---|
| Site Number: NM-3 | | | |
| Recorded By: Ryan Chiene | | | |
| Job Number: 136991 | | | |
| Date: 8/3/13 | | | |
| Time: 2:01 PM | | | |
| Location: Southeaster boundary of project site, north of Superior Avenue, south of Orange Coast Crossfit. | | | |
| Source of Peak Noise: Traffic on Superior Avenue, people walking/talking on sidewalk. | | | |
| Noise Data | | | |
| Leq (dB) | Lmin (dB) | Lmax (dB) | Peak (dB) |
| 67.4 | 51.8 | 79.8 | 101.8 |

| Equipment | | | | | | |
|---|---|---|---|---|---|---|
| Category | Type | Vendor | Model | Serial No. | Cert. Date | Note |
| Sound | Sound Level Meter | Brüel & Kjær | 2250 | 2548189 | 7/12/2013 | |
| | Microphone | Brüel & Kjær | 4189 | 2543364 | 7/12/2013 | |
| | Preamp | Brüel & Kjær | ZC 0032 | 4265 | 7/12/2013 | |
| | Calibrator | Brüel & Kjær | 4231 | 2545667 | 7/12/2013 | |

| Weather Data | | | |
|---|---|---|---|
| Est. | Duration: 10minutes | Sky: Sunny | |
| | Note: dBA Offset = 0.02 | Sensor Height (ft): 5 ft | |
| | Wind Ave Speed (mph / m/s) | Temperature (degrees Fahrenheit) | Barometer Pressure (inches) |
| | 1.7 | 87 | 29.89 |

## Photo of Measurement Location

## 2250

| | | |
|---|---|---|
| Instrument: | | 2250 |
| Application: | | BZ7225 Version 2.0.2 |
| Start Time: | | 09/03/2013 14:01:28 |
| End Time: | | 09/03/2013 14:11:28 |
| Elapsed Time: | | 00:10:00 |
| Bandwidth: | | 1/3-octave |
| Max Input Level: | | 138.78 |

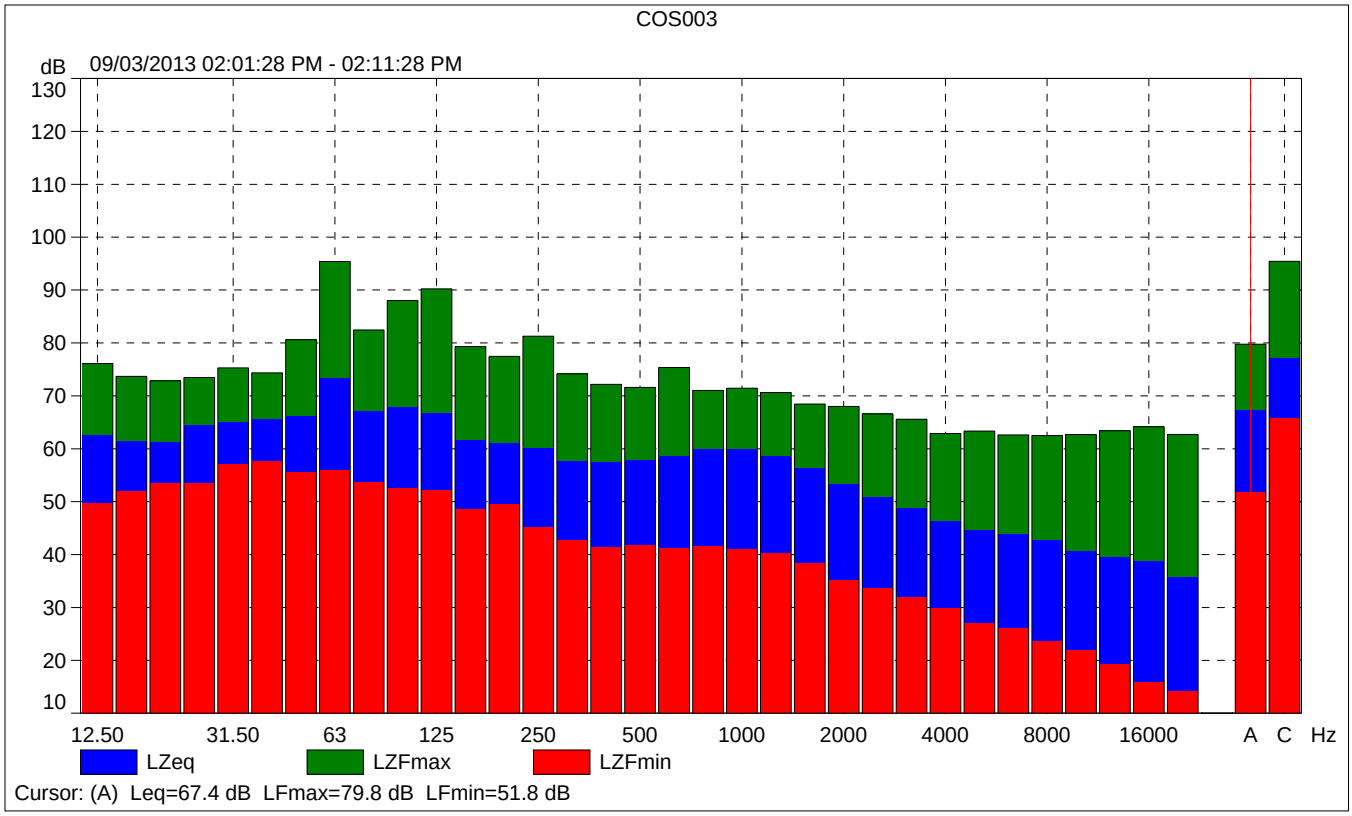
| | Time | Frequency |
|---|---|---|
| Broadband (excl. Peak): | FSI | AC |
| Broadband Peak: | | C |
| Spectrum: | FS | Z |

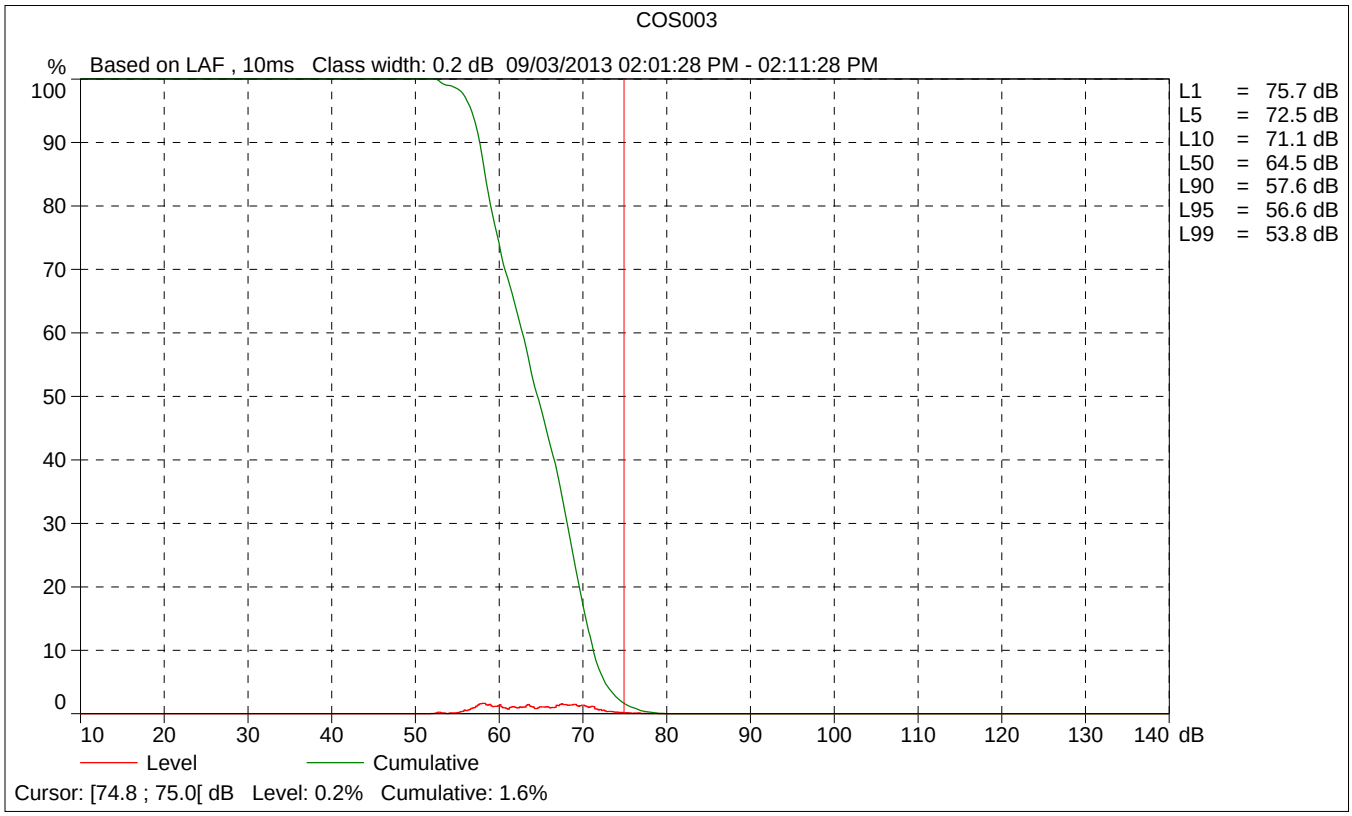
| | | |
|---|---|---|
| Instrument Serial Number: | | 2548189 |
| Microphone Serial Number: | | 2543364 |
| Input: | | Top Socket |
| Windscreen Correction: | | UA-1650 |
| Sound Field Correction: | | Diffuse-field |

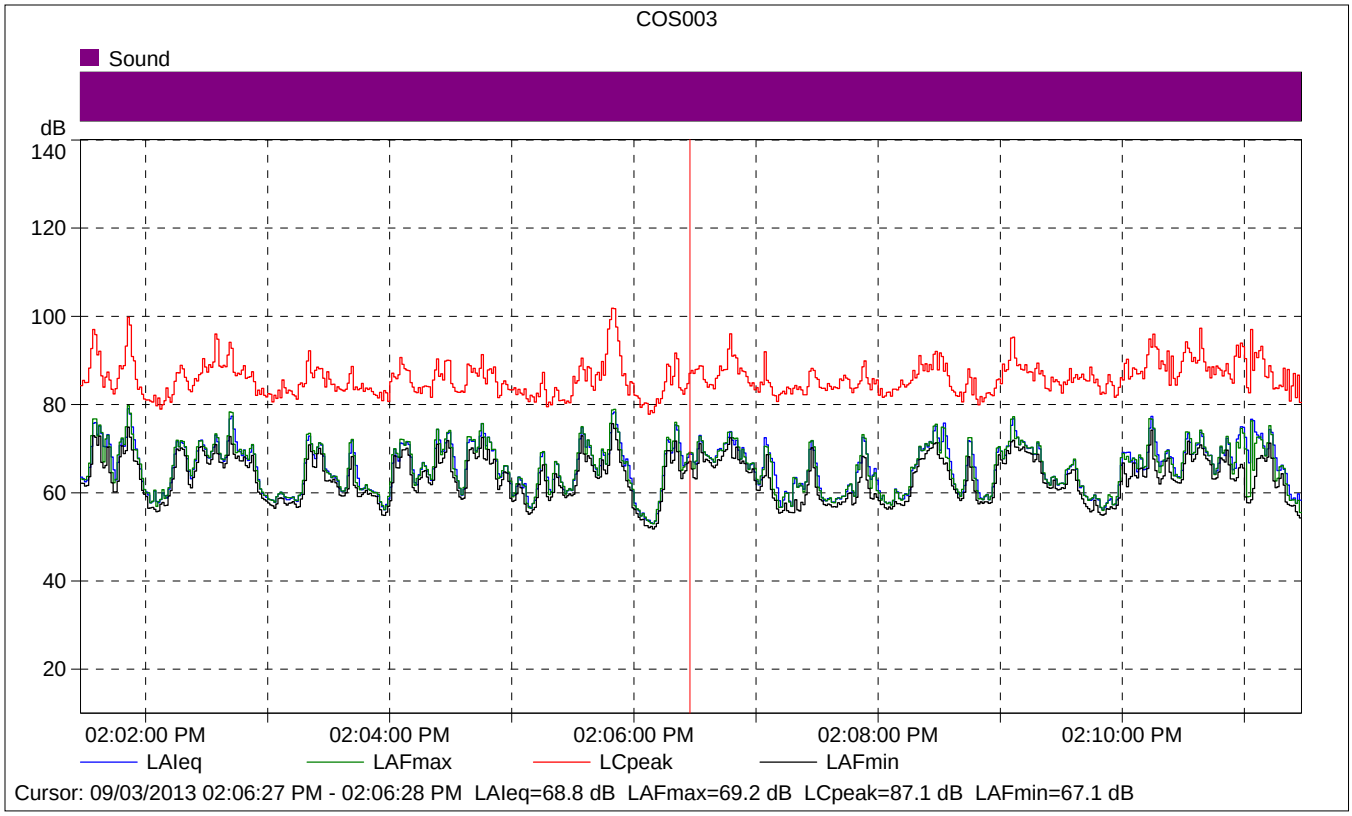
| | | |
|---|---|---|
| Calibration Time: | | 09/03/2013 08:28:13 |
| Calibration Type: | | External reference |
| Sensitivity: | | 64.14 mV/Pa |

