

Appendix H

Noise Modeling Assumptions and Results

Summary

File Name on Meter 21040100.LD0.s
 File Name on PC LxT_0004654-20210401 100056-21040100.LD0.ldbi
 Serial Number 0004654
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Description LTNM1-1
 Start 2021-04-01 10:00:56
 Stop 2021-04-01 12:00:00
 Duration 01:59:03.3
 Run Time 01:59:03.3
 Pause 00:00:00.0
 Pre-Calibration 2021-04-01 09:58:43
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Fast
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/3 Octave
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 143.9 dB
 Under Range Peak A 99.8 C 96.8 Z 101.8 dB
 Under Range Limit 37.0 36.6 43.7 dB
 Noise Floor 27.9 27.5 34.5 dB

Results

LAFeq 54.0
 LAFE 92.6
 EAF 200.419 µPa²h
 EAF8 808.038 µPa²h
 EAF40 4.040 mPa²h
 LZfpeak (max) 2021-04-01 10:01:41 107.5 dB
 LAFmax 2021-04-01 10:01:41 84.6 dB
 LAFmin 2021-04-01 11:56:48 47.8 dB
 SEA -99.94 dB

LAF > 85.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LAF > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCFeq 69.8 dB
 LAFeq 54.0 dB
 LCFeq - LAFeq 15.8 dB
 LAleq 58.7 dB
 LAeq 54.0 dB
 LAleq - LAeq 4.6 dB

| | A | | C | | Z | |
|------------|------|---------------------|----|------------|-------|---------------------|
| | dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| Leq | 54.0 | | | | | |
| Lf(max) | 84.6 | 2021/04/01 10:01:41 | | | | |
| Lf(min) | 47.8 | 2021/04/01 11:56:48 | | | | |
| Lpeak(max) | | | | | 107.5 | 2021/04/01 10:01:41 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose -99.94 0.00 %
 Projected Dose -99.94 0.00 %
 TWA (Projected) -99.94 11.3 dB
 TWA (t) -99.94 1.2 dB
 Lep (t) 48.0 48.0 dB

Statistics

LAI2.50 58.5 dB
 LAI8.00 54.4 dB
 LAI10.00 54.0 dB
 LAI25.00 52.6 dB
 LAI50.00 51.6 dB
 LAI90.00 50.0 dB

Summary

File Name on Meter 21040101.LD0.s
 File Name on PC LxT_0004654-20210401 120000-21040101.LD0.ldbi
 Serial Number 0004654
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Description POS LTNM1-2
 Start 2021-04-01 12:00:00
 Stop 2021-04-02 00:00:00
 Duration 12:00:00.0
 Run Time 12:00:00.0
 Pause 00:00:00.0
 Pre-Calibration 2021-04-01 09:58:43
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Fast
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/3 Octave
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 143.9 dB
 Under Range Peak A 99.8 C 96.8 Z 101.8 dB
 Under Range Limit 37.0 36.6 43.7 dB
 Noise Floor 27.9 27.5 34.5 dB

Results

LAFeq 55.9
 LAFE 102.3
 EAF 1.875 mPa²h
 EAF8 1.250 mPa²h
 EAF40 6.251 mPa²h
 LZfpeak (max) 2021-04-01 21:05:26 110.6 dB
 LAFmax 2021-04-01 15:44:37 91.1 dB
 LAFmin 2021-04-01 15:11:55 42.8 dB
 SEA -99.94 dB

LAF > 85.0 dB (Exceedance Counts / Duration) 7 8.5 s
 LAF > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCFeq 69.8 dB
 LAFeq 55.9 dB
 LCFeq - LAFeq 13.9 dB
 LAleq 58.8 dB
 LAeq 55.9 dB
 LAleq - LAeq 2.9 dB

| | A | | C | | Z | |
|------------|------|---------------------|----|------------|-------|---------------------|
| | dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| Leq | 55.9 | | | | | |
| Lf(max) | 91.1 | 2021/04/01 15:44:37 | | | | |
| Lf(min) | 42.8 | 2021/04/01 15:11:55 | | | | |
| Lpeak(max) | | | | | 110.6 | 2021/04/01 21:05:26 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose 0.00 0.03 %
 Projected Dose 0.00 0.02 %
 TWA (Projected) -3.1 29.4 dB
 TWA (t) -0.2 32.3 dB
 Lep (t) 57.7 57.7 dB

Statistics

LAI2.50 58.6 dB
 LAI8.00 55.1 dB
 LAI10.00 54.7 dB
 LAI25.00 53.2 dB
 LAI50.00 51.6 dB
 LAI90.00 48.0 dB

Summary

File Name on Meter 21040200.LD0.s
 File Name on PC LxT_0004654-20210402 000000-21040200.LD0.ldbi
 Serial Number 0004654
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Description LTNM1-3
 Start 2021-04-02 00:00:00
 Stop 2021-04-02 10:48:39
 Duration 10:48:39.9
 Run Time 10:48:39.9
 Pause 00:00:00.0
 Pre-Calibration 2021-04-01 09:58:43
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Fast
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/3 Octave
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 143.9 dB
 Under Range Peak A 99.8 C 96.8 Z 101.8 dB
 Under Range Limit 37.0 36.6 43.7 dB
 Noise Floor 27.9 27.5 34.5 dB

Results

LAFeq 56.8
 LAFe 102.7
 EAF 2.089 mPa²h
 EAF8 1.546 mPa²h
 EAF40 7.730 mPa²h
 LZfpeak (max) 2021-04-02 10:33:33 107.4 dB
 LAFmax 2021-04-02 00:32:42 86.0 dB
 LAFmin 2021-04-02 10:21:48 47.4 dB
 SEA -99.94 dB

LAF > 85.0 dB (Exceedance Counts / Duration) 1 0.4 s
 LAF > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCFeq 70.7 dB
 LAFeq 56.8 dB
 LCFeq - LAFeq 13.9 dB
 LAleq 59.0 dB
 LAeq 56.8 dB
 LAleq - LAeq 2.1 dB

| A | | C | | Z | |
|------|---------------------|----|------------|-------|---------------------|
| dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| 56.8 | | | | | |
| 86.0 | 2021/04/02 0:32:42 | | | | |
| 47.4 | 2021/04/02 10:21:48 | | | 107.4 | 2021/04/02 10:33:33 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose -99.94 0.01 %
 Projected Dose -99.94 0.00 %
 TWA (Projected) -99.94 18.2 dB
 TWA (t) -99.94 20.4 dB
 Lep (t) 58.1 58.1 dB

Statistics

LAI2.50 61.9 dB
 LAI8.00 58.8 dB
 LAI10.00 58.5 dB
 LAI25.00 57.0 dB
 LAI50.00 55.1 dB
 LAI90.00 51.1 dB

Summary

File Name on Meter 21040201.LD0.s
 File Name on PC LxT_0004654-20210402 122053-21040201.LD0.ldbi
 Serial Number 0004654
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Description POS LTNM1-4
 Start 2021-04-02 12:20:53
 Stop 2021-04-03 00:00:00
 Duration 11:39:06.8
 Run Time 11:39:06.8
 Pause 00:00:00.0
 Pre-Calibration 2021-04-02 12:18:29
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Fast
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/3 Octave
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 143.8 dB
 Under Range Peak A 99.7 C 96.7 Z 101.7 dB
 Under Range Limit 36.9 36.6 43.6 dB
 Noise Floor 27.8 27.4 34.5 dB

Results

LAFeq 54.0
 LAFe 100.3
 EAF 1.183 mPa²h
 EAF8 812.449 µPa²h
 EAF40 4.062 mPa²h
 LZfpeak (max) 2021-04-02 12:21:41 112.2 dB
 LAFmax 2021-04-02 12:21:01 80.9 dB
 LAFmin 2021-04-02 17:27:38 48.5 dB
 SEA -99.94 dB