## COS003

| | Start time | End time | Elapsed time | Overload [%] | LAeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|---|
| Value | | | | 0.00 | 67.4 | 79.8 | 51.8 |
| Time | 02:01:28 PM | 02:11:28 PM | 0:10:00 | | | | |
| Date | 09/03/2013 | 09/03/2013 | | | | | |

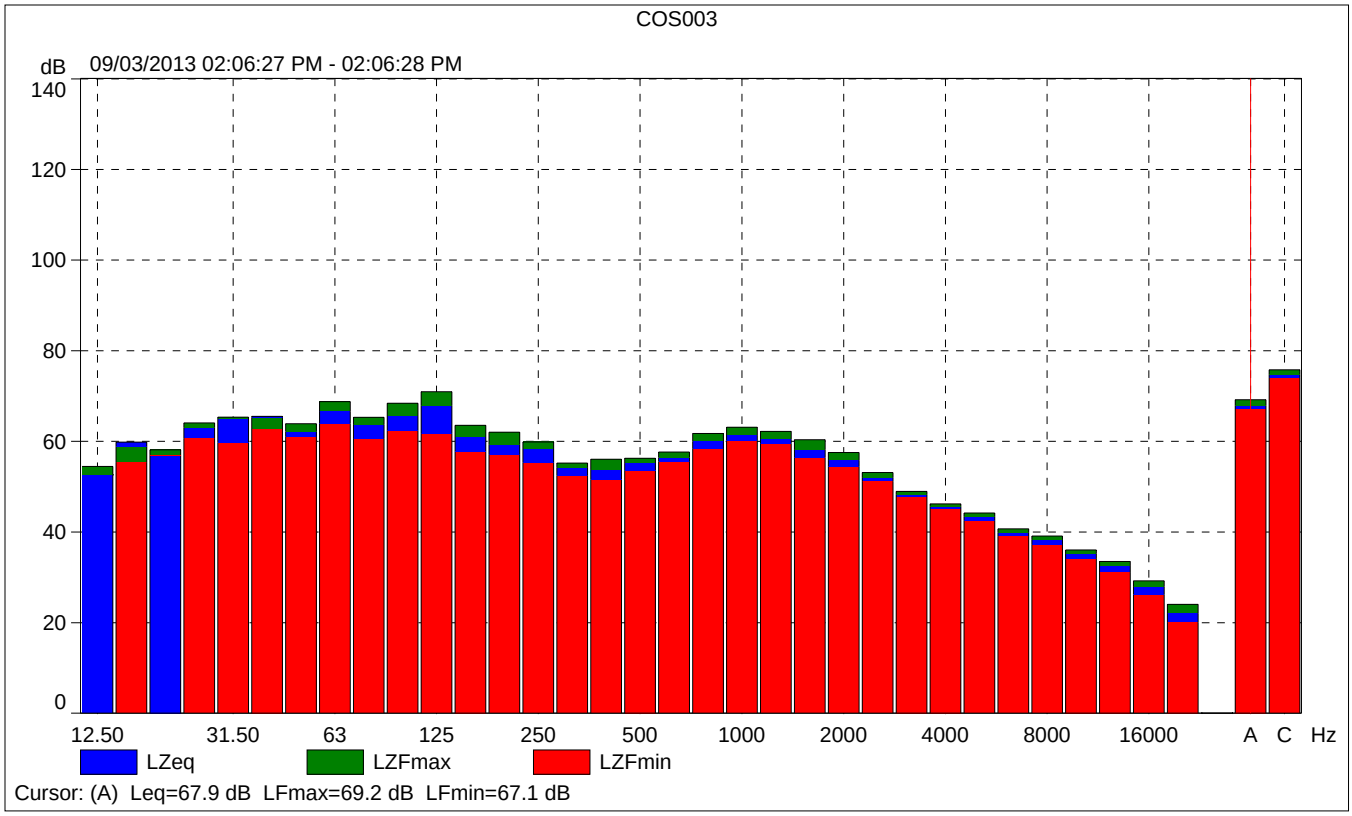

COS003
dB
09/03/2013 02:01:28 PM - 02:11:28 PM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=67.4 dB LFmax=79.8 dB LFmin=51.8 dB

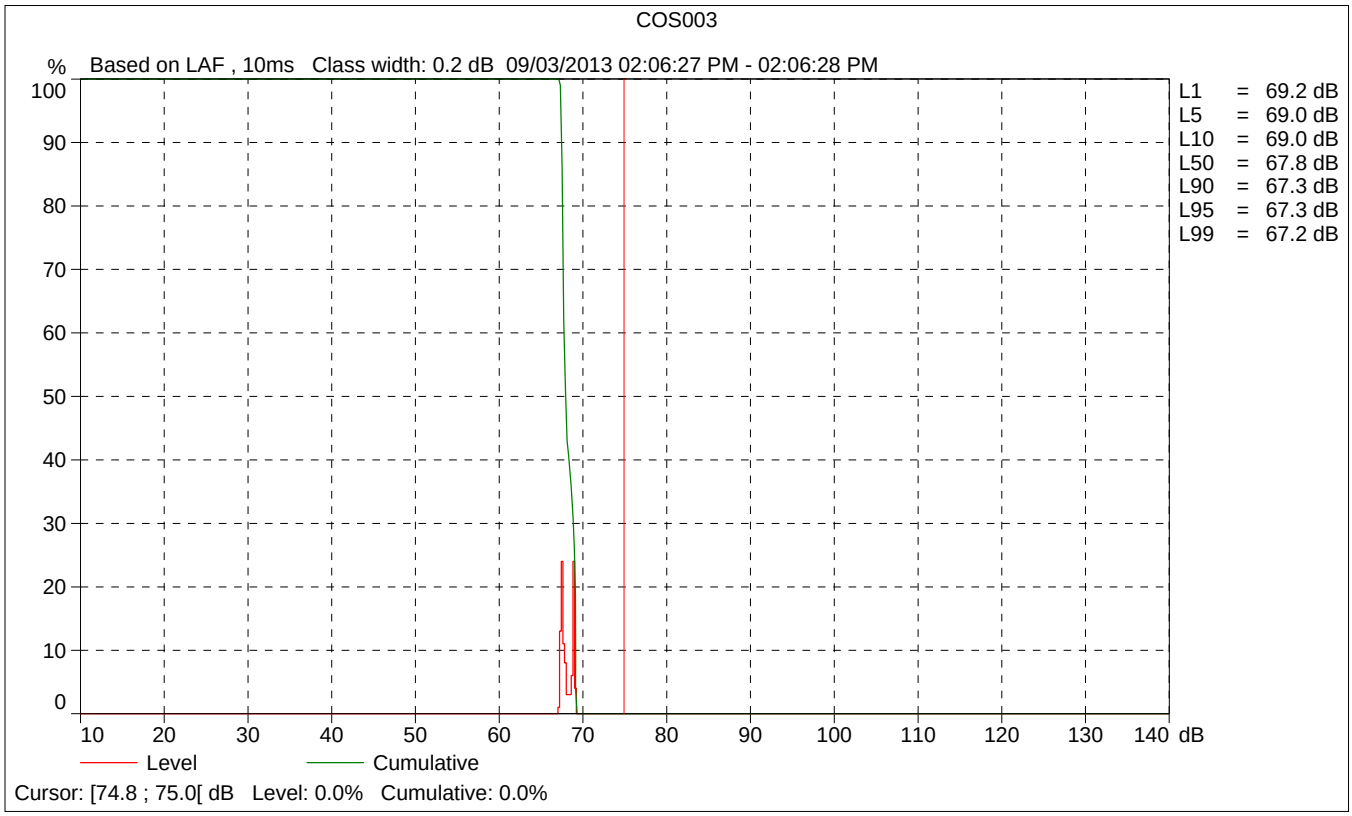

COS003
%
Based on LAF , 10ms Class width: 0.2 dB 09/03/2013 02:01:28 PM - 02:11:28 PM
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 75.7 dB
L5 = 72.5 dB
L10 = 71.1 dB
L50 = 64.5 dB
L90 = 57.6 dB
L95 = 56.6 dB
L99 = 53.8 dB
Level
Cumulative
Cursor: [74.8 ; 75.0[ dB Level: 0.2% Cumulative: 1.6%

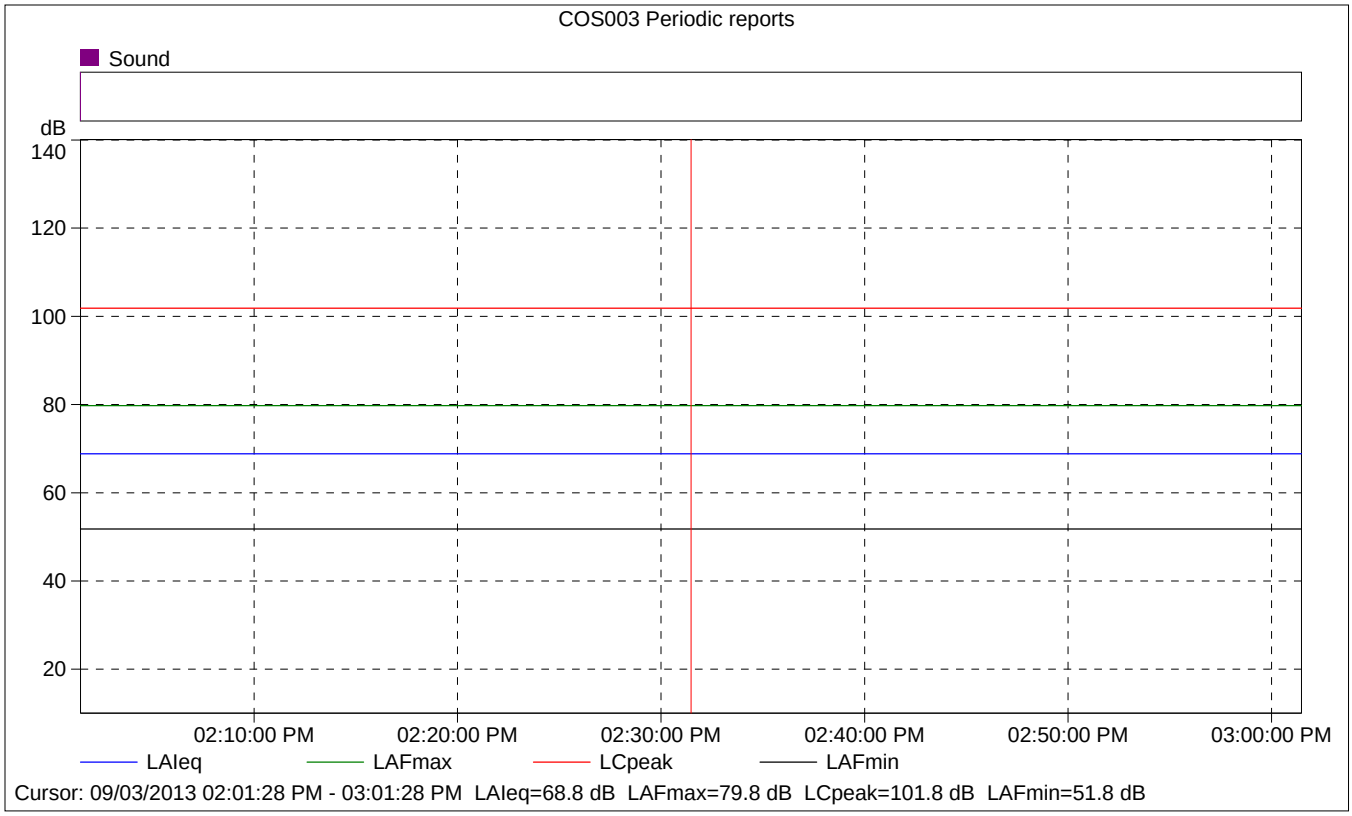



## COS003

| | Start time | Elapsed time | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|
| Value | | | 68.8 | 69.2 | 67.1 |
| Time | 02:06:27 PM | 0:00:01 | | | |
| Date | 09/03/2013 | | | | |

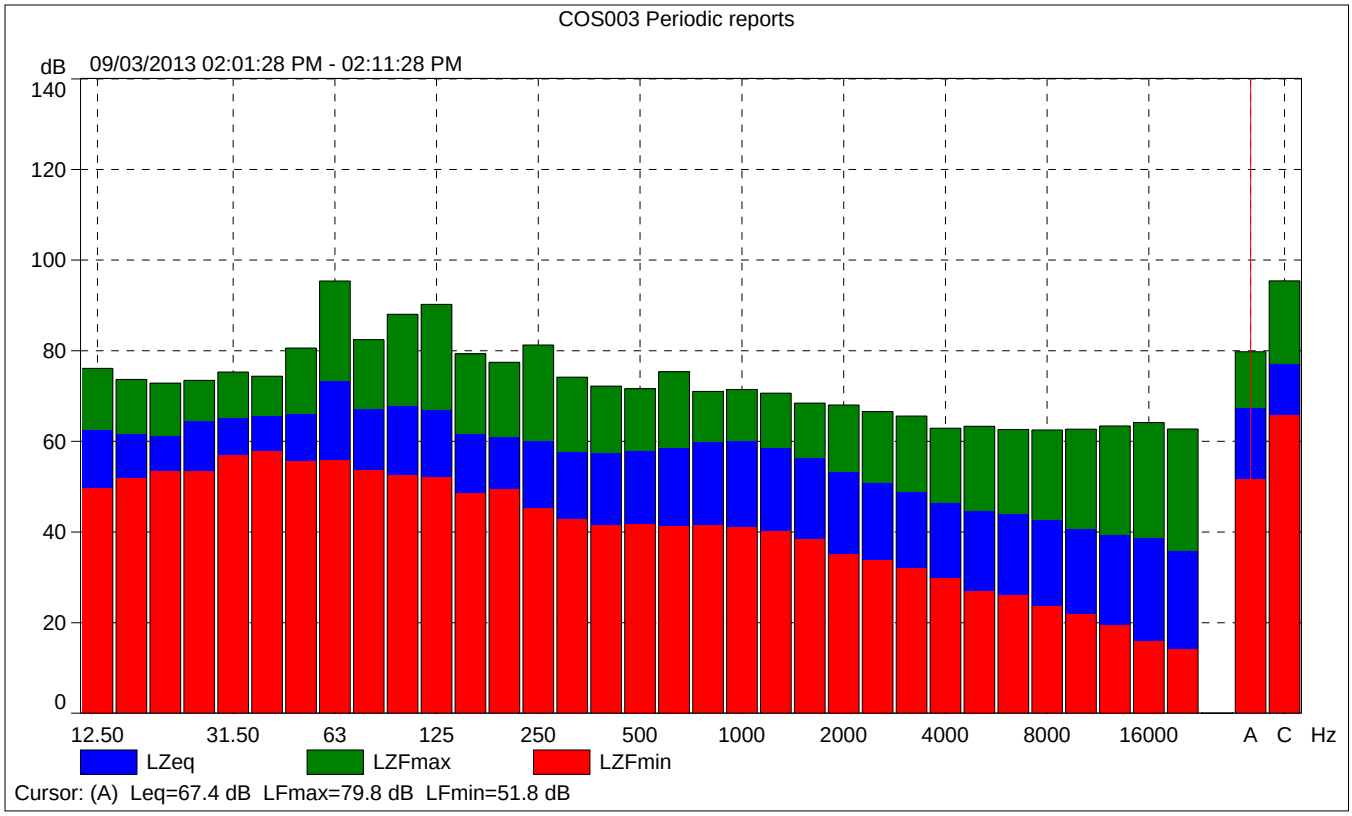

COS003
dB
09/03/2013 02:06:27 PM - 02:06:28 PM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=67.9 dB LFmax=69.2 dB LFmin=67.1 dB

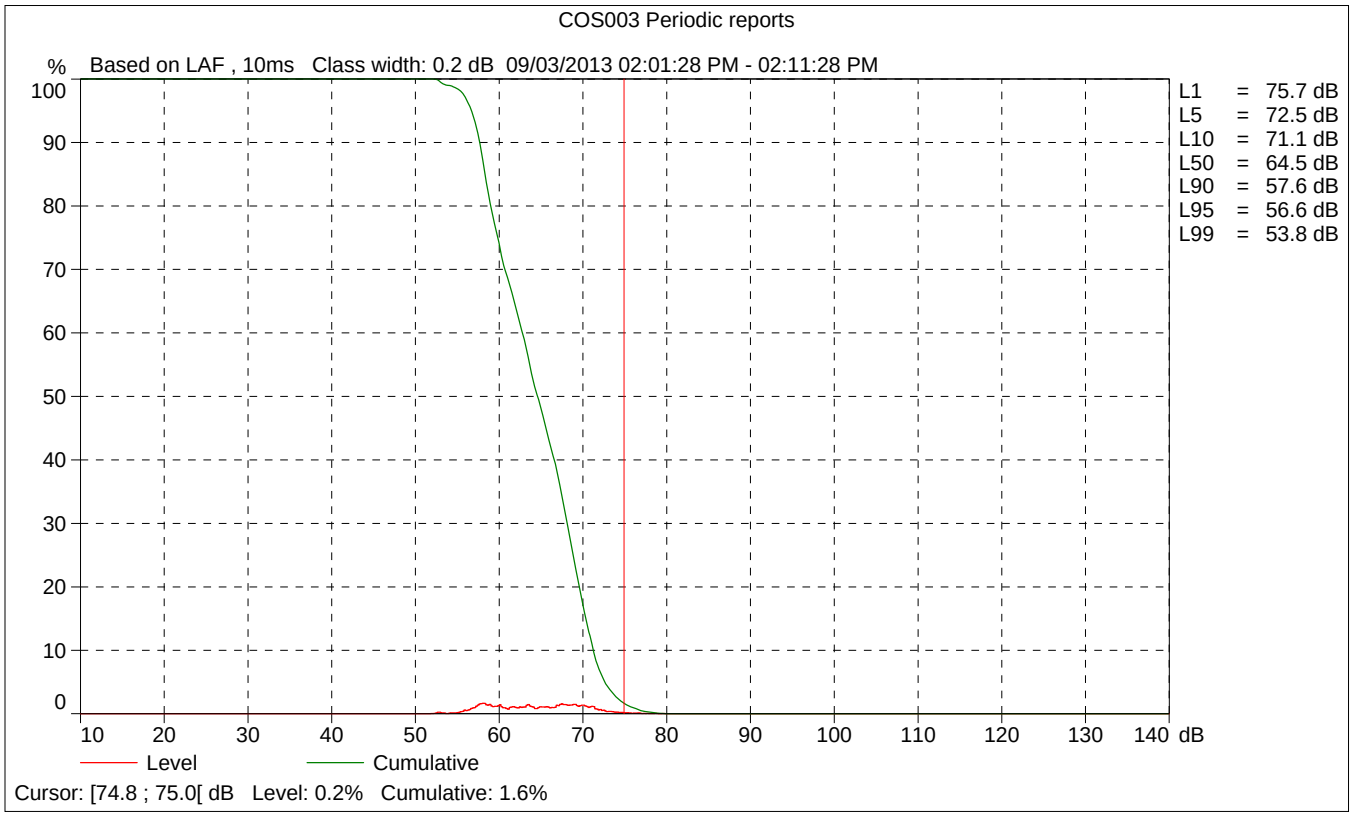

COS003
%
Based on LAF , 10ms Class width: 0.2 dB 09/03/2013 02:06:27 PM - 02:06:28 PM
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 69.2 dB
L5 = 69.0 dB
L10 = 69.0 dB
L50 = 67.8 dB
L90 = 67.3 dB
L95 = 67.3 dB
L99 = 67.2 dB
Level
Cumulative
Cursor: [74.8 ; 75.0[ dB Level: 0.0% Cumulative: 0.0%

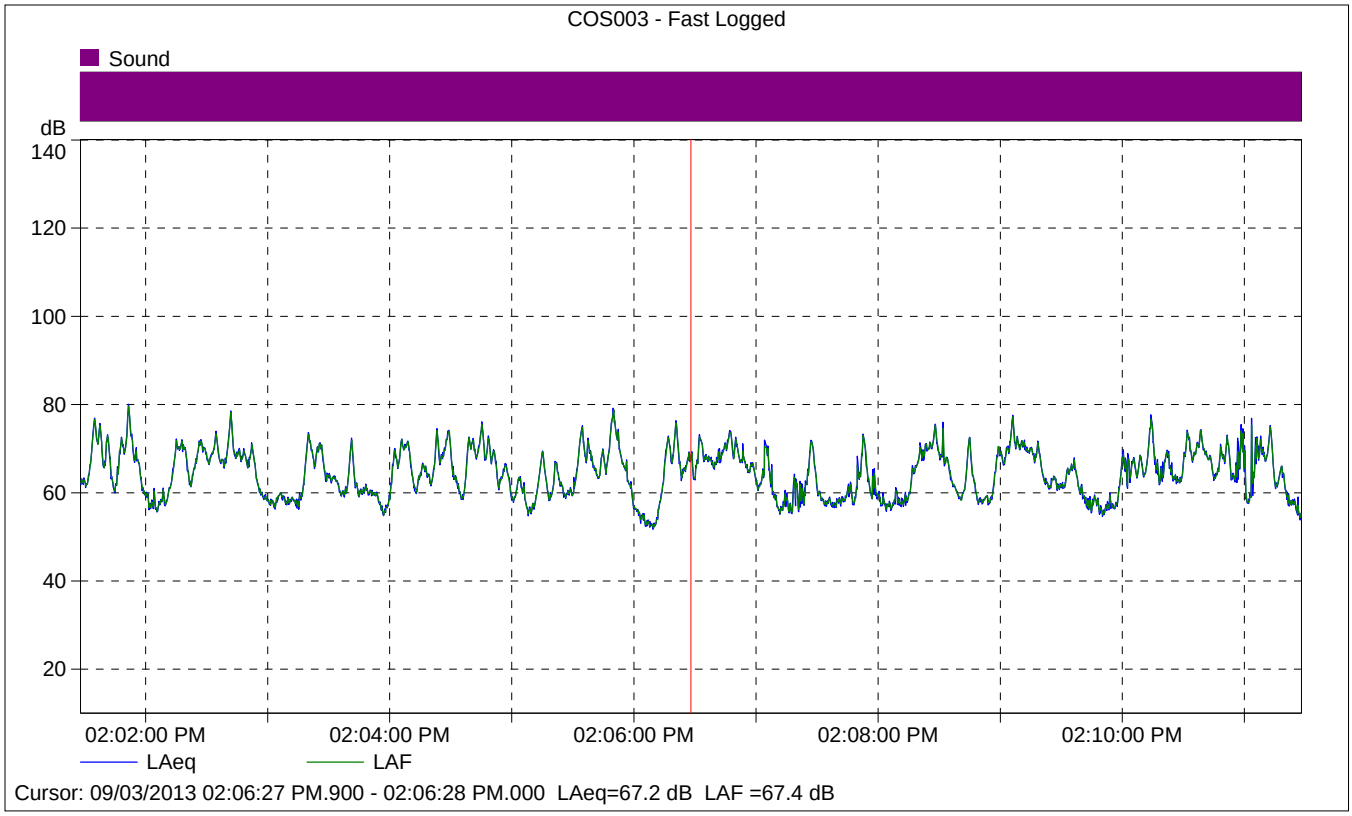



## COS003 Periodic reports

| | Start time | Elapsed time | Overload [%] | LAIeq [dB] | LAFmax [dB] | LAFmin [dB] |
|---|---|---|---|---|---|---|
| Value | | | 0.00 | 68.8 | 79.8 | 51.8 |
| Time | 02:01:28 PM | 0:10:00 | | | | |
| Date | 09/03/2013 | | | | | |


COS003 Periodic reports
dB
09/03/2013 02:01:28 PM - 02:11:28 PM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=67.4 dB LFmax=79.8 dB LFmin=51.8 dB


COS003 Periodic reports
%
Based on LAF , 10ms Class width: 0.2 dB 09/03/2013 02:01:28 PM - 02:11:28 PM
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 75.7 dB
L5 = 72.5 dB
L10 = 71.1 dB
L50 = 64.5 dB
L90 = 57.6 dB
L95 = 56.6 dB
L99 = 53.8 dB
Level
Cumulative
Cursor: [74.8 ; 75.0[ dB Level: 0.2% Cumulative: 1.6%




## COS003 - Fast Logged

| | Start time | Elapsed time | LAeq [dB] |
|---|---|---|---|
| Value | | | 67.2 |
| Time | 02:06:27 PM.900 | 0:00:00.100 | |
| Date | 09/03/2013 | | |

**RBF** **4 September 2013**
**Malisos** **TNM 2.5**

**INPUT: TRAFFIC FOR Lden**
**PROJECT/CONTRACT:** **17th/Superior (29 DU)**
**RUN:** **Future - 1st Floor**

| Roadway | Points | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | | | | | | | | | | | | |
| | | | ADT | Autos | | | | MTrucks | | | | HTrucks | | | | Buses | | | | Motorcycles | | | |
| | | | | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S |
| | | | veh/24hrs | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph |
| Superior NB | point1 | 1 | 10671 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point2 | 2 | | | | | | | | | | | | | | | | | | | | | |
| Superior SB | point3 | 3 | 10671 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point4 | 4 | | | | | | | | | | | | | | | | | | | | | |
| 17th EB | point5 | 5 | 5372 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point6 | 6 | | | | | | | | | | | | | | | | | | | | | |
| 17th WB | point7 | 7 | 5372 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point8 | 8 | | | | | | | | | | | | | | | | | | | | | |