LAF > 85.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LAF > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCFeq 72.9 dB
 LAFeq 54.0 dB
 LCFeq - LAFeq 18.9 dB
 LAleq 56.1 dB
 LAeq 54.0 dB
 LAleq - LAeq 2.1 dB

| | A | | C | | Z | |
|------------|------|---------------------|----|------------|-------|---------------------|
| | dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| Leq | 54.0 | | | | | |
| Lf(max) | 80.9 | 2021/04/02 12:21:01 | | | | |
| Lf(min) | 48.5 | 2021/04/02 17:27:38 | | | | |
| Lpeak(max) | | | | | 112.2 | 2021/04/02 12:21:41 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose -99.94 -99.94 %
 Projected Dose -99.94 -99.94 %
 TWA (Projected) -99.94 -99.94 dB
 TWA (t) -99.94 -99.94 dB
 Lep (t) 55.7 55.7 dB

Statistics

LAI2.50 57.1 dB
 LAI8.00 55.4 dB
 LAI10.00 55.2 dB
 LAI25.00 54.4 dB
 LAI50.00 53.6 dB
 LAI90.00 51.6 dB

Summary

File Name on Meter 21040200.LD0.s
 File Name on PC LxT_0004656-20210402 120851-21040200.LD0.ldbi
 Serial Number 0004656
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Description POS LTNM2-1
 Start 2021-04-02 12:08:51
 Stop 2021-04-03 00:00:00
 Duration 11:51:08.3
 Run Time 11:51:08.3
 Pause 00:00:00.0
 Pre-Calibration 2021-03-26 07:53:07
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Fast
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/3 Octave
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 144.8 dB
 Under Range Peak A C Z
 Under Range Limit 100.7 97.7 102.7 dB
 Under Range Limit 37.9 37.6 44.6 dB
 Noise Floor 28.8 28.4 35.5 dB

Results

LAFeq 54.4
 LAFe 100.7
 EAF 1.320 mPa²h
 EAF8 890.859 µPa²h
 EAF40 4.454 mPa²h
 LZfpeak (max) 2021-04-02 12:21:04 113.9 dB
 LAFmax 2021-04-02 12:09:06 78.7 dB
 LAFmin 2021-04-02 16:51:58 48.6 dB
 SEA -99.94 dB

LAF > 85.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LAF > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZfpeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCFeq 74.1 dB
 LAFeq 54.4 dB
 LCFeq - LAFeq 19.7 dB
 LAleq 56.7 dB
 LAeq 54.4 dB
 LAleq - LAeq 2.2 dB

| | A | | C | | Z | |
|------------|------|---------------------|----|------------|-------|---------------------|
| | dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| Leq | 54.4 | | | | | |
| Lf(max) | 78.7 | 2021/04/02 12:09:06 | | | | |
| Lf(min) | 48.6 | 2021/04/02 16:51:58 | | | | |
| Lpeak(max) | | | | | 113.9 | 2021/04/02 12:21:04 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose -99.94 -99.94 %
 Projected Dose -99.94 -99.94 %
 TWA (Projected) -99.94 -99.94 dB
 TWA (t) -99.94 -99.94 dB
 Lep (t) 56.2 56.2 dB

Statistics

LAI2.50 57.8 dB
 LAI8.00 56.1 dB
 LAI10.00 55.9 dB
 LAI25.00 55.0 dB
 LAI50.00 54.0 dB
 LAI90.00 51.4 dB

| Summary | |
|--------------------|---|
| File Name on Meter | 21040300.LD0.s |
| File Name on PC | LxT_0004656-20210403 000000-21040300.LD0.ldbi |
| Serial Number | 0004656 |
| Model | SoundTrack LxT* |
| Firmware Version | 2.404 |
| User | |
| Location | |
| Job Description | |
| Note | Data at end of measurement was removed from averages due to noise associated with meter removal |

| Measurement | |
|-----------------------|---------------------|
| Description | POS LTNM2-2 |
| Start | 2021-04-03 00:00:00 |
| Stop | 2021-04-03 11:44:04 |
| Duration | 11:44:04.8 |
| Run Time | 11:44:04.8 |
| Pause | 00:00:00.0 |
| Pre-Calibration | 2021-03-26 07:53:07 |
| Post-Calibration | 2021-04-03 11:44:09 |
| Calibration Deviation | 0.00 dB |

| Overall Settings | |
|-------------------------|---------------------|
| RMS Weight | A Weighting |
| Peak Weight | Z Weighting |
| Detector | Fast |
| Preamplifier | PRMLxT1 |
| Microphone Correction | Off |
| Integration Method | Exponential |
| OBA Range | Normal |
| OBA Bandwidth | 1/3 Octave |
| OBA Frequency Weighting | Z Weighting |
| OBA Max Spectrum | Bin Max |
| Overload | 144.6 dB |
| | A C Z |
| Under Range Peak | 100.6 97.6 102.6 dB |
| Under Range Limit | 37.8 37.4 44.5 dB |
| Noise Floor | 28.7 28.3 35.4 dB |

| Results | |
|---------------|------------------------------|
| LAFeq | 77.3 |
| LAFE | 123.6 |
| EAF | 254.852 mPa ² h |
| EAF8 | 173.743 mPa ² h |
| EAF40 | 868.715 mPa ² h |
| LZfpeak (max) | 2021-04-03 11:43:58 131.7 dB |
| LAFmax | 2021-04-03 11:43:56 115.0 dB |
| LAFmin | 2021-04-03 11:10:27 50.9 dB |
| SEA | 143.4 dB |

| | | |
|---|---|-------|
| LAF > 85.0 dB (Exceedance Counts / Duration) | 1 | 9.2 s |
| LAF > 115.0 dB (Exceedance Counts / Duration) | 0 | 0.0 s |
| LZfpeak > 135.0 dB (Exceedance Counts / Duration) | 0 | 0.0 s |
| LZfpeak > 137.0 dB (Exceedance Counts / Duration) | 0 | 0.0 s |
| LZfpeak > 140.0 dB (Exceedance Counts / Duration) | 0 | 0.0 s |

| | |
|---------------|---------|
| LCFeq | 81.3 dB |
| LAFeq | 77.3 dB |
| LCFeq - LAFeq | 3.9 dB |
| LALeq | 77.4 dB |
| LAeq | 77.4 dB |
| LALeq - LAeq | 0.0 dB |

| A | | C | | Z | |
|-------|---------------------|----|------------|-------|---------------------|
| dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| 77.4 | | | | | |
| 115.0 | 2021/04/03 11:43:56 | | | | |
| 50.9 | 2021/04/03 11:10:27 | | | | |
| | | | | 131.7 | 2021/04/03 11:43:58 |

| | |
|-----------------------|-------|
| Overload Count | 0 |
| Overload Duration | 0.0 s |
| OBA Overload Count | 0 |
| OBA Overload Duration | 0.0 s |

| Dose Settings | |
|--------------------|---------------|
| Dose Name | OSHA-1 OSHA-2 |
| Exchange Rate | 5 5 dB |
| Threshold | 90 80 dB |
| Criterion Level | 90 90 dB |
| Criterion Duration | 8 8 h |

| Results | |
|-----------------|--------------|
| Dose | 0.87 0.87 % |
| Projected Dose | 0.59 0.59 % |
| TWA (Projected) | 53.0 53.0 dB |
| TWA (t) | 55.8 55.8 dB |
| Lep (t) | 79.0 79.0 dB |

| Statistics | |
|------------|---------|
| LAI2.50 | 59.8 dB |
| LAI8.00 | 57.4 dB |
| LAI10.00 | 57.1 dB |
| LAI25.00 | 56.1 dB |
| LAI50.00 | 55.3 dB |
| LAI90.00 | 54.0 dB |

Summary

File Name on Meter LxT_Data.007.s
 File Name on PC LxT_0005439-20210401 162528-LxT_Data.007.ldbir
 Serial Number 0005439
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Description POS STNM1
 Start 2021-04-01 16:25:28
 Stop 2021-04-01 17:25:28
 Duration 01:00:00.0
 Run Time 01:00:00.0
 Pause 00:00:00.0
 Pre-Calibration 2021-04-01 16:25:10
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Slow
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/1 and 1/3
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 143.5 dB
 Under Range Peak A 99.5 C 96.5 Z 101.5 dB
 Under Range Limit 36.7 36.4 43.4 dB
 Noise Floor 27.6 27.2 34.3 dB

Results

LASeq 51.8
 LASeq 87.3
 EAS 60.161 µPa²h
 EASB 481.287 µPa²h
 EAS40 2.406 mPa²h
 LZSpeak (max) 2021-04-01 17:00:23 98.9 dB
 LASmax 2021-04-01 17:13:41 74.1 dB
 LASmin 2021-04-01 16:41:30 39.7 dB
 SEA -99.94 dB