RBF 4 September 2013
Malisos TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 17th/Superior (29 DU)
RUN: Future - 1st Floor

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

| Roadway Name | Width | Points Name | No. | Coordinates (pavement) X | Y | Z | Flow Control Control Device | Speed Constraint | Percent Vehicles Affected | Segment Pvmt Type | On Struct? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ft | | | ft | ft | ft | | mph | % | | |
| Superior NB | 28.0 | point1 | 1 | 6,051,642.0 | 2,178,429.2 | 0.00 | | | | Average | |
| | | point2 | 2 | 6,052,566.5 | 2,179,327.5 | 0.00 | | | | | |
| Superior SB | 28.0 | point3 | 3 | 6,052,537.5 | 2,179,334.0 | 0.00 | | | | Average | |
| | | point4 | 4 | 6,051,618.0 | 2,178,444.0 | 0.00 | | | | | |
| 17th EB | 28.0 | point5 | 5 | 6,051,528.0 | 2,179,218.0 | 0.00 | | | | Average | |
| | | point6 | 6 | 6,052,398.0 | 2,179,213.2 | 0.00 | | | | | |
| 17th WB | 28.0 | point7 | 7 | 6,052,415.5 | 2,179,232.2 | 0.00 | | | | Average | |
| | | point8 | 8 | 6,051,543.0 | 2,179,235.8 | 0.00 | | | | | |

RBF 4 September 2013
Malisos TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 17th/Superior (29 DU)
RUN: Future - 1st Floor

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria Existing Lden | Impact Criteria Lden | Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| 1 | 1 | 1 | 6,051,784.5 | 2,179,110.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 2 | 2 | 1 | 6,051,786.0 | 2,179,135.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 3 | 3 | 1 | 6,051,786.5 | 2,179,152.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 4 | 4 | 1 | 6,051,865.0 | 2,179,145.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 5 | 5 | 1 | 6,051,883.0 | 2,179,145.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 6 | 6 | 1 | 6,051,863.5 | 2,179,029.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 7 | 7 | 1 | 6,051,882.5 | 2,179,029.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 8 | 8 | 1 | 6,051,858.5 | 2,178,946.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 9 | 9 | 1 | 6,051,880.0 | 2,178,945.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 10 | 11 | 1 | 6,051,900.5 | 2,178,946.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 11 | 12 | 1 | 6,051,921.5 | 2,178,946.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 12 | 13 | 1 | 6,051,954.0 | 2,178,948.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 13 | 14 | 1 | 6,051,974.5 | 2,178,948.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 14 | 15 | 1 | 6,051,995.5 | 2,178,947.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 15 | 16 | 1 | 6,052,048.0 | 2,178,975.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 16 | 17 | 1 | 6,051,943.5 | 2,178,876.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 17 | 18 | 1 | 6,051,924.0 | 2,178,877.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 18 | 19 | 1 | 6,051,892.0 | 2,178,876.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 19 | 20 | 1 | 6,051,867.5 | 2,178,875.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 20 | 21 | 1 | 6,051,835.0 | 2,178,874.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 21 | 22 | 1 | 6,051,814.0 | 2,178,875.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 22 | 23 | 1 | 6,051,790.5 | 2,178,873.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 25 | 1 | 6,051,770.0 | 2,178,875.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 24 | 26 | 1 | 6,051,781.0 | 2,178,950.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 25 | 27 | 1 | 6,051,783.0 | 2,178,975.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 26 | 28 | 1 | 6,051,783.0 | 2,178,996.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 27 | 29 | 1 | 6,051,781.0 | 2,179,020.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 28 | 30 | 1 | 6,051,781.0 | 2,179,043.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 29 | 36 | 1 | 6,051,783.0 | 2,179,067.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

RBF 4 September 2013
Malisos TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17th/Superior (29 DU)
RUN: Future - 1st Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing Lden | No Barrier Lden Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated Lden | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 | 1 | 1 | 0.0 | 59.7 | 66 | 59.7 | 10 | ---- | 59.7 | 0.0 | 8 | -8.0 |
| 2 | 2 | 1 | 0.0 | 61.6 | 66 | 61.6 | 10 | ---- | 61.6 | 0.0 | 8 | -8.0 |
| 3 | 3 | 1 | 0.0 | 63.4 | 66 | 63.4 | 10 | ---- | 63.4 | 0.0 | 8 | -8.0 |
| 4 | 4 | 1 | 0.0 | 64.8 | 66 | 64.8 | 10 | ---- | 64.8 | 0.0 | 8 | -8.0 |
| 5 | 5 | 1 | 0.0 | 65.1 | 66 | 65.1 | 10 | ---- | 65.1 | 0.0 | 8 | -8.0 |
| 6 | 6 | 1 | 0.0 | 49.9 | 66 | 49.9 | 10 | ---- | 49.9 | 0.0 | 8 | -8.0 |
| 7 | 7 | 1 | 0.0 | 53.0 | 66 | 53.0 | 10 | ---- | 53.0 | 0.0 | 8 | -8.0 |
| 8 | 8 | 1 | 0.0 | 53.2 | 66 | 53.2 | 10 | ---- | 53.2 | 0.0 | 8 | -8.0 |
| 9 | 9 | 1 | 0.0 | 53.2 | 66 | 53.2 | 10 | ---- | 53.2 | 0.0 | 8 | -8.0 |
| 10 | 11 | 1 | 0.0 | 55.2 | 66 | 55.2 | 10 | ---- | 55.2 | 0.0 | 8 | -8.0 |
| 11 | 12 | 1 | 0.0 | 57.7 | 66 | 57.7 | 10 | ---- | 57.7 | 0.0 | 8 | -8.0 |
| 12 | 13 | 1 | 0.0 | 61.9 | 66 | 61.9 | 10 | ---- | 61.9 | 0.0 | 8 | -8.0 |
| 13 | 14 | 1 | 0.0 | 63.8 | 66 | 63.8 | 10 | ---- | 63.8 | 0.0 | 8 | -8.0 |
| 14 | 15 | 1 | 0.0 | 65.8 | 66 | 65.8 | 10 | ---- | 65.8 | 0.0 | 8 | -8.0 |
| 15 | 16 | 1 | 0.0 | 67.3 | 66 | 67.3 | 10 | Snd Lvl | 67.3 | 0.0 | 8 | -8.0 |
| 16 | 17 | 1 | 0.0 | 66.6 | 66 | 66.6 | 10 | Snd Lvl | 66.6 | 0.0 | 8 | -8.0 |
| 17 | 18 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 18 | 19 | 1 | 0.0 | 63.7 | 66 | 63.7 | 10 | ---- | 63.7 | 0.0 | 8 | -8.0 |
| 19 | 20 | 1 | 0.0 | 62.4 | 66 | 62.4 | 10 | ---- | 62.4 | 0.0 | 8 | -8.0 |
| 20 | 21 | 1 | 0.0 | 60.8 | 66 | 60.8 | 10 | ---- | 60.8 | 0.0 | 8 | -8.0 |
| 21 | 22 | 1 | 0.0 | 59.8 | 66 | 59.8 | 10 | ---- | 59.8 | 0.0 | 8 | -8.0 |
| 22 | 23 | 1 | 0.0 | 58.9 | 66 | 58.9 | 10 | ---- | 58.9 | 0.0 | 8 | -8.0 |
| 23 | 25 | 1 | 0.0 | 58.0 | 66 | 58.0 | 10 | ---- | 58.0 | 0.0 | 8 | -8.0 |
| 24 | 26 | 1 | 0.0 | 48.9 | 66 | 48.9 | 10 | ---- | 48.9 | 0.0 | 8 | -8.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 27 | 1 | 0.0 | 50.0 | 66 | 50.0 | 10 | ---- | 50.0 | 0.0 | 8 | -8.0 |
| 26 | 28 | 1 | 0.0 | 51.2 | 66 | 51.2 | 10 | ---- | 51.2 | 0.0 | 8 | -8.0 |
| 27 | 29 | 1 | 0.0 | 52.8 | 66 | 52.8 | 10 | ---- | 52.8 | 0.0 | 8 | -8.0 |
| 28 | 30 | 1 | 0.0 | 54.3 | 66 | 54.3 | 10 | ---- | 54.3 | 0.0 | 8 | -8.0 |
| 29 | 36 | 1 | 0.0 | 56.0 | 66 | 56.0 | 10 | ---- | 56.0 | 0.0 | 8 | -8.0 |

| **Dwelling Units** | **# DUs** | **Noise Reduction** | | |
|---|---|---|---|---|
| | | **Min** | **Avg** | **Max** |
| | | **dB** | **dB** | **dB** |
| All Selected | 29 | 0.0 | 0.0 | 0.0 |
| All Impacted | 2 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

RBF 4 September 2013
Malisos TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 17th/Superior (29 DU)
RUN: Future - 2nd Floor

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria Existing Lden | Impact Criteria Lden | Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| 1 | 1 | 1 | 6,051,784.5 | 2,179,110.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 2 | 2 | 1 | 6,051,786.0 | 2,179,135.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 3 | 3 | 1 | 6,051,786.5 | 2,179,152.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 4 | 4 | 1 | 6,051,865.0 | 2,179,145.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 5 | 5 | 1 | 6,051,883.0 | 2,179,145.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 6 | 6 | 1 | 6,051,863.5 | 2,179,029.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 7 | 7 | 1 | 6,051,882.5 | 2,179,029.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 8 | 8 | 1 | 6,051,858.5 | 2,178,946.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 9 | 9 | 1 | 6,051,880.0 | 2,178,945.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 10 | 11 | 1 | 6,051,900.5 | 2,178,946.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 11 | 12 | 1 | 6,051,921.5 | 2,178,946.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 12 | 13 | 1 | 6,051,954.0 | 2,178,948.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 13 | 14 | 1 | 6,051,974.5 | 2,178,948.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 14 | 15 | 1 | 6,051,995.5 | 2,178,947.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 15 | 16 | 1 | 6,052,048.0 | 2,178,975.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 16 | 17 | 1 | 6,051,943.5 | 2,178,876.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 17 | 18 | 1 | 6,051,924.0 | 2,178,877.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 18 | 19 | 1 | 6,051,892.0 | 2,178,876.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 19 | 20 | 1 | 6,051,867.5 | 2,178,875.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 20 | 21 | 1 | 6,051,835.0 | 2,178,874.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 21 | 22 | 1 | 6,051,814.0 | 2,178,875.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 22 | 23 | 1 | 6,051,790.5 | 2,178,873.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 25 | 1 | 6,051,770.0 | 2,178,875.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 24 | 26 | 1 | 6,051,781.0 | 2,178,950.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 25 | 27 | 1 | 6,051,783.0 | 2,178,975.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 26 | 28 | 1 | 6,051,783.0 | 2,178,996.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 27 | 29 | 1 | 6,051,781.0 | 2,179,020.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 28 | 30 | 1 | 6,051,781.0 | 2,179,043.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 29 | 36 | 1 | 6,051,783.0 | 2,179,067.2 | 0.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 | Y |

RBF 4 September 2013
Malisos TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17th/Superior (29 DU)
RUN: Future - 2nd Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing Lden | No Barrier Lden Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated Lden | Noise Reduction Calculated | Noise Reduction Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 | 1 | 1 | 0.0 | 60.2 | 66 | 60.2 | 10 | ---- | 60.2 | 0.0 | 8 | -8.0 |
| 2 | 2 | 1 | 0.0 | 61.8 | 66 | 61.8 | 10 | ---- | 61.8 | 0.0 | 8 | -8.0 |
| 3 | 3 | 1 | 0.0 | 63.5 | 66 | 63.5 | 10 | ---- | 63.5 | 0.0 | 8 | -8.0 |
| 4 | 4 | 1 | 0.0 | 65.1 | 66 | 65.1 | 10 | ---- | 65.1 | 0.0 | 8 | -8.0 |
| 5 | 5 | 1 | 0.0 | 65.6 | 66 | 65.6 | 10 | ---- | 65.6 | 0.0 | 8 | -8.0 |
| 6 | 6 | 1 | 0.0 | 54.7 | 66 | 54.7 | 10 | ---- | 54.7 | 0.0 | 8 | -8.0 |
| 7 | 7 | 1 | 0.0 | 57.4 | 66 | 57.4 | 10 | ---- | 57.4 | 0.0 | 8 | -8.0 |
| 8 | 8 | 1 | 0.0 | 56.8 | 66 | 56.8 | 10 | ---- | 56.8 | 0.0 | 8 | -8.0 |
| 9 | 9 | 1 | 0.0 | 56.3 | 66 | 56.3 | 10 | ---- | 56.3 | 0.0 | 8 | -8.0 |
| 10 | 11 | 1 | 0.0 | 57.8 | 66 | 57.8 | 10 | ---- | 57.8 | 0.0 | 8 | -8.0 |
| 11 | 12 | 1 | 0.0 | 59.7 | 66 | 59.7 | 10 | ---- | 59.7 | 0.0 | 8 | -8.0 |
| 12 | 13 | 1 | 0.0 | 63.1 | 66 | 63.1 | 10 | ---- | 63.1 | 0.0 | 8 | -8.0 |
| 13 | 14 | 1 | 0.0 | 64.5 | 66 | 64.5 | 10 | ---- | 64.5 | 0.0 | 8 | -8.0 |
| 14 | 15 | 1 | 0.0 | 66.2 | 66 | 66.2 | 10 | Snd Lvl | 66.2 | 0.0 | 8 | -8.0 |
| 15 | 16 | 1 | 0.0 | 67.7 | 66 | 67.7 | 10 | Snd Lvl | 67.7 | 0.0 | 8 | -8.0 |
| 16 | 17 | 1 | 0.0 | 66.8 | 66 | 66.8 | 10 | Snd Lvl | 66.8 | 0.0 | 8 | -8.0 |
| 17 | 18 | 1 | 0.0 | 65.8 | 66 | 65.8 | 10 | ---- | 65.8 | 0.0 | 8 | -8.0 |
| 18 | 19 | 1 | 0.0 | 64.7 | 66 | 64.7 | 10 | ---- | 64.7 | 0.0 | 8 | -8.0 |
| 19 | 20 | 1 | 0.0 | 64.0 | 66 | 64.0 | 10 | ---- | 64.0 | 0.0 | 8 | -8.0 |
| 20 | 21 | 1 | 0.0 | 63.2 | 66 | 63.2 | 10 | ---- | 63.2 | 0.0 | 8 | -8.0 |
| 21 | 22 | 1 | 0.0 | 62.7 | 66 | 62.7 | 10 | ---- | 62.7 | 0.0 | 8 | -8.0 |
| 22 | 23 | 1 | 0.0 | 62.3 | 66 | 62.3 | 10 | ---- | 62.3 | 0.0 | 8 | -8.0 |
| 23 | 25 | 1 | 0.0 | 61.8 | 66 | 61.8 | 10 | ---- | 61.8 | 0.0 | 8 | -8.0 |
| 24 | 26 | 1 | 0.0 | 53.8 | 66 | 53.8 | 10 | ---- | 53.8 | 0.0 | 8 | -8.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 27 | 1 | 0.0 | 54.5 | 66 | 54.5 | 10 | ---- | 54.5 | 0.0 | 8 | -8.0 |
| 26 | 28 | 1 | 0.0 | 55.3 | 66 | 55.3 | 10 | ---- | 55.3 | 0.0 | 8 | -8.0 |
| 27 | 29 | 1 | 0.0 | 56.4 | 66 | 56.4 | 10 | ---- | 56.4 | 0.0 | 8 | -8.0 |
| 28 | 30 | 1 | 0.0 | 57.3 | 66 | 57.3 | 10 | ---- | 57.3 | 0.0 | 8 | -8.0 |
| 29 | 36 | 1 | 0.0 | 56.0 | 66 | 56.0 | 10 | ---- | 56.0 | 0.0 | 8 | -8.0 |

| **Dwelling Units** | **# DUs** | **Noise Reduction** | | |
|---|---|---|---|---|
| | | **Min** | **Avg** | **Max** |
| | | **dB** | **dB** | **dB** |
| All Selected | 29 | 0.0 | 0.0 | 0.0 |
| All Impacted | 3 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

RBF 4 September 2013
Malisos TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 17th/Superior (29 DU)
RUN: Future - 3rd Floor

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria Existing Lden | Impact Criteria Lden | Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| 1 | 1 | 1 | 6,051,784.5 | 2,179,110.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 2 | 2 | 1 | 6,051,786.0 | 2,179,135.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 3 | 3 | 1 | 6,051,786.5 | 2,179,152.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 4 | 4 | 1 | 6,051,865.0 | 2,179,145.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 5 | 5 | 1 | 6,051,883.0 | 2,179,145.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 6 | 6 | 1 | 6,051,863.5 | 2,179,029.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 7 | 7 | 1 | 6,051,882.5 | 2,179,029.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 8 | 8 | 1 | 6,051,858.5 | 2,178,946.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 9 | 9 | 1 | 6,051,880.0 | 2,178,945.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 10 | 11 | 1 | 6,051,900.5 | 2,178,946.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 11 | 12 | 1 | 6,051,921.5 | 2,178,946.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 12 | 13 | 1 | 6,051,954.0 | 2,178,948.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 13 | 14 | 1 | 6,051,974.5 | 2,178,948.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 14 | 15 | 1 | 6,051,995.5 | 2,178,947.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 15 | 16 | 1 | 6,052,048.0 | 2,178,975.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 16 | 17 | 1 | 6,051,943.5 | 2,178,876.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 17 | 18 | 1 | 6,051,924.0 | 2,178,877.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 18 | 19 | 1 | 6,051,892.0 | 2,178,876.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 19 | 20 | 1 | 6,051,867.5 | 2,178,875.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 20 | 21 | 1 | 6,051,835.0 | 2,178,874.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 21 | 22 | 1 | 6,051,814.0 | 2,178,875.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 22 | 23 | 1 | 6,051,790.5 | 2,178,873.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 25 | 1 | 6,051,770.0 | 2,178,875.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 24 | 26 | 1 | 6,051,781.0 | 2,178,950.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 25 | 27 | 1 | 6,051,783.0 | 2,178,975.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 26 | 28 | 1 | 6,051,783.0 | 2,178,996.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 27 | 29 | 1 | 6,051,781.0 | 2,179,020.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 28 | 30 | 1 | 6,051,781.0 | 2,179,043.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 29 | 36 | 1 | 6,051,783.0 | 2,179,067.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

RBF 4 September 2013
Malisos TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17th/Superior (29 DU)
RUN: Future - 3rd Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing Lden | No Barrier Lden Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated Lden | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 | 1 | 1 | 0.0 | 60.3 | 66 | 60.3 | 10 | ---- | 60.3 | 0.0 | 8 | -8.0 |
| 2 | 2 | 1 | 0.0 | 61.6 | 66 | 61.6 | 10 | ---- | 61.6 | 0.0 | 8 | -8.0 |
| 3 | 3 | 1 | 0.0 | 63.2 | 66 | 63.2 | 10 | ---- | 63.2 | 0.0 | 8 | -8.0 |
| 4 | 4 | 1 | 0.0 | 64.9 | 66 | 64.9 | 10 | ---- | 64.9 | 0.0 | 8 | -8.0 |
| 5 | 5 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 6 | 6 | 1 | 0.0 | 55.0 | 66 | 55.0 | 10 | ---- | 55.0 | 0.0 | 8 | -8.0 |
| 7 | 7 | 1 | 0.0 | 57.6 | 66 | 57.6 | 10 | ---- | 57.6 | 0.0 | 8 | -8.0 |
| 8 | 8 | 1 | 0.0 | 57.1 | 66 | 57.1 | 10 | ---- | 57.1 | 0.0 | 8 | -8.0 |
| 9 | 9 | 1 | 0.0 | 56.6 | 66 | 56.6 | 10 | ---- | 56.6 | 0.0 | 8 | -8.0 |
| 10 | 11 | 1 | 0.0 | 58.1 | 66 | 58.1 | 10 | ---- | 58.1 | 0.0 | 8 | -8.0 |
| 11 | 12 | 1 | 0.0 | 60.0 | 66 | 60.0 | 10 | ---- | 60.0 | 0.0 | 8 | -8.0 |
| 12 | 13 | 1 | 0.0 | 63.3 | 66 | 63.3 | 10 | ---- | 63.3 | 0.0 | 8 | -8.0 |
| 13 | 14 | 1 | 0.0 | 64.6 | 66 | 64.6 | 10 | ---- | 64.6 | 0.0 | 8 | -8.0 |
| 14 | 15 | 1 | 0.0 | 66.2 | 66 | 66.2 | 10 | Snd Lvl | 66.2 | 0.0 | 8 | -8.0 |
| 15 | 16 | 1 | 0.0 | 67.5 | 66 | 67.5 | 10 | Snd Lvl | 67.5 | 0.0 | 8 | -8.0 |
| 16 | 17 | 1 | 0.0 | 66.6 | 66 | 66.6 | 10 | Snd Lvl | 66.6 | 0.0 | 8 | -8.0 |
| 17 | 18 | 1 | 0.0 | 65.7 | 66 | 65.7 | 10 | ---- | 65.7 | 0.0 | 8 | -8.0 |
| 18 | 19 | 1 | 0.0 | 64.8 | 66 | 64.8 | 10 | ---- | 64.8 | 0.0 | 8 | -8.0 |
| 19 | 20 | 1 | 0.0 | 64.2 | 66 | 64.2 | 10 | ---- | 64.2 | 0.0 | 8 | -8.0 |
| 20 | 21 | 1 | 0.0 | 63.4 | 66 | 63.4 | 10 | ---- | 63.4 | 0.0 | 8 | -8.0 |
| 21 | 22 | 1 | 0.0 | 62.9 | 66 | 62.9 | 10 | ---- | 62.9 | 0.0 | 8 | -8.0 |
| 22 | 23 | 1 | 0.0 | 62.4 | 66 | 62.4 | 10 | ---- | 62.4 | 0.0 | 8 | -8.0 |
| 23 | 25 | 1 | 0.0 | 61.9 | 66 | 61.9 | 10 | ---- | 61.9 | 0.0 | 8 | -8.0 |
| 24 | 26 | 1 | 0.0 | 54.1 | 66 | 54.1 | 10 | ---- | 54.1 | 0.0 | 8 | -8.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 27 | 1 | 0.0 | 54.7 | 66 | 54.7 | 10 | ---- | 54.7 | 0.0 | 8 | -8.0 |
| 26 | 28 | 1 | 0.0 | 55.5 | 66 | 55.5 | 10 | ---- | 55.5 | 0.0 | 8 | -8.0 |
| 27 | 29 | 1 | 0.0 | 56.6 | 66 | 56.6 | 10 | ---- | 56.6 | 0.0 | 8 | -8.0 |
| 28 | 30 | 1 | 0.0 | 57.5 | 66 | 57.5 | 10 | ---- | 57.5 | 0.0 | 8 | -8.0 |
| 29 | 36 | 1 | 0.0 | 58.4 | 66 | 58.4 | 10 | ---- | 58.4 | 0.0 | 8 | -8.0 |

| **Dwelling Units** | **# DUs** | **Noise Reduction** | | |
|---|---|---|---|---|
| | | **Min** | **Avg** | **Max** |
| | | **dB** | **dB** | **dB** |
| All Selected | 29 | 0.0 | 0.0 | 0.0 |
| All Impacted | 3 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

RBF 4 September 2013
Malisos TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 17th/Superior (29 DU)
RUN: Future - Roof

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria Existing Lden | Impact Criteria Lden | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| 1 | 1 | 1 | 6,051,784.5 | 2,179,110.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 2 | 2 | 1 | 6,051,786.0 | 2,179,135.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 3 | 3 | 1 | 6,051,786.5 | 2,179,152.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 4 | 4 | 1 | 6,051,865.0 | 2,179,145.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 5 | 5 | 1 | 6,051,883.0 | 2,179,145.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 6 | 6 | 1 | 6,051,863.5 | 2,179,029.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 7 | 7 | 1 | 6,051,882.5 | 2,179,029.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 8 | 8 | 1 | 6,051,858.5 | 2,178,946.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 9 | 9 | 1 | 6,051,880.0 | 2,178,945.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 10 | 11 | 1 | 6,051,900.5 | 2,178,946.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 11 | 12 | 1 | 6,051,921.5 | 2,178,946.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 12 | 13 | 1 | 6,051,954.0 | 2,178,948.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 13 | 14 | 1 | 6,051,974.5 | 2,178,948.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 14 | 15 | 1 | 6,051,995.5 | 2,178,947.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 15 | 16 | 1 | 6,052,048.0 | 2,178,975.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 16 | 17 | 1 | 6,051,943.5 | 2,178,876.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 17 | 18 | 1 | 6,051,924.0 | 2,178,877.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 18 | 19 | 1 | 6,051,892.0 | 2,178,876.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 19 | 20 | 1 | 6,051,867.5 | 2,178,875.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 20 | 21 | 1 | 6,051,835.0 | 2,178,874.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 21 | 22 | 1 | 6,051,814.0 | 2,178,875.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 22 | 23 | 1 | 6,051,790.5 | 2,178,873.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 25 | 1 | 6,051,770.0 | 2,178,875.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 24 | 26 | 1 | 6,051,781.0 | 2,178,950.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 25 | 27 | 1 | 6,051,783.0 | 2,178,975.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 26 | 28 | 1 | 6,051,783.0 | 2,178,996.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 27 | 29 | 1 | 6,051,781.0 | 2,179,020.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 28 | 30 | 1 | 6,051,781.0 | 2,179,043.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 29 | 36 | 1 | 6,051,783.0 | 2,179,067.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