LAS > 85.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LAS > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZSpeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZSpeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZSpeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCSeq 66.4 dB
 LASeq 51.8 dB
 LCSeq - LASeq 14.6 dB
 LASeq 56.0 dB
 LASeq 51.8 dB
 LASeq - LASeq 4.2 dB

| | A | | C | | Z | |
|------------|------|---------------------|----|------------|------|---------------------|
| | dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| Leq | 51.8 | | | | | |
| Ls(max) | 74.1 | 2021/04/01 17:13:41 | | | | |
| Ls(min) | 39.7 | 2021/04/01 16:41:30 | | | | |
| LPeak(max) | | | | | 98.9 | 2021/04/01 17:00:23 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose -99.94 -99.94 %
 Projected Dose -99.94 -99.94 %
 TWA (Projected) -99.94 -99.94 dB
 TWA (t) -99.94 -99.94 dB
 Lep (t) 42.7 42.7 dB

Statistics

LAI2.50 59.0 dB
 LAI8.00 55.0 dB
 LAI10.00 54.1 dB
 LAI25.00 50.1 dB
 LAI50.00 47.1 dB
 LAI90.00 43.3 dB

Summary

File Name on Meter LxT_Data.006.s
 File Name on PC LxT_0005439-20210401 151721-LxT_Data.006.ldbir
 Serial Number 0005439
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Pause POS STNM2
 Start 2021-04-01 15:17:21
 Stop 2021-04-01 16:17:21
 Duration 01:00:00.0
 Run Time 01:00:00.0
 Pause 00:00:00.0
 Pre-Calibration 2021-04-01 15:16:22
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Slow
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/1 and 1/3
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 144.1 dB
 Under Range Peak A C Z
 Under Range Limit 100.0 97.0 102.0 dB
 Under Range Limit 37.2 36.9 43.9 dB
 Noise Floor 28.1 27.8 34.8 dB

Results

LASeq 61.1
 LASeq 96.6
 EAS 513.505 µPa²h
 EASB 4.108 mPa²h
 EAS40 20.540 mPa²h
 LZspeak (max) 2021-04-01 16:01:51 101.8 dB
 LASmax 2021-04-01 16:01:51 79.2 dB
 LASmin 2021-04-01 15:33:49 46.3 dB
 SEA -99.94 dB

LAS > 85.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LAS > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCSeq 70.6 dB
 LASeq 61.1 dB
 LCSeq - LASeq 9.6 dB
 LAleq 62.4 dB
 LAeq 61.1 dB
 LAleq - LAeq 1.4 dB

| | A | | C | | Z | |
|------------|------|---------------------|----|------------|-------|---------------------|
| | dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| Leq | 61.1 | | | | | |
| Ls(max) | 79.2 | 2021/04/01 16:01:51 | | | | |
| Ls(min) | 46.3 | 2021/04/01 15:33:49 | | | | |
| Lpeak(max) | | | | | 101.8 | 2021/04/01 16:01:51 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose -99.94 -99.94 %
 Projected Dose -99.94 -99.94 %
 TWA (Projected) -99.94 -99.94 dB
 TWA (t) -99.94 -99.94 dB
 Lep (t) 52.1 52.1 dB

Statistics

LAI2.50 66.5 dB
 LAI8.00 63.6 dB
 LAI10.00 63.1 dB
 LAI25.00 61.3 dB
 LAI50.00 59.3 dB
 LAI90.00 54.1 dB

Summary

File Name on Meter LxT_Data.005.s
 File Name on PC LxT_0005439-20210401 140728-LxT_Data.005.ldbir
 Serial Number 0005439
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Description POS STNM3
 Start 2021-04-01 14:07:28
 Stop 2021-04-01 15:07:28
 Duration 01:00:00.0
 Run Time 01:00:00.0
 Pause 00:00:00.0
 Pre-Calibration 2021-04-01 14:07:02
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Slow
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/1 and 1/3
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 144.3 dB
 Under Range Peak A C Z
 Under Range Limit 100.3 97.3 102.3 dB
 Under Range Limit 37.5 37.1 44.2 dB
 Noise Floor 28.3 28.0 35.0 dB

Results

LASeq 63.6
 LASeq 99.1
 EAS 909.668 µPa²h
 EASB 7.277 mPa²h
 EAS40 36.387 mPa²h
 LZspeak (max) 2021-04-01 14:44:41 107.6 dB
 LASmax 2021-04-01 14:44:41 85.9 dB
 LASmin 2021-04-01 14:49:56 43.5 dB
 SEA -99.94 dB

LAS > 85.0 dB (Exceedance Counts / Duration) 1 7.2 s
 LAS > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCSeq 71.5 dB
 LASeq 63.6 dB
 LCSeq - LASeq 7.9 dB
 LASeq 66.3 dB
 LAeq 63.6 dB
 LASeq - LAeq 2.8 dB

| | A | | C | | Z | |
|------------|------|---------------------|----|------------|-------|---------------------|
| | dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| Leq | 63.6 | | | | | |
| Ls(max) | 85.9 | 2021/04/01 14:44:41 | | | | |
| Ls(min) | 43.5 | 2021/04/01 14:49:56 | | | | |
| LPeak(max) | | | | | 107.6 | 2021/04/01 14:44:41 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose -99.94 0.04 %
 Projected Dose -99.94 0.32 %
 TWA (Projected) -99.94 48.6 dB
 TWA (t) -99.94 33.6 dB
 Lep (t) 54.5 54.5 dB

Statistics

LAI2.50 63.6 dB
 LAI8.00 58.4 dB
 LAI10.00 57.9 dB
 LAI25.00 55.9 dB
 LAI50.00 53.4 dB
 LAI90.00 48.9 dB

Summary

File Name on Meter LxT_Data.004.s
 File Name on PC LxT_0005439-20210401 123415-LxT_Data.004.ldbir
 Serial Number 0005439
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Description POS STNM4
 Start 2021-04-01 12:34:15
 Stop 2021-04-01 13:34:15
 Duration 01:00:00.0
 Run Time 01:00:00.0
 Pause 00:00:00.0
 Pre-Calibration 2021-04-01 12:33:25
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Slow
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/1 and 1/3
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 144.0 dB
 Under Range Peak A 100.0 C 97.0 Z 102.0 dB
 Under Range Limit 37.2 36.9 43.9 dB
 Noise Floor 28.1 27.7 34.8 dB

Results

LASeq 47.5
 LASe 83.1
 EAS 22.687 µPa²h
 EASB 181.496 µPa²h
 EAS40 907.482 µPa²h
 LZspeak (max) 2021-04-01 13:32:01 97.5 dB
 LASmax 2021-04-01 13:33:48 61.8 dB
 LASmin 2021-04-01 13:09:14 36.8 dB
 SEA -99.94 dB

LAS > 85.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LAS > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCSeq 60.1 dB
 LASeq 47.5 dB
 LCSeq - LASeq 12.6 dB
 LASeq 50.9 dB
 LAeq 47.5 dB
 LASeq - LAeq 3.4 dB

| | A | | C | | Z | |
|------------|------|---------------------|----|------------|------|---------------------|
| | dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| Leq | 47.5 | | | | | |
| Ls(max) | 61.8 | 2021/04/01 13:33:48 | | | | |
| Ls(min) | 36.8 | 2021/04/01 13:09:14 | | | | |
| Lpeak(max) | | | | | 97.5 | 2021/04/01 13:32:01 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose -99.94 -99.94 %
 Projected Dose -99.94 -99.94 %
 TWA (Projected) -99.94 -99.94 dB
 TWA (t) -99.94 -99.94 dB
 Lep (t) 38.5 38.5 dB

Statistics

LAI2.50 56.3 dB
 LAI8.00 51.6 dB
 LAI10.00 50.4 dB
 LAI25.00 45.8 dB
 LAI50.00 43.6 dB
 LAI90.00 40.7 dB