RBF 4 September 2013
Malisos TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17th/Superior (29 DU)
RUN: Future - Roof
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing Lden | No Barrier Lden Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated Lden | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 | 1 | 1 | 0.0 | 61.0 | 66 | 61.0 | 10 | ---- | 61.0 | 0.0 | 8 | -8.0 |
| 2 | 2 | 1 | 0.0 | 62.5 | 66 | 62.5 | 10 | ---- | 62.5 | 0.0 | 8 | -8.0 |
| 3 | 3 | 1 | 0.0 | 64.8 | 66 | 64.8 | 10 | ---- | 64.8 | 0.0 | 8 | -8.0 |
| 4 | 4 | 1 | 0.0 | 65.3 | 66 | 65.3 | 10 | ---- | 65.3 | 0.0 | 8 | -8.0 |
| 5 | 5 | 1 | 0.0 | 65.6 | 66 | 65.6 | 10 | ---- | 65.6 | 0.0 | 8 | -8.0 |
| 6 | 6 | 1 | 0.0 | 59.1 | 66 | 59.1 | 10 | ---- | 59.1 | 0.0 | 8 | -8.0 |
| 7 | 7 | 1 | 0.0 | 60.3 | 66 | 60.3 | 10 | ---- | 60.3 | 0.0 | 8 | -8.0 |
| 8 | 8 | 1 | 0.0 | 60.2 | 66 | 60.2 | 10 | ---- | 60.2 | 0.0 | 8 | -8.0 |
| 9 | 9 | 1 | 0.0 | 60.4 | 66 | 60.4 | 10 | ---- | 60.4 | 0.0 | 8 | -8.0 |
| 10 | 11 | 1 | 0.0 | 61.3 | 66 | 61.3 | 10 | ---- | 61.3 | 0.0 | 8 | -8.0 |
| 11 | 12 | 1 | 0.0 | 62.3 | 66 | 62.3 | 10 | ---- | 62.3 | 0.0 | 8 | -8.0 |
| 12 | 13 | 1 | 0.0 | 64.6 | 66 | 64.6 | 10 | ---- | 64.6 | 0.0 | 8 | -8.0 |
| 13 | 14 | 1 | 0.0 | 65.9 | 66 | 65.9 | 10 | ---- | 65.9 | 0.0 | 8 | -8.0 |
| 14 | 15 | 1 | 0.0 | 66.6 | 66 | 66.6 | 10 | Snd Lvl | 66.6 | 0.0 | 8 | -8.0 |
| 15 | 16 | 1 | 0.0 | 67.4 | 66 | 67.4 | 10 | Snd Lvl | 67.4 | 0.0 | 8 | -8.0 |
| 16 | 17 | 1 | 0.0 | 67.1 | 66 | 67.1 | 10 | Snd Lvl | 67.1 | 0.0 | 8 | -8.0 |
| 17 | 18 | 1 | 0.0 | 66.2 | 66 | 66.2 | 10 | Snd Lvl | 66.2 | 0.0 | 8 | -8.0 |
| 18 | 19 | 1 | 0.0 | 64.9 | 66 | 64.9 | 10 | ---- | 64.9 | 0.0 | 8 | -8.0 |
| 19 | 20 | 1 | 0.0 | 64.3 | 66 | 64.3 | 10 | ---- | 64.3 | 0.0 | 8 | -8.0 |
| 20 | 21 | 1 | 0.0 | 63.7 | 66 | 63.7 | 10 | ---- | 63.7 | 0.0 | 8 | -8.0 |
| 21 | 22 | 1 | 0.0 | 63.2 | 66 | 63.2 | 10 | ---- | 63.2 | 0.0 | 8 | -8.0 |
| 22 | 23 | 1 | 0.0 | 62.9 | 66 | 62.9 | 10 | ---- | 62.9 | 0.0 | 8 | -8.0 |
| 23 | 25 | 1 | 0.0 | 62.5 | 66 | 62.5 | 10 | ---- | 62.5 | 0.0 | 8 | -8.0 |
| 24 | 26 | 1 | 0.0 | 58.5 | 66 | 58.5 | 10 | ---- | 58.5 | 0.0 | 8 | -8.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 27 | 1 | 0.0 | 58.1 | 66 | 58.1 | 10 | ---- | 58.1 | 0.0 | 8 | -8.0 |
| 26 | 28 | 1 | 0.0 | 58.4 | 66 | 58.4 | 10 | ---- | 58.4 | 0.0 | 8 | -8.0 |
| 27 | 29 | 1 | 0.0 | 58.7 | 66 | 58.7 | 10 | ---- | 58.7 | 0.0 | 8 | -8.0 |
| 28 | 30 | 1 | 0.0 | 59.0 | 66 | 59.0 | 10 | ---- | 59.0 | 0.0 | 8 | -8.0 |
| 29 | 36 | 1 | 0.0 | 59.6 | 66 | 59.6 | 10 | ---- | 59.6 | 0.0 | 8 | -8.0 |

| **Dwelling Units** | **# DUs** | **Noise Reduction** | | |
|---|---|---|---|---|
| | | **Min** | **Avg** | **Max** |
| | | **dB** | **dB** | **dB** |
| All Selected | 29 | 0.0 | 0.0 | 0.0 |
| All Impacted | 4 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

**RBF** **4 September 2013**
**Malisos** **TNM 2.5**

**INPUT: TRAFFIC FOR Lden**
**PROJECT/CONTRACT:** **17th/Superior (49 DU)**
**RUN:** **Future - 1st Floor**

| Roadway | Points | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | | | | | | | | | | | | |
| | | | ADT | Autos | | | | MTrucks | | | | HTrucks | | | | Buses | | | | Motorcycles | | | |
| | | | | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S | %D | %E | %N | S |
| | | | veh/24hrs | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph | % | % | % | mph |
| Superior NB | point1 | 1 | 10715 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point2 | 2 | | | | | | | | | | | | | | | | | | | | | |
| Superior SB | point3 | 3 | 10715 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point4 | 4 | | | | | | | | | | | | | | | | | | | | | |
| 17th EB | point5 | 5 | 5411 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point6 | 6 | | | | | | | | | | | | | | | | | | | | | |
| 17th WB | point7 | 7 | 5411 | 97 | 97 | 97 | 35 | 2 | 2 | 2 | 35 | 1 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | point8 | 8 | | | | | | | | | | | | | | | | | | | | | |

RBF 4 September 2013
Malisos TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 17th/Superior (49 DU)
RUN: Future - 1st Floor

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

| Roadway Name | Width | Points Name | No. | Coordinates (pavement) X | Y | Z | Flow Control Control Device | Speed Constraint | Percent Vehicles Affected | Segment Pvmt Type | On Struct? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ft | | | ft | ft | ft | | mph | % | | |
| Superior NB | 28.0 | point1 | 1 | 6,051,642.0 | 2,178,429.2 | 0.00 | | | | Average | |
| | | point2 | 2 | 6,052,566.5 | 2,179,327.5 | 0.00 | | | | | |
| Superior SB | 28.0 | point3 | 3 | 6,052,537.5 | 2,179,334.0 | 0.00 | | | | Average | |
| | | point4 | 4 | 6,051,618.0 | 2,178,444.0 | 0.00 | | | | | |
| 17th EB | 28.0 | point5 | 5 | 6,051,528.0 | 2,179,218.0 | 0.00 | | | | Average | |
| | | point6 | 6 | 6,052,398.0 | 2,179,213.2 | 0.00 | | | | | |
| 17th WB | 28.0 | point7 | 7 | 6,052,415.5 | 2,179,232.2 | 0.00 | | | | Average | |
| | | point8 | 8 | 6,051,543.0 | 2,179,235.8 | 0.00 | | | | | |

RBF 4 September 2013
Malisos TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 17th/Superior (49 DU)
RUN: Future - 1st Floor

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria Existing Lden | Impact Criteria Lden | Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| 1 | 1 | 1 | 6,051,784.5 | 2,179,110.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 2 | 2 | 1 | 6,051,786.0 | 2,179,135.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 3 | 3 | 1 | 6,051,786.5 | 2,179,152.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 4 | 4 | 1 | 6,051,865.0 | 2,179,145.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 5 | 5 | 1 | 6,051,883.0 | 2,179,145.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 6 | 6 | 1 | 6,051,905.0 | 2,179,145.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 7 | 7 | 1 | 6,051,924.0 | 2,179,145.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 8 | 8 | 1 | 6,051,941.5 | 2,179,144.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 9 | 9 | 1 | 6,051,973.5 | 2,179,145.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 10 | 11 | 1 | 6,051,996.5 | 2,179,144.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 11 | 12 | 1 | 6,052,014.5 | 2,179,144.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 12 | 13 | 1 | 6,052,033.5 | 2,179,144.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 13 | 14 | 1 | 6,052,068.5 | 2,179,142.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 14 | 15 | 1 | 6,052,088.5 | 2,179,142.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 15 | 16 | 1 | 6,052,110.0 | 2,179,142.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 16 | 17 | 1 | 6,052,128.5 | 2,179,142.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 17 | 18 | 1 | 6,052,078.0 | 2,179,064.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 18 | 19 | 1 | 6,052,077.5 | 2,179,043.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 19 | 20 | 1 | 6,052,078.0 | 2,179,023.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 20 | 21 | 1 | 6,052,012.0 | 2,179,002.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 21 | 22 | 1 | 6,051,996.5 | 2,178,945.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 22 | 23 | 1 | 6,051,977.0 | 2,178,945.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 25 | 1 | 6,051,955.0 | 2,178,945.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 24 | 26 | 1 | 6,051,947.5 | 2,178,872.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 25 | 27 | 1 | 6,051,925.0 | 2,178,871.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 26 | 28 | 1 | 6,051,908.0 | 2,178,871.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 27 | 29 | 1 | 6,051,885.0 | 2,178,871.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 28 | 30 | 1 | 6,051,868.5 | 2,178,872.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 29 | 31 | 1 | 6,051,832.0 | 2,178,872.5 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 30 | 32 | 1 | 6,051,808.0 | 2,178,871.2 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 31 | 33 | 1 | 6,051,792.0 | 2,178,873.0 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 32 | 34 | 1 | 6,051,772.5 | 2,178,871.8 | 0.00 | 5.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