Summary

File Name on Meter LxT_Data.003.s
 File Name on PC LxT_0005439-20210401 111848-LxT_Data.003.ldbir
 Serial Number 0005439
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Description POS STNMS
 Start 2021-04-01 11:18:48
 Stop 2021-04-01 12:18:48
 Duration 01:00:00.0
 Run Time 01:00:00.0
 Pause 00:00:00.0
 Pre-Calibration 2021-04-01 11:17:50
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Slow
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/1 and 1/3
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 143.7 dB
 Under Range Peak A 99.7 C 96.7 Z 101.7 dB
 Under Range Limit 36.9 36.6 43.6 dB
 Noise Floor 27.8 27.4 34.5 dB

Results

LASeq 62.2
 LASeq 97.8
 EAS 663.781 µPa²h
 EAS8 5.310 mPa²h
 EAS40 26.551 mPa²h
 LZspeak (max) 2021-04-01 11:38:25 104.6 dB
 LASmax 2021-04-01 11:38:25 90.2 dB
 LASmin 2021-04-01 12:18:30 39.1 dB
 SEA -99.94 dB

LAS > 85.0 dB (Exceedance Counts / Duration) 1 2.3 s
 LAS > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCSeq 70.5 dB
 LASeq 62.2 dB
 LCSeq - LASeq 8.3 dB
 LASeq 66.4 dB
 LAeq 62.2 dB
 LASeq - LAeq 4.2 dB

| | A | | C | | Z | |
|------------|------|---------------------|----|------------|-------|---------------------|
| | dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| Leq | 62.2 | | | | | |
| Ls(max) | 90.2 | 2021/04/01 11:38:25 | | | | |
| Ls(min) | 39.1 | 2021/04/01 12:18:30 | | | | |
| Lpeak(max) | | | | | 104.6 | 2021/04/01 11:38:25 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose 0.00 0.01 %
 Projected Dose 0.01 0.05 %
 TWA (Projected) 19.4 34.9 dB
 TWA (t) 4.4 19.9 dB
 Lep (t) 53.2 53.2 dB

Statistics

LAI2.50 71.4 dB
 LAI8.00 65.8 dB
 LAI10.00 64.2 dB
 LAI25.00 54.0 dB
 LAI50.00 47.0 dB
 LAI90.00 41.8 dB

Summary

File Name on Meter LxT_Data.002.s
 File Name on PC LxT_0005439-20210401 094808-LxT_Data.002.ldbir
 Serial Number 0005439
 Model SoundTrack LxT®
 Firmware Version 2.404
 User
 Location
 Job Description
 Note

Measurement

Description POS STNM6
 Start 2021-04-01 09:48:08
 Stop 2021-04-01 10:48:08
 Duration 01:00:00.0
 Run Time 01:00:00.0
 Pause 00:00:00.0
 Pre-Calibration 2021-04-01 09:41:52
 Post-Calibration None
 Calibration Deviation ---

Overall Settings

RMS Weight A Weighting
 Peak Weight Z Weighting
 Detector Slow
 Preamplifier PRMLxT1
 Microphone Correction Off
 Integration Method Exponential
 OBA Range Normal
 OBA Bandwidth 1/1 and 1/3
 OBA Frequency Weighting Z Weighting
 OBA Max Spectrum Bin Max
 Overload 143.6 dB
 Under Range Peak A 99.6 C 96.6 Z 101.6 dB
 Under Range Limit 36.8 36.4 43.5 dB
 Noise Floor 27.7 27.3 34.3 dB

Results

LASeq 48.7
 LASeq 84.3
 EAS 29.675 µPa²h
 EASB 237.403 µPa²h
 EAS40 1.187 mPa²h
 LZspeak (max) 2021-04-01 09:59:41 86.5 dB
 LASmax 2021-04-01 09:50:22 65.5 dB
 LASmin 2021-04-01 10:48:08 42.3 dB
 SEA -99.94 dB

LAS > 85.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LAS > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZspeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

LCSeq 64.5 dB
 LASeq 48.7 dB
 LCSeq - LASeq 15.8 dB
 LAleq 51.4 dB
 LAeq 48.7 dB
 LAleq - LAeq 2.7 dB

| | A | | C | | Z | |
|------------|------|---------------------|----|------------|------|--------------------|
| | dB | Time Stamp | dB | Time Stamp | dB | Time Stamp |
| Leq | 48.7 | | | | | |
| Ls(max) | 65.5 | 2021/04/01 9:50:22 | | | | |
| Ls(min) | 42.3 | 2021/04/01 10:48:08 | | | | |
| Lpeak(max) | | | | | 86.5 | 2021/04/01 9:59:41 |

Overload Count 0
 Overload Duration 0.0 s
 OBA Overload Count 0
 OBA Overload Duration 0.0 s

Dose Settings

Dose Name OSHA-1 OSHA-2
 Exchange Rate 5 5 dB
 Threshold 90 80 dB
 Criterion Level 90 90 dB
 Criterion Duration 8 8 h

Results

Dose -99.94 -99.94 %
 Projected Dose -99.94 -99.94 %
 TWA (Projected) -99.94 -99.94 dB
 TWA (t) -99.94 -99.94 dB
 Lep (t) 39.7 39.7 dB

Statistics

LAI2.50 53.2 dB
 LAI8.00 50.8 dB
 LAI10.00 50.4 dB
 LAI25.00 48.8 dB
 LAI50.00 47.3 dB
 LAI90.00 45.0 dB

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/6/2021
 Case Description: Phase 1 Bridge Rail Replacement

---- Receptor #6 ----

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|--------------------------|-------------|---------|---------|-------|
| N. Temporary Work Platfc | Residential | 65 | 65 | 45 |

Equipment

| Description | Impact Device | Usage(%) | Spec | Actual | Receptor | Estimated |
|--------------------|---------------|----------|------------|------------|-----------------|-----------------|
| | | | Lmax (dBA) | Lmax (dBA) | Distance (feet) | Shielding (dBA) |
| Crane | No | 16 | 80.6 | 2800 | 0 | |
| Crane | No | 16 | 80.6 | 2800 | 0 | |
| Impact Pile Driver | Yes | 20 | 101.3 | 2800 | 0 | |
| Welder / Torch | No | 40 | 74 | 2800 | 0 | |
| Concrete Saw | No | 20 | 89.6 | 2800 | 0 | |
| Excavator | No | 40 | 80.7 | 2800 | 0 | |
| Dozer | No | 40 | 81.7 | 2800 | 0 | |
| Roller | No | 20 | 80 | 2800 | 0 | |
| Man Lift | No | 20 | 74.7 | 2800 | 0 | |

Calculated (dBA)

| Equipment | *Lmax | Leq |
|--------------------|-------------|-------------|
| Crane | 45.6 | 37.6 |
| Crane | 45.6 | 37.6 |
| Impact Pile Driver | 66.3 | 59.3 |
| Welder / Torch | 39 | 35.1 |
| Concrete Saw | 54.6 | 47.6 |
| Excavator | 45.7 | 41.8 |
| Dozer | 46.7 | 42.7 |
| Roller | 45 | 38 |
| Man Lift | 39.7 | 32.7 |
| Total | 66.3 | 59.9 |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/6/2021

Case Description: Phase 2a Underpass Construction BNSF ROW

---- Receptor #1 ----

Baselines (dBA)

| Description | Land Use | Daytime | Evening | Night |
|-------------|-------------|---------|---------|-------|
| Residential | Residential | 65 | 65 | 45 |

Equipment

| Description | Impact | Device | Usage(%) | Spec | Actual | Receptor | Estimated |
|--------------------|--------|--------|----------|------------|------------|-----------------|-----------------|
| | | | | Lmax (dBA) | Lmax (dBA) | Distance (feet) | Shielding (dBA) |
| Generator | No | | 50 | | 80.6 | 60 | 0 |
| Front End Loader | No | | 40 | | 79.1 | 60 | 0 |
| Compressor (air) | No | | 40 | | 77.7 | 60 | 0 |
| Compressor (air) | No | | 40 | | 77.7 | 60 | 0 |
| Man Lift | No | | 20 | | 74.7 | 60 | 0 |
| Man Lift | No | | 20 | | 74.7 | 60 | 0 |
| Impact Pile Driver | Yes | | 20 | | 101.3 | 130 | 0 |
| Crane | No | | 16 | | 80.6 | 60 | 0 |

Calculated (dBA)

| Equipment | *Lmax | Leq |
|--------------------|-----------|-------------|
| Generator | 79 | 76 |
| Front End Loader | 77.5 | 73.5 |
| Compressor (air) | 76.1 | 72.1 |
| Compressor (air) | 76.1 | 72.1 |
| Man Lift | 73.1 | 66.1 |
| Man Lift | 73.1 | 66.1 |
| Impact Pile Driver | 93 | 86 |
| Crane | 79 | 71 |
| Total | 93 | 87.1 |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/6/2021
 Case Description: Phase 2a Underpass Construction BNSF ROW @ 270 Feet

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) | | |
|-------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Residential | Residential | 65 | 65 | 45 |

| Description | Device | Usage(%) | Equipment | | Receptor Distance (feet) | Estimated Shielding (dBA) |
|--------------------|--------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | | |
| Generator | No | 50 | | 80.6 | 310 | 0 |
| Front End Loader | No | 40 | | 79.1 | 310 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 310 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 310 | 0 |
| Man Lift | No | 20 | | 74.7 | 310 | 0 |
| Man Lift | No | 20 | | 74.7 | 310 | 0 |
| Impact Pile Driver | Yes | 20 | | 101.3 | 130 | 0 |
| Crane | No | 16 | | 80.6 | 310 | 0 |

Calculated (dBA)

| Equipment | *Lmax | Leq |
|--------------------|-----------|-----------|
| Generator | 64.8 | 61.8 |
| Front End Loader | 63.3 | 59.3 |
| Compressor (air) | 61.8 | 57.8 |
| Compressor (air) | 61.8 | 57.8 |
| Man Lift | 58.9 | 51.9 |
| Man Lift | 58.9 | 51.9 |
| Impact Pile Driver | 93 | 86 |
| Crane | 64.7 | 56.7 |
| Total | 93 | 86 |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/6/2021
 Case Description: Phase 2b Earthwork and Tractwork BNSF ROW 2 25 Feet

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) | | |
|-------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Residential | Residential | 65 | 65 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | Receptor Distance (feet) | Estimated Shielding (dBA) |
|--|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | | |
| Dozer | No | 40 | | 81.7 | 60 | 0 |
| Dozer | No | 40 | | 81.7 | 60 | 0 |
| Excavator | No | 40 | | 80.7 | 60 | 0 |
| Excavator | No | 40 | | 80.7 | 60 | 0 |
| Dump Trucks 80% to represent 20 trucks | No | 80 | | 76.5 | 60 | 0 |
| Compactor (ground) | No | 20 | 80 | | 60 | 0 |
| Compactor (ground) | No | 20 | 80 | | 60 | 0 |
| Welder / Torch | No | 40 | | 74 | 60 | 0 |
| Generator | No | 50 | | 80.6 | 60 | 0 |
| Front End Loader | No | 40 | | 79.1 | 60 | 0 |
| Front End Loader | No | 40 | | 79.1 | 60 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 60 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 60 | 0 |
| Man Lift | No | 20 | | 74.7 | 60 | 0 |
| Man Lift | No | 20 | | 74.7 | 60 | 0 |

Calculated (dBA)

| Equipment | *Lmax | Leq |
|--|-------------|-------------|
| Dozer | 80.1 | 76.1 |
| Dozer | 80.1 | 76.1 |
| Excavator | 79.1 | 75.1 |
| Excavator | 79.1 | 75.1 |
| Dump Trucks 80% to represent 20 trucks | 74.9 | 73.9 |
| Compactor (ground) | 78.4 | 71.4 |
| Compactor (ground) | 78.4 | 71.4 |
| Welder / Torch | 72.4 | 68.4 |
| Generator | 79 | 76 |
| Front End Loader | 77.5 | 73.5 |
| Front End Loader | 77.5 | 73.5 |
| Compressor (air) | 76.1 | 72.1 |
| Compressor (air) | 76.1 | 72.1 |
| Man Lift | 73.1 | 66.1 |
| Man Lift | 73.1 | 66.1 |
| Total | 80.1 | 85.2 |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/6/2021
 Case Description: Phase 2b Earthwork and Tractwork BNSF ROW @ 270 Feet

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) | | |
|-------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Residential | Residential | 65 | 65 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | Receptor Distance (feet) | Estimated Shielding (dBA) |
|--|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | | |
| Dozer | No | 40 | | 81.7 | 310 | 0 |
| Dozer | No | 40 | | 81.7 | 310 | 0 |
| Excavator | No | 40 | | 80.7 | 310 | 0 |
| Excavator | No | 40 | | 80.7 | 310 | 0 |
| Dump Trucks 80% to represent 20 trucks | No | 80 | | 76.5 | 310 | 0 |
| Compactor (ground) | No | 20 | 80 | | 310 | 0 |
| Compactor (ground) | No | 20 | 80 | | 310 | 0 |
| Welder / Torch | No | 40 | | 74 | 310 | 0 |
| Generator | No | 50 | | 80.6 | 310 | 0 |
| Front End Loader | No | 40 | | 79.1 | 310 | 0 |
| Front End Loader | No | 40 | | 79.1 | 310 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 310 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 310 | 0 |
| Man Lift | No | 20 | | 74.7 | 310 | 0 |
| Man Lift | No | 20 | | 74.7 | 310 | 0 |

Calculated (dBA)

| Equipment | *Lmax | Leq |
|--|-------------|-----------|
| Dozer | 65.8 | 61.8 |
| Dozer | 65.8 | 61.8 |
| Excavator | 64.9 | 60.9 |
| Excavator | 64.9 | 60.9 |
| Dump Trucks 80% to represent 20 trucks | 60.7 | 59.7 |
| Compactor (ground) | 64.2 | 57.2 |
| Compactor (ground) | 64.2 | 57.2 |
| Welder / Torch | 58.2 | 54.2 |
| Generator | 64.8 | 61.8 |
| Front End Loader | 63.3 | 59.3 |
| Front End Loader | 63.3 | 59.3 |
| Compressor (air) | 61.8 | 57.8 |
| Compressor (air) | 61.8 | 57.8 |
| Man Lift | 58.9 | 51.9 |
| Man Lift | 58.9 | 51.9 |
| Total | 65.8 | 71 |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/6/2021
 Case Description: Mitigated Phase 2b Earthwork and Tractwork BNSF ROW at 25 Feet

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) | | | Equipment | | | |
|--|---------------|-----------------|-----------------|-------------------|--------------------------|---------------------------|--------------------------|---------------------------|
| | | Daytime | Evening | Night | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
| Residential | Residential | 65 | 65 | 45 | | | | |
| Description | Impact Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) | | |
| Dozer 80 | No | 40 | | 80 | 95 | 0 | | |
| Dozer 80 | No | 40 | | 80 | 95 | 0 | | |
| Excavator | No | 40 | | 80.7 | 95 | 0 | | |
| Excavator | No | 40 | | 80.7 | 95 | 0 | | |
| Dump Trucks 80% to represent 20 trucks | No | 80 | | 76.5 | 95 | 0 | | |
| Compactor (ground) | No | 20 | 80 | | 95 | 0 | | |
| Compactor (ground) | No | 20 | 80 | | 95 | 0 | | |
| Welder / Torch | No | 40 | | 74 | 95 | 0 | | |
| Generator | No | 50 | | 80.6 | 95 | 10 | | |
| Front End Loader | No | 40 | | 79.1 | 95 | 0 | | |
| Front End Loader | No | 40 | | 79.1 | 95 | 0 | | |
| Compressor (air) | No | 40 | | 77.7 | 95 | 10 | | |
| Compressor (air) | No | 40 | | 77.7 | 95 | 10 | | |
| Man Lift | No | 20 | | 74.7 | 95 | 0 | | |
| Man Lift | No | 20 | | 74.7 | 95 | 0 | | |

Calculated (dBA)

| Equipment | *Lmax | Leq |
|--|-------------|-------------|
| Dozer 80 | 74.4 | 70.4 |
| Dozer 80 | 74.4 | 70.4 |
| Excavator | 75.1 | 71.2 |
| Excavator | 75.1 | 71.2 |
| Dump Trucks 80% to represent 20 trucks | 70.9 | 70 |
| Compactor (ground) | 74.4 | 67.4 |
| Compactor (ground) | 74.4 | 67.4 |
| Welder / Torch | 68.4 | 64.4 |
| Generator | 65.1 | 62 |
| Front End Loader | 73.5 | 69.6 |
| Front End Loader | 73.5 | 69.6 |
| Compressor (air) | 62.1 | 58.1 |
| Compressor (air) | 62.1 | 58.1 |
| Man Lift | 69.1 | 62.1 |
| Man Lift | 69.1 | 62.1 |
| Total | 75.1 | 79.8 |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/6/2021
 Case Description: Phase 2c Earthwork and Track Construction-Port

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) | | |
|-----------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Earthwork & Trackwork | Residential | 65 | 65 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | Estimated Shielding (dBA) |
|--|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | |
| Excavator | No | 40 | | 80.7 | 285 | 0 |
| Excavator | No | 40 | | 80.7 | 285 | 0 |
| Dump Trucks 80% to represent 20 trucks | No | 80 | | 76.5 | 285 | 0 |
| Welder / Torch | No | 40 | | 74 | 285 | 0 |
| Generator | No | 50 | | 80.6 | 285 | 0 |
| Front End Loader | No | 40 | | 79.1 | 285 | 0 |
| Front End Loader | No | 40 | | 79.1 | 285 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 285 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 285 | 0 |
| Man Lift | No | 20 | | 74.7 | 285 | 0 |

Calculated (dBA)

| Equipment | *Lmax | Leq |
|--|-------------|-------------|
| Excavator | 65.6 | 61.6 |
| Excavator | 65.6 | 61.6 |
| Dump Trucks 80% to represent 20 trucks | 61.4 | 60.4 |
| Welder / Torch | 58.9 | 54.9 |
| Generator | 65.5 | 62.5 |
| Front End Loader | 64 | 60 |
| Front End Loader | 64 | 60 |
| Compressor (air) | 62.6 | 58.6 |
| Compressor (air) | 62.6 | 58.6 |
| Man Lift | 59.6 | 52.6 |
| Total | 65.6 | 69.9 |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/6/2021
 Case Description: Phase 3 Port Yard Improvements

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) | | |
|-------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| McCloy Yard | Residential | 65 | 65 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | |
|---------------------------------------|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
| Dozer (4) | No | 40 | | 87.7 | 2350 | 0 |
| Dump Truck 80% to represent 20 trucks | No | 80 | | 76.5 | 2350 | 0 |
| Excavator | No | 40 | | 80.7 | 2350 | 0 |
| Excavator | No | 40 | | 80.7 | 2350 | 0 |
| Compactors (4) | No | 20 | | 89.2 | 2350 | 0 |
| Welders (4) | No | 40 | | 80 | 2350 | 0 |
| Generator | No | 50 | | 80.6 | 2350 | 0 |
| Generator | No | 50 | | 80.6 | 2350 | 0 |
| Front End Loader | No | 40 | | 79.1 | 2350 | 0 |
| Front End Loader | No | 40 | | 79.1 | 2350 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 2350 | 0 |
| Compressor (air) | No | 40 | | 77.7 | 2350 | 0 |
| Man Lift | No | 20 | | 74.7 | 2350 | 0 |
| Man Lift | No | 20 | | 74.7 | 2350 | 0 |

Calculated (dBA)

| Equipment | *Lmax | Leq |
|---------------------------------------|-------------|-------------|
| Dozer (4) | 54.3 | 50.3 |
| Dump Truck 80% to represent 20 trucks | 43.1 | 42.1 |
| Excavator | 47.3 | 43.3 |
| Excavator | 47.3 | 43.3 |
| Compactors (4) | 55.8 | 48.8 |
| Welders (4) | 46.6 | 42.6 |
| Generator | 47.2 | 44.2 |
| Generator | 47.2 | 44.2 |
| Front End Loader | 45.7 | 41.7 |
| Front End Loader | 45.7 | 41.7 |
| Compressor (air) | 44.2 | 40.2 |
| Compressor (air) | 44.2 | 40.2 |
| Man Lift | 41.3 | 34.3 |
| Man Lift | 41.3 | 34.3 |
| Total | 55.8 | 55.6 |

*Calculated Lmax is the Loudest value.

Construction Scenario: Pile Driving Alone

| 8-Hour Leq | | Ldn | | |
|-----------------|-----------|-------------|------------|--------------|
| Time | 1Hr Leq | Hour | Leq | With Penalty |
| 7:00 AM | 87.0 | Ambient | 57.8 | 67.83672 |
| 8:00 AM | 87.0 | Ambient | 55.2 | 65.23178 |
| 9:00 AM | 87.0 | Ambient | 56.0 | 65.95206 |
| 10:00 AM | 87.0 | Ambient | 56.1 | 66.14732 |
| 11:00 AM | 87.0 | Ambient | 57.3 | 67.3134 |
| Ambient | 52.7 | Ambient | 56.3 | 66.284 |
| 1:00 PM | 87.0 | Ambient | 59.3 | 69.3 |
| 2:00 PM | 87.0 | 7:00-8:00 | 87.0 | 87 |
| | | 8:00-9:00 | 87.0 | 87 |
| 8 Hr Leq | 86 | 9:00-10:00 | 87.0 | 87 |
| | | 10:00-11:00 | 87.0 | 87 |
| | | 11:00-12:00 | 87.0 | 87 |
| | | LUNCH | 52.7 | 52.65026 |
| | | 1:00-2:00 | 87.0 | 87 |
| | | 2:00-3:00 | 87.0 | 87 |
| | | 3:00-4:00 | 87.0 | 87 |
| | | Ambient | 55.3 | 55.26924 |
| | | Ambient | 53.2 | 53.21861 |
| | | Ambient | 50.8 | 50.82623 |
| | | Ambient | 54.0 | 54.0 |
| | | Ambient | 56.4 | 56.4 |
| | | Ambient | 54.9 | 54.9 |
| | | Ambient | 53.8 | 63.75014 |
| | | Ambient | 54.0 | 64.03848 |
| | | | Ldn | 82 |

Construction Scenario: Phase 1 Rail Bridge Replacement

| 8-Hour Leq | | Ldn | | |
|-----------------|-----------|-------------|------------|--------------|
| Time | 1Hr Leq | Hour | Leq | With Penalty |
| 7:00 AM | 60.0 | Ambient | 57.8 | 67.83672 |
| 8:00 AM | 60.0 | Ambient | 55.2 | 65.23178 |
| 9:00 AM | 60.0 | Ambient | 56.0 | 65.95206 |
| 10:00 AM | 60.0 | Ambient | 56.1 | 66.14732 |
| 11:00 AM | 60.0 | Ambient | 57.3 | 67.3134 |
| Ambient | 52.7 | Ambient | 56.3 | 66.284 |
| 1:00 PM | 60.0 | Ambient | 59.3 | 69.3 |
| 2:00 PM | 60.0 | 7:00-8:00 | 60.0 | 60 |
| | | 8:00-9:00 | 60.0 | 60 |
| 8 Hr Leq | 60 | 9:00-10:00 | 60.0 | 60 |
| | | 10:00-11:00 | 60.0 | 60 |
| | | 11:00-12:00 | 60.0 | 60 |
| | | LUNCH | 52.7 | 52.65026 |
| | | 1:00-2:00 | 60.0 | 60 |
| | | 2:00-3:00 | 60.0 | 60 |
| | | 3:00-4:00 | 60.0 | 60 |
| | | Ambient | 55.3 | 55.26924 |
| | | Ambient | 53.2 | 53.21861 |
| | | Ambient | 50.8 | 50.82623 |
| | | Ambient | 54.0 | 54.0 |
| | | Ambient | 56.4 | 56.4 |
| | | Ambient | 54.9 | 54.9 |
| | | Ambient | 53.8 | 63.75014 |
| | | Ambient | 54.0 | 64.03848 |
| | | | Ldn | 63 |

Construction Scenario: Phase 2a at 25 Feet

| 8-Hour Leq | | Ldn | | |
|-----------------|-----------|-------------|------|--------------|
| Time | 1Hr Leq | Hour | Leq | With Penalty |
| 7:00 AM | 87.0 | Ambient | 57.8 | 67.83672 |
| 8:00 AM | 87.0 | Ambient | 55.2 | 65.23178 |
| 9:00 AM | 87.0 | Ambient | 56.0 | 65.95206 |
| 10:00 AM | 87.0 | Ambient | 56.1 | 66.14732 |
| 11:00 AM | 87.0 | Ambient | 57.3 | 67.3134 |
| Ambient | 52.7 | Ambient | 56.3 | 66.284 |
| 1:00 PM | 87.0 | Ambient | 59.3 | 69.3 |
| 2:00 PM | 87.0 | 7:00-8:00 | 87.0 | 87 |
| | | 8:00-9:00 | 87.0 | 87 |
| 8 Hr Leq | 86 | 9:00-10:00 | 87.0 | 87 |
| | | 10:00-11:00 | 87.0 | 87 |
| | | 11:00-12:00 | 87.0 | 87 |
| | | LUNCH | 52.7 | 52.65026 |
| | | 1:00-2:00 | 87.0 | 87 |
| | | 2:00-3:00 | 87.0 | 87 |
| | | 3:00-4:00 | 87.0 | 87 |
| | | Ambient | 55.3 | 55.26924 |
| | | Ambient | 53.2 | 53.21861 |
| | | Ambient | 50.8 | 50.82623 |
| | | Ambient | 54.0 | 54.0 |
| | | Ambient | 56.4 | 56.4 |
| | | Ambient | 54.9 | 54.9 |
| | | Ambient | 53.8 | 63.75014 |
| | | Ambient | 54.0 | 64.03848 |
| | | Ldn | | 82 |

Construction Scenario: Phase 2a @ 270 Feet

| 8-Hour Leq | | Ldn | | |
|-----------------|-----------|-------------|------------|--------------|
| Time | 1Hr Leq | Hour | Leq | With Penalty |
| 7:00 AM | 86.0 | Ambient | 57.8 | 67.83672 |
| 8:00 AM | 86.0 | Ambient | 55.2 | 65.23178 |
| 9:00 AM | 86.0 | Ambient | 56.0 | 65.95206 |
| 10:00 AM | 86.0 | Ambient | 56.1 | 66.14732 |
| 11:00 AM | 86.0 | Ambient | 57.3 | 67.3134 |
| Ambient | 52.7 | Ambient | 56.3 | 66.284 |
| 1:00 PM | 86.0 | Ambient | 59.3 | 69.3 |
| 2:00 PM | 86.0 | 7:00-8:00 | 86.0 | 86 |
| | | 8:00-9:00 | 86.0 | 86 |
| 8 Hr Leq | 85 | 9:00-10:00 | 86.0 | 86 |
| | | 10:00-11:00 | 86.0 | 86 |
| | | 11:00-12:00 | 86.0 | 86 |
| | | LUNCH | 52.7 | 52.65026 |
| | | 1:00-2:00 | 86.0 | 86 |
| | | 2:00-3:00 | 86.0 | 86 |
| | | 3:00-4:00 | 86.0 | 86 |
| | | Ambient | 55.3 | 55.26924 |
| | | Ambient | 53.2 | 53.21861 |
| | | Ambient | 50.8 | 50.82623 |
| | | Ambient | 54.0 | 54.0 |
| | | Ambient | 56.4 | 56.4 |
| | | Ambient | 54.9 | 54.9 |
| | | Ambient | 53.8 | 63.75014 |
| | | Ambient | 54.0 | 64.03848 |
| | | | Ldn | 81 |

Construction Scenario: Phase 2b at 25 Feet

| 8-Hour Leq | | Ldn | | |
|-----------------|-----------|-------------|------------|--------------|
| Time | 1Hr Leq | Hour | Leq | With Penalty |
| 7:00 AM | 85.0 | Ambient | 57.8 | 67.83672 |
| 8:00 AM | 85.0 | Ambient | 55.2 | 65.23178 |
| 9:00 AM | 85.0 | Ambient | 56.0 | 65.95206 |
| 10:00 AM | 85.0 | Ambient | 56.1 | 66.14732 |
| 11:00 AM | 85.0 | Ambient | 57.3 | 67.3134 |
| Ambient | 52.7 | Ambient | 56.3 | 66.284 |
| 1:00 PM | 85.0 | Ambient | 59.3 | 69.3 |
| 2:00 PM | 85.0 | 7:00-8:00 | 85.0 | 85 |
| | | 8:00-9:00 | 85.0 | 85 |
| 8 Hr Leq | 84 | 9:00-10:00 | 85.0 | 85 |
| | | 10:00-11:00 | 85.0 | 85 |
| | | 11:00-12:00 | 85.0 | 85 |
| | | LUNCH | 52.7 | 52.65026 |
| | | 1:00-2:00 | 85.0 | 85 |
| | | 2:00-3:00 | 85.0 | 85 |
| | | 3:00-4:00 | 85.0 | 85 |
| | | Ambient | 55.3 | 55.26924 |
| | | Ambient | 53.2 | 53.21861 |
| | | Ambient | 50.8 | 50.82623 |
| | | Ambient | 54.0 | 54.0 |
| | | Ambient | 56.4 | 56.4 |
| | | Ambient | 54.9 | 54.9 |
| | | Ambient | 53.8 | 63.75014 |
| | | Ambient | 54.0 | 64.03848 |
| | | | Ldn | 80 |

Construction Scenario:Phase 2b @ 270 Feet

| 8-Hour Leq | | Ldn | | |
|-----------------|-----------|-------------|------------|--------------|
| Time | 1Hr Leq | Hour | Leq | With Penalty |
| 7:00 AM | 71.0 | Ambient | 57.8 | 67.83672 |
| 8:00 AM | 71.0 | Ambient | 55.2 | 65.23178 |
| 9:00 AM | 71.0 | Ambient | 56.0 | 65.95206 |
| 10:00 AM | 71.0 | Ambient | 56.1 | 66.14732 |
| 11:00 AM | 71.0 | Ambient | 57.3 | 67.3134 |
| Ambient | 52.7 | Ambient | 56.3 | 66.284 |
| 1:00 PM | 71.0 | Ambient | 59.3 | 69.3 |
| 2:00 PM | 71.0 | 7:00-8:00 | 71.0 | 71 |
| | | 8:00-9:00 | 71.0 | 71 |
| 8 Hr Leq | 70 | 9:00-10:00 | 71.0 | 71 |
| | | 10:00-11:00 | 71.0 | 71 |
| | | 11:00-12:00 | 71.0 | 71 |
| | | LUNCH | 52.7 | 52.65026 |
| | | 1:00-2:00 | 71.0 | 71 |
| | | 2:00-3:00 | 71.0 | 71 |
| | | 3:00-4:00 | 71.0 | 71 |
| | | Ambient | 55.3 | 55.26924 |
| | | Ambient | 53.2 | 53.21861 |
| | | Ambient | 50.8 | 50.82623 |
| | | Ambient | 54.0 | 54.0 |
| | | Ambient | 56.4 | 56.4 |
| | | Ambient | 54.9 | 54.9 |
| | | Ambient | 53.8 | 63.75014 |
| | | Ambient | 54.0 | 64.03848 |
| | | | Ldn | 68 |

Construction Scenario: Phase 2b at 70 Feet Mitigated

| 8-Hour Leq | | Ldn | | |
|-----------------|-----------|-------------|------|--------------|
| Time | 1Hr Leq | Hour | Leq | With Penalty |
| 7:00 AM | 80.0 | Ambient | 57.8 | 67.83672 |
| 8:00 AM | 80.0 | Ambient | 55.2 | 65.23178 |
| 9:00 AM | 80.0 | Ambient | 56.0 | 65.95206 |
| 10:00 AM | 80.0 | Ambient | 56.1 | 66.14732 |
| 11:00 AM | 80.0 | Ambient | 57.3 | 67.3134 |
| Ambient | 52.7 | Ambient | 56.3 | 66.284 |
| 1:00 PM | 80.0 | Ambient | 59.3 | 69.3 |
| 2:00 PM | 80.0 | 7:00-8:00 | 80.0 | 80 |
| | | 8:00-9:00 | 80.0 | 80 |
| 8 Hr Leq | 79 | 9:00-10:00 | 80.0 | 80 |
| | | 10:00-11:00 | 80.0 | 80 |
| | | 11:00-12:00 | 80.0 | 80 |
| | | LUNCH | 52.7 | 52.65026 |
| | | 1:00-2:00 | 80.0 | 80 |
| | | 2:00-3:00 | 80.0 | 80 |
| | | 3:00-4:00 | 80.0 | 80 |
| | | Ambient | 55.3 | 55.26924 |
| | | Ambient | 53.2 | 53.21861 |
| | | Ambient | 50.8 | 50.82623 |
| | | Ambient | 54.0 | 54.0 |
| | | Ambient | 56.4 | 56.4 |
| | | Ambient | 54.9 | 54.9 |
| | | Ambient | 53.8 | 63.75014 |
| | | Ambient | 54.0 | 64.03848 |
| | | Ldn | | 75 |

Construction Scenario: Phase 2c

| 8-Hour Leq | | Ldn | | |
|-----------------|-----------|-------------|------|--------------|
| Time | 1Hr Leq | Hour | Leq | With Penalty |
| 7:00 AM | 70.0 | Ambient | 57.8 | 67.83672 |
| 8:00 AM | 70.0 | Ambient | 55.2 | 65.23178 |
| 9:00 AM | 70.0 | Ambient | 56.0 | 65.95206 |
| 10:00 AM | 70.0 | Ambient | 56.1 | 66.14732 |
| 11:00 AM | 70.0 | Ambient | 57.3 | 67.3134 |
| Ambient | 52.7 | Ambient | 56.3 | 66.284 |
| 1:00 PM | 70.0 | Ambient | 59.3 | 69.3 |
| 2:00 PM | 70.0 | 7:00-8:00 | 70.0 | 70 |
| | | 8:00-9:00 | 70.0 | 70 |
| 8 Hr Leq | 69 | 9:00-10:00 | 70.0 | 70 |
| | | 10:00-11:00 | 70.0 | 70 |
| | | 11:00-12:00 | 70.0 | 70 |
| | | LUNCH | 52.7 | 52.65026 |
| | | 1:00-2:00 | 70.0 | 70 |
| | | 2:00-3:00 | 70.0 | 70 |
| | | 3:00-4:00 | 70.0 | 70 |
| | | Ambient | 55.3 | 55.26924 |
| | | Ambient | 53.2 | 53.21861 |
| | | Ambient | 50.8 | 50.82623 |
| | | Ambient | 54.0 | 54.0 |
| | | Ambient | 56.4 | 56.4 |
| | | Ambient | 54.9 | 54.9 |
| | | Ambient | 53.8 | 63.75014 |
| | | Ambient | 54.0 | 64.03848 |
| | | Ldn | | 67 |

Construction Scenario: Phase 3 Port Yard Improvements

| 8-Hour Leq | | Ldn | | |
|-----------------|-----------|-------------|------------|--------------|
| Time | 1Hr Leq | Hour | Leq | With Penalty |
| 7:00 AM | 55.6 | Ambient | 57.8 | 67.83672 |
| 8:00 AM | 55.6 | Ambient | 55.2 | 65.23178 |
| 9:00 AM | 55.6 | Ambient | 56.0 | 65.95206 |
| 10:00 AM | 55.6 | Ambient | 56.1 | 66.14732 |
| 11:00 AM | 55.6 | Ambient | 57.3 | 67.3134 |
| Ambient | 52.7 | Ambient | 56.3 | 66.284 |
| 1:00 PM | 55.6 | Ambient | 59.3 | 69.3 |
| 2:00 PM | 55.6 | 7:00-8:00 | 55.6 | 55.6 |
| | | 8:00-9:00 | 55.6 | 55.6 |
| 8 Hr Leq | 55 | 9:00-10:00 | 55.6 | 55.6 |
| | | 10:00-11:00 | 55.6 | 55.6 |
| | | 11:00-12:00 | 55.6 | 55.6 |
| | | LUNCH | 52.7 | 52.65026 |
| | | 1:00-2:00 | 55.6 | 55.6 |
| | | 2:00-3:00 | 55.6 | 55.6 |
| | | 3:00-4:00 | 55.6 | 55.6 |
| | | Ambient | 55.3 | 55.26924 |
| | | Ambient | 53.2 | 53.21861 |
| | | Ambient | 50.8 | 50.82623 |
| | | Ambient | 54.0 | 54.0 |
| | | Ambient | 56.4 | 56.4 |
| | | Ambient | 54.9 | 54.9 |
| | | Ambient | 53.8 | 63.75014 |
| | | Ambient | 54.0 | 64.03848 |
| | | | Ldn | 63 |

**750 Heavy Trucks
at 25 Feet**

| | DAYTIME | | | NIGHTTIME | | | | |
|---------------------------|---------|----------|----------|-----------|----------|----------|--------------|--------|
| | AUTOS | M.TRUCKS | H.TRUCKS | AUTOS | M.TRUCKS | H.TRUCKS | ADT | 750.00 |
| | | | | | | | SPEED | 25.00 |
| | | | | | | | DISTANCE | 25.00 |
| INPUT PARAMETERS | | | | | | | | |
| Vehicles per hour | 0.00 | 0.00 | 15.63 | 0.00 | 0.00 | 15.63 | % A | 0.00 |
| Speed in MPH | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | | |
| Left angle | -90.00 | -90.00 | -90.00 | -90.00 | -90.00 | -90.00 | | |
| Right angle | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | % MT | 0.00 |
| NOISE CALCULATIONS | | | | | | | | |
| Reference levels | 59.44 | 71.09 | 77.24 | 59.44 | 71.09 | 77.24 | % HT | 100.00 |
| ADJUSTMENTS | | | | | | | | |
| Flow | -42.35 | -42.35 | 7.65 | -42.35 | -42.35 | 7.65 | | |
| Distance | 2.94 | 2.94 | 2.94 | 2.94 | 2.94 | 2.94 | LEFT | -90.00 |
| Finite Roadway | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | RIGHT | 90.00 |
| Barrier | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Grade | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | Ldn | 69.24 |
| Constant | -25.00 | -25.00 | -25.00 | -25.00 | -25.00 | -25.00 | DAY LEQ | 62.83 |
| LEQ | -4.97 | 6.68 | 62.83 | -4.97 | 6.68 | 62.83 | Day hour | 89.00 |
| | | | | | | | Absorbitive? | no |
| | DAY LEQ | 62.83 | | NIGHT LEQ | 62.83 | | Use hour? | no |
| | Ldn | | 69.24 | | | | | |

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

Port of Stockton New LLDT

| RESULTS | | | |
|---------------------|-----------------|---------------------------|-----------------------------|
| Noise Source | Ldn (dB) | Leq - daytime (dB) | Leq - nighttime (dB) |
| All Sources | 64 | 57 | 57 |
| Source 1 | 62 | 56 | 56 |
| Source 2 | 58 | 52 | 52 |
| Source 3 | 0 | 0 | 0 |
| Source 4 | 0 | 0 | 0 |
| Source 5 | 0 | 0 | 0 |
| Source 6 | 0 | 0 | 0 |
| Source 7 | 0 | 0 | 0 |
| Source 8 | 0 | 0 | 0 |

Enter noise receiver land use category below.

| LAND USE CATEGORY | |
|--|---|
| Noise receiver land use category (1, 2 or 3) | 2 |

Enter data for up to 8 noise sources below - see reference list for source numbers.

| NOISE SOURCE PARAMETERS | | | | | |
|---|--------------------|------|-----------------------------|------|-----------------|
| Parameter | Source 1 | | Source 2 | | Source 3 |
| Source Num. | Freight Locomotive | 9 | Freight Cars | 10 | |
| Distance (source to receiver) | distance (ft) | 94 | distance (ft) | 94 | |
| Daytime Hours (7 AM - 10 PM) | speed (mph) | 30 | speed (mph) | 30 | |
| | trains/hour | 0.15 | trains/hour | 0.15 | |
| | locos/train | 0.15 | length of cars (ft) / train | 500 | |
| Nighttime Hours (10 PM - 7 AM) | speed (mph) | 30 | speed (mph) | 30 | |
| | trains/hour | 0.15 | trains/hour | 0.15 | |
| | locos/train | 0.15 | length of cars (ft) / train | 500 | |
| Wheel Flats? | | Y | % of cars w/ wheel flats | Y | |
| Jointed Track? | Y/N | Y | Y/N | Y | |
| Embedded Track? | Y/N | Y | Y/N | Y | |
| Aerial Structure? | Y/N | N | Y/N | N | |
| Barrier Present? | Y/N | N | Y/N | N | |
| Intervening Rows of Buildings | number of rows | | number of rows | | |