RBF 4 September 2013
Malisos TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17th/Superior (49 DU)
RUN: Future - 1st Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing Lden | No Barrier Lden Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated Lden | Noise Reduction Calculated | Noise Reduction Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 | 1 | 1 | 0.0 | 59.8 | 66 | 59.8 | 10 | ---- | 59.8 | 0.0 | 8 | -8.0 |
| 2 | 2 | 1 | 0.0 | 61.7 | 66 | 61.7 | 10 | ---- | 61.7 | 0.0 | 8 | -8.0 |
| 3 | 3 | 1 | 0.0 | 63.4 | 66 | 63.4 | 10 | ---- | 63.4 | 0.0 | 8 | -8.0 |
| 4 | 4 | 1 | 0.0 | 64.8 | 66 | 64.8 | 10 | ---- | 64.8 | 0.0 | 8 | -8.0 |
| 5 | 5 | 1 | 0.0 | 65.0 | 66 | 65.0 | 10 | ---- | 65.0 | 0.0 | 8 | -8.0 |
| 6 | 6 | 1 | 0.0 | 65.1 | 66 | 65.1 | 10 | ---- | 65.1 | 0.0 | 8 | -8.0 |
| 7 | 7 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 8 | 8 | 1 | 0.0 | 65.1 | 66 | 65.1 | 10 | ---- | 65.1 | 0.0 | 8 | -8.0 |
| 9 | 9 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 10 | 11 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 11 | 12 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 12 | 13 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 13 | 14 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 14 | 15 | 1 | 0.0 | 65.3 | 66 | 65.3 | 10 | ---- | 65.3 | 0.0 | 8 | -8.0 |
| 15 | 16 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 16 | 17 | 1 | 0.0 | 65.7 | 66 | 65.7 | 10 | ---- | 65.7 | 0.0 | 8 | -8.0 |
| 17 | 18 | 1 | 0.0 | 63.4 | 66 | 63.4 | 10 | ---- | 63.4 | 0.0 | 8 | -8.0 |
| 18 | 19 | 1 | 0.0 | 64.7 | 66 | 64.7 | 10 | ---- | 64.7 | 0.0 | 8 | -8.0 |
| 19 | 20 | 1 | 0.0 | 66.0 | 66 | 66.0 | 10 | Snd Lvl | 66.0 | 0.0 | 8 | -8.0 |
| 20 | 21 | 1 | 0.0 | 62.8 | 66 | 62.8 | 10 | ---- | 62.8 | 0.0 | 8 | -8.0 |
| 21 | 22 | 1 | 0.0 | 66.2 | 66 | 66.2 | 10 | Snd Lvl | 66.2 | 0.0 | 8 | -8.0 |
| 22 | 23 | 1 | 0.0 | 64.4 | 66 | 64.4 | 10 | ---- | 64.4 | 0.0 | 8 | -8.0 |
| 23 | 25 | 1 | 0.0 | 62.3 | 66 | 62.3 | 10 | ---- | 62.3 | 0.0 | 8 | -8.0 |
| 24 | 26 | 1 | 0.0 | 67.5 | 66 | 67.5 | 10 | Snd Lvl | 67.5 | 0.0 | 8 | -8.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 27 | 1 | 0.0 | 66.0 | 66 | 66.0 | 10 | Snd Lvl | 66.0 | 0.0 | 8 | -8.0 |
| 26 | 28 | 1 | 0.0 | 65.1 | 66 | 65.1 | 10 | ---- | 65.1 | 0.0 | 8 | -8.0 |
| 27 | 29 | 1 | 0.0 | 63.7 | 66 | 63.7 | 10 | ---- | 63.7 | 0.0 | 8 | -8.0 |
| 28 | 30 | 1 | 0.0 | 62.7 | 66 | 62.7 | 10 | ---- | 62.7 | 0.0 | 8 | -8.0 |
| 29 | 31 | 1 | 0.0 | 60.8 | 66 | 60.8 | 10 | ---- | 60.8 | 0.0 | 8 | -8.0 |
| 30 | 32 | 1 | 0.0 | 59.8 | 66 | 59.8 | 10 | ---- | 59.8 | 0.0 | 8 | -8.0 |
| 31 | 33 | 1 | 0.0 | 59.0 | 66 | 59.0 | 10 | ---- | 59.0 | 0.0 | 8 | -8.0 |
| 32 | 34 | 1 | 0.0 | 58.3 | 66 | 58.3 | 10 | ---- | 58.3 | 0.0 | 8 | -8.0 |

| **Dwelling Units** | **# DUs** | **Noise Reduction** | | |
|---|---|---|---|---|
| | | **Min** | **Avg** | **Max** |
| | | **dB** | **dB** | **dB** |
| All Selected | 32 | 0.0 | 0.0 | 0.0 |
| All Impacted | 4 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

RBF 4 September 2013
Malisos TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 17th/Superior(49 DU)
RUN: Future - 2nd Floor

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria Existing Lden | Impact Criteria Lden | Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| 1 | 1 | 1 | 6,051,784.5 | 2,179,110.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 2 | 2 | 1 | 6,051,786.0 | 2,179,135.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 3 | 3 | 1 | 6,051,786.5 | 2,179,152.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 4 | 4 | 1 | 6,051,865.0 | 2,179,145.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 5 | 5 | 1 | 6,051,883.0 | 2,179,145.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 6 | 6 | 1 | 6,051,905.0 | 2,179,145.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 7 | 7 | 1 | 6,051,924.0 | 2,179,145.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 8 | 8 | 1 | 6,051,941.5 | 2,179,144.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 9 | 9 | 1 | 6,051,973.5 | 2,179,145.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 10 | 11 | 1 | 6,051,996.5 | 2,179,144.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 11 | 12 | 1 | 6,052,014.5 | 2,179,144.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 12 | 13 | 1 | 6,052,033.5 | 2,179,144.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 13 | 14 | 1 | 6,052,068.5 | 2,179,142.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 14 | 15 | 1 | 6,052,088.5 | 2,179,142.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 15 | 16 | 1 | 6,052,110.0 | 2,179,142.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 16 | 17 | 1 | 6,052,128.5 | 2,179,142.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 17 | 18 | 1 | 6,052,078.0 | 2,179,064.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 18 | 19 | 1 | 6,052,077.5 | 2,179,043.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 19 | 20 | 1 | 6,052,078.0 | 2,179,023.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 20 | 21 | 1 | 6,052,012.0 | 2,179,002.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 21 | 22 | 1 | 6,051,996.5 | 2,178,945.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 22 | 23 | 1 | 6,051,977.0 | 2,178,945.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 25 | 1 | 6,051,955.0 | 2,178,945.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 24 | 26 | 1 | 6,051,947.5 | 2,178,872.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 25 | 27 | 1 | 6,051,925.0 | 2,178,871.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 26 | 28 | 1 | 6,051,908.0 | 2,178,871.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 27 | 29 | 1 | 6,051,885.0 | 2,178,871.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 28 | 30 | 1 | 6,051,868.5 | 2,178,872.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 29 | 31 | 1 | 6,051,832.0 | 2,178,872.5 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 30 | 32 | 1 | 6,051,808.0 | 2,178,871.2 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 31 | 33 | 1 | 6,051,792.0 | 2,178,873.0 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 32 | 34 | 1 | 6,051,772.5 | 2,178,871.8 | 0.00 | 15.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

RBF 4 September 2013
Malisos TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17th/Superior(49 DU)
RUN: Future - 2nd Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing Lden | No Barrier Lden Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated Lden | Noise Reduction Calculated | Noise Reduction Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 | 1 | 1 | 0.0 | 60.3 | 66 | 60.3 | 10 | ---- | 60.3 | 0.0 | 8 | -8.0 |
| 2 | 2 | 1 | 0.0 | 61.9 | 66 | 61.9 | 10 | ---- | 61.9 | 0.0 | 8 | -8.0 |
| 3 | 3 | 1 | 0.0 | 63.5 | 66 | 63.5 | 10 | ---- | 63.5 | 0.0 | 8 | -8.0 |
| 4 | 4 | 1 | 0.0 | 65.1 | 66 | 65.1 | 10 | ---- | 65.1 | 0.0 | 8 | -8.0 |
| 5 | 5 | 1 | 0.0 | 65.3 | 66 | 65.3 | 10 | ---- | 65.3 | 0.0 | 8 | -8.0 |
| 6 | 6 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 7 | 7 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 8 | 8 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 9 | 9 | 1 | 0.0 | 65.5 | 66 | 65.5 | 10 | ---- | 65.5 | 0.0 | 8 | -8.0 |
| 10 | 11 | 1 | 0.0 | 65.5 | 66 | 65.5 | 10 | ---- | 65.5 | 0.0 | 8 | -8.0 |
| 11 | 12 | 1 | 0.0 | 65.5 | 66 | 65.5 | 10 | ---- | 65.5 | 0.0 | 8 | -8.0 |
| 12 | 13 | 1 | 0.0 | 65.6 | 66 | 65.6 | 10 | ---- | 65.6 | 0.0 | 8 | -8.0 |
| 13 | 14 | 1 | 0.0 | 65.6 | 66 | 65.6 | 10 | ---- | 65.6 | 0.0 | 8 | -8.0 |
| 14 | 15 | 1 | 0.0 | 65.7 | 66 | 65.7 | 10 | ---- | 65.7 | 0.0 | 8 | -8.0 |
| 15 | 16 | 1 | 0.0 | 65.8 | 66 | 65.8 | 10 | ---- | 65.8 | 0.0 | 8 | -8.0 |
| 16 | 17 | 1 | 0.0 | 66.3 | 66 | 66.3 | 10 | Snd Lvl | 66.3 | 0.0 | 8 | -8.0 |
| 17 | 18 | 1 | 0.0 | 64.6 | 66 | 64.6 | 10 | ---- | 64.6 | 0.0 | 8 | -8.0 |
| 18 | 19 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 19 | 20 | 1 | 0.0 | 66.5 | 66 | 66.5 | 10 | Snd Lvl | 66.5 | 0.0 | 8 | -8.0 |
| 20 | 21 | 1 | 0.0 | 64.0 | 66 | 64.0 | 10 | ---- | 64.0 | 0.0 | 8 | -8.0 |
| 21 | 22 | 1 | 0.0 | 66.6 | 66 | 66.6 | 10 | Snd Lvl | 66.6 | 0.0 | 8 | -8.0 |
| 22 | 23 | 1 | 0.0 | 65.0 | 66 | 65.0 | 10 | ---- | 65.0 | 0.0 | 8 | -8.0 |
| 23 | 25 | 1 | 0.0 | 63.5 | 66 | 63.5 | 10 | ---- | 63.5 | 0.0 | 8 | -8.0 |
| 24 | 26 | 1 | 0.0 | 67.7 | 66 | 67.7 | 10 | Snd Lvl | 67.7 | 0.0 | 8 | -8.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 27 | 1 | 0.0 | 66.3 | 66 | 66.3 | 10 | Snd Lvl | 66.3 | 0.0 | 8 | -8.0 |
| 26 | 28 | 1 | 0.0 | 65.6 | 66 | 65.6 | 10 | ---- | 65.6 | 0.0 | 8 | -8.0 |
| 27 | 29 | 1 | 0.0 | 64.8 | 66 | 64.8 | 10 | ---- | 64.8 | 0.0 | 8 | -8.0 |
| 28 | 30 | 1 | 0.0 | 64.2 | 66 | 64.2 | 10 | ---- | 64.2 | 0.0 | 8 | -8.0 |
| 29 | 31 | 1 | 0.0 | 63.3 | 66 | 63.3 | 10 | ---- | 63.3 | 0.0 | 8 | -8.0 |
| 30 | 32 | 1 | 0.0 | 62.7 | 66 | 62.7 | 10 | ---- | 62.7 | 0.0 | 8 | -8.0 |
| 31 | 33 | 1 | 0.0 | 62.3 | 66 | 62.3 | 10 | ---- | 62.3 | 0.0 | 8 | -8.0 |
| 32 | 34 | 1 | 0.0 | 61.9 | 66 | 61.9 | 10 | ---- | 61.9 | 0.0 | 8 | -8.0 |

| **Dwelling Units** | **# DUs** | **Noise Reduction** | | |
|---|---|---|---|---|
| | | **Min** | **Avg** | **Max** |
| | | **dB** | **dB** | **dB** |
| All Selected | 32 | 0.0 | 0.0 | 0.0 |
| All Impacted | 5 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

RBF 4 September 2013
Malisos TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 17th/Superior (49 DU)
RUN: Future - 3nd Floor

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria Existing Lden | Impact Criteria Lden | Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| 1 | 1 | 1 | 6,051,784.5 | 2,179,110.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 2 | 2 | 1 | 6,051,786.0 | 2,179,135.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 3 | 3 | 1 | 6,051,786.5 | 2,179,152.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 4 | 4 | 1 | 6,051,865.0 | 2,179,145.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 5 | 5 | 1 | 6,051,883.0 | 2,179,145.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 6 | 6 | 1 | 6,051,905.0 | 2,179,145.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 7 | 7 | 1 | 6,051,924.0 | 2,179,145.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 8 | 8 | 1 | 6,051,941.5 | 2,179,144.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 9 | 9 | 1 | 6,051,973.5 | 2,179,145.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 10 | 11 | 1 | 6,051,996.5 | 2,179,144.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 11 | 12 | 1 | 6,052,014.5 | 2,179,144.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 12 | 13 | 1 | 6,052,033.5 | 2,179,144.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 13 | 14 | 1 | 6,052,068.5 | 2,179,142.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 14 | 15 | 1 | 6,052,088.5 | 2,179,142.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 15 | 16 | 1 | 6,052,110.0 | 2,179,142.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 16 | 17 | 1 | 6,052,128.5 | 2,179,142.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 17 | 18 | 1 | 6,052,078.0 | 2,179,064.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 18 | 19 | 1 | 6,052,077.5 | 2,179,043.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 19 | 20 | 1 | 6,052,078.0 | 2,179,023.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 20 | 21 | 1 | 6,052,012.0 | 2,179,002.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 21 | 22 | 1 | 6,051,996.5 | 2,178,945.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 22 | 23 | 1 | 6,051,977.0 | 2,178,945.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 25 | 1 | 6,051,955.0 | 2,178,945.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 24 | 26 | 1 | 6,051,947.5 | 2,178,872.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 25 | 27 | 1 | 6,051,925.0 | 2,178,871.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 26 | 28 | 1 | 6,051,908.0 | 2,178,871.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 27 | 29 | 1 | 6,051,885.0 | 2,178,871.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 28 | 30 | 1 | 6,051,868.5 | 2,178,872.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 29 | 31 | 1 | 6,051,832.0 | 2,178,872.5 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 30 | 32 | 1 | 6,051,808.0 | 2,178,871.2 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 31 | 33 | 1 | 6,051,792.0 | 2,178,873.0 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 32 | 34 | 1 | 6,051,772.5 | 2,178,871.8 | 0.00 | 25.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

RBF 4 September 2013
Malisos TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17th/Superior (49 DU)
RUN: Future - 3nd Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing Lden | No Barrier Lden Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated Lden | Noise Reduction Calculated | Noise Reduction Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 | 1 | 1 | 0.0 | 60.3 | 66 | 60.3 | 10 | ---- | 60.3 | 0.0 | 8 | -8.0 |
| 2 | 2 | 1 | 0.0 | 61.6 | 66 | 61.6 | 10 | ---- | 61.6 | 0.0 | 8 | -8.0 |
| 3 | 3 | 1 | 0.0 | 63.2 | 66 | 63.2 | 10 | ---- | 63.2 | 0.0 | 8 | -8.0 |
| 4 | 4 | 1 | 0.0 | 64.8 | 66 | 64.8 | 10 | ---- | 64.8 | 0.0 | 8 | -8.0 |
| 5 | 5 | 1 | 0.0 | 65.0 | 66 | 65.0 | 10 | ---- | 65.0 | 0.0 | 8 | -8.0 |
| 6 | 6 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 7 | 7 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 8 | 8 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 9 | 9 | 1 | 0.0 | 65.3 | 66 | 65.3 | 10 | ---- | 65.3 | 0.0 | 8 | -8.0 |
| 10 | 11 | 1 | 0.0 | 65.3 | 66 | 65.3 | 10 | ---- | 65.3 | 0.0 | 8 | -8.0 |
| 11 | 12 | 1 | 0.0 | 65.3 | 66 | 65.3 | 10 | ---- | 65.3 | 0.0 | 8 | -8.0 |
| 12 | 13 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 13 | 14 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 14 | 15 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 15 | 16 | 1 | 0.0 | 65.6 | 66 | 65.6 | 10 | ---- | 65.6 | 0.0 | 8 | -8.0 |
| 16 | 17 | 1 | 0.0 | 66.1 | 66 | 66.1 | 10 | Snd Lvl | 66.1 | 0.0 | 8 | -8.0 |
| 17 | 18 | 1 | 0.0 | 64.8 | 66 | 64.8 | 10 | ---- | 64.8 | 0.0 | 8 | -8.0 |
| 18 | 19 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 19 | 20 | 1 | 0.0 | 66.4 | 66 | 66.4 | 10 | Snd Lvl | 66.4 | 0.0 | 8 | -8.0 |
| 20 | 21 | 1 | 0.0 | 64.2 | 66 | 64.2 | 10 | ---- | 64.2 | 0.0 | 8 | -8.0 |
| 21 | 22 | 1 | 0.0 | 66.6 | 66 | 66.6 | 10 | Snd Lvl | 66.6 | 0.0 | 8 | -8.0 |
| 22 | 23 | 1 | 0.0 | 65.1 | 66 | 65.1 | 10 | ---- | 65.1 | 0.0 | 8 | -8.0 |
| 23 | 25 | 1 | 0.0 | 63.6 | 66 | 63.6 | 10 | ---- | 63.6 | 0.0 | 8 | -8.0 |
| 24 | 26 | 1 | 0.0 | 67.5 | 66 | 67.5 | 10 | Snd Lvl | 67.5 | 0.0 | 8 | -8.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 27 | 1 | 0.0 | 66.3 | 66 | 66.3 | 10 | Snd Lvl | 66.3 | 0.0 | 8 | -8.0 |
| 26 | 28 | 1 | 0.0 | 65.7 | 66 | 65.7 | 10 | ---- | 65.7 | 0.0 | 8 | -8.0 |
| 27 | 29 | 1 | 0.0 | 64.9 | 66 | 64.9 | 10 | ---- | 64.9 | 0.0 | 8 | -8.0 |
| 28 | 30 | 1 | 0.0 | 64.4 | 66 | 64.4 | 10 | ---- | 64.4 | 0.0 | 8 | -8.0 |
| 29 | 31 | 1 | 0.0 | 63.4 | 66 | 63.4 | 10 | ---- | 63.4 | 0.0 | 8 | -8.0 |
| 30 | 32 | 1 | 0.0 | 62.9 | 66 | 62.9 | 10 | ---- | 62.9 | 0.0 | 8 | -8.0 |
| 31 | 33 | 1 | 0.0 | 62.5 | 66 | 62.5 | 10 | ---- | 62.5 | 0.0 | 8 | -8.0 |
| 32 | 34 | 1 | 0.0 | 62.1 | 66 | 62.1 | 10 | ---- | 62.1 | 0.0 | 8 | -8.0 |

| **Dwelling Units** | **# DUs** | **Noise Reduction** | | |
|---|---|---|---|---|
| | | **Min** | **Avg** | **Max** |
| | | **dB** | **dB** | **dB** |
| All Selected | 32 | 0.0 | 0.0 | 0.0 |
| All Impacted | 5 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

RBF 4 September 2013
Malisos TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 17th/Superior (49 DU)
RUN: Future - Roof

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria Existing Lden | Impact Criteria Lden | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ft | ft | ft | ft | dBA | dBA | dB | dB | |
| 1 | 1 | 1 | 6,051,784.5 | 2,179,110.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 2 | 2 | 1 | 6,051,786.0 | 2,179,135.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 3 | 3 | 1 | 6,051,786.5 | 2,179,152.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 4 | 4 | 1 | 6,051,865.0 | 2,179,145.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 5 | 5 | 1 | 6,051,883.0 | 2,179,145.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 6 | 6 | 1 | 6,051,905.0 | 2,179,145.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 7 | 7 | 1 | 6,051,924.0 | 2,179,145.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 8 | 8 | 1 | 6,051,941.5 | 2,179,144.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 9 | 9 | 1 | 6,051,973.5 | 2,179,145.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 10 | 11 | 1 | 6,051,996.5 | 2,179,144.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 11 | 12 | 1 | 6,052,014.5 | 2,179,144.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 12 | 13 | 1 | 6,052,033.5 | 2,179,144.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 13 | 14 | 1 | 6,052,068.5 | 2,179,142.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 14 | 15 | 1 | 6,052,088.5 | 2,179,142.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 15 | 16 | 1 | 6,052,110.0 | 2,179,142.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 16 | 17 | 1 | 6,052,128.5 | 2,179,142.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 17 | 18 | 1 | 6,052,078.0 | 2,179,064.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 18 | 19 | 1 | 6,052,077.5 | 2,179,043.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 19 | 20 | 1 | 6,052,078.0 | 2,179,023.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 20 | 21 | 1 | 6,052,012.0 | 2,179,002.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 21 | 22 | 1 | 6,051,996.5 | 2,178,945.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 22 | 23 | 1 | 6,051,977.0 | 2,178,945.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 25 | 1 | 6,051,955.0 | 2,178,945.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 24 | 26 | 1 | 6,051,947.5 | 2,178,872.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 25 | 27 | 1 | 6,051,925.0 | 2,178,871.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 26 | 28 | 1 | 6,051,908.0 | 2,178,871.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 27 | 29 | 1 | 6,051,885.0 | 2,178,871.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 28 | 30 | 1 | 6,051,868.5 | 2,178,872.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 29 | 31 | 1 | 6,051,832.0 | 2,178,872.5 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 30 | 32 | 1 | 6,051,808.0 | 2,178,871.2 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 31 | 33 | 1 | 6,051,792.0 | 2,178,873.0 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |
| 32 | 34 | 1 | 6,051,772.5 | 2,178,871.8 | 0.00 | 35.00 | 0.00 | 66 | 10.0 | 8.0 | Y |

RBF 4 September 2013
Malisos TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17th/Superior (49 DU)
RUN: Future - Roof
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing Lden | No Barrier Lden Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated Lden | Noise Reduction Calculated | Noise Reduction Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 | 1 | 1 | 0.0 | 60.6 | 66 | 60.6 | 10 | ---- | 60.6 | 0.0 | 8 | -8.0 |
| 2 | 2 | 1 | 0.0 | 62.4 | 66 | 62.4 | 10 | ---- | 62.4 | 0.0 | 8 | -8.0 |
| 3 | 3 | 1 | 0.0 | 64.7 | 66 | 64.7 | 10 | ---- | 64.7 | 0.0 | 8 | -8.0 |
| 4 | 4 | 1 | 0.0 | 64.8 | 66 | 64.8 | 10 | ---- | 64.8 | 0.0 | 8 | -8.0 |
| 5 | 5 | 1 | 0.0 | 65.0 | 66 | 65.0 | 10 | ---- | 65.0 | 0.0 | 8 | -8.0 |
| 6 | 6 | 1 | 0.0 | 65.1 | 66 | 65.1 | 10 | ---- | 65.1 | 0.0 | 8 | -8.0 |
| 7 | 7 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 8 | 8 | 1 | 0.0 | 65.2 | 66 | 65.2 | 10 | ---- | 65.2 | 0.0 | 8 | -8.0 |
| 9 | 9 | 1 | 0.0 | 65.3 | 66 | 65.3 | 10 | ---- | 65.3 | 0.0 | 8 | -8.0 |
| 10 | 11 | 1 | 0.0 | 65.4 | 66 | 65.4 | 10 | ---- | 65.4 | 0.0 | 8 | -8.0 |
| 11 | 12 | 1 | 0.0 | 65.6 | 66 | 65.6 | 10 | ---- | 65.6 | 0.0 | 8 | -8.0 |
| 12 | 13 | 1 | 0.0 | 65.7 | 66 | 65.7 | 10 | ---- | 65.7 | 0.0 | 8 | -8.0 |
| 13 | 14 | 1 | 0.0 | 65.7 | 66 | 65.7 | 10 | ---- | 65.7 | 0.0 | 8 | -8.0 |
| 14 | 15 | 1 | 0.0 | 65.8 | 66 | 65.8 | 10 | ---- | 65.8 | 0.0 | 8 | -8.0 |
| 15 | 16 | 1 | 0.0 | 66.3 | 66 | 66.3 | 10 | Snd Lvl | 66.3 | 0.0 | 8 | -8.0 |
| 16 | 17 | 1 | 0.0 | 67.1 | 66 | 67.1 | 10 | Snd Lvl | 67.1 | 0.0 | 8 | -8.0 |
| 17 | 18 | 1 | 0.0 | 65.1 | 66 | 65.1 | 10 | ---- | 65.1 | 0.0 | 8 | -8.0 |
| 18 | 19 | 1 | 0.0 | 66.0 | 66 | 66.0 | 10 | Snd Lvl | 66.0 | 0.0 | 8 | -8.0 |
| 19 | 20 | 1 | 0.0 | 66.7 | 66 | 66.7 | 10 | Snd Lvl | 66.7 | 0.0 | 8 | -8.0 |
| 20 | 21 | 1 | 0.0 | 64.5 | 66 | 64.5 | 10 | ---- | 64.5 | 0.0 | 8 | -8.0 |
| 21 | 22 | 1 | 0.0 | 66.5 | 66 | 66.5 | 10 | Snd Lvl | 66.5 | 0.0 | 8 | -8.0 |
| 22 | 23 | 1 | 0.0 | 65.7 | 66 | 65.7 | 10 | ---- | 65.7 | 0.0 | 8 | -8.0 |
| 23 | 25 | 1 | 0.0 | 64.1 | 66 | 64.1 | 10 | ---- | 64.1 | 0.0 | 8 | -8.0 |
| 24 | 26 | 1 | 0.0 | 67.4 | 66 | 67.4 | 10 | Snd Lvl | 67.4 | 0.0 | 8 | -8.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 27 | 1 | 0.0 | 66.6 | 66 | 66.6 | 10 | Snd Lvl | 66.6 | 0.0 | 8 | -8.0 |
| 26 | 28 | 1 | 0.0 | 65.7 | 66 | 65.7 | 10 | ---- | 65.7 | 0.0 | 8 | -8.0 |
| 27 | 29 | 1 | 0.0 | 64.9 | 66 | 64.9 | 10 | ---- | 64.9 | 0.0 | 8 | -8.0 |
| 28 | 30 | 1 | 0.0 | 64.5 | 66 | 64.5 | 10 | ---- | 64.5 | 0.0 | 8 | -8.0 |
| 29 | 31 | 1 | 0.0 | 63.7 | 66 | 63.7 | 10 | ---- | 63.7 | 0.0 | 8 | -8.0 |
| 30 | 32 | 1 | 0.0 | 63.2 | 66 | 63.2 | 10 | ---- | 63.2 | 0.0 | 8 | -8.0 |
| 31 | 33 | 1 | 0.0 | 62.9 | 66 | 62.9 | 10 | ---- | 62.9 | 0.0 | 8 | -8.0 |
| 32 | 34 | 1 | 0.0 | 62.6 | 66 | 62.6 | 10 | ---- | 62.6 | 0.0 | 8 | -8.0 |

| **Dwelling Units** | **# DUs** | **Noise Reduction** | | |
|---|---|---|---|---|
| | | **Min** | **Avg** | **Max** |
| | | **dB** | **dB** | **dB** |
| All Selected | 32 | 0.0 | 0.0 | 0.0 |
| All Impacted | 7 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |