

# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix A**

### Memo on Approach Methodology

August 2012

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## DULLES TOLL ROAD MEMORANDUM

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**TO:** MICHAEL HEWITT, METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

**FROM:** KRISTIN FUSCO ROWE, STRAUGHAN ENVIRONMENTAL, INC & CHRIS DAILY, VANASSE HANGEN BRUSTLIN, INC

**SUBJECT:** STUDY METHODOLOGY RATIONALE

**DATE:** 8/22/2012

The purpose of this memorandum is to explain how the noise analysis methodology documented in the “*Dulles Toll Road Type II Highway Sound Measurement and Noise Barrier Analysis*” differs from the final Metropolitan Washington Airports Authority’s *Dulles Toll Road Highway Noise Policy*. The Type II noise analysis was conducted concurrently with the development of the Dulles Toll Road (DTR) noise policy. Many key components of the DTR noise policy were still being deliberated when important elements of the Type II noise analysis were being performed. The Type II noise analysis relies upon assumptions that were consistent with Federal Highway Administration (FHWA) and various state departments of transportation noise policies that existed at that time that were reviewed during the deliberation criteria to include in the DTR noise policy. These assumptions were also in line with Virginia Department of Transportation (VDOT) guidance at the time, per email and telephone correspondence with VDOT personnel. These assumptions were brought to the attention of representatives of the Airports Authority’s technical committee charged with oversight of both the DTR noise policy and Type II noise study.

While the Type II noise analysis identified receptor locations in a slightly different manner, the final decisions to build, modify, or not build a noise wall remain unchanged after a retroactive comparison of the final adopted DTR noise policy to the methodologies followed during the course of the Type II noise study and development of the *Dulles Toll Road Noise Wall Program*.

On July 13, 2010, Federal Highway Administration’s (FHWA’s) Code of Federal Regulations (CFR), 23 CFR 772, was revised and available to the public for comments and review. The new CFR became effective July 13, 2011.

The Type II noise study began in 2010, during the revision stage of the FHWA CFR. At the same time, the Straughan Environmental, Inc. (Straughan)/Vanasse Hangen Brustlin, Inc (VHB) team began assisting Airports Authority staff in the establishment of the DTR noise policy. During the policy compilation and vetting period, the team consulted with state and federal officials to obtain their guidance and recommendations as applicable to this Type II noise study. This included correspondence with FHWA, Virginia, Maryland, Massachusetts, and Florida; and consisted of a synopsis of criteria pulled from their draft noise policies and guidance documentation (oral guidance in the case of Virginia as no previously published guidance document existed at the time to govern noise analysis in the Commonwealth for state maintained roads).

Because of the overlapping nature of these two processes – Type II noise study and DTR noise policy development – certain aspects of the noise analysis are specific to this one-time Modified Type II noise study; and, the aspects differ from the DTR noise policy that was adopted in February 2012, by the Airports Authority Board for all future Type I projects. These specific variances in

methodology are detailed in the “*Dulles Toll Road Highway Sound Measurement and Noise Barrier Analysis Report.*”

There are three notable variances between the Type II noise study methodology and the final DTR noise policy, and more specifically between the Type II noise study methodology and the final VDOT guidance document, to which the DTR noise policy refers for all matters in which the DTR noise policy remains silent. The final VDOT guidance document was officially made public in September 2011.

- 1) While a property equivalency was considered to be one (1) for a single family home or apartment (which fall under Noise Activity Category B), in instances of churches, schools, playgrounds and other similar outdoor locations that comprising Activity Category C, the fire code was used, if applicable, as an equivalency. For example, if a church had an outdoor usage area, such as a playground, with a capacity for 25 people, the property equivalency of the church would be equal to 25. At the time that this portion of the Type II study was conducted, there were no set criteria in place in the DTR noise policy for determining property equivalencies for Category C properties, nor was there a standardized VDOT methodology. Also, at the time, the decision had not been made to adhere to VDOT guidance for all matters not specifically addressed in the DTR noise policy. The fire code methodology was suggested by FHWA in October 2010, and confirmed in March 2011, as one of the various methods that was used by other state highway agencies. This approach was discussed with VDOT in June 2011; and at the time, VDOT concurred that this was an acceptable approach and one that had been used on a case-by-case basis on VDOT projects. This topic was also vetted and approved by the Airports Authority highway noise technical committee in April 2011. Ultimately, the current VDOT guidance, effective September 2011, suggests an alternative procedure for Noise Activity Category C – a 1 equivalent residence per 100-foot of property frontage. However, the VDOT guidance (page 65) also allows other factors to be considered in the evaluation, such as adding value to sites (by treating as more than one residence each) based on park/outdoor activity usage). In the case of this project, the added value to a site came from the fire code.
- 2) For Noise Activity Category C properties where a fire code was not applicable or unavailable, a 100-foot linear spacing along the highway frontage was considered in lieu of the fire code equivalency. This methodology was modeled from the Maryland State Highway Association (MDSHA), and was approved by FHWA. Every receiver that was impacted under this process was considered to be one (1) impacted property equivalency. This approach was used for outdoor fields, publicly used parks, and walking trails along the highway that were considered areas of public use, but with no set occupancy limit. This linear spacing differs from the current Virginia guidance that is now in place that uses a grid system to determine equivalencies for these land use types. At the time this Type II noise study impact analysis was completed, only front row receptors were being analyzed for impacts, per decisions vetted by the Airports Authority highway noise technical committee in 2010. Therefore, the grid method did not apply as it would have accounted for not only front row, but additional row receptors. It should also be noted that if the grid method would have been used, it may have resulted in additional receptors being benefitted; in turn, the additional benefitted receptors would reduce the square-foot-of-wall to benefitted property ratio. In other words, the same noise barrier that was proposed as part of the *Dulles Toll Road Noise Wall Program* would be made even more reasonable.

- 3) At the time that the Type II noise study impact analysis had been completed, only ground level receptors were considered. The decision to consider impacts at multi-dwelling receptors on higher floors (up to 30 feet per the VDOT guidance document) occurred in September 2011, following the release of the current VDOT guidance document. After this decision was made, additional modeled receptors were added to account for noise receptors above the first story (i.e., ground level) up to 30 feet above the elevation of the base of a theoretical wall. Noise impacts to a multi-dwelling unit (e.g., an apartment building or hotel) had already been determined based on the modeled ground level receptors; but, for those multi-dwelling properties that were impacted at the ground level, additional receptors were analyzed on additional floors of the property – in accordance with the definition provided above – to determine the number of benefited property equivalencies. If second, third, and fourth story receptors had been analyzed for impacts at multi-dwelling properties where the ground level receptors were not considered impacted, there may have been additional impacted receptors in the cumulative total for a given Noise Sensitivity Area (NSA); however, these properties with upper-level impacted dwellings would have still required the mandated insertion loss. A noise wall designed to achieve the mandated insertion loss in this hypothetical situation would have a higher square-foot-of-wall to benefitted property ratio. It should be noted that any receptor placed above the 30-foot imaginary demarcation line that exhibited a benefit was considered to have a zero property equivalency. If this was the case for a balcony or public use area (such as a pool or tennis court), despite having a benefited receptor, the location did not qualify for further investigation for a noise barrier.

# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix B**

Dulles Toll Road Highway Noise and  
Virginia Department of Transportation  
Noise Policies and Guidance

August 2012

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix B: Governing Policies and Guidance Documents

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Metropolitan Washington Airports Authority Highway Noise Policy:

<http://www.metwashairports.com/tollroad/3063.htm>

Virginia Department of Transportation State Noise Abatement Policy:

[http://www.virginiadot.org/projects/resources/noisewalls/State\\_Noise\\_Abatement\\_Policy.pdf](http://www.virginiadot.org/projects/resources/noisewalls/State_Noise_Abatement_Policy.pdf)

Virginia Department of Transportation Highway Traffic Noise Impact Analysis Guidance Manual:

[http://www.virginiadot.org/projects/resources/noisewalls/Highway\\_Traffic\\_Noise\\_impact\\_Analysis\\_Guidance\\_Manual.pdf](http://www.virginiadot.org/projects/resources/noisewalls/Highway_Traffic_Noise_impact_Analysis_Guidance_Manual.pdf)

# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix C** Sound Measurement Data

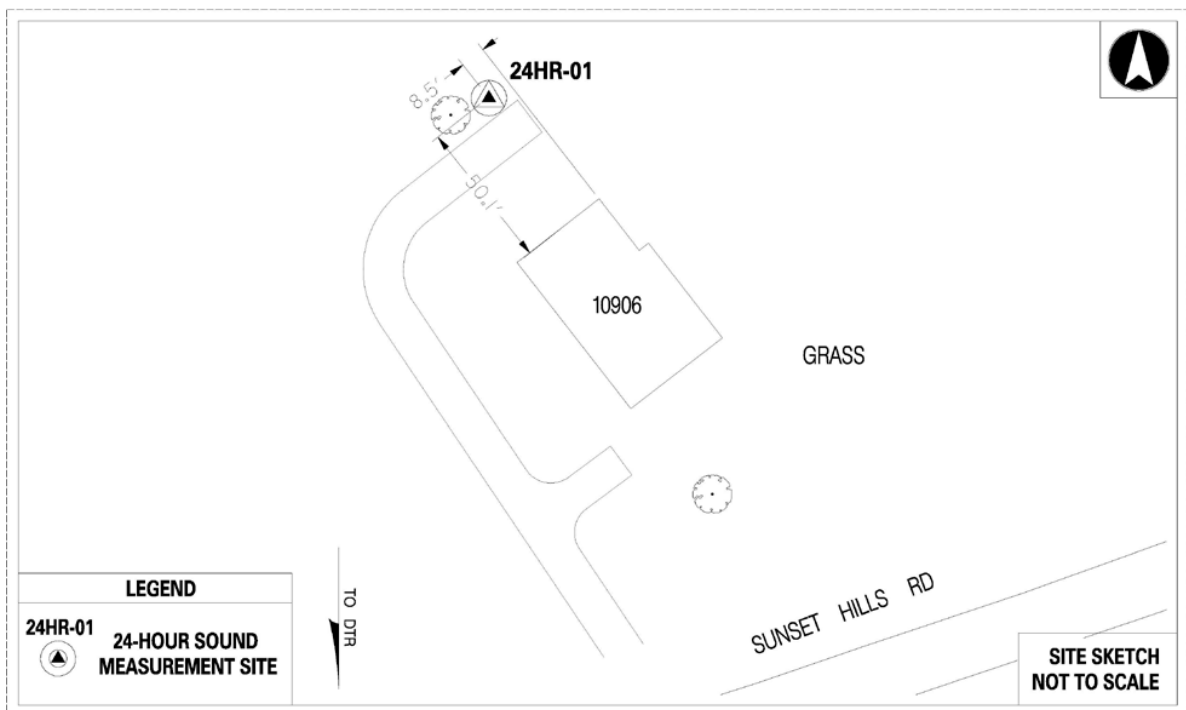
August 2012

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>24HR-01: 10906 Sunset Hills Road</b>	
Date	August 25, 2010 to August 26, 2010
Start Time to End Time	2:00 PM to 2:00 PM
Peak Noise Hour Leq	60 dB(A)



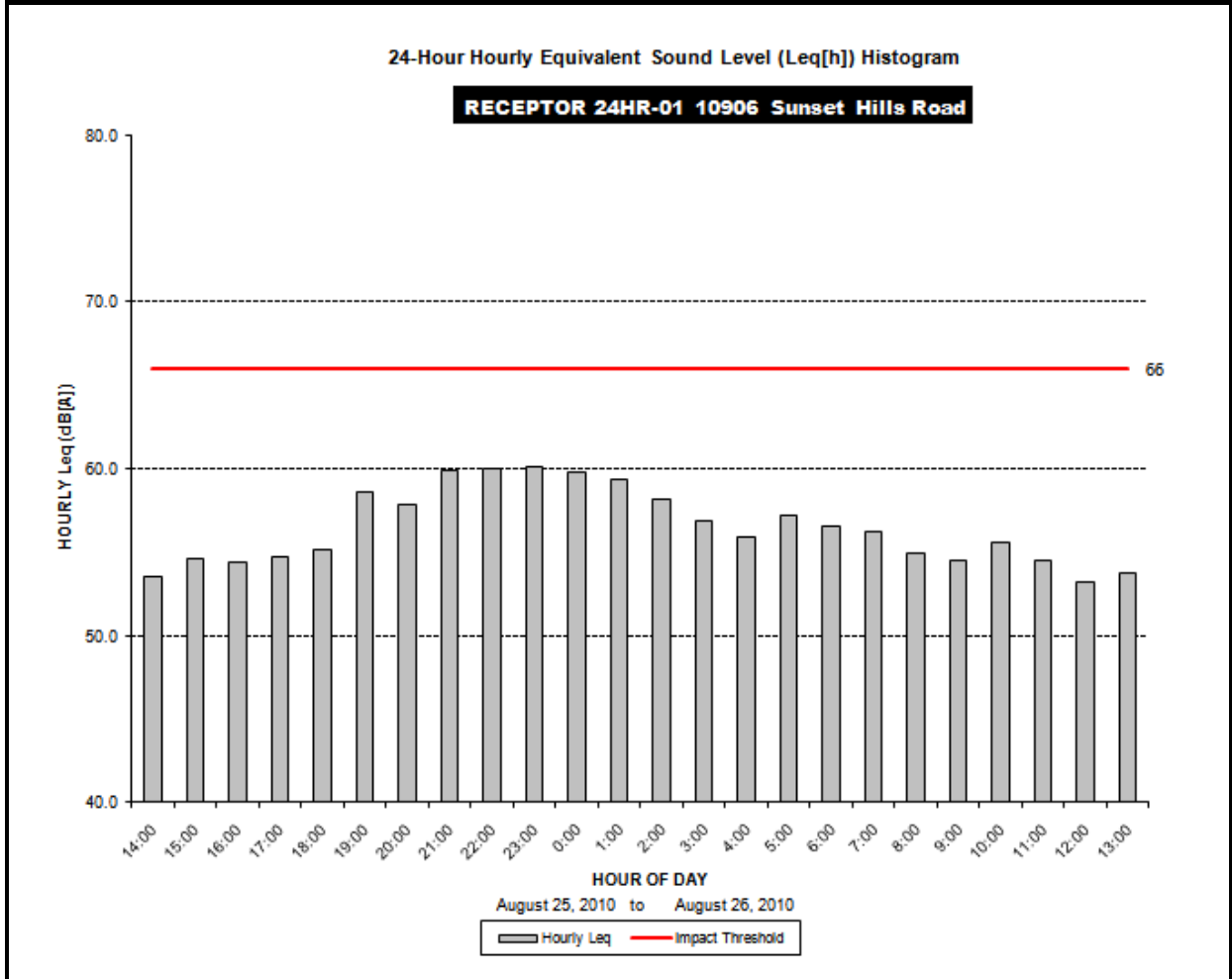


# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

**Figure C.1** 24 Hour Hourly Equivalent Sound Level (Leq[h]) Histogram  
24HR-01: 10906 Sunset Hills Road



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.1 5 Minute Sound Equivalent Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
14:00	52.6	56.4	54.6	50.4
14:05	52.7	57.0	54.3	50.4
14:10	52.8	61.8	53.9	50.3
14:15	52.4	55.5	54.1	49.6
14:20	54.1	61.1	55.9	49.9
14:25	52.8	56.5	54.4	50.1
14:30	54.0	59.3	56.6	51
14:35	55.2	62.9	56.6	53.2
14:40	54.8	59.2	55.8	53.3
14:45	53.2	57.1	55.5	50.6
14:50	53.9	61.6	56.4	50.9
14:55	52.7	55.5	54.3	50.9
15:00	53.9	57.4	55	52.6
15:05	54.1	61.2	56.9	51.8
15:10	54.6	61.2	55.7	52.9
15:15	56.0	59.8	58	53.7
15:20	55.7	60.6	57.8	53.7
15:25	54.2	56.3	55.4	52.9
15:30	53.9	58.3	55.8	51.7
15:35	54.0	59.1	55.6	51.5
15:40	53.3	57.3	54.7	51.6
15:45	54.4	58.1	55.6	52.8
15:50	54.9	60.2	56.1	53
15:55	54.7	62.7	56.6	52.7
16:00	54.8	61.3	56.3	52.9
16:05	55.1	61.4	56.4	53.4
16:10	55.8	60.8	58.1	53.5
16:15	53.3	56.1	54.7	51.4
16:20	54.7	59.9	56.1	52.7
16:25	54.2	57.2	55.4	52.8
16:30	53.7	56.0	55	52.6
16:35	54.0	57.5	55.3	52.8
16:40	54.2	56.1	55	53.2
16:45	54.4	57.0	55.8	52.9
16:50	54.4	58.2	56.2	52.6
16:55	53.8	57.9	54.8	52.5
17:00	54.6	58.4	55.7	53.2
17:05	54.7	61.2	56	52.7
17:10	55.1	64.8	55.9	53.6
17:15	54.3	56.7	55.6	52.8
17:20	54.6	58.3	56	52.7

<b>Table C.1 5 Minute Sound Equivalent Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
17:25	55.1	61.4	56.4	53.3
17:30	54.9	60.0	56.1	53
17:35	54.3	58.0	55.5	52.8
17:40	54.7	57.8	56.2	53
17:45	54.2	58.2	55.9	52.6
17:50	55.1	58.4	57.1	52.7
17:55	55.0	59.4	56.7	53.3
18:00	54.7	59.5	56	53.3
18:05	54.9	62.3	56.5	52.4
18:10	53.9	57.1	55.3	52.4
18:15	54.6	57.5	56.1	52.6
18:20	56.2	67.4	56.9	53.8
18:25	55.4	57.9	56.5	53.9
18:30	55.3	64.5	56.1	54
18:35	54.9	57.6	56.1	53.6
18:40	55.0	57.4	56.2	53.6
18:45	56.1	63.2	58.2	54.2
18:50	54.9	57.5	56.2	53.7
18:55	55.6	58.2	57	54.1
19:00	56.6	65.2	57.9	54.8
19:05	57.0	66.7	59.9	53.5
19:10	57.3	65.5	58.5	54
19:15	57.4	63.5	58.7	55.2
19:20	58.0	71.1	60	54.7
19:25	58.1	61.5	60.2	55.9
19:30	60.0	65.0	62.7	56.8
19:35	58.7	64.0	60.7	55.7
19:40	58.3	64.9	60.8	55.4
19:45	59.0	68.9	60.8	56
19:50	59.8	65.4	61.6	56.7
19:55	60.5	71.7	62.6	56.9
20:00	57.2	63.0	60.7	53.6
20:05	54.8	63.0	56.1	52.5
20:10	55.5	62.4	56.9	53.8
20:15	55.7	60.1	56.8	54.6
20:20	57.4	62.8	59.2	56.1
20:25	57.4	58.8	58	56.9
20:30	58.1	59.2	58.5	57.6
20:35	58.5	59.8	59	58
20:40	59.1	60.1	59.5	58.7
20:45	59.2	61.0	59.7	58.7

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.1 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
20:50	59.2	60.5	59.6	58.9
20:55	59.4	60.8	59.7	59
21:00	59.8	66.4	60.2	59.3
21:05	59.8	62.0	60.4	59.3
21:10	59.7	60.7	60	59.4
21:15	59.8	60.9	60.2	59.6
21:20	59.8	60.5	60.1	59.5
21:25	60.1	61.8	60.6	59.7
21:30	60.1	61.0	60.4	59.8
21:35	59.9	60.8	60.2	59.6
21:40	60.0	60.8	60.2	59.7
21:45	60.0	63.6	60.4	59.6
21:50	59.8	60.7	60.1	59.6
21:55	59.9	60.9	60.3	59.6
22:00	59.8	60.9	60.1	59.5
22:05	59.9	66.6	60	59.5
22:10	59.9	60.7	60.2	59.6
22:15	59.9	60.6	60.2	59.7
22:20	60.0	61.0	60.3	59.8
22:25	60.1	61.0	60.4	59.8
22:30	59.9	60.9	60.3	59.5
22:35	59.8	60.6	60.1	59.6
22:40	59.9	60.8	60.2	59.6
22:45	60.0	60.8	60.3	59.7
22:50	60.0	61.1	60.3	59.8
22:55	60.0	66.9	60.2	59.6
23:00	60.0	61.0	60.3	59.8
23:05	60.0	60.7	60.2	59.8
23:10	60.1	60.7	60.3	59.9
23:15	59.8	60.5	60.1	59.6
23:20	59.9	60.5	60.1	59.6
23:25	59.9	60.5	60.1	59.7
23:30	60.0	62.0	60.2	59.7
23:35	59.9	60.8	60.1	59.7
23:40	59.9	60.8	60.1	59.6
23:45	61.8	71.2	63	59.4
23:50	59.6	60.2	59.8	59.4
23:55	59.8	60.5	60	59.6
0:00	59.8	60.5	60	59.5
0:05	59.8	60.5	60.1	59.6
0:10	59.9	60.8	60.1	59.6
0:15	60.0	60.8	60.3	59.7
0:20	59.8	60.5	60	59.5
0:25	59.7	60.5	59.9	59.4
0:30	59.7	60.4	59.9	59.5

<b>Table C.1 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
0:35	59.5	60.2	59.8	59.3
0:40	59.6	60.4	59.9	59.3
0:45	59.8	60.6	60.1	59.5
0:50	59.6	60.4	60	59.3
0:55	59.7	60.7	60	59.4
1:00	59.7	60.4	60	59.4
1:05	59.8	60.5	60.1	59.5
1:10	59.6	60.5	59.9	59.3
1:15	59.6	60.6	59.9	59.3
1:20	59.6	60.3	59.8	59.3
1:25	59.5	60.1	59.7	59.3
1:30	59.1	59.8	59.4	58.8
1:35	59.2	59.7	59.4	59
1:40	59.1	59.9	59.3	58.8
1:45	58.8	59.5	59.1	58.5
1:50	58.6	59.4	58.9	58.3
1:55	58.6	59.3	58.9	58.3
2:00	58.5	59.2	58.8	58.3
2:05	58.4	59.1	58.7	58.1
2:10	58.3	58.9	58.6	58
2:15	58.3	59.2	58.6	58
2:20	58.1	59.0	58.4	57.8
2:25	58.0	58.7	58.2	57.6
2:30	58.0	58.6	58.2	57.7
2:35	58.0	58.8	58.3	57.7
2:40	58.1	58.8	58.4	57.8
2:45	58.1	58.7	58.4	57.8
2:50	58.2	60.2	58.5	57.7
2:55	58.0	58.6	58.3	57.6
3:00	58.0	58.6	58.3	57.6
3:05	57.5	58.2	57.9	57.1
3:10	57.1	58.5	57.4	56.8
3:15	56.9	58.1	57.3	56.4
3:20	57.0	57.8	57.3	56.7
3:25	56.9	58.8	57.3	56.5
3:30	57.0	57.7	57.4	56.5
3:35	56.6	57.2	56.9	56.3
3:40	56.4	57.1	56.6	56.1
3:45	56.3	58.7	56.6	56
3:50	56.3	56.9	56.5	56
3:55	55.8	57.2	56.5	55.2
4:00	55.4	56.8	55.7	55.1
4:05	55.6	56.4	55.9	55.3
4:10	55.6	56.4	55.9	55.3
4:15	55.4	56.4	55.8	55.1

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.1 5 Minute Sound Equivalent Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
4:20	55.7	57.3	56.1	55.4
4:25	55.9	58.4	56.3	55.6
4:30	55.8	58.3	56.3	55.3
4:35	56.1	57.6	56.7	55.6
4:40	56.7	61.7	57	56.3
4:45	56.4	57.7	57	55.7
4:50	55.9	56.8	56.2	55.7
4:55	56.1	57.2	56.4	55.7
5:00	56.2	57.3	56.7	55.9
5:05	57.0	58.7	57.4	56.6
5:10	57.2	59.9	57.6	56.9
5:15	57.3	59.6	57.8	56.9
5:20	57.5	58.7	57.8	57
5:25	57.1	58.4	57.7	56.6
5:30	57.1	58.3	57.7	56.8
5:35	57.3	60.4	57.8	56.8
5:40	57.4	59.6	58	56.9
5:45	57.7	59.8	58.2	57.2
5:50	57.3	59.0	57.8	56.8
5:55	56.8	58.4	57.4	56.3
6:00	56.6	58.9	57.1	56.1
6:05	56.6	60.1	57.1	56.2
6:10	56.7	58.5	57.5	56
6:15	56.6	59.2	57.6	56
6:20	56.1	57.5	56.7	55.6
6:25	56.0	57.5	56.6	55.5
6:30	56.3	64.2	56.8	55.1
6:35	56.4	60.0	57.3	55.6
6:40	56.5	58.6	57.6	55.4
6:45	57.3	62.4	58.9	56
6:50	56.8	62.2	57.9	55.6
6:55	56.8	62.6	57.6	55.6
7:00	56.4	58.8	57.6	55.6
7:05	56.9	60.5	58.1	55.6
7:10	56.2	58.3	57.2	55.1
7:15	57.7	62.0	59.3	55.9
7:20	57.1	61.0	59.2	55.1
7:25	55.8	57.4	56.9	54.8
7:30	55.5	57.5	56.4	54.5
7:35	56.0	59.8	57.2	54.4
7:40	55.6	57.6	56.6	53.9
7:45	55.1	57.7	56.4	53.2
7:50	56.3	62.7	57.7	54.3
7:55	55.3	59.5	56.3	54.3
8:00	55.3	59.4	56.6	53.7

<b>Table C.1 5 Minute Sound Equivalent Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
8:05	55.2	59.8	56.8	52.6
8:10	54.4	56.7	55.8	52.3
8:15	54.3	56.5	55.6	52.4
8:20	54.7	59.1	56.5	53.2
8:25	54.8	59.5	56.1	53
8:30	55.6	62.5	57.5	52.9
8:35	54.3	57.6	55.5	52.7
8:40	54.8	58.9	56	53
8:45	54.7	58.5	55.8	52.9
8:50	55.1	57.3	56.4	53.9
8:55	55.0	57.9	56.4	53.2
9:00	54.7	58.6	56.4	52.7
9:05	54.1	56.8	55.3	52.4
9:10	54.8	58.5	56.4	53.2
9:15	55.6	63.9	57.4	52.8
9:20	54.2	58.2	55.8	52.4
9:25	55.2	59.0	56.6	53.4
9:30	55.1	65.5	57.3	52.5
9:35	53.8	56.8	55.1	51.7
9:40	54.6	59.6	56.3	52.5
9:45	53.4	57.9	55.1	51
9:50	53.5	57.0	55.4	51.4
9:55	53.6	59.8	55.4	51.5
10:00	53.5	56.0	55.1	51.6
10:05	59.6	74.8	58.6	52.1
10:10	55.1	59.6	57.5	52.5
10:15	54.6	59.2	56.7	52.3
10:20	54.7	60.0	56.5	52.4
10:25	53.1	57.3	54.7	51.2
10:30	52.9	57.3	54.2	51.1
10:35	53.6	58.5	56	51.2
10:40	60.0	72.8	61.4	50.2
10:45	52.7	56.2	54.6	50.7
10:50	54.2	59.7	56.2	52
10:55	53.4	65.0	55	50.6
11:00	51.8	55.2	53.2	50.1
11:05	54.1	61.1	56.5	51.3
11:10	51.7	55.5	53.5	49.6
11:15	54.5	62.5	56.7	50.9
11:20	53.5	65.4	54.7	50.5
11:25	51.9	54.2	53.4	50.4
11:30	53.8	61.3	56.2	50.6
11:35	59.3	64.3	63.6	52.1
11:40	57.3	63.7	61.7	51.1
11:45	52.4	57.7	53.9	50.1

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

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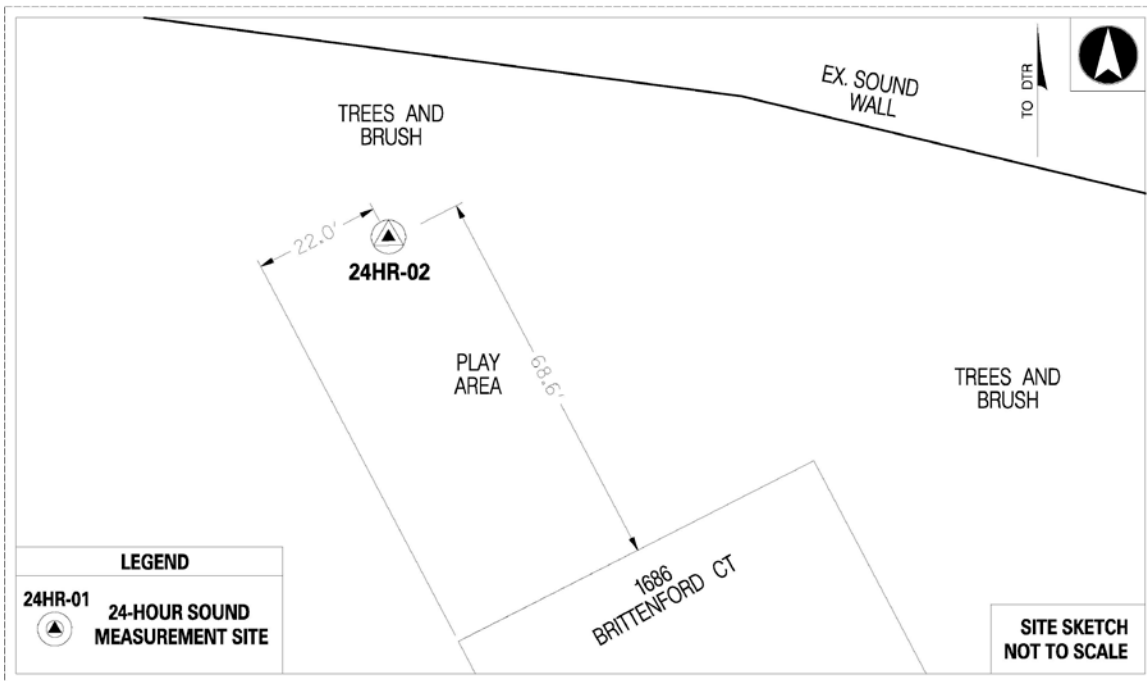
<b>Table C.1 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
11:50	52.5	56.2	54	50.8
11:55	53.2	60.1	55.2	50.8
12:00	54.3	62.3	57.4	50.8
12:05	54.3	62.6	56	50.4
12:10	53.1	58.1	55.5	50.2
12:15	52.6	56.9	54.2	49.9
12:20	55.0	66.5	57.6	51
12:25	52.8	57.9	54.6	50.5
12:30	52.3	61.4	54.3	50.2
12:35	52.8	61.8	54.5	50.2
12:40	53.2	64.3	54.1	50.8
12:45	51.6	58.9	53.3	49.8
12:50	52.1	58.1	53.9	49.5
12:55	52.5	61.2	54.3	49.5
13:00	52.4	59.5	53.9	49.4
13:05	51.8	57.4	53.5	49.7
13:10	53.8	65.1	56	50.2
13:15	52.5	65.1	53.8	50
13:20	56.9	68.7	55.9	50.3
13:25	54.9	63.5	57.2	51.2
13:30	51.9	55.2	53.5	49.9
13:35	52.9	61.0	54.8	49.6
13:40	53.1	57.8	55.2	50.6
13:45	55.8	71.8	53.8	49.9
13:50	52.6	62.6	54.2	49.6
13:55	52.1	55.5	53.7	49.6

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>24HR-02: 1686 Brittenford Court</b>	
Date	August 11, 2010 to August 12, 2010
Start Time to End Time	2:00 PM to 2:00 PM
Peak Noise Hour Leq	66 dB(A)

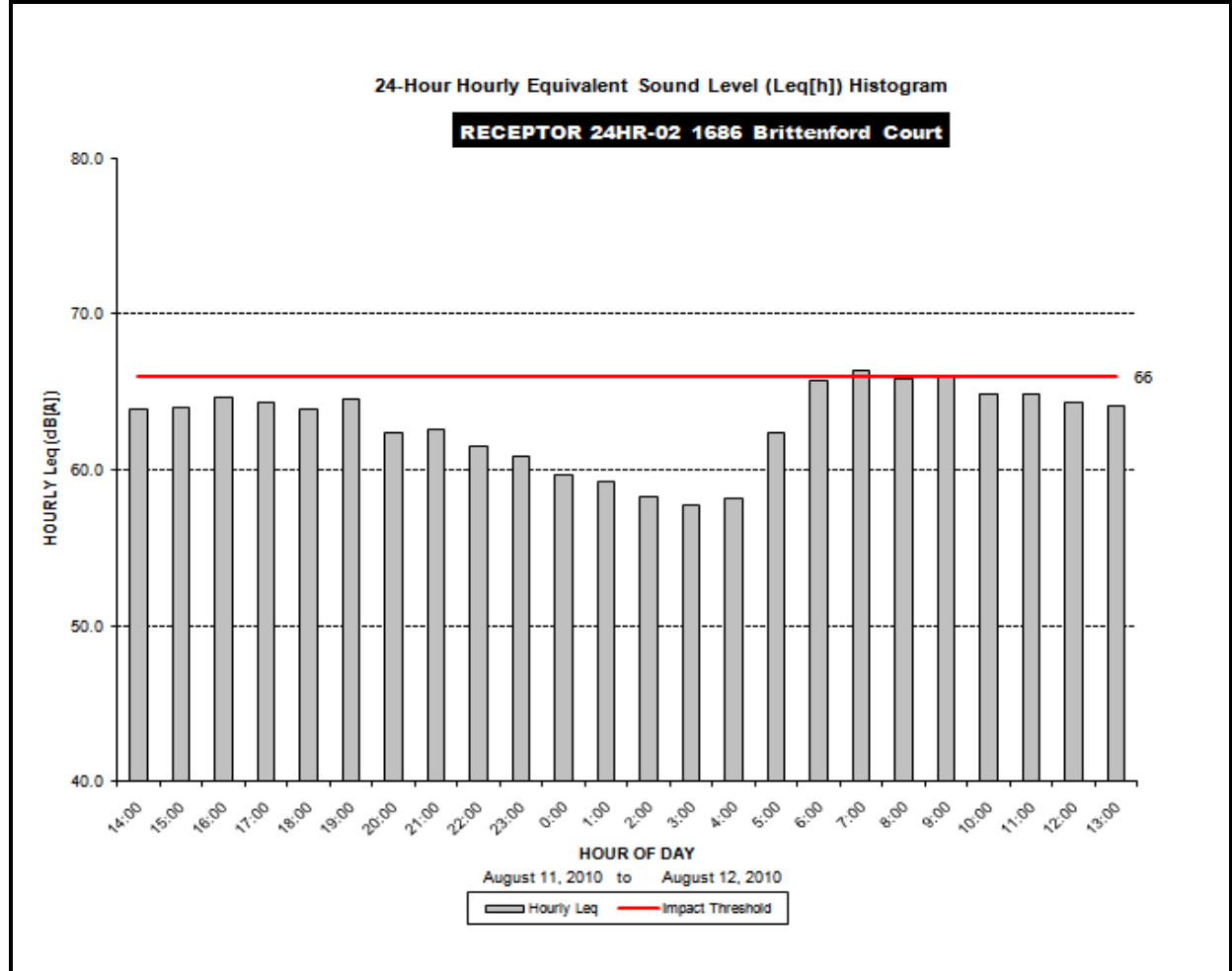


# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

**Figure C.2** 24 Hour Hourly Equivalent Sound Level (Leq[h]) Histogram  
24HR-02: 1686 Brittenford Court



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.2 5 Minute Sound Equivalent Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
14:00	63.8	69.1	65	62
14:05	63.8	67.0	65.4	61.9
14:10	63.7	67.2	65.2	62
14:15	63.9	66.7	65.2	61.3
14:20	64.4	67.2	65.7	62.7
14:25	63.9	68.4	65.9	61.2
14:30	64.0	68.3	65.5	62
14:35	64.0	67.3	65.6	61.7
14:40	63.6	66.6	65.2	61.5
14:45	64.0	67.9	65.4	62.2
14:50	63.6	67.2	65	61.8
14:55	63.8	67.6	65.4	62
15:00	63.8	68.8	65.6	61.4
15:05	63.4	66.8	64.7	61.7
15:10	64.3	66.7	65.7	62.9
15:15	64.1	69.4	65.4	62.1
15:20	64.4	68.2	66	62.8
15:25	64.6	69.3	66	62.7
15:30	63.7	67.5	65.1	62.1
15:35	63.7	67.4	65.2	61.3
15:40	63.9	67.4	65.3	61.9
15:45	64.0	69.6	65.2	62.2
15:50	64.5	67.5	65.8	62.8
15:55	63.8	66.1	65.1	62
16:00	64.2	72.8	65.6	62.4
16:05	64.3	68.2	65.5	62.5
16:10	64.3	67.5	65.5	62.7
16:15	64.3	66.7	65.7	62.2
16:20	64.9	67.9	65.9	63.5
16:25	64.7	67.3	65.9	63.2
16:30	64.6	67.1	65.9	63
16:35	64.6	67.1	65.7	63.2
16:40	65.1	68.9	66.1	63.5
16:45	64.7	67.3	66.1	63
16:50	64.8	67.7	66.2	62.8
16:55	64.5	68.1	65.8	63.1
17:00	64.5	68.4	65.7	62.8
17:05	64.4	67.6	65.8	62.7
17:10	64.8	73.5	66.4	62.8
17:15	64.0	66.5	65.5	61.7
17:20	64.2	66.0	65.4	62.9
17:25	64.6	67.0	66	62.3
17:30	64.0	66.3	65.2	62.3

<b>Table C.2 5 Minute Sound Equivalent Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
17:35	64.7	67.0	66.2	62.8
17:40	64.7	66.9	66.2	62.9
17:45	63.9	66.8	65.4	61.5
17:50	63.9	66.5	65.3	61.5
17:55	64.0	67.0	65.5	61.8
18:00	63.3	66.1	65	61.1
18:05	63.9	67.1	65.4	62.3
18:10	63.7	66.4	65.2	61.9
18:15	63.5	66.0	64.9	61.6
18:20	63.4	65.8	64.8	61.4
18:25	64.1	66.9	65.6	62
18:30	63.5	67.7	64.9	61.5
18:35	62.8	65.6	64.6	59.8
18:40	63.7	67.4	65.4	61.6
18:45	64.1	66.5	65.6	62.3
18:50	64.6	67.4	66.2	62.6
18:55	64.8	68.0	66.4	62.7
19:00	64.5	68.2	66.4	62.6
19:05	64.2	67.2	65.9	61.9
19:10	64.3	67.7	65.8	62.4
19:15	63.7	66.7	65.3	61.8
19:20	64.5	70.7	66.3	62.3
19:25	64.4	72.8	65.9	62.4
19:30	64.6	70.4	66.1	62.7
19:35	64.2	67.1	66.1	61.4
19:40	65.5	68.3	67.5	63.2
19:45	64.0	67.1	65.5	62
19:50	65.2	68.8	66.8	62.9
19:55	65.2	67.7	66.9	63.1
20:00	64.2	68.2	66.1	62.2
20:05	64.0	66.5	65.5	61.9
20:10	63.1	66.8	64.3	61.2
20:15	62.6	66.4	64.1	60.3
20:20	62.5	66.4	64.1	60.5
20:25	61.6	64.1	63.1	59.4
20:30	61.3	64.4	62.9	59.1
20:35	61.2	64.3	62.9	59.2
20:40	61.7	64.6	63.2	60.1
20:45	61.6	64.7	63	59.7
20:50	62.1	72.8	63.5	59.5
20:55	61.3	65.6	62.4	59.6
21:00	61.3	64.2	62.5	59.5
21:05	61.4	64.1	62.8	59.8



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.2 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
21:10	61.8	65.5	63	60
21:15	61.7	66.2	63.5	59.6
21:20	61.6	64.4	63.1	59.8
21:25	63.1	67.6	65.3	60.3
21:30	64.8	73.8	66	62.9
21:35	64.7	67.2	65.9	63.1
21:40	63.4	67.3	65.3	60.6
21:45	61.8	64.4	63.3	60.4
21:50	61.5	65.7	62.9	59.8
21:55	61.6	64.6	63.1	59.9
22:00	61.7	66.6	63.5	59.9
22:05	61.5	64.6	62.8	60
22:10	61.4	64.5	62.8	59.7
22:15	61.7	65.6	62.9	60.1
22:20	62.2	66.7	63.8	60.5
22:25	61.3	64.1	62.8	60
22:30	61.5	65.3	62.8	60
22:35	61.3	64.0	62.5	59.8
22:40	61.4	65.8	62.8	59.6
22:45	61.3	66.1	62.9	59.6
22:50	61.0	63.6	62.3	59.5
22:55	61.3	67.0	62.7	59.7
23:00	61.3	65.5	62.7	59.9
23:05	60.9	65.7	62.2	59.3
23:10	61.2	63.9	62.6	59.7
23:15	61.1	64.9	62.2	59.8
23:20	61.6	64.2	62.8	60.1
23:25	61.0	64.6	62.3	59.4
23:30	60.3	64.0	61.6	58.8
23:35	60.3	65.5	61.6	58.5
23:40	60.6	64.2	61.7	59.2
23:45	60.8	63.8	61.9	59.6
23:50	60.1	62.5	60.8	59.3
23:55	60.6	62.9	61.5	59.7
0:00	60.5	62.9	61.5	59.5
0:05	60.3	65.3	62	58.7
0:10	60.1	62.0	61.1	59.1
0:15	59.6	62.5	60.8	58.4
0:20	59.4	62.6	60.5	58.1
0:25	59.4	62.8	60.5	58.2
0:30	59.6	62.0	60.7	58.6
0:35	59.5	62.7	60.6	58.3
0:40	59.4	64.2	60.3	58.4
0:45	59.7	63.9	60.8	58.5
0:50	59.5	63.2	60.4	58.5

<b>Table C.2 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
0:55	59.0	60.8	59.9	58.2
1:00	59.5	63.5	60.4	58.6
1:05	58.9	65.3	59.6	57.9
1:10	59.2	63.8	60.2	58.3
1:15	59.4	63.7	60.4	58.3
1:20	59.9	64.0	61.7	58.6
1:25	59.5	64.2	60.5	58.3
1:30	58.9	61.8	59.7	58.2
1:35	59.3	62.1	60.4	58.2
1:40	59.4	64.6	61	58
1:45	58.7	63.7	60	57.4
1:50	58.2	61.3	58.9	57.6
1:55	59.0	63.7	60.2	57.7
2:00	58.8	65.7	59.3	57.6
2:05	58.4	63.9	59.4	57.3
2:10	59.2	64.6	60.6	57.7
2:15	58.8	64.9	60.1	57.4
2:20	58.7	65.5	60.3	56.9
2:25	58.3	64.0	59.9	56.8
2:30	57.9	63.0	59.2	56.4
2:35	58.4	67.4	59.7	56.4
2:40	57.6	63.6	59.3	55.9
2:45	58.0	61.8	59.1	57
2:50	57.4	62.5	59	55.6
2:55	57.1	63.6	58.2	55.6
3:00	57.8	65.2	58.8	56.3
3:05	57.7	61.6	58.9	56.4
3:10	57.3	59.9	58.8	55.7
3:15	57.9	61.1	59	56.4
3:20	57.4	62.8	58.8	55.3
3:25	57.4	63.2	59.7	55.4
3:30	57.9	67.0	59.9	55.3
3:35	57.2	63.3	59.3	55.2
3:40	57.6	63.9	59.3	55.4
3:45	58.7	68.2	60.3	55.4
3:50	57.2	64.7	58.9	54.9
3:55	57.7	64.6	60	54.9
4:00	57.6	63.5	60.3	54.4
4:05	56.5	61.3	58.8	54.3
4:10	56.7	59.8	58.8	54.4
4:15	57.2	63.6	59.9	52.3
4:20	57.7	65.9	60.1	52.7
4:25	58.4	64.1	61.5	53.9
4:30	57.9	65.0	60.9	53.3
4:35	58.2	64.7	60.7	53.8

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.2 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
4:40	58.9	65.8	61.1	54.4
4:45	59.2	65.6	61.9	54.1
4:50	58.8	66.4	61	55.2
4:55	59.1	64.2	61.4	55.1
5:00	59.6	66.2	62.3	55.3
5:05	60.3	67.7	63.1	55.6
5:10	60.8	67.1	62.9	57.1
5:15	61.5	66.6	63.5	57.2
5:20	61.6	68.3	64	57.3
5:25	62.0	67.0	63.8	58.2
5:30	63.2	70.6	65.6	59.8
5:35	63.0	66.2	64.8	60.1
5:40	63.7	67.1	65.6	61.1
5:45	63.2	68.2	65.1	60.6
5:50	63.5	68.2	64.9	60.6
5:55	64.0	67.3	65.8	61.4
6:00	64.0	67.5	65.9	61.2
6:05	64.7	67.4	66.2	62.8
6:10	65.3	68.8	66.9	63
6:15	65.6	68.3	67.1	63.4
6:20	65.3	68.0	66.6	63.1
6:25	65.9	68.6	67.4	63.8
6:30	66.1	68.7	67.5	64.2
6:35	66.2	71.0	67.6	64.2
6:40	66.2	69.5	67.3	64.9
6:45	66.1	68.8	67.1	64.6
6:50	66.3	70.7	67.6	64.5
6:55	65.8	68.2	66.9	64.1
7:00	66.0	68.3	67.1	64.4
7:05	66.4	69.1	67.4	65.1
7:10	66.0	68.6	67.2	64.3
7:15	66.2	68.7	67.1	65.3
7:20	66.2	71.3	67.1	65.1
7:25	66.0	67.9	66.7	65.1
7:30	66.7	68.7	67.9	65.5
7:35	66.8	69.5	67.7	65.8
7:40	66.5	69.3	67.6	65.1
7:45	66.7	68.6	68	65
7:50	66.3	68.9	67.6	64.5
7:55	66.5	68.7	67.7	65.4
8:00	66.7	69.4	67.8	65.4
8:05	66.5	70.4	67.5	65.1
8:10	66.6	69.3	67.5	65.6
8:15	66.4	70.5	67.5	64.9
8:20	65.8	67.9	66.5	64.4

<b>Table C.2 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
8:25	65.2	68.6	66.6	62.8
8:30	65.1	68.6	67.2	62
8:35	65.3	67.2	66.4	64.3
8:40	65.8	70.1	67.4	63.3
8:45	66.4	68.1	67.4	65.2
8:50	65.0	69.5	66.2	63.6
8:55	64.4	66.4	65.6	62.7
9:00	65.1	68.5	66.3	63.2
9:05	65.7	69.1	66.8	64.4
9:10	65.8	68.3	67.1	63.6
9:15	66.1	68.5	67.5	63.7
9:20	66.0	68.9	67.5	64.1
9:25	66.7	69.5	68	65.2
9:30	66.2	68.9	67.5	64.4
9:35	66.1	69.0	67.4	64.6
9:40	65.8	69.6	67.2	64.4
9:45	65.9	68.5	67.5	64.2
9:50	66.4	75.0	67.4	64.6
9:55	66.2	76.3	67.3	63.3
10:00	65.4	69.3	66.5	63.7
10:05	65.3	69.3	66.8	63.3
10:10	64.7	68.3	66.2	62.6
10:15	65.4	73.5	66.9	63
10:20	64.8	70.2	66.4	62.8
10:25	64.4	68.3	65.9	62.3
10:30	64.0	67.4	65.6	62
10:35	64.6	68.9	66.3	62.3
10:40	64.9	70.9	66.3	63
10:45	65.1	70.9	66.7	63.4
10:50	64.6	68.0	66	62.8
10:55	64.8	69.3	66.1	63.3
11:00	64.2	66.9	65.5	62.3
11:05	64.7	68.3	66	63.1
11:10	64.4	73.1	65.7	62.4
11:15	63.9	68.7	65.4	61.9
11:20	65.1	67.5	66.5	63.6
11:25	64.6	69.3	66.4	62.3
11:30	67.2	81.0	67.5	63.4
11:35	64.8	67.5	66	62.9
11:40	64.5	69.0	65.7	62.7
11:45	64.5	68.4	65.7	63
11:50	64.4	69.7	66	62.3
11:55	64.5	68.0	66	62.4
12:00	64.4	69.9	66	62.3
12:05	64.2	67.2	65.7	62.3

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

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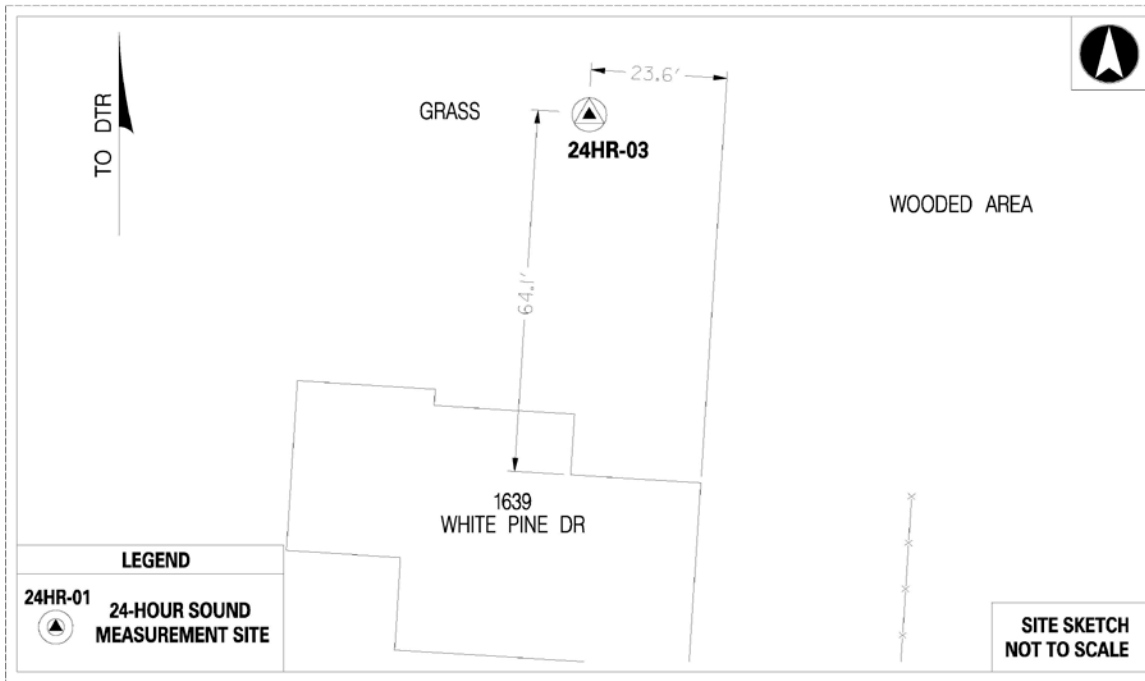
<b>Table C.2 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
12:10	64.5	66.7	65.7	63
12:15	64.3	68.7	65.9	62.1
12:20	64.1	69.3	65.2	62.4
12:25	64.4	71.5	65.9	62.4
12:30	64.1	67.7	65.7	62.1
12:35	64.2	67.3	65.6	62.4
12:40	64.5	67.1	65.8	62.9
12:45	64.3	67.4	65.6	62.5
12:50	64.2	68.5	65.7	62.2
12:55	63.8	69.2	65.4	61.3
13:00	64.2	68.6	65.5	62.4
13:05	64.2	68.1	65.6	62.2
13:10	64.1	69.6	65.8	62.2
13:15	64.4	69.3	65.6	62.5
13:20	64.0	68.9	65.7	61.8
13:25	64.2	67.3	65.7	62.3
13:30	64.2	68.6	65.9	62
13:35	63.9	68.3	65.5	61.2
13:40	64.0	68.1	65.8	61.4
13:45	64.3	71.9	65.8	62
13:50	63.9	66.8	65.5	61.5
13:55	63.6	66.6	65.1	61.8

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

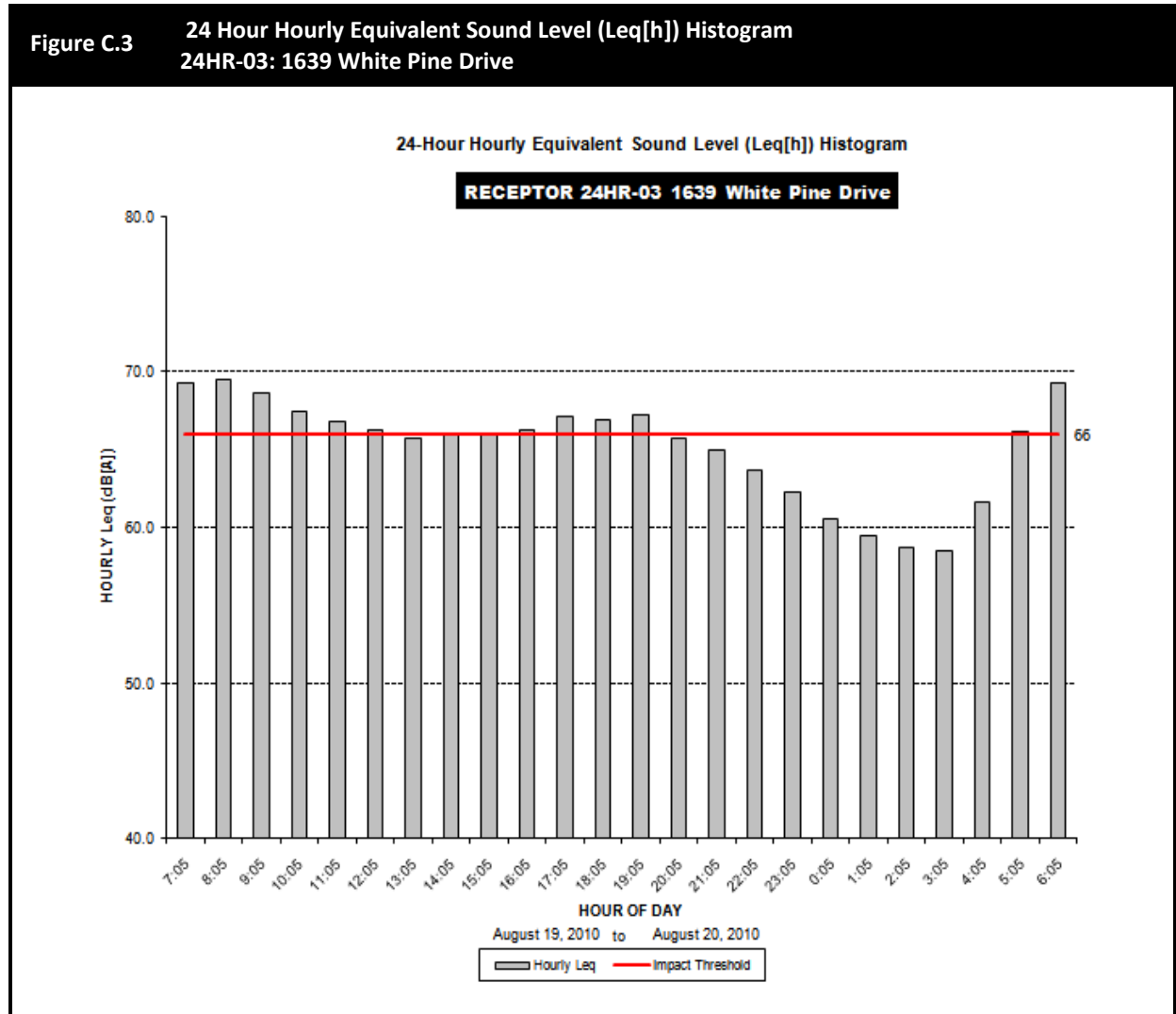
<b>24HR-03: 1639 White Pine Drive</b>	
Date	August 19, 2010 to August 20, 2010
Start Time to End Time	7:05 AM to 7:05 AM
Peak Noise Hour Leq	69 dB(A)



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.3 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
7:05	69.3	71.0	70.2	68.3
7:10	69.1	70.9	70	67.9
7:15	69.4	71.2	70.3	68.4
7:20	69.3	72.8	70.4	68.4
7:25	69.4	71.4	70.1	68.6
7:30	69.2	71.3	69.8	68.6
7:35	69.1	70.6	69.8	68.1
7:40	69.3	73.8	70.5	68
7:45	69.2	73.8	70	68.4
7:50	69.8	74.4	70.6	68.9
7:55	69.2	71.9	70.2	68.2
8:00	69.4	71.5	70.3	68.3
8:05	69.6	71.3	70.3	68.8
8:10	69.4	71.4	70.3	68.4
8:15	69.4	71.3	70.2	68.2
8:20	69.6	73.1	70.6	68.7
8:25	69.2	70.9	70	68.2
8:30	69.4	71.2	70.3	68.3
8:35	69.5	72.1	70.5	68.3
8:40	69.8	72.3	70.6	68.8
8:45	69.6	74.1	70.8	68.1
8:50	69.4	71.7	70.6	68.2
8:55	69.3	71.4	70.3	68.2
9:00	68.9	71.8	70.1	67.3
9:05	69.5	72.7	70.4	68.3
9:10	68.7	73.6	70.4	67.1
9:15	68.7	71.0	69.8	67.4
9:20	68.5	71.2	70	66.7
9:25	68.5	71.8	69.8	66.8
9:30	68.5	70.4	69.6	67.1
9:35	68.7	71.3	70.1	67.1
9:40	68.9	70.6	69.9	67.5
9:45	68.5	71.7	69.6	66.9
9:50	68.2	71.7	69.6	66.1
9:55	68.5	71.2	70.1	66.7
10:00	67.9	71.0	69.2	66.1
10:05	67.9	70.6	68.9	66.6
10:10	67.2	69.7	68.7	65
10:15	67.7	70.3	69.1	65.8
10:20	67.4	70.3	68.3	66.3
10:25	67.7	71.7	69.4	66.1
10:30	67.9	72.9	69.2	66
10:35	67.2	70.7	69	64.8

<b>Table C.3 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
10:40	67.1	70.5	68.8	65.1
10:45	67.9	71.8	69.4	65.1
10:50	67.2	70.7	68.8	65
10:55	66.8	70.1	68.2	65.5
11:00	67.3	73.0	68.4	65.6
11:05	66.9	73.0	68	64.9
11:10	66.6	70.0	67.8	64
11:15	66.7	69.6	68.2	64.8
11:20	67.1	70.6	68.5	64.6
11:25	67.1	72.1	68.6	64.7
11:30	66.8	71.5	68.7	64.2
11:35	66.2	69.2	67.5	64
11:40	67.5	71.2	69	65.7
11:45	66.7	71.5	68.2	64.6
11:50	66.3	69.6	67.9	64.2
11:55	66.6	69.9	67.9	64.2
12:00	66.8	70.7	68.5	64.2
12:05	65.8	69.8	67.3	63.9
12:10	68.2	81.8	67.9	64.2
12:15	66.4	69.6	68	64.4
12:20	66.3	69.0	67.6	64.8
12:25	66.4	71.5	67.9	63.4
12:30	66.1	69.2	67.6	63.6
12:35	66.1	70.2	67.6	64.4
12:40	66.3	70.2	68.1	64.3
12:45	65.6	68.4	67	62.8
12:50	65.8	68.6	67.2	63.1
12:55	65.9	72.0	68	63.1
13:00	66.0	69.8	67.9	63.4
13:05	65.7	69.2	67.4	63.4
13:10	65.7	68.0	67.1	63.8
13:15	65.5	69.0	67.4	63.6
13:20	65.8	70.7	67.6	64
13:25	66.1	68.6	67.5	64.4
13:30	65.7	68.3	66.9	64.3
13:35	66.2	69.3	67.8	64.1
13:40	66.5	71.3	68.2	64.3
13:45	65.4	68.7	67.3	62.6
13:50	64.7	67.9	66.1	62.5
13:55	65.0	69.6	66.5	63.5
14:00	65.6	69.8	67.2	63.8
14:05	65.4	74.6	66.5	63.5
14:10	66.3	69.4	68.2	63.8

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.3 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
14:15	66.3	69.2	67.8	64.8
14:20	66.1	71.0	67.3	64.8
14:25	66.3	69.5	67.5	65
14:30	66.4	68.9	67.6	64.8
14:35	66.4	70.0	67.9	63.9
14:40	65.9	69.8	67.4	64.3
14:45	66.0	72.3	67.3	64.5
14:50	65.6	68.6	66.9	64
14:55	66.4	70.8	67.8	64.6
15:00	65.7	68.5	66.9	64.4
15:05	65.0	68.3	66.5	63.1
15:10	65.5	68.7	66.8	63.6
15:15	65.8	68.0	67.1	64.5
15:20	66.3	69.0	67.7	65.1
15:25	65.8	69.4	67.1	64
15:30	65.9	68.7	67.2	64
15:35	66.0	68.8	67.6	63.9
15:40	66.2	69.4	67.9	64.6
15:45	66.2	70.2	67.3	64.6
15:50	66.0	70.4	67.2	64.6
15:55	66.0	68.4	67.1	64.4
16:00	66.5	73.1	67.8	64.6
16:05	66.0	68.4	67.4	64.4
16:10	66.4	72.3	68	64.1
16:15	66.9	69.4	67.9	65.5
16:20	66.2	68.3	67.5	65
16:25	66.2	69.4	67.8	64
16:30	66.2	68.2	67.2	64.9
16:35	65.8	68.3	67	64.2
16:40	66.2	68.4	67.3	64.5
16:45	66.1	69.8	67	64.8
16:50	66.2	68.6	67.3	65
16:55	66.5	69.2	67.5	65.1
17:00	66.5	68.4	67.6	64.8
17:05	66.4	68.2	67.5	65
17:10	66.6	69.3	67.8	65.1
17:15	66.8	69.2	68.1	65.3
17:20	67.7	69.7	68.7	66.5
17:25	67.4	69.4	68.5	66.3
17:30	67.4	69.7	68.7	66.3
17:35	67.2	69.0	68.2	66.1
17:40	66.9	69.1	67.8	65.6
17:45	66.9	69.4	68	65.5
17:50	67.6	69.9	68.5	66.5
17:55	67.0	68.6	67.9	65.9

<b>Table C.3 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
18:00	67.0	69.4	68.5	65.7
18:05	66.8	68.7	67.8	65.4
18:10	66.7	69.2	67.8	65.3
18:15	66.1	68.3	67	64.9
18:20	67.0	69.4	68.2	65.9
18:25	66.8	68.6	67.9	65.3
18:30	66.6	68.7	67.8	65.6
18:35	66.8	68.9	67.8	65.8
18:40	67.1	69.9	68.2	65.8
18:45	66.7	69.0	67.9	65.3
18:50	66.6	69.1	67.8	65.1
18:55	67.3	69.7	68.3	65.9
19:00	67.8	71.4	69.3	66.1
19:05	67.5	71.1	68.5	66
19:10	67.9	70.7	69.1	66.5
19:15	67.3	70.6	68.4	65.8
19:20	67.6	70.0	69.2	66.1
19:25	66.7	69.1	68	65
19:30	67.0	69.4	68.4	65
19:35	66.7	68.9	68	64.7
19:40	67.2	70.7	68.5	65.9
19:45	67.6	70.7	68.8	66.2
19:50	66.9	69.2	68.3	65.5
19:55	67.0	71.1	68.5	65.2
20:00	66.3	69.0	67.6	65.1
20:05	66.9	69.2	68.3	65.3
20:10	66.1	68.7	67.6	64.6
20:15	65.9	69.0	67.3	64.3
20:20	66.2	70.6	68	64.4
20:25	65.9	69.5	67.3	64.1
20:30	65.9	68.4	67.3	64.5
20:35	65.4	68.3	66.8	63.6
20:40	65.6	68.4	67	64
20:45	65.7	71.7	67.4	63.8
20:50	65.1	68.8	66.4	63.5
20:55	64.6	67.5	66	63
21:00	64.9	67.8	66.6	63.1
21:05	65.0	69.0	66.6	62.8
21:10	65.2	67.2	66.2	63.8
21:15	64.9	68.3	66.8	63.2
21:20	65.0	69.0	66.8	62.3
21:25	64.8	67.1	66.1	63.2
21:30	64.9	68.0	66.3	63.1
21:35	65.0	70.6	66.9	62.5
21:40	65.0	68.3	66.9	63

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.3 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
21:45	65.0	67.1	66.4	63.2
21:50	65.1	68.5	66.5	63.4
21:55	65.2	69.3	66.3	63.2
22:00	64.8	68.9	65.9	63
22:05	64.3	68.4	66	62.3
22:10	64.1	66.6	65.7	62.3
22:15	64.2	69.0	65.9	62
22:20	64.3	69.6	65.9	62.1
22:25	63.6	70.1	64.7	61.9
22:30	63.0	66.4	64.8	60.7
22:35	63.6	67.9	65.4	60.2
22:40	63.7	70.0	65.6	61.2
22:45	63.8	67.8	65.1	62
22:50	62.8	65.9	64.5	60.2
22:55	62.8	66.9	64.7	60.3
23:00	62.7	68.0	64.2	61
23:05	63.5	67.8	65.4	61.1
23:10	62.7	66.7	64.2	60.3
23:15	62.6	67.0	64.2	60.3
23:20	62.9	66.8	64.3	60.6
23:25	62.4	66.7	64.4	60.1
23:30	62.0	65.3	63.6	59.8
23:35	62.5	68.3	64.7	59.5
23:40	62.2	68.8	64.4	59
23:45	61.9	67.6	64.2	58.9
23:50	61.7	66.0	63.7	59.3
23:55	61.4	67.2	63.2	58
0:00	61.2	65.6	63.2	58.8
0:05	60.8	64.1	63	58.1
0:10	61.6	65.9	63.5	58.7
0:15	60.7	64.9	62.4	57.9
0:20	59.6	65.6	61.6	56.7
0:25	61.4	65.6	63.5	58.5
0:30	60.0	64.5	61.6	57
0:35	60.7	65.2	63	57.1
0:40	60.6	64.4	62.1	58.9
0:45	59.8	64.8	62.3	56.8
0:50	60.8	64.4	62.8	58
0:55	59.7	64.3	61.7	56.8
1:00	59.4	64.3	62	56.2
1:05	60.6	67.1	63.1	57
1:10	60.8	68.5	62.8	57.3
1:15	59.5	63.4	61.8	57
1:20	59.9	65.0	63.1	55.7
1:25	60.0	65.1	62.5	56.4

<b>Table C.3 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
1:30	60.3	69.0	63.6	55.4
1:35	58.7	63.5	61.1	54.3
1:40	58.5	64.6	60.6	55.4
1:45	58.4	65.4	60.8	54.3
1:50	59.5	64.9	61.6	56.2
1:55	58.0	63.1	61.2	54.5
2:00	57.7	61.5	60.4	53.5
2:05	57.5	63.9	60.6	53.5
2:10	59.1	67.6	62.7	54.6
2:15	57.5	63.0	61.1	52.8
2:20	58.7	64.7	60.8	55.4
2:25	60.1	68.9	64.2	55.3
2:30	58.9	64.0	61.8	54.2
2:35	59.3	70.2	62.7	53.7
2:40	57.5	66.2	60.8	52.5
2:45	59.2	73.0	61.5	52.2
2:50	57.0	61.4	59.7	52.5
2:55	59.0	69.2	62.6	50.7
3:00	59.2	65.6	61.4	52.7
3:05	58.9	66.9	62.5	52.5
3:10	56.3	66.0	59.3	50
3:15	57.2	66.1	59.6	51.5
3:20	56.5	63.7	59.8	51.7
3:25	58.1	65.7	61.2	53.1
3:30	58.1	63.2	60.9	52.4
3:35	59.2	67.0	62.3	52.9
3:40	58.8	70.6	60.6	53.1
3:45	58.1	66.3	60.9	51.3
3:50	60.2	65.6	63.1	54.8
3:55	60.1	66.3	63	55
4:00	58.0	66.3	60.6	51.1
4:05	59.7	66.2	62.7	50.2
4:10	58.8	64.8	61.4	55.1
4:15	59.9	67.6	62.7	55.9
4:20	61.6	67.6	64.8	56.3
4:25	60.2	64.9	62.2	56.8
4:30	61.7	68.4	64.2	57.7
4:35	62.3	69.1	64.1	59.6
4:40	63.1	68.3	65.6	59.8
4:45	62.0	69.8	64.5	57.4
4:50	61.9	67.9	64.3	58.3
4:55	63.1	68.2	64.8	59.9
5:00	62.5	65.9	64.5	59.9
5:05	63.8	70.0	66.4	59.9
5:10	63.8	69.1	65.2	61.4



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

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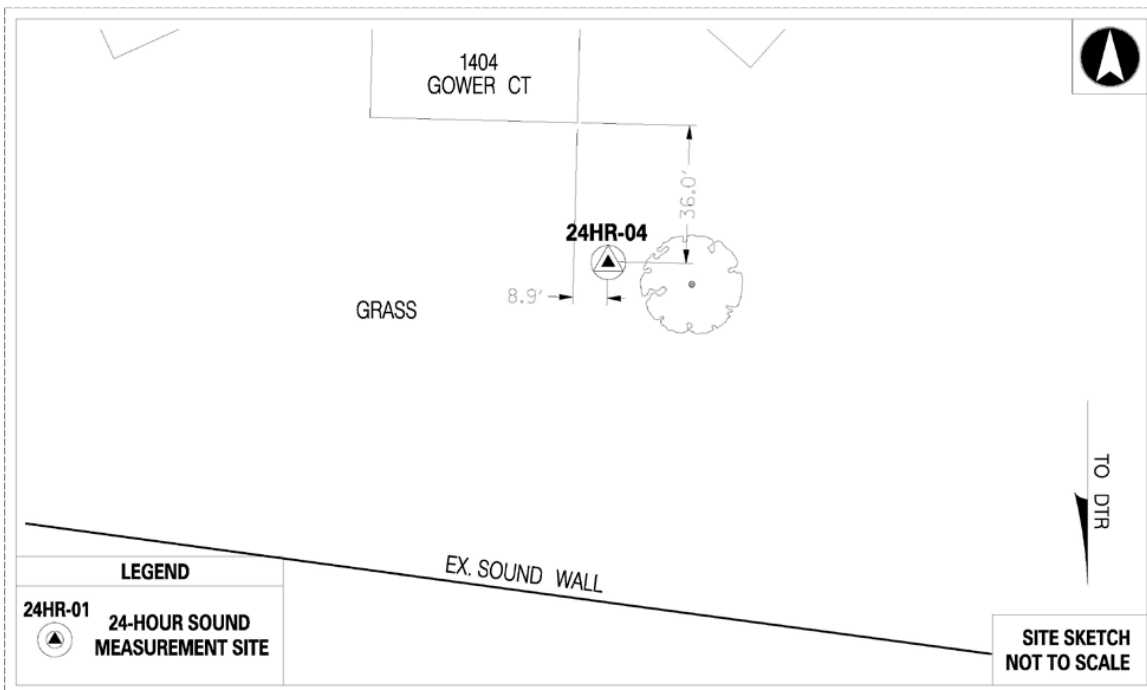
<b>Table C.3 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
5:15	64.4	69.4	66.5	61.6
5:20	65.2	69.6	67.8	62.1
5:25	65.5	69.3	66.9	63.7
5:30	65.8	69.8	67.4	63.2
5:35	66.3	70.1	68.4	64
5:40	67.1	73.3	68.8	64.7
5:45	66.9	73.1	68.6	64.5
5:50	67.3	70.0	68.8	65.9
5:55	67.4	70.7	69	65.2
6:00	67.9	73.4	69.3	65.1
6:05	67.9	70.9	69.1	66.4
6:10	68.1	71.6	69.4	66.4
6:15	69.0	76.5	70.5	66.6
6:20	68.8	71.1	70.2	66.2
6:25	69.2	71.5	70.2	68
6:30	69.2	71.9	70.4	67.6
6:35	69.6	71.6	70.7	68.2
6:40	69.8	74.8	70.8	68.6
6:45	69.9	73.7	71.1	68.8
6:50	70.1	73.9	71.4	68.1
6:55	70.0	72.3	71.1	68.6
7:00	69.6	71.5	70.6	68.5

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>24HR-04: 1404 Gower Court</b>	
Date	August 19, 2010 to August 20, 2010
Start Time to End Time	7:05 AM to 7:05 AM
Peak Noise Hour Leq	62 dB(A)

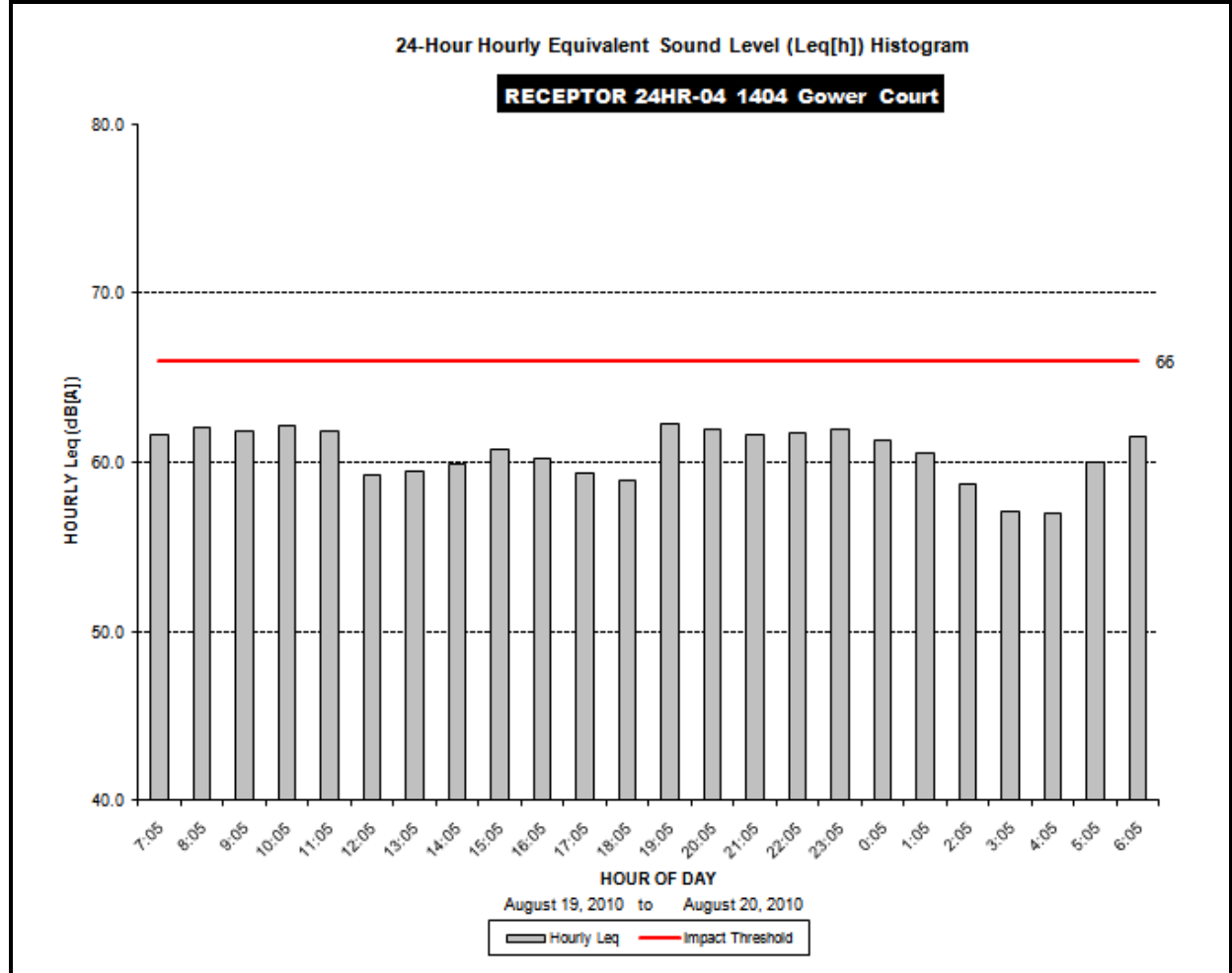


# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

**Figure C.4** 24 Hour Hourly Equivalent Sound Level (Leq[h]) Histogram  
24HR-04: 1404 Gower Court



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.4 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
7:05	64.1	69.7	68.1	60.7
7:10	61.0	63.0	62.0	59.7
7:15	61.2	63.1	62.2	60.2
7:20	61.1	63.9	62.1	59.7
7:25	61.0	64.7	61.8	60.1
7:30	61.6	63.4	62.4	60.2
7:35	61.3	63.2	62.2	60.2
7:40	61.5	63.7	62.7	60.2
7:45	61.6	64.3	62.8	60.3
7:50	61.2	62.7	61.9	60.3
7:55	61.6	63.8	62.5	60.6
8:00	61.6	62.9	62.3	60.9
8:05	62.5	64.5	63.4	61.7
8:10	61.7	65.3	62.6	60.7
8:15	61.8	64.0	62.4	61.2
8:20	61.7	64.0	62.4	60.9
8:25	61.8	66.2	62.6	60.8
8:30	61.6	62.9	62.4	60.9
8:35	61.9	63.3	62.6	61.3
8:40	61.9	63.2	62.6	61.0
8:45	61.8	64.5	62.9	60.9
8:50	62.0	64.0	62.8	61.2
8:55	62.4	65.1	63.6	61.5
9:00	62.7	69.0	63.7	61.4
9:05	62.4	68.3	63.4	61.1
9:10	62.3	64.5	63.2	61.5
9:15	61.8	64.6	62.7	60.8
9:20	61.6	63.7	62.5	60.2
9:25	61.4	64.5	62.2	60.2
9:30	61.9	64.2	62.7	60.8
9:35	62.2	67.0	63.5	60.6
9:40	61.9	68.0	62.9	59.8
9:45	61.6	66.7	62.5	60.5
9:50	62.4	65.5	63.7	60.7
9:55	61.6	65.8	62.4	60.4
10:00	60.3	65.6	61.3	59.2
10:05	60.3	62.9	61.2	59.2
10:10	60.7	65.6	61.8	59.6
10:15	61.5	69.5	62.5	59.6
10:20	62.6	74.3	62.7	60.1
10:25	63.6	74.0	65.0	61.2
10:30	64.0	71.9	66.4	60.7
10:35	62.6	66.3	64.0	61.1

<b>Table C.4 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
10:40	62.7	70.5	64.3	60.2
10:45	61.8	64.2	62.7	60.9
10:50	61.2	62.6	62.0	60.2
10:55	62.2	70.9	64.0	59.5
11:00	61.5	67.8	62.7	59.5
11:05	63.0	67.6	64.2	61.7
11:10	63.1	71.4	64.4	61.1
11:15	60.6	63.1	61.6	59.5
11:20	61.9	65.1	63.6	60.0
11:25	65.2	78.5	65.1	60.6
11:30	62.1	69.5	64.2	59.6
11:35	59.9	62.7	61.2	58.5
11:40	60.9	63.3	61.9	59.6
11:45	60.2	63.4	62.1	58.1
11:50	60.4	63.7	61.8	58.9
11:55	60.9	68.0	62.4	59.1
12:00	60.0	66.3	61.4	58.3
12:05	59.8	62.4	60.8	58.9
12:10	60.4	63.2	61.6	59.3
12:15	59.7	68.0	60.6	57.9
12:20	59.5	64.0	60.8	58.1
12:25	59.4	62.3	61.0	57.7
12:30	59.0	61.3	60.2	57.4
12:35	59.4	63.3	60.5	57.9
12:40	58.8	61.7	59.9	57.0
12:45	58.1	60.9	59.3	56.6
12:50	58.4	62.4	59.4	56.9
12:55	58.8	63.8	60.3	57.2
13:00	59.5	61.5	60.6	58.2
13:05	59.2	61.4	60.1	58.2
13:10	59.2	62.9	60.9	57.4
13:15	59.2	61.4	60.3	58.0
13:20	58.9	61.3	59.9	57.8
13:25	60.1	63.2	61.3	58.5
13:30	59.8	62.7	61.2	58.7
13:35	59.4	63.8	60.8	57.7
13:40	59.0	61.8	60.3	57.5
13:45	59.3	61.0	60.4	58.0
13:50	59.7	63.5	61.0	58.4
13:55	59.7	61.7	60.7	58.6
14:00	59.7	64.5	60.7	58.5
14:05	60.3	64.0	61.4	59.3
14:10	61.0	64.4	62.1	60.0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.4 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
14:15	60.6	63.6	61.5	59.7
14:20	59.7	61.8	60.7	58.2
14:25	59.1	61.6	60.0	57.9
14:30	59.1	63.8	60.2	57.8
14:35	59.5	62.8	60.9	58.0
14:40	59.7	61.7	60.4	58.8
14:45	60.4	63.0	61.8	59.1
14:50	59.6	62.8	60.8	58.3
14:55	59.7	61.6	60.6	58.6
15:00	59.9	62.6	61.0	58.9
15:05	60.5	63.2	61.7	59.2
15:10	60.6	62.2	61.5	59.6
15:15	60.3	63.6	61.3	59.0
15:20	62.0	71.1	64.7	59.3
15:25	60.9	63.6	62.0	59.6
15:30	61.5	66.5	63.1	59.9
15:35	61.3	64.6	63.1	59.6
15:40	59.9	61.9	60.9	58.8
15:45	61.6	69.0	64.6	58.9
15:50	60.6	63.9	61.7	59.2
15:55	59.2	61.5	60.1	58.4
16:00	59.9	63.1	60.7	58.8
16:05	60.4	63.0	61.6	59.1
16:10	62.9	73.1	65.1	58.3
16:15	59.3	62.1	60.5	58.2
16:20	60.6	62.3	61.6	59.6
16:25	60.1	62.5	61.3	59.0
16:30	60.2	63.1	61.2	59.1
16:35	59.1	62.7	60.2	57.8
16:40	59.3	61.4	60.3	58.5
16:45	59.7	62.9	60.9	58.5
16:50	59.8	62.3	61.0	58.4
16:55	59.9	62.5	60.9	59.0
17:00	59.4	61.1	60.1	58.6
17:05	59.7	64.9	61.7	58.1
17:10	60.7	63.4	62.3	59.0
17:15	62.1	65.1	64.1	59.6
17:20	58.8	60.4	59.7	57.9
17:25	59.3	61.3	60.1	58.5
17:30	58.8	60.7	59.8	57.6
17:35	58.6	60.7	59.6	57.6
17:40	58.6	64.1	60.1	57.2
17:45	58.2	60.1	59.3	56.8
17:50	58.7	66.6	59.9	57.4
17:55	58.4	60.7	59.3	57.5

<b>Table C.4 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
18:00	58.3	60.8	59.7	56.6
18:05	59.5	62.2	60.9	58.2
18:10	59.6	67.1	60.4	58.5
18:15	58.9	60.5	59.7	58.2
18:20	59.6	67.6	60.6	58.0
18:25	58.4	60.5	59.2	57.5
18:30	58.9	60.7	60.0	58.0
18:35	58.3	60.4	59.4	57.3
18:40	59.2	63.1	60.8	57.8
18:45	58.1	60.4	59.0	57.1
18:50	57.8	60.1	58.8	57.1
18:55	58.3	60.8	59.6	57.0
19:00	59.9	61.9	60.9	58.8
19:05	60.4	63.0	61.5	59.5
19:10	59.7	61.6	60.6	58.7
19:15	59.9	62.8	61.1	58.6
19:20	59.9	63.4	61.2	57.6
19:25	60.6	64.4	61.7	58.9
19:30	61.3	63.6	62.8	59.7
19:35	62.3	66.6	63.8	60.7
19:40	62.3	64.5	63.2	61.2
19:45	63.5	69.6	64.2	61.8
19:50	63.8	65.4	64.6	62.6
19:55	64.5	66.2	65.6	63.5
20:00	64.3	66.9	65.4	63.1
20:05	65.0	72.4	65.8	63.0
20:10	64.4	67.9	65.4	63.3
20:15	63.9	65.7	65.0	62.6
20:20	62.4	64.4	63.6	60.9
20:25	61.0	63.7	62.2	59.3
20:30	59.8	61.9	60.7	58.7
20:35	59.4	61.1	60.2	58.4
20:40	59.3	60.9	60.1	58.5
20:45	60.5	61.9	61.1	59.8
20:50	60.4	61.7	61.1	59.7
20:55	61.1	62.3	61.6	60.4
21:00	60.9	62.8	61.5	60.2
21:05	61.1	63.4	61.6	60.4
21:10	61.3	63.0	62.1	60.6
21:15	61.1	62.6	61.7	60.4
21:20	61.3	63.0	61.9	60.7
21:25	61.2	62.3	61.7	60.7
21:30	61.2	62.5	61.7	60.7
21:35	61.5	64.5	62.0	61.0
21:40	61.9	65.5	62.3	61.3

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>Table C.4 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
21:45	61.4	62.4	61.9	60.8
21:50	61.6	62.8	62.0	61.2
21:55	61.8	62.8	62.2	61.4
22:00	62.9	72.3	62.6	61.3
22:05	61.4	63.1	62.0	60.9
22:10	61.7	62.8	62.2	61.3
22:15	61.6	62.9	62.2	61.0
22:20	61.8	63.0	62.3	61.4
22:25	61.7	65.1	62.2	61.1
22:30	61.2	62.4	61.8	60.6
22:35	61.6	66.5	62.2	61.0
22:40	61.9	66.7	62.4	61.3
22:45	61.6	65.7	62.2	61.1
22:50	61.8	63.2	62.4	61.3
22:55	62.0	63.5	62.6	61.5
23:00	62.3	63.9	62.9	61.8
23:05	61.9	63.2	62.4	61.3
23:10	61.9	62.8	62.3	61.6
23:15	61.8	63.0	62.3	61.4
23:20	61.9	65.0	62.3	61.3
23:25	62.1	63.5	62.6	61.5
23:30	62.3	64.6	62.9	61.8
23:35	62.2	65.3	62.7	61.6
23:40	62.1	63.8	62.6	61.6
23:45	62.0	63.4	62.6	61.5
23:50	61.6	63.0	62.1	61.1
23:55	61.4	62.6	61.9	60.9
0:00	61.5	62.8	61.9	61.0
0:05	61.3	62.3	61.8	60.8
0:10	62.2	70.1	62.1	60.8
0:15	61.4	62.5	61.8	61.0
0:20	61.5	62.6	61.9	61.2
0:25	61.3	62.2	61.7	60.9
0:30	61.3	62.4	61.8	60.8
0:35	61.0	61.9	61.3	60.8
0:40	60.9	61.9	61.4	60.5
0:45	61.0	62.6	61.3	60.5
0:50	61.0	62.1	61.4	60.6
0:55	61.0	62.2	61.4	60.6
1:00	60.9	61.9	61.3	60.5
1:05	61.0	62.0	61.5	60.6
1:10	61.0	62.1	61.3	60.6
1:15	61.0	62.6	61.5	60.5
1:20	60.7	62.0	61.3	60.3
1:25	60.4	62.4	61.0	59.9

<b>Table C.4 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
1:30	60.6	63.1	61.1	60.1
1:35	60.6	62.4	61.0	60.2
1:40	60.4	61.6	60.8	60.0
1:45	60.2	62.2	60.7	59.6
1:50	60.2	61.6	60.7	59.8
1:55	60.0	61.3	60.5	59.6
2:00	59.8	61.1	60.3	59.4
2:05	60.0	63.1	60.8	59.4
2:10	59.2	60.9	59.8	58.7
2:15	59.0	60.6	59.7	58.5
2:20	59.1	60.9	59.7	58.5
2:25	58.9	60.7	59.5	58.4
2:30	59.0	60.6	59.7	58.3
2:35	58.5	59.9	58.9	58.2
2:40	58.5	60.9	59.4	57.8
2:45	58.2	60.2	59.0	57.5
2:50	57.6	59.9	58.3	57.1
2:55	57.7	60.0	58.5	57.1
3:00	57.7	59.5	58.4	57.1
3:05	57.6	59.0	58.3	56.9
3:10	57.1	58.8	57.9	56.3
3:15	56.9	59.1	57.8	56.0
3:20	57.4	59.2	58.1	56.7
3:25	57.8	60.3	58.5	57.2
3:30	57.0	58.4	57.7	56.2
3:35	56.9	58.7	57.6	56.2
3:40	56.8	60.0	57.6	56.1
3:45	56.8	58.9	57.7	55.8
3:50	56.8	59.4	57.8	56.1
3:55	56.8	59.0	57.8	56.0
4:00	56.9	59.5	58.0	55.8
4:05	56.5	58.8	57.6	55.4
4:10	56.4	60.6	57.6	55.3
4:15	56.9	62.6	58.4	55.4
4:20	56.2	58.6	57.2	54.8
4:25	56.4	59.2	57.6	55.4
4:30	56.3	58.5	57.6	54.8
4:35	57.7	64.2	59.0	55.7
4:40	56.9	59.7	58.3	55.2
4:45	57.7	61.7	59.5	55.9
4:50	57.2	60.1	58.5	55.8
4:55	57.6	59.9	59.0	56.1
5:00	57.4	60.0	58.5	56.4
5:05	57.8	60.5	59.1	56.5
5:10	58.9	61.6	60.3	57.5

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

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<b>Table C.4 5 Minute Sound Equivalent Time History Report</b>				
<b>TIME</b>	<b>Leq dB(A)</b>	<b>Lmax dB(A)</b>	<b>L(10.0) dB(A)</b>	<b>L(90.0) dB(A)</b>
5:15	58.5	60.5	59.5	57.6
5:20	59.1	61.5	60.3	57.7
5:25	59.6	62.1	60.7	58.7
5:30	60.0	61.7	61.1	59.0
5:35	60.2	62.3	61.0	58.8
5:40	60.7	63.1	61.7	59.4
5:45	60.8	62.3	61.6	60.0
5:50	60.9	63.3	62.0	59.9
5:55	61.0	63.3	61.8	60.2
6:00	60.9	63.3	61.7	60.1
6:05	61.0	62.8	61.9	60.2
6:10	61.4	64.0	62.5	60.5
6:15	61.5	63.7	62.8	60.5
6:20	61.3	63.3	62.3	60.4
6:25	61.5	63.1	62.4	60.6
6:30	61.6	68.6	62.7	60.4
6:35	61.6	66.0	62.4	60.7
6:40	61.4	63.2	62.3	60.5
6:45	61.7	64.3	62.5	60.6
6:50	61.7	64.6	62.5	60.7
6:55	61.3	63.9	62.0	60.5
7:00	61.3	63.1	62.3	60.3

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

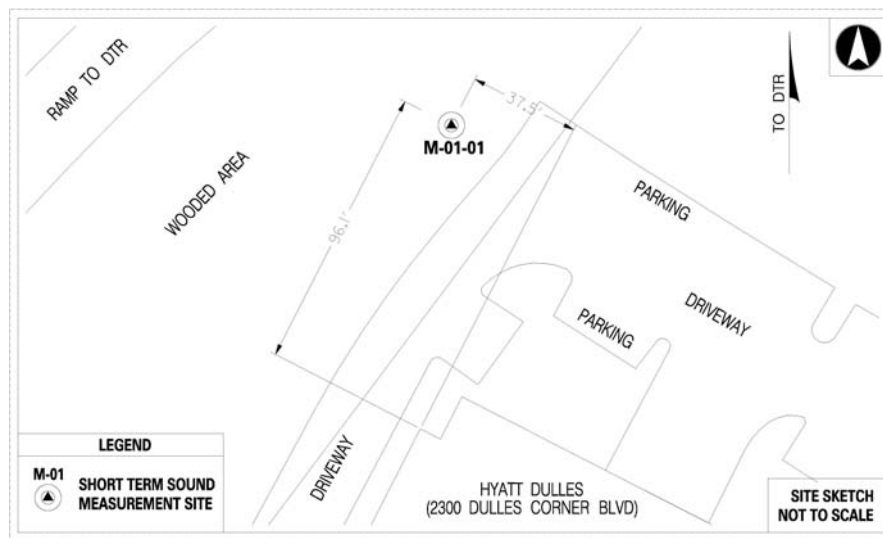
M-01-01 2300 DULLES CORNER BOULEVARD	
DATE	09/01/2010
START TIME	1310
END TIME	1330
TRAFFIC MONITORING	TMS 01
Leq	63.7
Notes:	



Located at the Hyatt Hotel

Table C.1 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
<del>1310</del>	<del>68.6</del>	<del>77.4</del>	<del>71.8</del>	<del>62.5</del>
1311	62.3	68.4	65.1	58.3
1312	64.1	68.3	67.0	60.1
1313	62.6	67.8	64.5	57.5
1314	65.3	71.7	69.6	56.4
1315	64.7	68.2	66.7	60.2
1316	64.0	67.6	66.5	61.1
1317	64.4	68.8	67.3	59.0
1318	62.3	68.4	64.4	57.7
<del>1319</del>	<del>65.6</del>	<del>70.7</del>	<del>67.2</del>	<del>61.5</del>
1320	65.1	71.0	68.4	59.8
1321	64.1	69.4	67.0	60.6
1322	64.6	69.6	67.4	58.5
1323	66.5	73.7	68.7	62.7
1324	62.2	65.2	64.0	59.0
1325	63.6	68.3	66.5	57.5
1326	61.4	66.7	63.3	58.8
1327	63.7	66.7	65.5	60.2
<del>1328</del>	<del>65.5</del>	<del>70.8</del>	<del>69.1</del>	<del>61.3</del>
1329	56.3	58.1	57.4	56.1

Non-Highway Noise  
 13:10 Trash Truck on Local Road  
 13:19 Welding at the Hyatt  
 13:28 Van on Local Road





# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

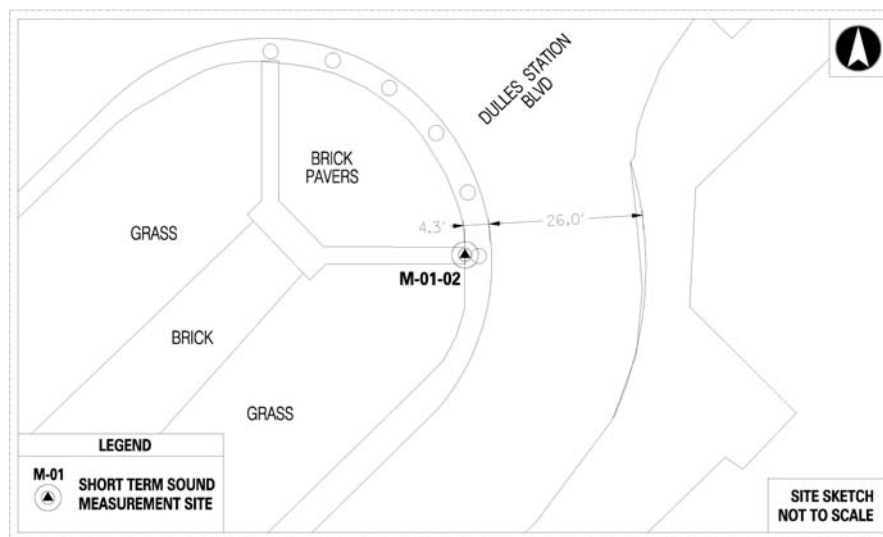
M-01-02 2320 DULLES STATION BOULEVARD	
DATE	09/01/2010
START TIME	1310
END TIME	1330
TRAFFIC MONITORING	TMS 01
Leq	51.3
Notes:	



Looking Northwest toward Dulles Station

Table C.2 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1310	49.3	53.5	51.4	47.6
1311	46.4	48.9	47.5	45.8
1312	46.4	48.8	46.9	45.7
1313	51.8	57.4	53.6	50.0
1314	55.4	65.4	58.3	49.0
1315	54.8	64.0	59.1	46.8
1316	53.2	69.2	53.1	46.4
1317	50.1	55.1	53.2	46.0
1318	49.8	57.3	53.7	45.6
1319	51.8	61.3	54.2	46.0
1320	47.2	49.9	48.4	45.8
1321	47.3	53.1	48.7	45.6
1322	51.3	61.6	55.1	45.7
<del>1323</del>	<del>58.0</del>	<del>68.4</del>	<del>63.4</del>	<del>45.5</del>
1324	48.6	57.8	51.6	44.6
1325	53.4	60.3	57.5	45.9
1326	53.7	61.8	58.8	45.1
1327	53.7	63.1	57.8	47.1
1328	48.0	55.2	50.6	45.2
1329	46.4	54.8	48.0	44.7

*Non-Highway Noise*  
13:23 UPS Truck



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>M-01-03 13460 SUNRISE VALLEY DRIVE</b>	
DATE	09/01/2010
START TIME	1155
END TIME	1215
TRAFFIC MONITORING	TMS 02
Leq	56.2
Notes:	



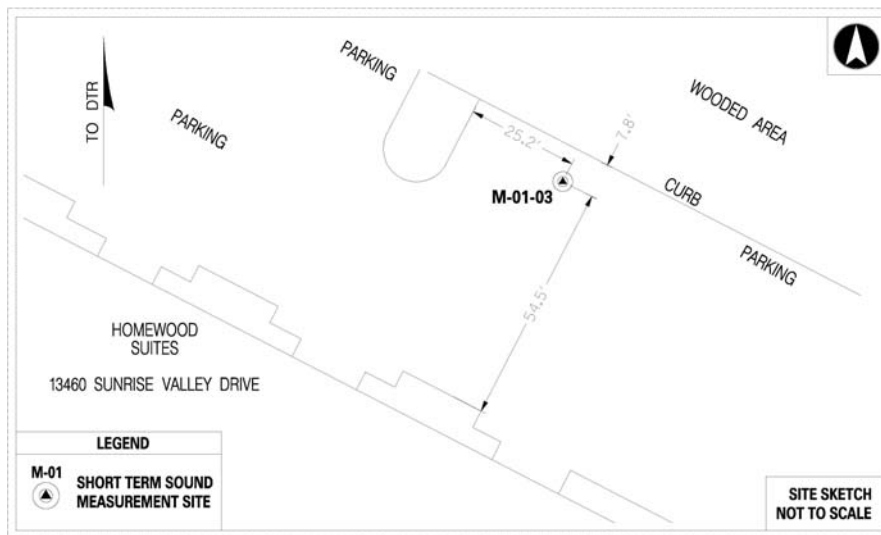
Looking Southwest toward Homewood Suites

**Table C.3** 1-min Equivalent Sound Level (Leq[h]) Time History Report

TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1155	55.4	57.6	56.7	54.2
1156	55.5	57.6	56.9	54.4
1157	56.3	59.0	57.9	54.9
1158	56.1	60.3	57.3	54.6
1159	56.3	59.0	57.6	55.1
1200	56.2	57.9	57.4	55.0
1201	55.5	58.7	56.1	55.0
1202	56.7	59.8	58.1	55.4
1203	55.6	58.2	56.0	55.1
1204	58.6	65.5	63.1	55.5
1205	55.9	57.6	56.8	54.9
1206	55.5	57.3	56.5	54.8
1207	57.2	64.7	58.6	55.5
<del>1208</del>	<del>63.9</del>	<del>74.1</del>	<del>68.3</del>	<del>55.1</del>
<del>1209</del>	<del>67.6</del>	<del>79.4</del>	<del>71.0</del>	<del>56.1</del>
1210	55.3	56.7	56.1	54.3
1211	56.5	62.6	57.2	54.8
1212	56.6	61.7	58.9	54.1
1213	54.5	55.8	55.3	53.7
1214	56.5	61.5	58.7	55.0

Non-Highway Noise

12:08 Delivery Truck Local Road  
 12:09 Delivery Truck Local Road



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

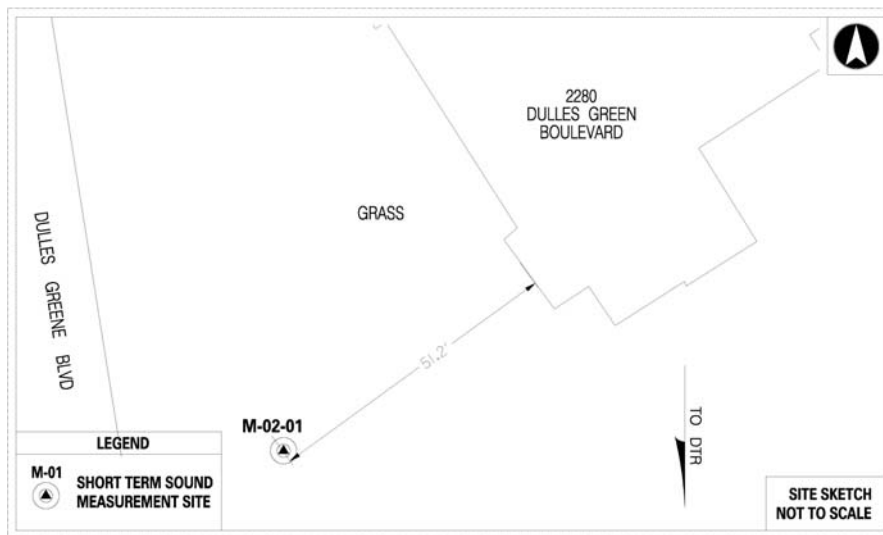
### Appendix C: Sound Measurement Data

M-02-01 2282 DULLES GREENE BOULEVARD	
DATE	09/01/10
START TIME	1310
END TIME	1330
TRAFFIC MONITORING	TMS 01
Leq	56.7
Notes:	



Looking Northeast toward Apartments

Table C.4 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1310	57.3	61.1	59.7	53.7
1311	59.1	62.7	61.9	56.9
1312	56.3	61.4	58.1	53.7
1313	56.3	58.2	57.3	55.1
1314	56.4	58.7	57.6	55.4
1315	56.2	59.2	58.3	54.3
1316	56.9	59.2	58.5	55.0
1317	56.6	61.2	58.9	53.7
1318	55.5	59.1	57.3	53.0
1319	56.2	59.5	58.8	53.6
1320	56.0	59.2	57.7	54.1
1321	56.6	59.7	58.5	54.9
1322	56.4	59.8	58.9	53.6
1323	55.2	58.5	57.4	52.3
1324	56.6	60.0	58.7	54.9
1325	56.8	61.3	59.9	54.4
1326	55.0	57.6	56.0	54.0
1327	57.3	61.5	60.0	54.1
1328	57.0	60.8	59.0	54.7
1329	58.8	65.3	62.4	54.1
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

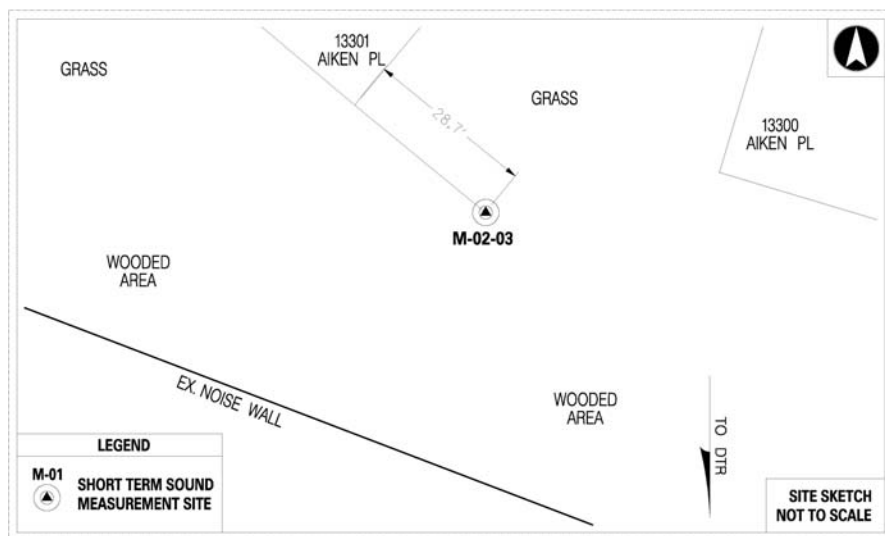
M-02-03 13301 AIKEN PLACE	
DATE	09/01/2010
START TIME	1155
END TIME	1215
TRAFFIC MONITORING	TMS 02
Leq	56.9
Notes:	



**Table C.5 1-min Equivalent Sound Level (Leq[h]) Time History Report**

TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1155	57.4	59.8	59.2	54.9
1156	56.6	61.0	58.4	53.5
1157	57.6	62.4	59.2	55.5
1158	57.2	60.1	58.7	56.0
1159	56.0	57.8	57.3	53.1
1200	56.2	59.9	57.3	53.0
1201	56.2	60.0	57.9	54.6
1202	57.2	63.5	60.2	54.1
1203	57.7	60.8	59.7	55.1
1204	56.3	59.2	57.8	54.1
1205	55.1	56.8	56.6	52.0
1206	56.5	59.4	58.4	53.8
1207	57.2	61.4	59.7	54.5
1208	56.8	58.7	58.0	55.7
1209	57.2	60.5	58.4	55.6
1210	57.1	60.6	59.5	55.0
1211	57.4	60.4	59.5	55.1
1212	56.7	58.4	57.5	55.2
1213	56.7	59.5	58.0	54.9
1214	58.0	59.9	59.3	56.3

Non-Highway Noise  
none



# Dulles Toll Road

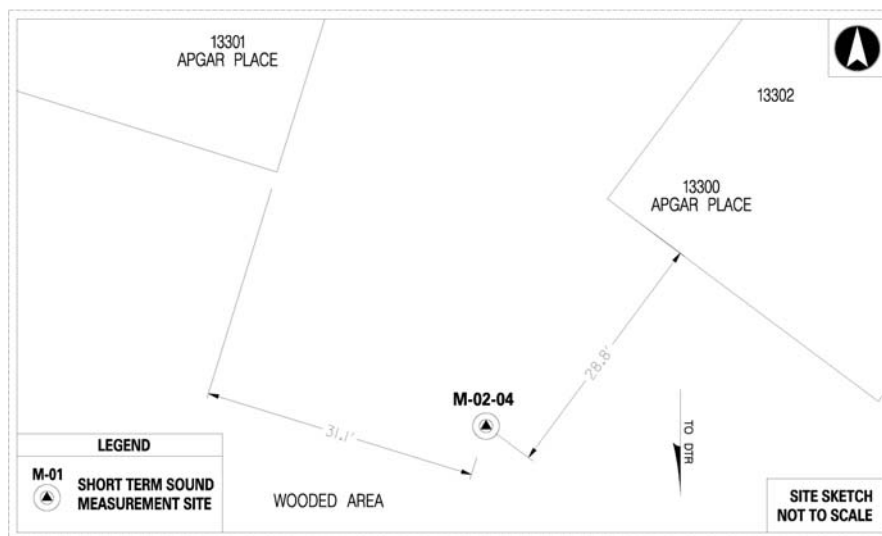
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-02-04 13300 APGAR PLACE	
DATE	09/01/2010
START TIME	1155
END TIME	1215
TRAFFIC MONITORING	TMS 02
Leq	47.8
Notes:	



Table C.6 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1155	48.4	52.3	50.2	45.0
1156	48.2	55.5	50.3	45.4
1157	47.8	52.6	49.7	45.3
1158	48.2	51.6	50.0	46.4
1159	46.9	48.9	47.7	45.7
1200	49.3	56.2	52.9	45.1
1201	48.2	55.5	49.6	45.4
1202	47.6	52.7	50.5	45.1
1203	48.1	54.1	51.2	45.2
1204	47.5	53.7	49.4	43.9
1205	44.9	47.8	46.4	42.7
1206	46.0	48.5	47.7	44.4
1207	48.5	54.8	51.2	44.0
1208	47.4	51.6	48.6	46.0
1209	46.7	50.9	47.9	45.2
1210	47.2	50.8	49.3	44.5
1211	48.1	51.9	49.1	46.7
1212	49.2	54.6	51.2	47.0
1213	47.1	49.7	48.7	44.9
1214	49.0	53.6	51.3	46.9
<u>Non-Highway Noise</u> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

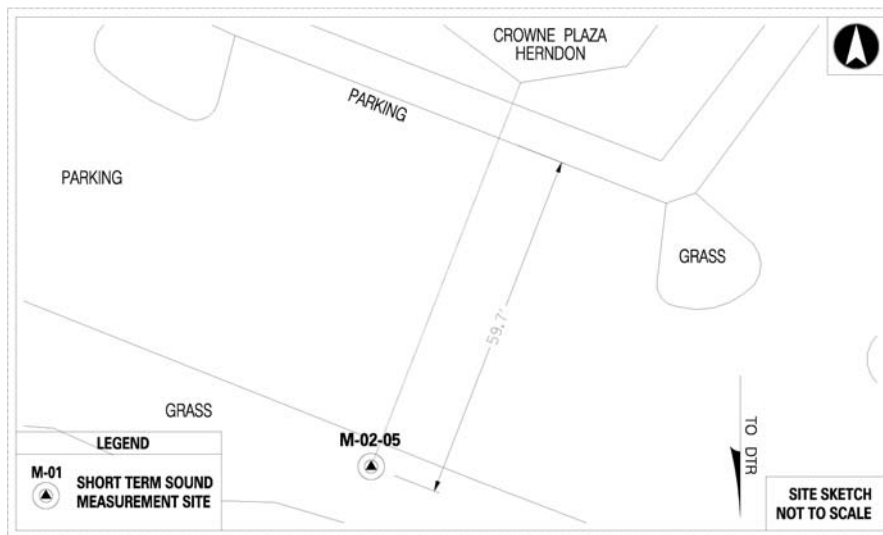
### Appendix C: Sound Measurement Data

M-02-05 2200 CENTREVILLE ROAD	
DATE	09/01/2010
START TIME	1115
END TIME	1135
TRAFFIC MONITORING	TMS 03
Leq	57.5
Notes:	



Looking Northeast towards Crown Plaza

Table C.7 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1115	57.4	61.2	59.1	55.1
1116	56.8	63.1	59.8	53.4
1117	56.0	59.0	57.9	54.6
1118	56.6	61.5	59.3	53.5
1119	57.9	60.6	60.1	55.3
1120	58.4	64.7	61.3	52.7
1121	56.2	58.5	57.3	54.0
1122	57.8	62.0	60.3	55.2
1123	57.5	61.8	60.3	55.1
1124	58.0	61.2	59.9	55.4
1125	55.1	59.8	56.5	53.1
1126	55.9	59.7	58.2	53.8
1127	57.4	61.8	59.6	54.8
1128	56.4	60.0	58.8	52.7
1129	58.2	61.7	60.6	55.5
1130	57.1	60.6	59.7	54.8
1131	59.5	65.8	63.0	56.2
1132	57.7	62.7	59.1	54.5
1133	58.1	62.9	60.9	55.7
1134	58.6	62.1	60.5	55.9
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

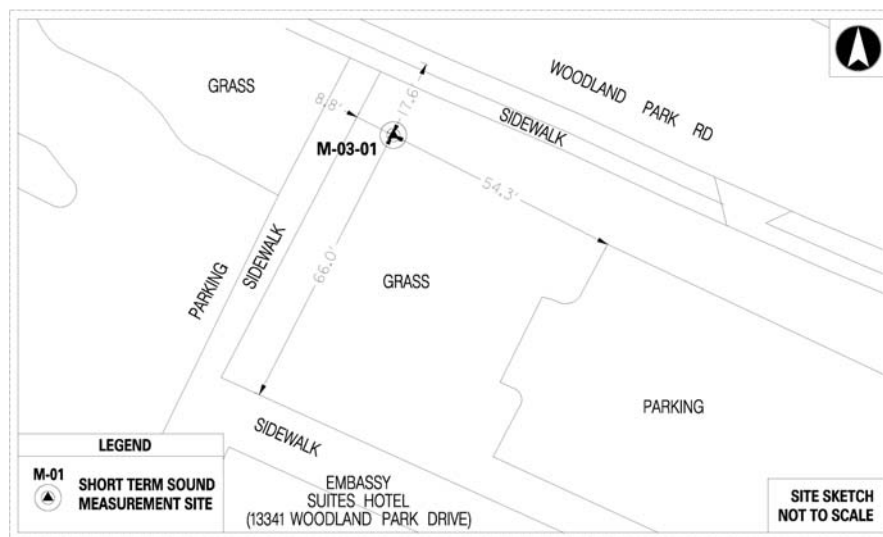
### Appendix C: Sound Measurement Data

M-03-01 13341 WOODLAND PARK DRIVE	
DATE	09/01/2010
START TIME	1115
END TIME	1135
TRAFFIC MONITORING	TMS 03
Leq	59.1
Notes:	



Looking South towards Embassy Suites

Table C.8 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1115	60.2	67.6	64.9	52.7
1116	59.2	65.2	62.4	55.5
1117	59.6	65.9	62.2	54.5
1118	58.4	67.1	62.3	52.5
1119	59.6	63.9	62.5	55.2
1120	61.3	68.6	67.3	53.5
1121	60.0	64.9	62.5	56.8
1122	57.8	64.9	60.3	51.3
1123	60.7	70.3	65.5	52.2
1124	58.2	66.9	60.8	53.5
1125	60.0	68.2	64.1	52.0
1126	55.0	60.8	59.0	48.5
1127	58.7	66.0	62.1	53.4
1128	59.3	63.6	62.1	54.3
1129	57.6	64.9	60.6	51.1
1130	56.8	63.3	60.8	49.8
1131	58.0	66.1	60.6	53.3
1132	61.6	72.3	66.9	53.5
1133	62.8	74.5	66.9	51.5
1134	59.8	67.5	64.2	52.1
<i>Non-Highway Noise</i> 11:32-11:33 Plane Overhead				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

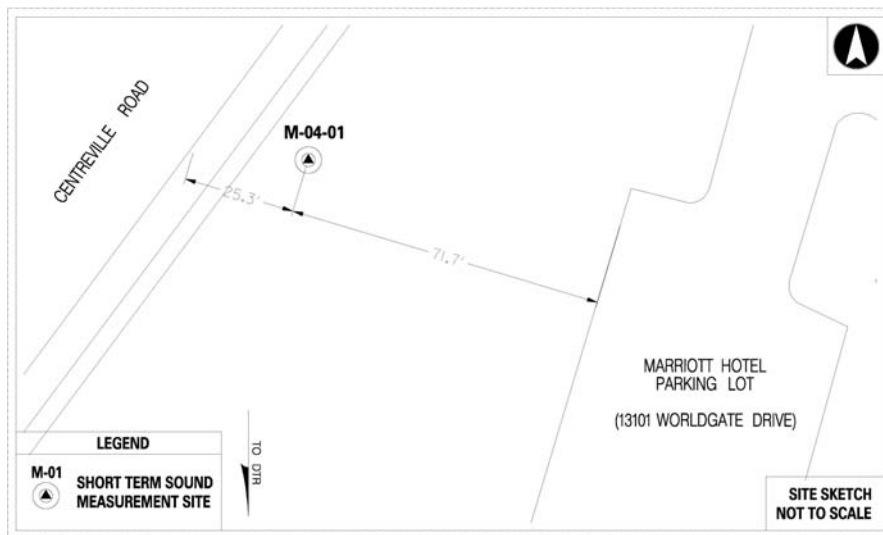
### Appendix C: Sound Measurement Data

<b>M-04-01 13101 WORLDGATE DRIVE</b>	
DATE	09/01/2010
START TIME	1115
END TIME	1135
TRAFFIC MONITORING	TMS 03
Leq	67.2
Notes:	



Looking East towards Marriott Hotel

Table C.9 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1115	67.2	71.7	70.7	61.7
1116	65.0	70.8	68.8	58.4
1117	68.9	78.8	71.0	60.5
1118	64.6	72.0	68.2	58.0
1119	68.3	72.3	71.3	61.0
1120	68.8	75.2	72.2	62.5
1121	68.2	73.9	72.4	58.4
1122	65.3	70.0	68.6	61.0
1123	68.6	78.7	71.8	60.3
1124	65.8	70.3	69.3	59.1
1125	69.0	75.7	73.3	61.7
1126	62.8	69.9	68.2	56.7
1127	67.3	71.4	69.8	59.1
1128	63.7	69.6	66.6	58.8
1129	68.9	73.8	72.3	63.1
1130	64.4	71.0	67.9	59.2
1131	67.7	71.1	70.0	63.2
1132	68.2	76.5	71.8	60.5
1133	66.7	70.9	69.5	63.6
1134	66.5	70.9	69.2	62.6
<i>Non-Highway Noise</i> none				





# Dulles Toll Road

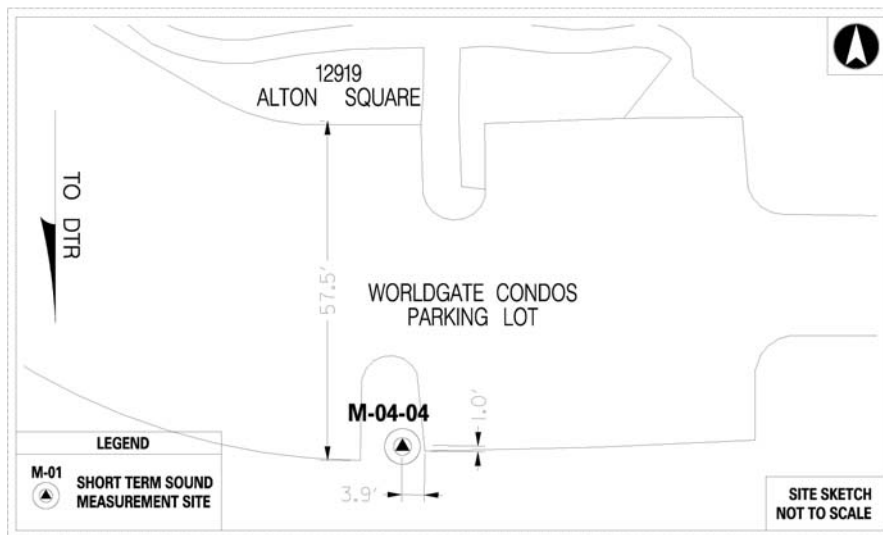
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>M-04-04 12919 ALTON SQUARE</b>	
DATE	09/01/2010
START TIME	1030
END TIME	1050
TRAFFIC MONITORING	TMS 04
Leq	59.7
Notes:	



<b>Table C.10 1-min Equivalent Sound Level (Leq[h]) Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1030	59.1	60.7	60.1	57.9
1031	59.5	61.6	61.1	58.0
1032	59.6	62.5	61.0	57.6
1033	59.4	61.7	61.2	57.9
1034	59.8	61.9	61.2	57.9
1035	59.2	60.8	59.9	58.0
1036	60.8	63.5	62.1	58.9
1037	59.9	63.6	62.5	56.7
1038	61.0	63.1	62.8	58.9
1039	59.2	62.3	61.1	57.6
1040	59.3	64.2	60.3	57.4
1041	61.2	68.0	62.8	58.5
1042	59.5	64.6	61.6	56.8
1043	59.5	61.4	60.9	57.6
1044	60.8	63.9	62.9	59.0
1045	59.5	61.5	60.9	58.1
1046	59.8	62.9	61.7	58.3
1047	59.5	61.4	60.0	59.0
1048	59.0	61.3	60.5	57.9
1049	57.4	61.6	59.3	55.1
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

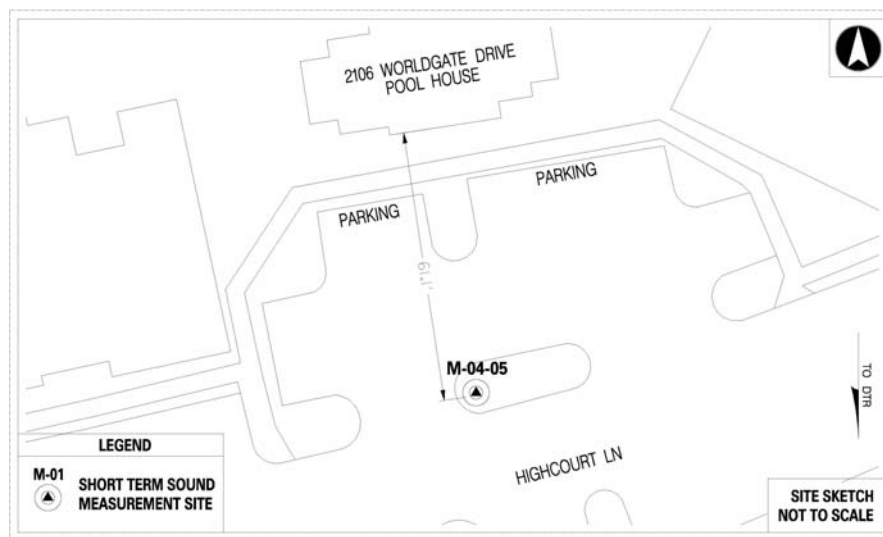
<b>M-04-05 2106 WORLDGATE DRIVE</b>	
DATE	09/01/2010
START TIME	1030
END TIME	1050
TRAFFIC MONITORING	TMS 04
Leq	55.5
Notes:	



Looking North towards Pool House

<b>Table C.11 1-min Equivalent Sound Level (Leq[h]) Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1030	54.9	58.1	56.4	52.8
1031	54.0	57.0	55.4	52.4
1032	54.6	57.4	56.8	52.8
1033	55.2	57.3	56.4	54.0
1034	54.2	57.4	55.7	52.9
1035	55.4	58.3	56.9	53.4
1036	54.2	56.6	55.4	52.6
1037	55.4	58.9	57.3	53.3
1038	56.0	63.2	57.8	53.1
1039	55.9	59.4	58.0	54.0
1040	55.0	58.3	56.2	53.9
1041	55.9	60.6	57.5	54.3
1042	56.3	63.1	58.5	53.4
1043	55.6	60.6	57.3	53.1
1044	55.7	58.7	56.8	54.7
1045	57.0	60.7	58.5	55.0
1046	55.1	57.9	56.4	53.9
1047	55.7	59.0	57.6	53.8
1048	59.1	62.2	61.1	54.1
1049	60.6	61.9	61.1	59.9

*Non-Highway Noise*  
10:48-10:49 Machine Started



# Dulles Toll Road

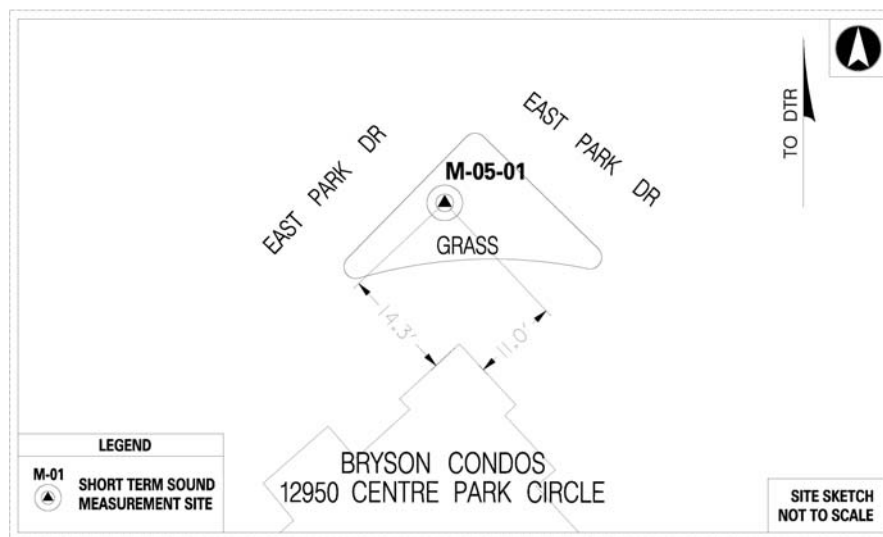
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-05-01 12950 CENTRE PARK CIRCLE	
DATE	09/01/2010
START TIME	1025
END TIME	1045
TRAFFIC MONITORING	TMS 04
Leq	55.3
Notes:	



Table C.12 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1025	53.5	60.1	56.7	49.3
1026	54.9	62.2	60.9	48.4
1027	57.4	64.4	62.0	48.1
1028	51.4	58.3	52.0	49.5
1029	52.9	61.8	55.1	49.3
1030	53.2	62.2	55.0	49.2
1031	53.4	60.8	58.2	49.7
1032	50.7	55.8	51.9	49.2
1033	55.4	63.1	58.9	50.3
1034	53.1	61.7	56.8	49.1
1035	53.6	63.0	57.3	49.1
1036	57.6	64.3	62.0	49.4
1037	57.2	63.3	62.2	49.5
1038	56.0	65.1	59.8	49.5
1039	60.6	70.5	66.1	50.4
1040	49.8	53.3	51.8	48.2
1041	52.8	58.8	55.6	49.8
1042	55.0	60.7	58.1	48.1
1043	52.6	61.0	56.2	48.1
1044	57.6	66.3	62.3	48.1
<u>Non-Highway Noise</u> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

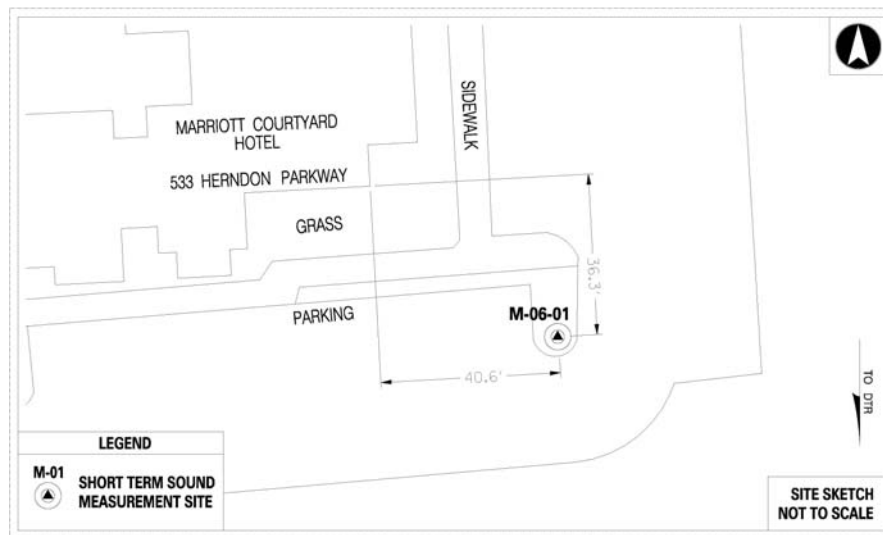
<b>M-06-01 533 HERNDON PARKWAY</b>	
DATE	08/26/2010
START TIME	1150
END TIME	1210
TRAFFIC MONITORING	TMS 05
Leq	67.9
Notes:	



Looking Northwest towards Marriott

<b>Table C.13 1-min Equivalent Sound Level (Leq[h]) Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1150	65.6	68.9	67.5	61.7
1151	68.6	74.9	73.0	64.4
1152	65.7	68.6	67.1	63.8
1153	68.6	76.0	71.5	62.3
1154	67.8	78.4	69.5	62.2
1155	67.4	74.3	70.2	63.2
1156	68.5	73.4	71.4	63.8
1157	65.4	69.7	67.1	63.0
1158	69.2	75.8	72.5	65.4
1159	68.5	73.4	71.3	64.4
1200	69.2	77.8	72.6	61.3
1201	67.4	72.7	70.4	63.8
1202	66.8	70.3	68.9	63.1
1203	68.0	72.7	70.6	63.7
1204	68.6	74.4	72.3	64.0
1205	69.0	75.4	72.5	65.1
1206	71.1	82.8	72.6	62.6
1207	68.2	73.9	71.0	59.7
1208	67.4	75.8	70.6	59.3
1209	67.7	71.8	70.4	60.5

*Non-Highway Noise*  
12:06 Restart Meter



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

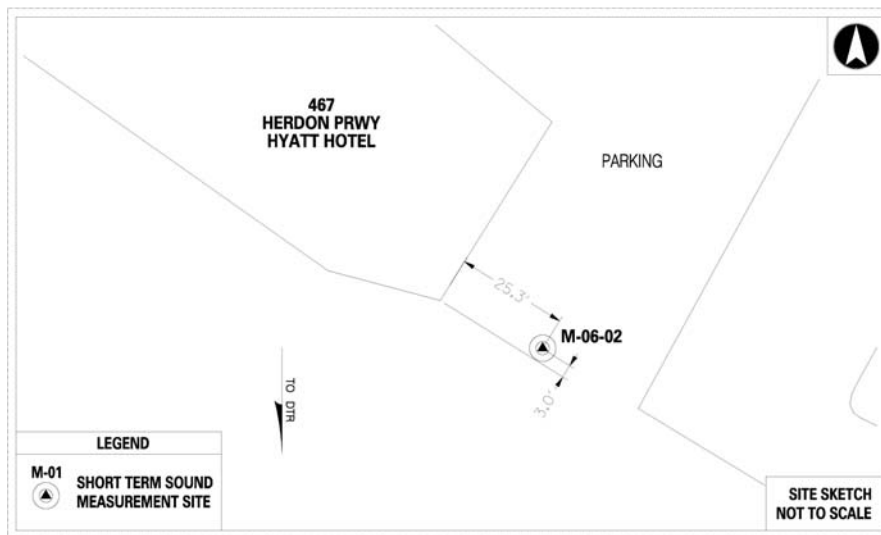
### Appendix C: Sound Measurement Data

M-06-02 467 HERNDON PARKWAY	
DATE	08/26/2010
START TIME	1145
END TIME	1210
TRAFFIC MONITORING	TMS 05
Leq	54.1
Notes:	



Looking North towards Hotel

Table C.14 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1145	55.8	58.7	57.5	54.6
1146	54.7	58.0	56.5	53.5
1147	53.4	60.2	55.1	51.7
1148	54.0	56.2	54.7	53.4
1149	54.4	57.2	55.5	53.7
1150	54.2	58.2	55.5	53.5
1151	53.4	54.2	54.0	52.6
1152	54.9	61.2	55.7	53.6
1153	53.5	54.9	54.3	52.9
1154	53.5	54.7	54.2	52.5
1155	54.0	55.3	54.4	53.6
1156	54.4	61.2	55.3	53.0
1157	54.5	57.7	55.9	52.0
1158	52.5	53.6	53.3	51.9
1159	53.0	56.1	54.4	51.6
1200	54.1	58.0	55.4	52.4
1201	54.1	56.4	55.7	52.5
1202	53.8	55.3	54.6	53.0
1203	54.1	54.9	54.6	53.4
1204	54.4	57.4	55.6	53.3
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

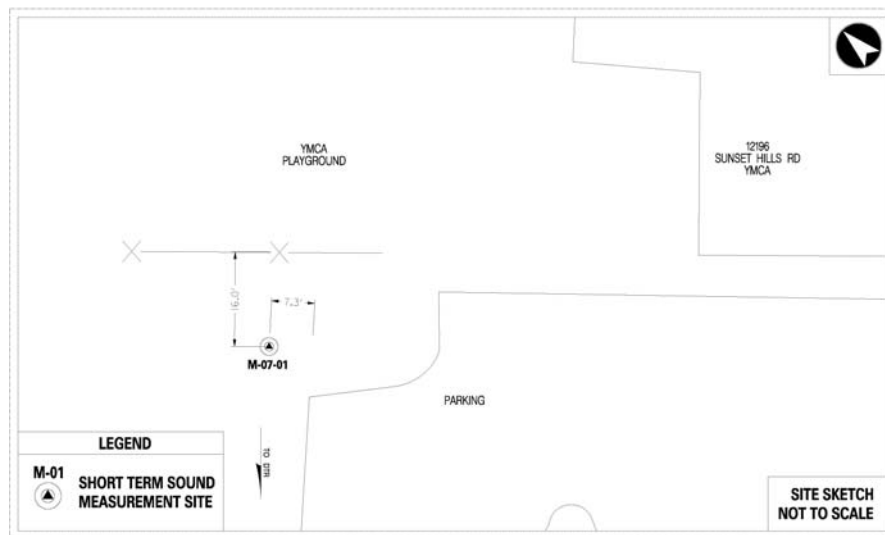
M-07-01 12196 SUNSET HILLS ROAD	
DATE	08/26/2010
START TIME	1150
END TIME	1210
TRAFFIC MONITORING	TMS 05
Leq	56.3
Notes:	



Looking Northeast towards Receptor

Table C.15 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1150	56.1	57.8	57.3	54.4
1151	56.7	60.0	58.9	54.5
1152	56.5	57.9	57.3	55.0
<del>1153</del>	<del>58.2</del>	<del>62.4</del>	<del>60.0</del>	<del>55.9</del>
1154	56.0	58.7	57.9	54.7
1155	55.5	57.8	57.1	53.4
1156	56.8	60.8	58.8	54.2
1157	55.0	62.0	56.8	53.3
1158	53.7	56.1	55.5	52.3
1159	54.9	58.6	56.4	52.6
1200	57.4	59.4	58.8	54.1
1201	57.2	61.5	58.5	55.2
1202	56.2	58.2	57.5	53.9
1203	57.9	60.6	59.0	56.3
1204	56.4	60.6	57.1	55.3
<del>1205</del>	<del>58.7</del>	<del>64.4</del>	<del>60.8</del>	<del>56.3</del>
1206	56.5	58.2	57.3	55.3
1207	56.5	58.9	58.1	55.0
1208	56.9	62.7	58.3	55.4
1209	54.6	59.5	57.6	51.7

Non-Highway Noise  
 11:53 Local Car  
 12:05 Motorcycle on Local Road



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

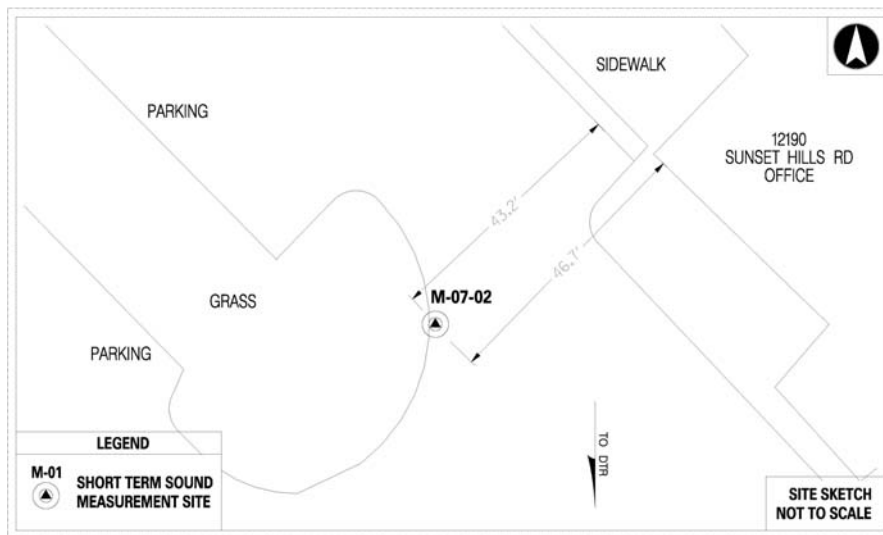
### Appendix C: Sound Measurement Data

<b>M-07-02 12190 SUNSET HILLS ROAD</b>	
DATE	08/26/2010
START TIME	1150
END TIME	1210
TRAFFIC MONITORING	TMS 05
Leq	56.8
Notes:	



Looking Northeast towards Receptor

Table C.16 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1150	54.4	56.9	55.5	52.8
1151	55.9	60.3	57.6	53.8
1152	58.7	63.3	61.2	56.4
1153	55.7	58.3	57.2	53.7
1154	56.9	62.2	60.3	54.1
1155	54.4	58.2	55.9	53.5
1156	58.3	64.2	60.3	53.2
1157	58.4	66.8	62.5	52.8
1158	56.7	60.3	58.2	54.6
1159	55.3	59.3	56.9	53.2
1200	54.9	59.0	57.7	52.5
1201	55.8	58.3	57.4	54.4
1202	55.3	61.1	58.1	53.1
1203	58.1	64.2	60.4	54.7
1204	57.0	60.1	57.9	55.5
1205	57.1	62.4	60.1	54.7
1206	58.3	62.8	60.1	55.9
1207	58.4	63.6	60.5	55.9
1208	55.7	59.3	57.5	54.1
1209	55.7	60.0	57.5	53.7
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

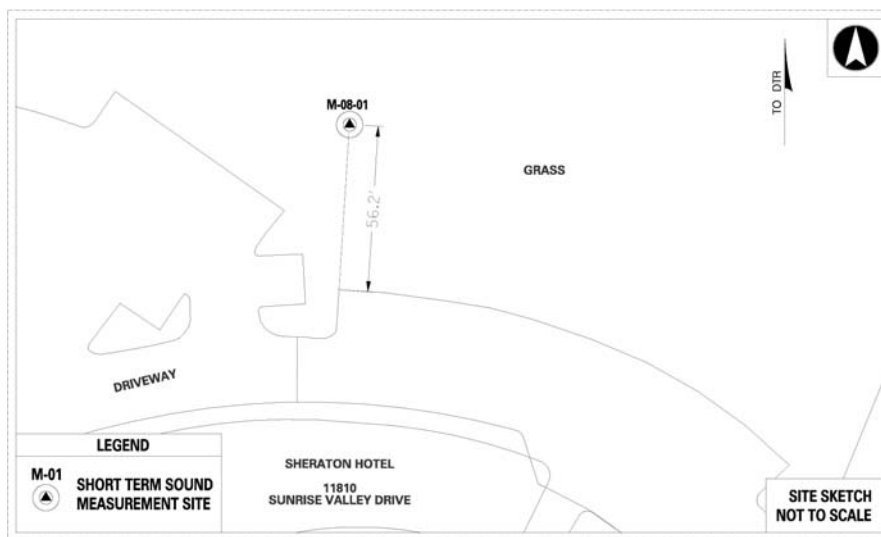
### Appendix C: Sound Measurement Data

M-08-01 11810 SUNRISE VALLEY DRIVE	
DATE	09/01/2010
START TIME	0935
END TIME	0955
TRAFFIC MONITORING	TMS 06
Leq	63.7
Notes:	



Looking South towards the Sheraton Hotel

Table C.17 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0935	64.6	66.3	65.6	63.7
0936	63.9	69.7	66.1	61.2
0937	63.0	64.7	64.1	60.9
0938	62.9	64.4	64.0	61.6
0939	63.9	65.8	65.0	62.3
0940	63.5	66.2	64.9	62.2
0941	64.0	65.7	65.3	62.5
0942	64.1	67.3	65.2	62.9
0943	62.9	65.1	64.4	61.5
0944	63.9	68.0	65.9	61.6
0945	63.1	65.0	64.1	61.9
0946	62.8	64.8	63.9	60.4
0947	63.7	66.5	65.3	62.0
0948	62.5	66.6	63.9	60.8
0949	63.8	66.0	65.2	60.6
0950	63.8	66.1	64.9	62.0
0951	64.2	66.2	65.4	62.7
0952	64.0	69.4	65.1	61.4
0953	64.2	70.2	65.5	61.7
0954	63.5	65.7	65.2	61.7
<i>Non-Highway Noise</i> none				





# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>M-08-02 11840 SUNRISE VALLEY DRIVE</b>	
DATE	09/01/2010
START TIME	0935
END TIME	0955
TRAFFIC MONITORING	TMS 06
Leq	54.7
Notes:	



Looking Southeast towards Hotel

<b>Table C.18 1-min Equivalent Sound Level (Leq[h]) Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0935	53.7	56.3	55.4	52.4
0936	54.9	59.3	56.5	51.7
0937	53.7	56.8	55.8	51.8
0938	55.4	63.7	57.5	52.5
0939	53.7	56.8	54.7	52.8
0940	54.5	60.2	56.3	52.4
0941	55.9	61.4	59.0	52.0
0942	54.7	59.4	57.2	52.0
<del>0943</del>	<del>65.7</del>	<del>76.9</del>	<del>69.8</del>	<del>53.1</del>
0944	53.8	55.3	54.9	52.9
0945	53.3	57.1	55.7	51.5
<del>0946</del>	<del>60.8</del>	<del>68.5</del>	<del>63.9</del>	<del>55.1</del>
<del>0947</del>	<del>60.3</del>	<del>67.5</del>	<del>64.3</del>	<del>54.6</del>
0948	55.3	62.1	56.8	53.3
0949	54.8	60.0	57.9	51.9
0950	55.3	59.5	57.4	52.4
0951	55.0	58.8	56.4	53.8
0952	55.6	61.8	58.8	53.3
<del>0953</del>	<del>58.0</del>	<del>68.2</del>	<del>60.8</del>	<del>53.4</del>
0954	54.9	55.4	55.2	54.3

*Non-Highway Noise*  
 9:43 person walked to meter  
 9:46-9:47 Two guys talking  
 9:53 Car on Local Road



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

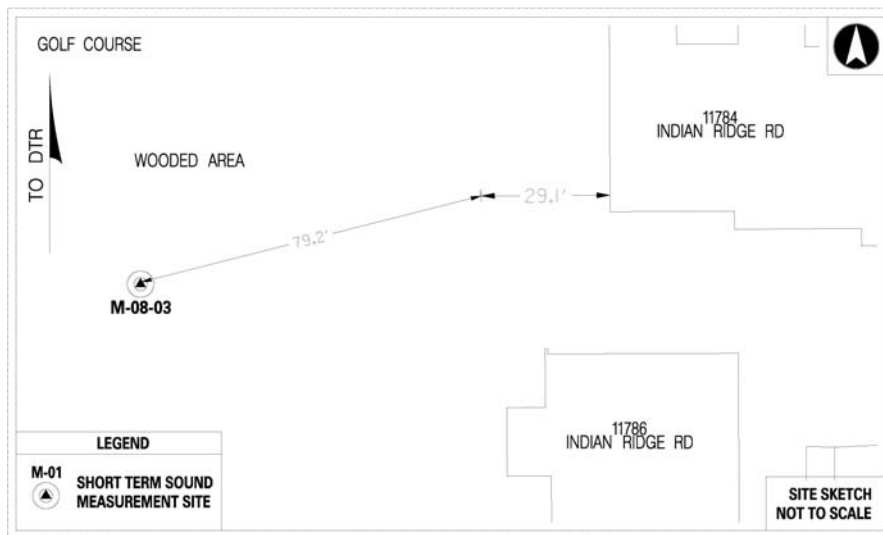
### Appendix C: Sound Measurement Data

M-08-03 11784 INDIAN RIDGE ROAD	
DATE	9/01/2010
START TIME	0935
END TIME	0955
TRAFFIC MONITORING	TMS 06
Leq	53.7
Notes:	



Table C.19 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0935	53.1	55.7	54.7	51.5
0936	51.7	53.5	52.7	50.3
0937	52.1	53.6	53.0	51.4
0938	53.4	55.5	54.6	52.3
0939	52.4	53.7	53.2	51.8
0940	52.0	53.4	53.1	50.4
0941	51.7	53.1	52.6	50.8
0942	53.4	59.5	55.1	51.2
0943	55.0	60.8	58.1	50.9
0944	51.6	54.1	53.4	50.2
0945	52.2	55.1	53.2	51.0
0946	53.5	61.1	56.6	49.9
0947	53.9	61.3	54.3	51.0
0948	58.0	66.2	63.6	52.7
<del>0949</del>	<del>67.3</del>	<del>75.5</del>	<del>73.3</del>	<del>50.7</del>
0950	53.1	55.4	54.5	51.8
0951	55.8	60.2	58.7	51.7
0952	52.8	56.2	54.5	51.4
0953	53.8	56.9	56.2	51.0
0954	51.9	56.0	53.9	49.6

*Non-Highway Noise*  
9:49 Ambulance



# Dulles Toll Road

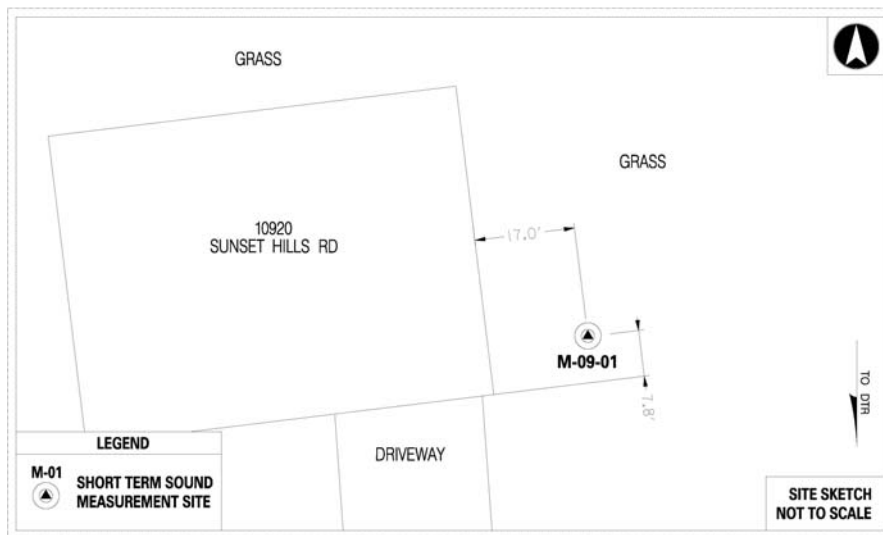
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-09-01 10920 SUNSET HILLS ROAD	
DATE	08/26/2010
START TIME	1345
END TIME	1405
TRAFFIC MONITORING	TMS 07
Leq	50.1
Notes:	



Table 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1345	0.0	0.0	0.0	0.0
1346	54.4	65.4	58.3	46.3
1347	48.7	54.0	50.3	46.7
1348	49.4	51.6	50.8	47.2
1349	48.8	51.7	49.5	48.1
1350	49.6	56.1	53.3	47.2
1351	53.1	58.5	56.2	49.1
1352	50.9	56.4	54.9	47.8
1353	50.5	55.7	54.8	47.7
1354	48.3	50.4	49.7	47.3
1355	48.4	49.9	48.8	47.8
1356	48.8	50.5	49.7	48.1
1357	47.6	49.3	48.5	46.9
1358	48.8	50.4	49.8	47.2
1359	50.1	53.3	51.5	48.3
1360	49.7	53.3	52.0	47.2
1401	49.4	51.6	51.2	47.8
1402	51.6	57.2	55.9	48.7
1403	51.1	58.9	53.3	47.3
1404	48.5	49.7	49.3	47.5
<i>Non-Highway Noise</i> 13:51 Cicada				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-09-02 10905 EQUESTRIAN COURT	
DATE	08/26/2010
START TIME	1345
END TIME	1405
TRAFFIC MONITORING	TMS 07
Leq	46.4
Notes:	



Table C.21 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1345	48.8	55.2	50.6	46.0
1346	47.3	54.0	48.9	44.6
1347	45.7	50.8	47.9	43.4
1348	46.9	50.2	48.4	44.6
1349	43.7	46.4	45.2	42.2
1350	47.1	56.3	48.5	42.8
1351	49.9	56.8	53.0	43.5
1352	43.6	45.2	44.3	42.9
1353	46.5	51.7	48.2	43.6
1354	45.0	47.6	47.0	42.9
1355	47.1	50.2	48.2	45.3
1356	47.9	50.2	49.6	45.3
1357	45.9	50.5	47.1	44.3
1358	46.4	50.4	48.5	44.0
1359	48.7	51.6	50.5	46.3
1400	47.9	50.9	49.8	45.8
1401	44.6	47.0	46.2	43.4
1402	46.4	50.8	49.0	44.1
1403	46.1	53.9	47.0	43.9
1404	45.2	47.7	46.8	43.7
<i>Non-Highway Noise</i>				
13:45 Truck				
13:51 Plane				



# Dulles Toll Road

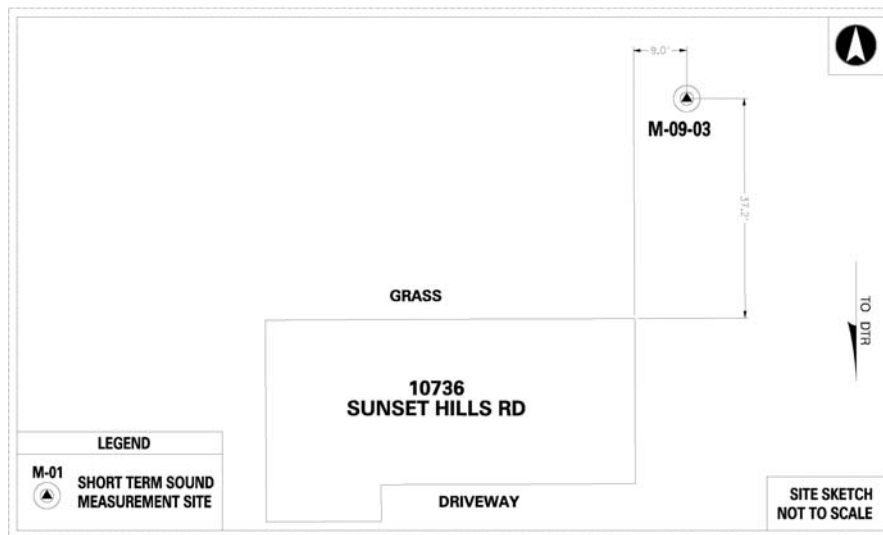
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>M-09-03 10728 SUNSET HILLS ROAD</b>	
DATE	08/26/2010
START TIME	1345
END TIME	1405
TRAFFIC MONITORING	TMS 07
Leq	57.1
Notes:	



<b>Table C.22 1-min Equivalent Sound Level (Leq[h]) Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1345	55.9	57.5	57.0	53.9
1346	56.0	62.1	56.9	53.8
1347	58.2	64.7	60.2	55.4
1348	57.2	59.0	58.1	55.3
1349	55.5	56.8	56.3	54.8
1350	56.9	59.7	58.4	55.7
1351	56.5	58.7	58.2	53.8
1352	55.1	56.9	56.4	53.0
1353	56.6	60.6	59.2	54.1
1354	59.2	61.9	61.5	56.0
1355	57.5	61.7	59.2	55.4
1356	55.7	57.9	57.1	53.7
1357	56.3	58.8	57.6	54.0
1358	56.6	58.6	57.9	54.8
<del>1359</del>	<del>57.1</del>	<del>60.0</del>	<del>58.7</del>	<del>55.6</del>
1400	56.8	58.8	58.1	55.8
1401	56.4	58.0	57.1	55.4
1402	56.6	58.8	57.9	54.8
1403	57.7	63.1	59.2	55.9
1404	60.2	67.5	64.2	54.3
<i>Non-Highway Noise</i> 13:59 Loud Bug				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

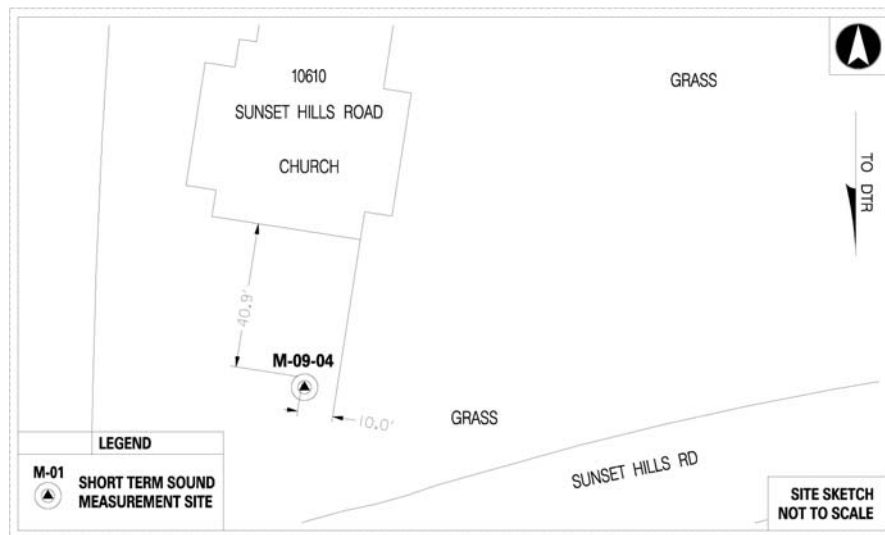
<b>M-09-04 10610 SUNSET HILLS ROAD</b>	
DATE	08/26/2010
START TIME	1345
END TIME	1405
TRAFFIC MONITORING	TMS 07
Leq	62.9
Notes:	



Looking North towards Church

<b>Table C.23 1-min Equivalent Sound Level (Leq[h]) Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1345	62.5	65.6	64.6	60.5
1346	61.9	65.7	63.9	59.4
1347	63.6	69.3	66.2	58.7
<del>1348</del>	<del>66.0</del>	<del>71.1</del>	<del>69.5</del>	<del>62.2</del>
1349	63.1	67.9	65.6	59.9
1350	62.5	69.2	65.9	56.7
1351	61.7	65.2	63.3	59.2
1352	62.0	66.4	64.3	57.1
1353	62.7	68.0	65.5	58.5
1354	62.0	65.1	63.8	59.4
1355	63.3	67.1	66.1	60.8
1356	61.6	66.5	64.1	59.1
1357	62.2	68.1	65.1	57.1
1358	63.6	68.4	66.5	60.2
1359	61.6	66.0	64.2	58.1
1400	62.9	67.6	65.6	59.7
<del>1401</del>	<del>66.4</del>	<del>71.2</del>	<del>70.2</del>	<del>61.5</del>
1402	62.6	65.8	64.9	59.2
1403	61.7	67.4	65.2	58.1
1404	66.5	74.7	70.2	61.4

*Non-Highway Noise*  
 13:48 Motorcycle on Local Road  
 14:01 Dump Truck on Local Road



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

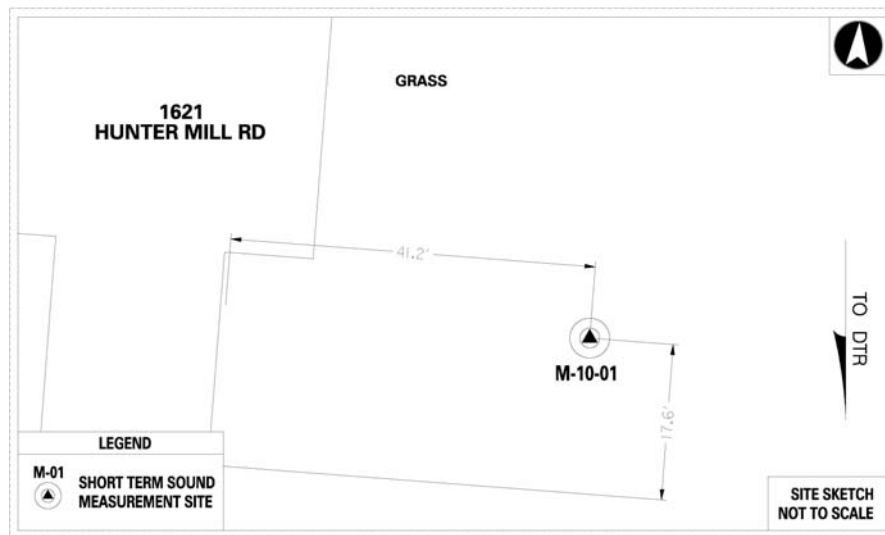
### Appendix C: Sound Measurement Data

M-10-01 1621 HUNTER MILL ROAD	
DATE	08/26/2010
START TIME	1430
END TIME	1450
TRAFFIC MONITORING	TMS 08
Leq	52.0
Notes:	



Table C.24 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1430	51.3	55.0	53.2	48.2
1431	53.5	61.1	56.8	49.2
1432	50.3	53.3	52.3	48.1
1433	49.3	52.4	51.3	47.6
1434	50.9	56.9	54.5	45.6
1435	52.0	60.0	55.6	47.9
1436	49.0	51.5	50.8	46.3
1437	51.5	53.8	53.1	48.8
1438	51.4	53.4	52.9	49.7
1439	50.8	53.3	52.6	48.6
1440	54.2	60.4	57.0	50.4
1441	55.6	63.6	59.5	49.5
1442	50.3	52.6	51.8	48.2
1443	52.7	58.5	55.3	49.0
1444	51.0	57.9	52.7	48.1
1445	51.1	53.9	52.7	48.9
1446	52.7	57.9	55.2	49.4
1447	52.5	53.8	53.7	51.1
1448	0.0	0.0	0.0	0.0
1449	0.0	0.0	0.0	0.0

*Non-Highway Noise*  
 14:48 Invalid Result  
 14:49 Invalid Result



# Dulles Toll Road

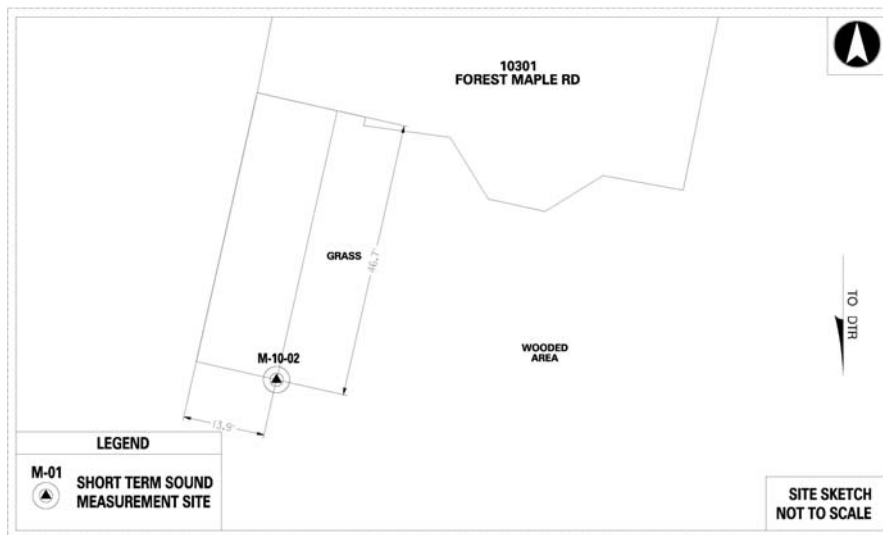
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>M-10-02 10301 FOREST MAPLE ROAD</b>	
DATE	08/26/2010
START TIME	1510
END TIME	1530
TRAFFIC MONITORING	TMS 09
Leq	57.0
Notes:	



<b>Table C.25 1-min Equivalent Sound Level (Leq[h]) Time History Report</b>				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1510	57.6	59.5	58.9	56.3
1511	59.3	64.1	62.5	55.9
1512	56.5	57.8	57.3	55.5
1513	57.7	59.4	58.9	56.6
1514	56.5	58.5	57.5	55.6
1515	56.7	58.3	57.6	55.7
1516	56.9	57.9	57.5	56.2
1517	56.1	57.4	57.1	55.2
1518	56.7	58.2	57.9	55.1
1519	57.1	58.1	57.6	56.7
1520	57.3	58.5	58.2	55.7
1521	56.5	57.3	57.0	55.9
<del>1522</del>	<del>59.3</del>	<del>64.9</del>	<del>63.8</del>	<del>56.0</del>
<del>1523</del>	<del>59.3</del>	<del>65.7</del>	<del>63.3</del>	<del>54.8</del>
1524	56.9	58.3	57.7	55.8
1525	55.9	57.8	56.9	55.0
1526	56.9	57.9	57.7	56.3
1527	55.8	57.7	57.0	54.5
1528	56.5	57.6	57.4	55.3
1529	57.0	58.2	57.8	56.5
<i>Non-Highway Noise</i> 15:22-15:23 Plane Overhead				





# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-10-03 1536 WINDSTONE DRIVE	
DATE	08/26/2010
START TIME	1510
END TIME	1530
TRAFFIC MONITORING	TMS 09
Leq	57.8
Notes:	



Table C.26 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1510	0.0	0.0	0.0	0.0
1511	57.8	59.7	58.9	56.8
1512	57.3	58.9	58.4	55.9
1513	57.2	58.4	58.0	56.0
1514	58.3	59.6	59.2	57.2
1515	57.0	59.3	58.2	55.6
1516	57.6	59.2	58.6	56.3
1517	58.9	60.7	60.1	57.8
1518	57.6	59.2	58.7	56.6
1519	57.3	60.9	59.3	55.3
1520	57.5	59.3	58.5	56.5
1521	58.0	60.5	59.7	56.3
1522	57.3	59.2	58.7	55.1
1523	58.1	59.2	58.8	57.4
1524	58.2	60.9	60.3	55.0
1525	58.1	61.2	60.0	55.8
1526	56.9	59.1	58.1	55.5
1527	58.6	60.5	59.4	57.8
1528	57.7	59.6	59.0	56.3
1529	57.7	59.8	59.0	56.7
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

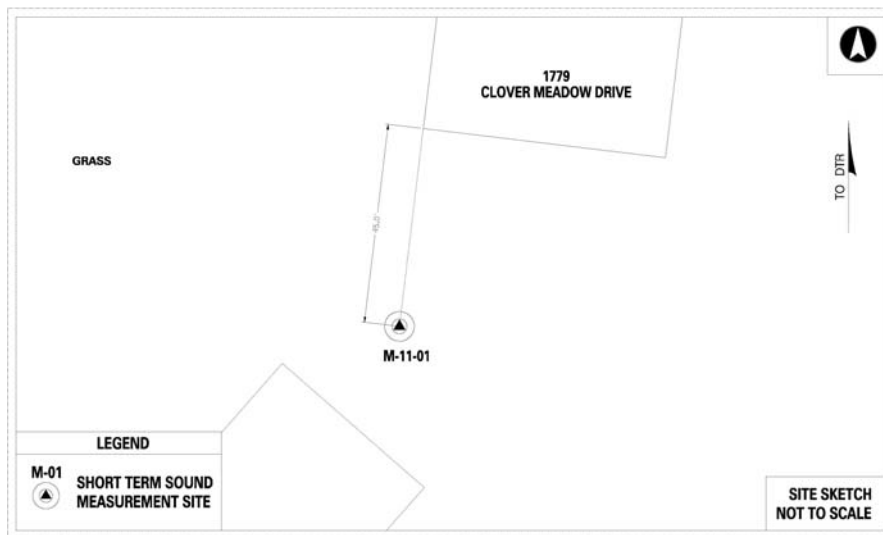
### Appendix C: Sound Measurement Data

M-11-01 1779 CLOVER MEADOW DRIVE	
DATE	08/26/2010
START TIME	1430
END TIME	1450
TRAFFIC MONITORING	TMS 08
Leq	54.8
Notes:	



Looking North towards Residence

Table C.27 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1430	56.3	59.2	57.6	54.7
1431	56.6	61.1	59.4	52.7
1432	54.5	56.1	55.6	53.1
1433	54.3	56.5	55.5	52.5
1434	55.2	58.0	56.9	53.4
1435	54.2	56.5	55.4	52.9
1436	53.9	56.8	55.9	50.4
1437	55.5	58.5	57.0	53.7
1438	53.6	58.9	54.9	52.3
1439	53.9	56.7	55.3	52.1
1440	56.0	59.3	57.8	53.6
1441	54.5	57.2	56.1	52.4
1442	54.8	59.4	57.1	52.2
1443	54.4	58.1	55.6	52.9
1444	55.4	58.0	56.9	53.1
1445	55.0	60.0	57.5	53.2
1446	54.0	57.6	55.5	52.8
1447	53.8	59.6	55.8	51.4
1448	54.9	59.5	56.4	52.7
1449	53.8	55.6	54.9	52.9
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

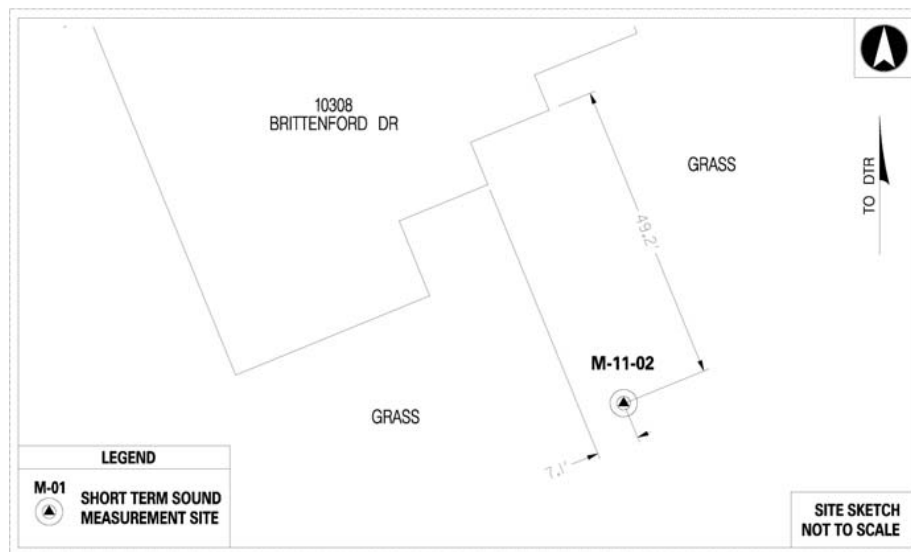
### Appendix C: Sound Measurement Data

M-11-02 10308 BRITTENFORD DRIVE	
DATE	08/26/2010
START TIME	1430
END TIME	1450
TRAFFIC MONITORING	TMS 08
Leq	50.1
Notes:	



Table C.28 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1430	53.3	61.2	56.8	47.9
1431	52.6	59.3	57.3	46.3
1432	47.5	50.0	48.5	46.6
<del>1433</del>	<del>59.3</del>	<del>70.2</del>	<del>63.5</del>	<del>45.9</del>
1434	48.2	49.8	49.1	47.1
1435	46.6	51.1	46.9	45.9
1436	51.4	61.7	55.0	45.3
1437	46.6	48.5	47.7	45.3
1438	46.6	50.3	49.2	44.9
1439	52.1	60.9	58.1	44.3
1440	50.5	62.0	50.9	44.3
1441	49.0	61.9	49.6	44.3
1442	48.8	62.0	49.1	43.1
1443	50.3	58.6	55.3	43.0
1444	49.9	59.3	53.7	44.9
1445	52.4	62.0	55.2	46.7
<del>1446</del>	<del>54.4</del>	<del>65.0</del>	<del>57.8</del>	<del>47.4</del>
<del>1447</del>	<del>55.8</del>	<del>66.6</del>	<del>59.5</del>	<del>46.4</del>
1448	47.3	49.3	48.4	46.3
1449	47.2	50.8	48.5	46.0

Non-Highway Noise  
 14:33 Large Truck on Local  
 14:46-46 Meter Issue



# Dulles Toll Road

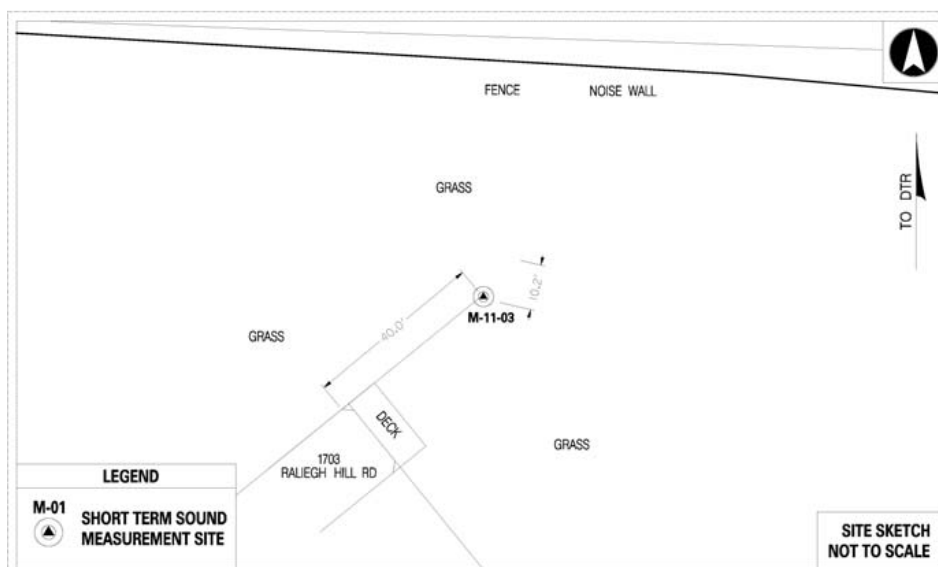
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-11-03 1703 RALEIGH HILL ROAD	
DATE	08/26/2010
START TIME	1430
END TIME	1450
TRAFFIC MONITORING	TMS 08
Leq	55.1
Notes:	



Table C.29 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1430	55.6	57.3	56.8	54.1
1431	56.6	59.5	58.4	54.7
1432	55.3	58.1	56.8	53.9
1433	55.8	58.4	57.5	54.6
1434	55.3	57.6	56.8	53.7
1435	55.2	57.0	56.5	54.0
1436	54.6	56.8	55.7	53.3
1437	55.8	61.1	56.8	53.5
1438	54.2	56.7	55.3	52.6
1439	54.1	56.6	55.8	52.4
1440	54.8	56.9	56.2	52.9
1441	54.8	57.7	56.0	53.1
1442	54.2	56.1	55.6	52.7
1443	55.1	59.4	56.5	53.0
1444	55.3	59.2	57.3	53.6
1445	55.0	58.0	56.4	53.1
1446	55.3	57.4	56.9	53.6
1447	54.3	56.5	55.2	52.9
1448	55.2	57.7	56.5	52.9
1449	54.4	57.7	55.3	52.4
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

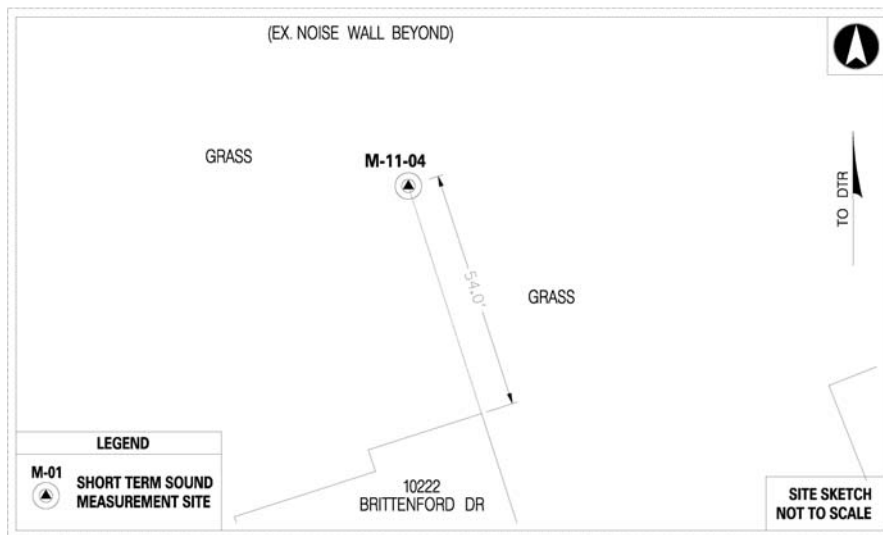
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-11-04 10222 BRITTENFORD DRIVE	
DATE	08/26/2010
START TIME	1510
END TIME	1530
TRAFFIC MONITORING	TMS 09
Leq	54.3
Notes:	



Table C.30 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1510	54.4	55.7	55.3	53.5
1511	54.7	55.6	55.2	53.9
1512	53.7	56.8	55.0	52.5
1513	53.2	54.3	54.0	52.5
1514	54.2	56.2	55.4	53.0
1515	53.8	56.7	55.9	52.5
1516	54.2	56.3	55.6	53.1
1517	54.3	55.1	54.7	53.7
1518	53.2	54.2	53.8	52.5
1519	54.1	55.4	54.9	53.3
1520	53.9	55.8	55.1	53.2
1521	54.6	55.6	55.2	53.8
1522	53.2	54.3	53.9	52.5
1523	54.2	57.7	56.0	53.0
1524	55.0	58.1	56.6	53.7
1525	54.6	56.6	55.7	53.4
1526	54.0	55.2	54.9	52.5
1527	54.6	55.9	55.4	53.9
1528	54.2	55.5	55.0	53.6
1529	56.6	65.6	58.9	53.9
<u>Non-Highway Noise</u> none				



# Dulles Toll Road

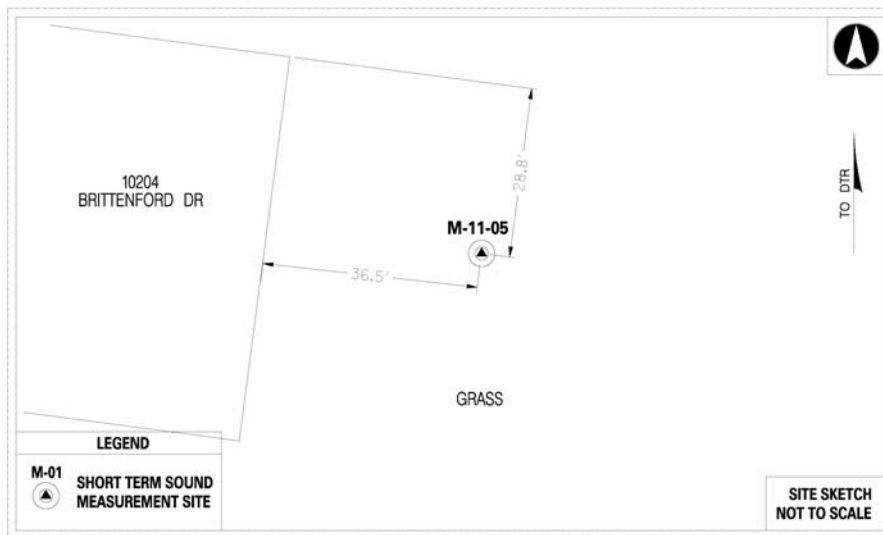
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-11-05 10204 BRITTENFORD DRIVE	
DATE	08/26/2010
START TIME	1510
END TIME	1530
TRAFFIC MONITORING	TMS 09
Leq	49.7
Notes:	



Table C.31 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1510	48.6	49.9	49.6	47.6
1511	49.4	52.9	50.3	47.7
1512	48.6	51.5	49.7	47.8
1513	48.9	52.9	50.6	47.0
1514	49.4	52.6	50.8	47.5
1515	49.7	53.3	52.2	47.7
1516	49.4	51.9	50.8	47.8
1517	49.6	51.6	50.5	48.6
1518	51.2	55.0	54.4	48.0
1519	52.0	57.6	55.0	47.4
1520	50.9	56.1	55.3	47.2
1521	48.6	51.3	50.5	47.1
1522	48.4	50.6	49.9	47.0
1523	50.8	57.7	52.2	48.5
1524	48.4	49.0	48.7	47.8
1525	48.5	50.1	49.2	47.5
1526	48.9	52.3	50.0	47.0
1527	50.2	57.1	51.8	48.0
1528	49.7	51.5	51.1	48.6
1529	50.6	54.2	51.3	49.4
<u>Non-Highway Noise</u> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

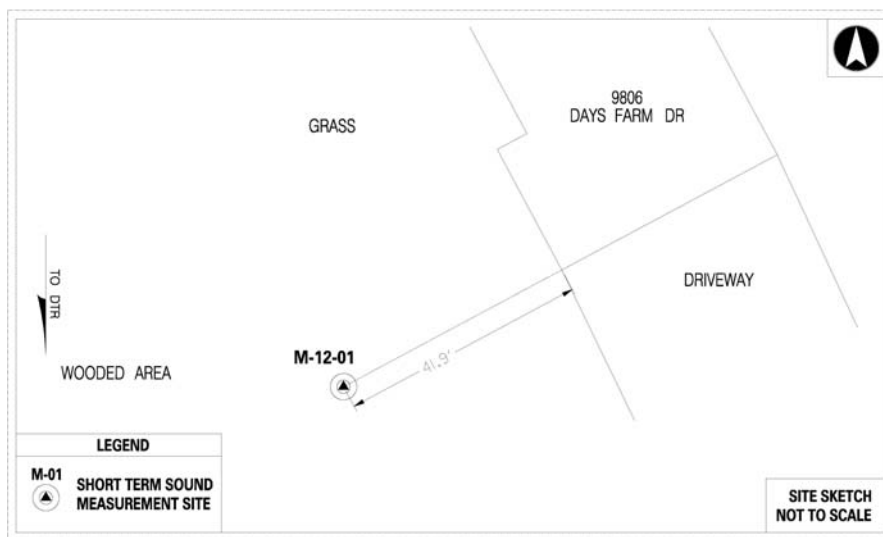
### Appendix C: Sound Measurement Data

M-12-01 9806 DAYS FARM ROAD	
DATE	08/31/2010
START TIME	1200
END TIME	1220
TRAFFIC MONITORING	TMS 10
Leq	53.6
Notes:	



Table C.32 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1200	53.7	56.1	55.0	52.3
1201	54.0	56.6	56.0	52.5
1202	54.6	57.9	56.0	53.3
1203	54.8	56.7	56.1	53.7
1204	53.9	55.2	54.7	53.1
1205	55.3	59.9	57.5	52.4
1206	53.6	55.4	54.9	51.5
1207	53.9	56.1	55.6	52.3
1208	53.4	55.8	54.7	51.9
1209	53.7	55.1	54.7	52.3
<del>1210</del>	<del>57.5</del>	<del>62.9</del>	<del>60.8</del>	<del>53.5</del>
1211	52.8	54.0	53.5	52.1
1212	52.9	54.4	54.1	51.9
1213	53.5	56.2	55.4	51.8
1214	53.6	55.4	54.6	52.6
1215	52.6	54.6	53.5	51.4
1216	52.8	54.7	54.1	51.0
1217	52.6	54.4	53.7	51.6
1218	52.9	54.6	53.8	51.3
1219	52.2	54.9	54.1	49.2

*Non-Highway Noise*  
12:10 Plane Above



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

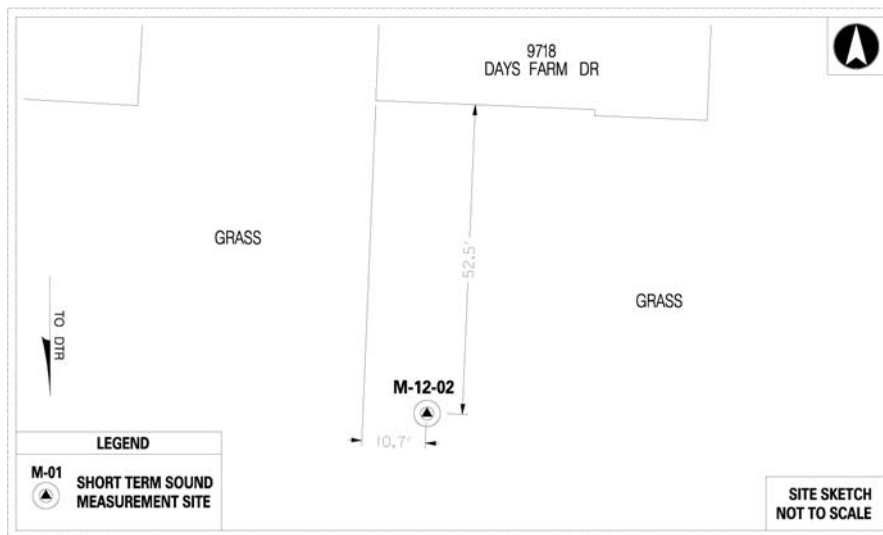
### Appendix C: Sound Measurement Data

M-12-02 9718 DAYS FARM ROAD	
DATE	08/31/2010
START TIME	1229
END TIME	1249
TRAFFIC MONITORING	TMS 11
Leq	49.6
Notes:	



Table C.33 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1229	54.3	61.9	54.3	51.9
1230	53.8	58.8	55.6	52.6
1231	53.4	56.6	55.2	51.1
1232	50.2	52.2	51.2	49.4
1233	49.7	50.5	50.2	49.3
1234	50.6	53.1	51.6	49.8
1235	50.3	52.0	51.6	48.6
1236	50.5	52.0	51.5	48.6
1237	50.0	51.7	50.8	49.2
1238	49.4	52.0	51.4	48.0
1239	47.6	49.3	48.4	46.8
1240	46.9	47.9	47.4	46.6
1241	47.7	48.8	48.4	47.1
1242	48.6	49.9	49.2	47.9
1243	50.2	51.7	51.2	49.1
1244	50.2	51.8	51.3	48.2
1245	50.3	53.5	51.7	48.1
1246	48.6	51.4	50.0	47.7
1247	49.0	50.8	50.1	47.5
1248	49.2	50.7	50.0	47.9

*Non-Highway Noise*  
12:29-12:31 Plane flying above & 2 cars on Local Road





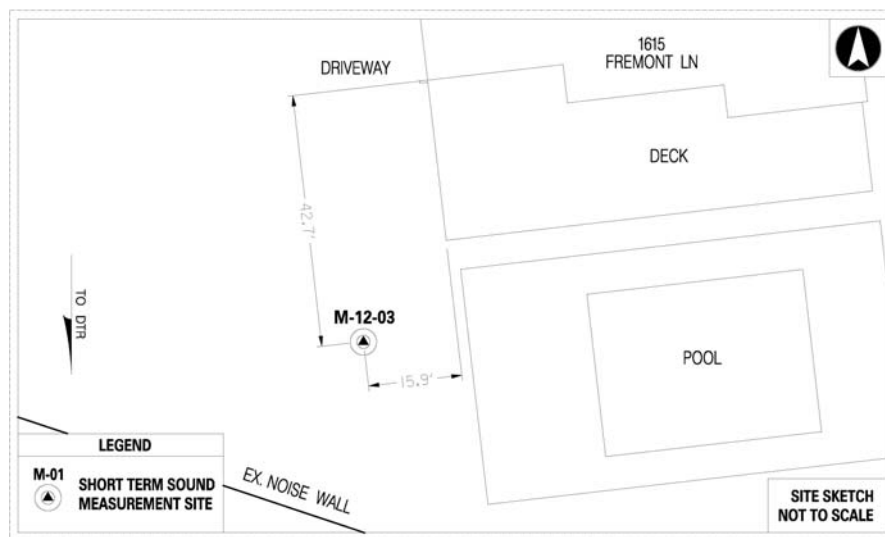
# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-12-03 1615 FREMONT LANE	
DATE	08/31/2010
START TIME	1200
END TIME	1220
TRAFFIC MONITORING	TMS 10
Leq	59.5
Notes:	

Table C.34 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1200	57.9	61.4	59.4	55.9
1201	59.5	62.5	61.3	57.7
1202	59.3	64.6	61.4	54.1
1203	59.6	63.4	61.2	57.8
1204	59.8	63.7	62.2	56.9
1205	62.5	72.3	66.7	55.3
1206	58.9	62.6	61.6	55.1
1207	58.9	62.6	61.5	53.1
1208	58.2	62.7	61.6	54.5
1209	59.0	62.5	60.8	56.2
1210	60.2	64.6	62.1	57.5
1211	60.6	66.1	64.4	57.3
1212	57.1	60.1	58.8	53.9
1213	59.4	63.0	61.3	56.1
1214	59.2	63.8	61.1	55.7
1215	59.3	62.7	61.2	57.0
1216	59.2	61.6	60.6	57.6
1217	58.7	60.7	59.9	56.1
1218	60.6	64.6	64.1	57.7
1219	59.0	62.0	60.7	56.3
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

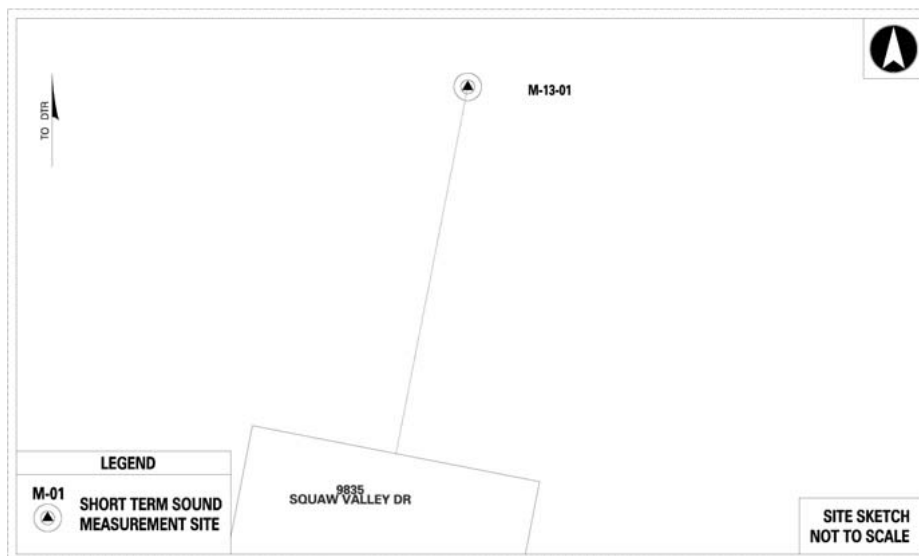
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-13-01 9835 SQUAW VALLEY DRIVE	
DATE	08/31/2010
START TIME	1200
END TIME	1220
TRAFFIC MONITORING	TMS 10
Leq	53.2
Notes:	



Table C.35 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1200	55.9	58.4	57.0	54.7
1201	55.9	60.0	57.7	52.8
1202	52.3	54.2	53.3	51.3
1203	52.6	54.6	53.9	51.2
1204	53.6	57.1	55.4	52.0
1205	53.1	56.9	55.7	50.9
1206	52.1	55.1	54.2	49.9
1207	52.6	55.5	54.1	50.3
1208	52.9	56.2	55.2	50.7
<del>1209</del>	<del>60.5</del>	<del>65.6</del>	<del>64.5</del>	<del>53.6</del>
1210	52.6	55.9	54.7	50.5
1211	54.1	58.2	56.6	51.7
1212	52.1	56.3	54.2	48.8
1213	52.1	55.3	54.5	49.6
1214	52.2	55.2	54.3	50.0
1215	51.8	54.5	53.9	49.1
1216	53.0	55.0	54.5	51.2
1217	53.7	57.3	55.7	50.3
1218	52.9	57.3	55.6	49.0
1219	53.0	54.9	54.2	52.4
<i>Non-Highway Noise</i> 12:09 Plane overhead				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-13-02 1600 SERENO COURT	
DATE	08/31/2010
START TIME	1200
END TIME	1220
TRAFFIC MONITORING	TMS 10
Leq	48.4
Notes:	



Table C.36 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1200	49.0	52.0	51.2	47.1
1201	47.7	50.3	49.1	45.3
1202	47.4	49.4	48.2	45.8
1203	48.0	49.3	48.8	46.9
1204	51.2	59.5	56.3	46.8
1205	50.4	57.1	52.9	48.0
1206	47.9	52.0	50.6	45.1
1207	47.3	50.3	48.9	45.0
1208	49.9	54.9	52.1	47.6
<del>1209</del>	<del>54.7</del>	<del>66.2</del>	<del>55.8</del>	<del>46.3</del>
<del>1210</del>	<del>59.3</del>	<del>67.0</del>	<del>65.6</del>	<del>47.6</del>
1211	46.5	47.9	47.4	45.2
1212	47.1	48.5	47.9	46.1
1213	47.5	49.7	48.7	46.8
1214	47.7	49.1	48.8	46.6
1215	48.0	49.6	49.4	46.5
1216	49.8	54.0	51.9	47.4
1217	47.5	50.5	49.2	45.9
1218	48.1	51.3	49.0	47.0
1219	47.9	54.8	49.4	46.6
<i>Non-Highway Noise</i> 12:09-12:10 Helicopter				



# Dulles Toll Road

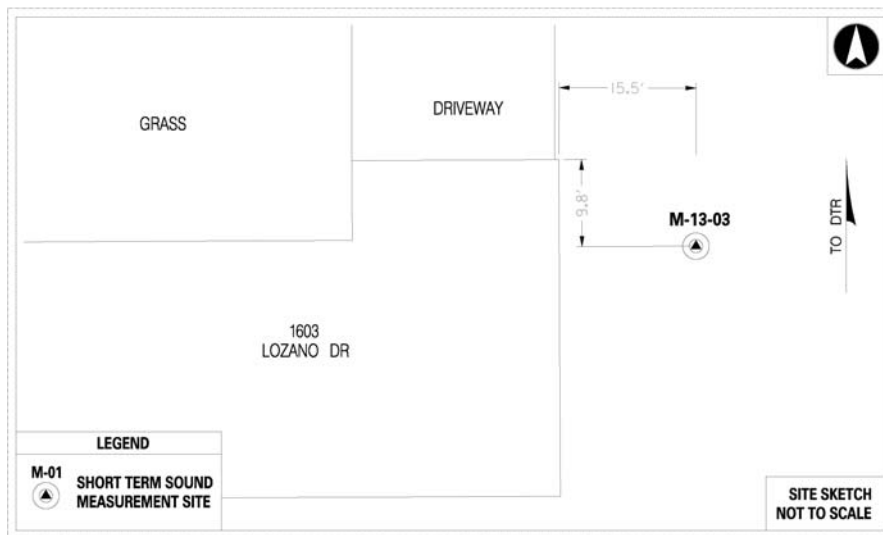
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-13-03 1603 LOZANO DRIVE	
DATE	08/31/2010
START TIME	1230
END TIME	1250
TRAFFIC MONITORING	TMS 11
Leq	57.3
Notes:	



Table C.37 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1230	58.4	60.3	59.5	57.3
1231	57.1	60.7	58.7	54.8
1232	56.4	59.5	58.0	55.2
1233	56.9	58.9	57.8	55.9
1234	57.0	58.5	57.8	55.9
1235	57.6	59.4	58.8	56.3
1236	56.2	59.3	58.4	54.3
1237	57.0	59.9	58.4	56.0
1238	56.0	57.6	57.1	54.8
1239	56.1	57.4	57.1	55.2
1240	56.2	58.0	57.0	55.5
1241	56.9	60.1	58.9	55.4
1242	57.3	58.9	58.2	56.0
1243	57.2	59.2	58.6	55.7
1244	57.3	59.8	59.4	55.9
1245	58.2	60.0	59.2	57.0
1246	57.2	58.8	58.0	56.5
1247	58.1	59.2	58.8	57.3
1248	57.3	59.2	58.3	56.5
1249	60.0	66.4	62.2	57.1
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

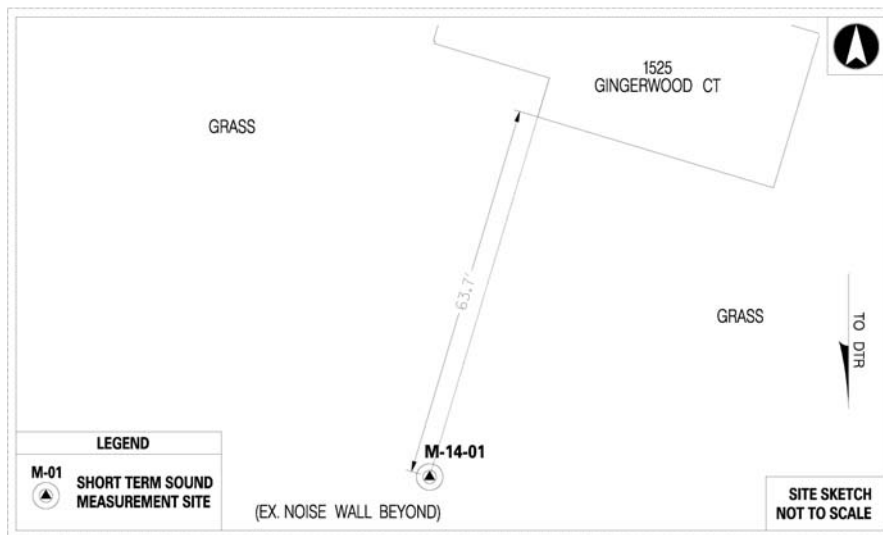
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-14-01 1525 GINGERWOOD COURT	
DATE	08/31/2010
START TIME	1230
END TIME	1250
TRAFFIC MONITORING	TMS 11
Leq	57.8
Notes:	



Table C.38 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1230	58.8	60.9	59.8	57.6
1231	57.8	60.9	60.2	54.5
1232	57.8	60.9	58.8	56.4
1233	57.0	59.1	58.1	55.3
1234	58.1	59.9	59.5	56.6
1235	58.1	61.4	59.8	56.3
1236	56.9	61.0	58.5	55.0
1237	58.1	60.9	59.7	56.8
1238	57.8	59.6	58.9	56.6
1239	57.2	60.2	59.1	55.4
1240	56.9	60.4	58.5	55.5
1241	57.2	60.0	58.6	56.2
1242	58.4	62.2	59.6	56.4
1243	58.3	61.9	60.7	56.1
1244	57.1	59.6	58.2	56.4
1245	58.6	61.5	59.6	57.4
1246	57.5	59.5	58.7	55.2
1247	58.0	59.9	59.2	56.9
1248	57.4	61.1	58.4	55.5
1249	57.5	60.6	59.2	55.8
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

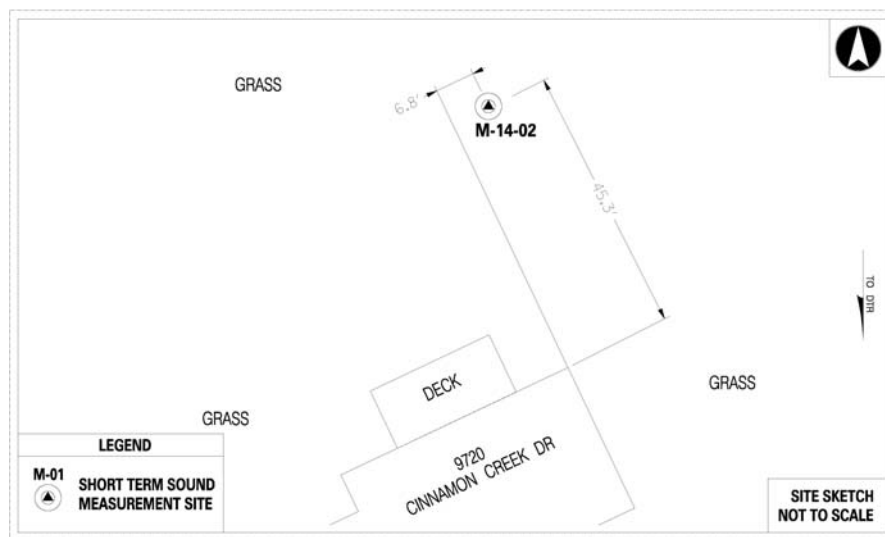
### Appendix C: Sound Measurement Data

M-14-02 9720 CINNAMON CREEK DRIVE	
DATE	08/31/2010
START TIME	1300
END TIME	1320
TRAFFIC MONITORING	TMS 12
Leq	46.3
Notes:	



Table 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1300	46.3	49.1	46.9	45.5
<del>1301</del>	<del>53.9</del>	<del>60.3</del>	<del>57.3</del>	<del>47.0</del>
1302	47.3	52.0	49.4	45.7
1303	45.5	47.3	46.5	44.4
1304	46.1	47.8	46.9	45.0
1305	45.3	46.8	46.1	44.5
1306	45.8	47.0	46.4	45.3
1307	45.9	47.0	46.6	45.2
1308	45.7	46.7	46.3	45.2
1309	45.6	46.2	45.9	45.3
1310	45.6	46.4	46.1	45.1
1311	46.0	47.1	46.5	45.4
1312	45.4	46.5	46.1	44.8
1313	45.6	46.6	46.3	45.0
1314	48.5	53.5	52.2	45.4
<del>1315</del>	<del>55.1</del>	<del>61.8</del>	<del>58.6</del>	<del>48.0</del>
1316	48.7	52.9	50.1	47.2
1317	46.4	49.4	47.3	45.2
1318	45.6	47.2	46.6	44.9
1319	45.9	47.1	46.5	45.4

*Non-Highway Noise*  
 13:01 Plane & Local Car  
 13:15 Car on Local Road



# Dulles Toll Road

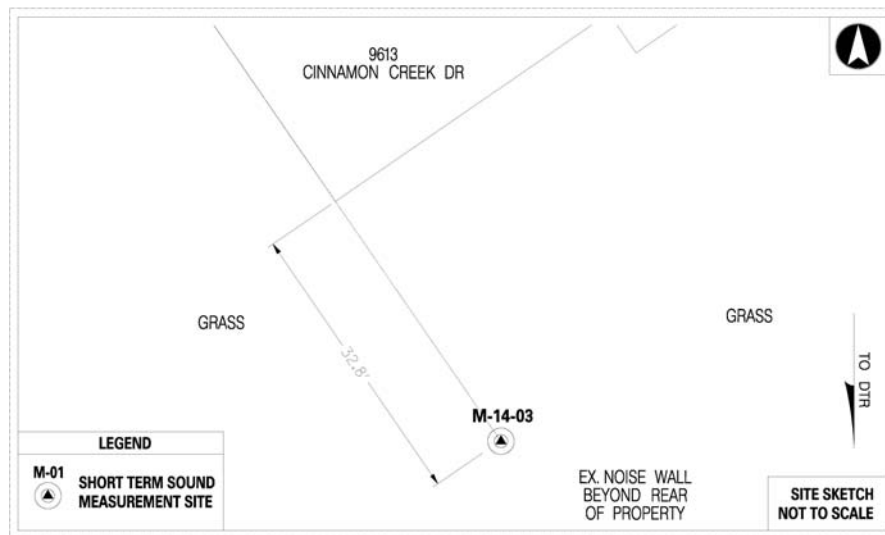
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-14-03 9613 CINNAMON CREEK DRIVE	
DATE	08/31/2010
START TIME	1300
END TIME	1320
TRAFFIC MONITORING	TMS 12
Leq	57.9
Notes:	



Table C.40 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1300	58.4	60.0	59.5	57.3
1301	58.4	65.0	59.4	56.7
1302	60.5	64.0	62.9	58.0
1303	56.6	59.2	58.6	53.5
1304	57.7	61.6	59.8	55.2
1305	57.3	59.9	58.4	55.4
1306	57.2	59.5	58.9	56.0
1307	56.9	58.0	57.7	56.1
1308	56.7	58.8	57.9	55.1
1309	57.6	59.3	58.9	56.2
1310	56.9	59.2	58.4	54.5
1311	58.1	60.3	59.7	56.4
1312	57.0	59.7	58.3	55.8
1313	57.2	59.6	59.0	55.6
1314	58.0	60.8	59.6	56.1
1315	60.5	65.0	62.1	58.5
1316	57.5	59.6	58.7	56.4
1317	57.1	60.0	59.3	54.7
1318	57.6	60.5	59.0	56.0
1319	57.6	59.3	58.9	56.2
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-15-01 9609 CHATHAMS FORD DRIVE	
DATE	08/31/2010
START TIME	1300
END TIME	1320
TRAFFIC MONITORING	TMS 12
Leq	53.6
Notes:	



Table C.41 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1300	0.0	0.0	0.0	0.0
1301	57.4	61.6	59.8	53.7
1302	52.9	57.4	54.4	51.4
1303	53.5	56.1	55.2	50.8
1304	54.3	56.7	56.0	52.5
1305	52.5	54.5	53.5	51.1
1306	52.9	56.0	54.7	50.3
1307	53.2	56.8	55.4	51.8
1308	54.0	57.0	55.9	51.6
1309	52.6	56.2	54.1	51.3
1310	55.6	65.4	57.8	51.8
1311	53.5	55.3	54.6	51.8
1312	53.2	55.8	54.9	49.9
1313	53.5	56.9	55.7	51.4
1314	57.7	62.8	59.9	52.9
1315	55.9	61.4	59.3	52.7
1316	54.5	57.1	56.2	52.6
1317	54.0	56.2	55.3	52.2
1318	53.0	55.9	55.0	51.1
1319	53.9	56.0	55.1	52.8
<i>Non-Highway Noise</i>				
13:00 Test 1 minute Late		13:10 Door		
13:01 Car on Local Road		13:14 Airplane Overhead		





# Dulles Toll Road

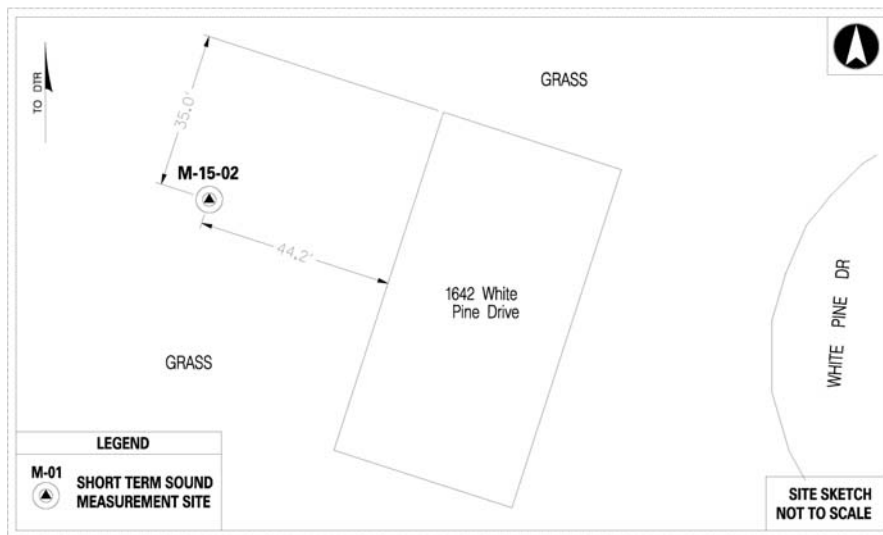
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-15-02 1642 WHITE PINE DRIVE	
DATE	08/31/2010
START TIME	0920
END TIME	0940
TRAFFIC MONITORING	TMS 13
Leq	55.5
Notes:	



Table C.42 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0920	56.5	59.3	57.4	55.8
0921	55.9	57.2	56.7	54.9
0922	55.4	56.4	55.8	55.0
0923	54.7	56.7	55.4	54.1
0924	55.6	57.0	56.3	55.0
0925	55.8	57.1	56.7	55.3
0926	55.7	56.9	56.3	55.2
0927	55.9	57.8	57.1	55.0
0928	56.6	57.6	57.2	56.0
0929	56.2	57.1	56.7	55.9
0930	55.1	56.9	55.7	54.6
0931	55.2	55.9	55.6	54.7
0932	55.5	56.4	56.1	54.8
0933	55.4	56.2	56.0	55.0
0934	55.6	56.7	56.0	54.5
0935	54.1	55.2	54.7	53.5
0936	54.4	55.1	54.9	53.3
0937	56.0	59.6	57.8	54.7
0938	55.2	57.6	56.1	54.1
0939	54.3	55.3	54.8	53.6
<u>Non-Highway Noise</u> none				



# Dulles Toll Road

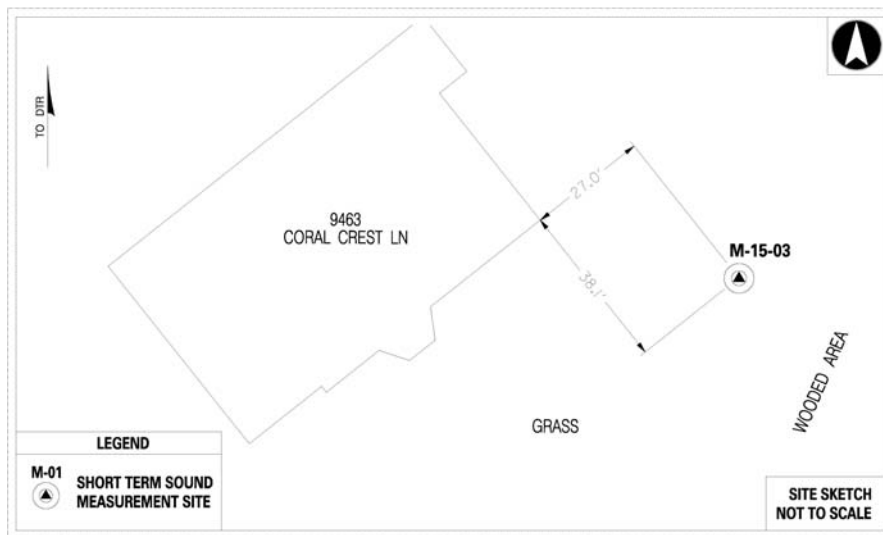
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-15-03 9463 CORAL CREST LANE	
DATE	08/31/2010
START TIME	1000
END TIME	1020
TRAFFIC MONITORING	TMS 14
Leq	55.4
Notes:	



Table C.43 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1000	55.5	58.8	57.2	54.4
1001	54.9	56.4	55.8	54.1
1002	55.0	56.1	55.6	54.5
1003	55.6	58.0	56.9	54.4
1004	55.2	57.8	56.4	54.3
1005	55.2	56.3	55.8	54.3
1006	55.6	58.4	57.0	54.7
1007	55.5	57.4	56.3	54.5
1008	54.9	57.5	55.9	53.7
1009	55.7	58.2	57.4	54.5
1010	55.2	56.6	56.2	54.1
1011	54.8	56.1	55.7	53.9
1012	55.0	56.2	55.8	54.3
1013	55.3	56.1	55.7	54.6
1014	55.4	57.0	56.2	54.6
1015	56.3	58.2	57.2	55.5
1016	55.6	58.0	56.7	54.5
1017	55.4	57.0	55.9	54.7
1018	55.6	57.8	57.2	54.0
1019	55.1	57.1	56.4	53.8
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

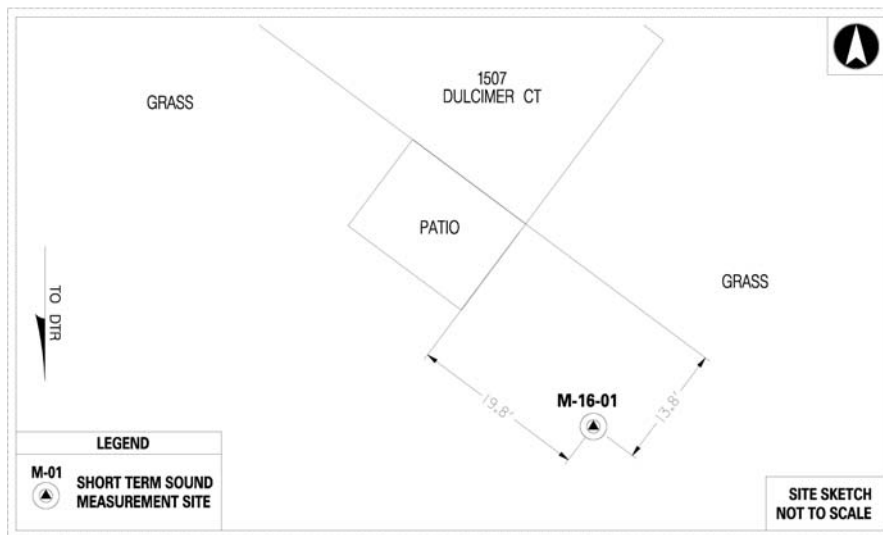
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-16-01 1507 DULCIMER COURT	
DATE	08/31/2010
START TIME	0920
END TIME	0940
TRAFFIC MONITORING	TMS 13
Leq	51.7
Notes:	



Table C.44 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0920	51.5	52.7	52.2	51.0
0921	52.8	54.4	53.9	51.4
0922	51.5	53.3	52.5	51.0
0923	53.1	59.9	56.4	50.9
0924	53.7	60.0	56.6	51.4
0925	51.9	53.2	52.6	51.4
0926	51.2	52.0	51.6	50.6
0927	53.2	54.3	53.9	52.1
0928	51.6	52.9	52.4	51.0
0929	51.1	52.7	52.0	50.2
0930	50.7	51.5	51.2	50.1
0931	51.3	52.6	52.2	50.6
0932	50.9	52.0	51.8	50.4
0933	51.1	51.8	51.6	50.5
0934	50.7	52.2	51.8	50.0
0935	50.2	50.6	50.3	49.9
0936	51.1	53.0	52.2	50.3
0937	53.5	61.0	55.8	51.2
0938	51.1	53.3	52.3	50.2
0939	50.1	50.3	50.2	50.1
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

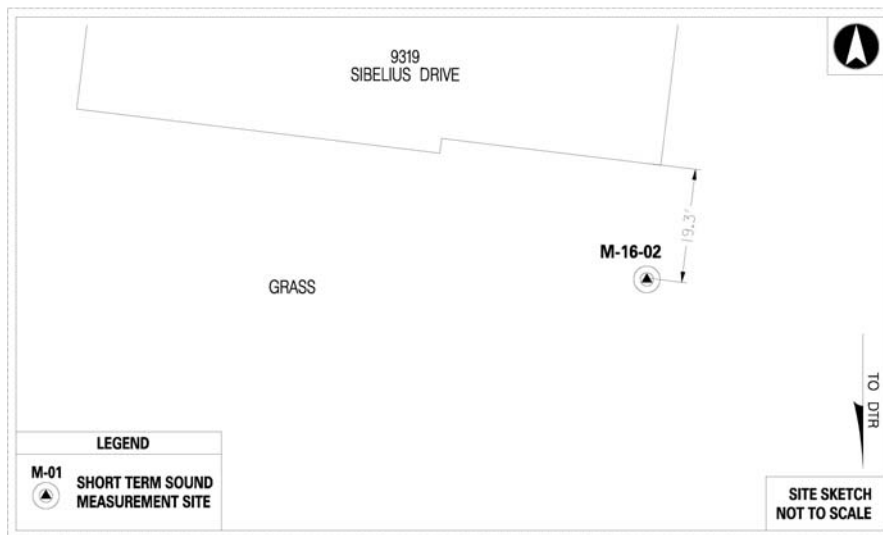
### Appendix C: Sound Measurement Data

M-16-02 9319 SIBELIUS DRIVE	
DATE	08/31/2010
START TIME	1045
END TIME	1105
TRAFFIC MONITORING	TMS 15
Leq	53.5
Notes:	



Table 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1045	54.0	63.4	55.7	50.9
<del>1046</del>	<del>59.4</del>	<del>67.3</del>	<del>63.8</del>	<del>52.8</del>
1047	51.3	61.3	52.7	48.6
1048	53.7	56.9	56.2	49.3
1049	53.2	56.2	55.1	51.3
1050	52.5	54.8	54.1	51.1
1051	53.8	58.0	56.6	51.7
1052	54.3	59.1	56.9	51.3
1053	54.5	58.8	56.7	51.8
1054	53.0	56.8	54.9	50.6
1055	53.4	56.2	55.5	51.0
<del>1056</del>	<del>56.7</del>	<del>61.1</del>	<del>59.3</del>	<del>52.3</del>
<del>1057</del>	<del>55.2</del>	<del>59.1</del>	<del>57.0</del>	<del>52.6</del>
1058	52.9	57.8	56.7	49.9
1059	53.2	56.8	55.5	49.6
1100	52.4	55.2	53.8	50.8
1101	53.8	56.4	55.3	51.6
1102	53.7	63.2	54.7	51.7
1103	54.7	57.0	56.3	50.5
1104	54.9	56.9	56.3	52.6

*Non-Highway Noise*  
 10:46 Hammering  
 10:56-10:57 Saw



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

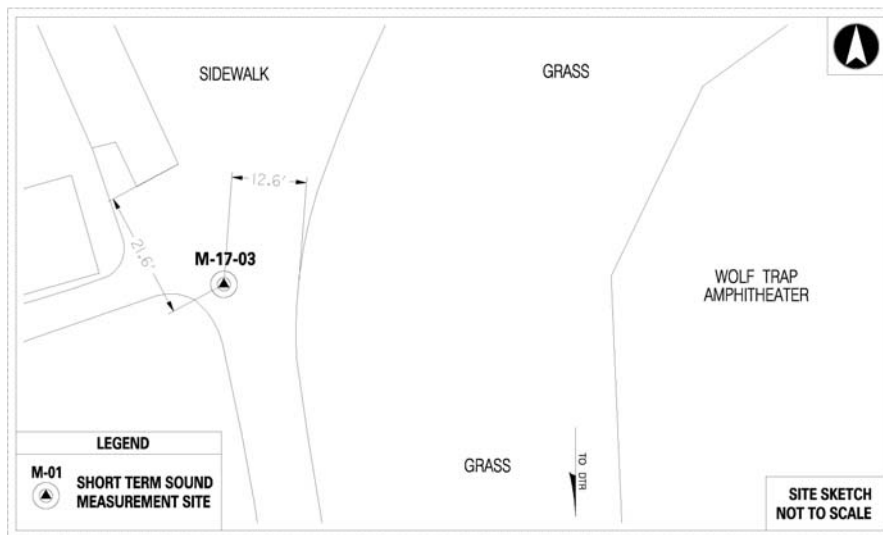
M-17-03 1645 TRAP ROAD	
DATE	08/31/2010
START TIME	1045
END TIME	1105
TRAFFIC MONITORING	TMS 15
Leq	52.7
Notes:	



Looking North towards Receptor

Table C.46 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1045	56.9	60.0	58.5	54.4
1046	53.0	58.1	56.1	49.9
1047	52.5	59.1	53.8	50.7
1048	53.9	58.9	57.1	50.6
1049	52.1	54.5	52.6	51.4
1050	53.5	58.6	55.3	51.7
1051	53.6	59.2	57.0	49.0
1052	50.7	52.2	52.0	49.7
1053	51.5	52.7	52.3	50.5
1054	52.3	55.9	53.6	50.5
1055	53.1	60.5	54.0	51.4
1056	53.3	56.9	54.7	50.9
1057	52.5	56.7	55.1	50.4
1058	52.7	56.9	54.5	50.9
1059	51.4	52.8	52.5	50.3
1100	52.2	53.3	52.8	51.3
1101	51.3	53.8	53.5	49.4
1102	52.6	59.2	55.2	50.5
1103	53.1	57.5	55.4	49.5
1104	54.4	55.1	55.0	54.6

*Non-Highway Noise*  
10:45 Meter Set Up



# Dulles Toll Road

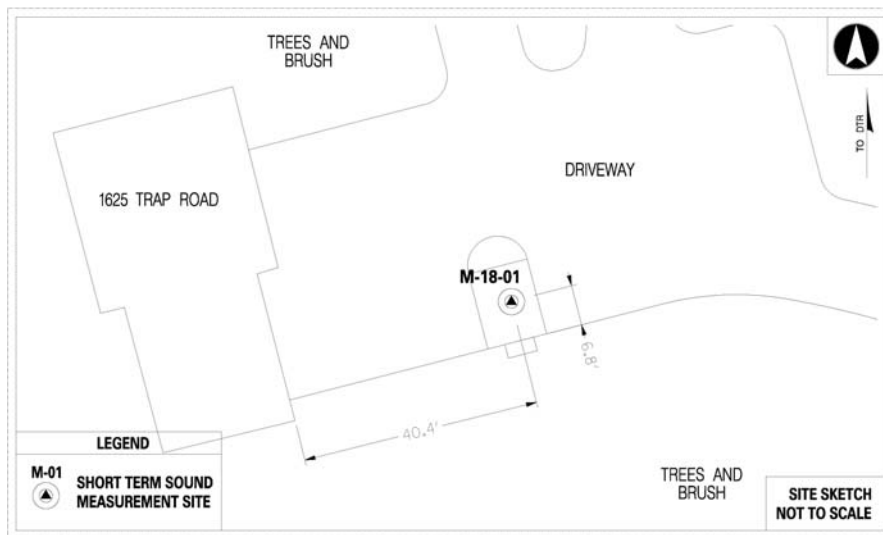
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-18-01 1625 TRAP ROAD	
DATE	08/31/2010
START TIME	1000
END TIME	1020
TRAFFIC MONITORING	TMS 14
Leq	65.3
Notes:	



Table C.47 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1000	65.1	67.6	66.3	63.5
1001	66.2	69.7	68.9	64.0
1002	64.6	66.8	66.1	63.3
1003	65.2	66.2	65.8	64.5
1004	67.5	75.9	68.2	65.6
1005	64.6	66.7	65.4	63.6
1006	65.5	66.7	66.3	64.6
1007	65.6	67.5	66.7	64.4
1008	65.4	68.4	66.8	64.3
1009	65.9	69.6	67.8	63.6
1010	65.7	69.5	67.2	64.4
1011	64.5	66.7	66.1	63.2
1012	64.4	66.4	65.5	63.2
1013	65.1	67.4	66.5	63.8
1014	65.2	66.7	65.9	64.5
1015	65.2	66.4	65.8	64.6
1016	64.4	65.4	65.1	63.4
1017	65.8	69.4	67.9	63.2
1018	65.3	67.3	66.1	64.2
1019	64.3	65.7	65.2	63.7
<u>Non-Highway Noise</u> none				



# Dulles Toll Road

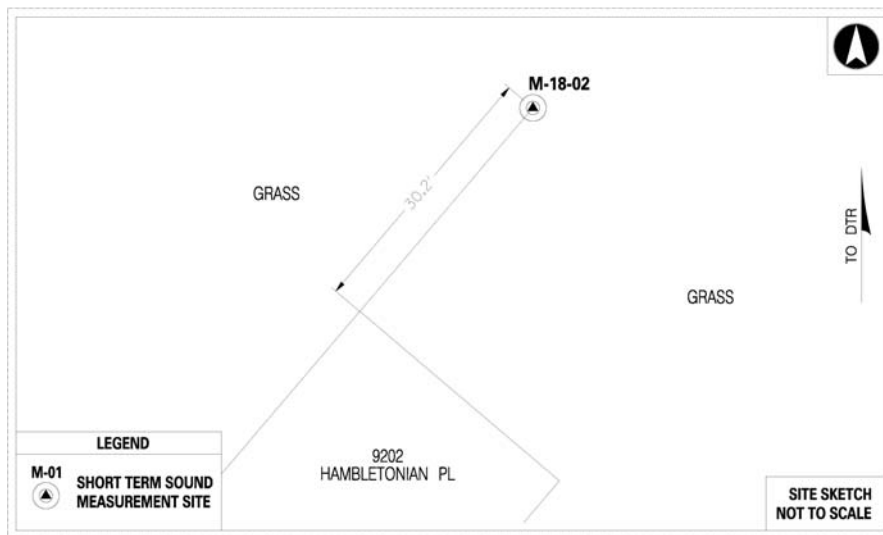
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-18-02 9202 HAMBLETONIAN PLACE	
DATE	08/31/2010
START TIME	1000
END TIME	1020
TRAFFIC MONITORING	TMS 14
Leq	53.4
Notes:	



Table C.48 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1000	53.4	57.5	55.7	51.8
1001	52.1	54.3	53.1	51.0
1002	52.2	54.0	53.2	51.2
1003	53.0	55.6	54.6	51.1
1004	54.7	61.7	57.9	51.2
1005	52.3	56.7	53.6	51.0
1006	55.3	60.5	59.0	51.5
1007	54.0	60.6	56.8	51.3
1008	52.0	53.7	53.0	50.6
1009	53.4	57.6	54.6	51.6
1010	52.0	57.5	53.3	51.1
1011	51.4	56.4	52.3	50.0
1012	53.9	62.1	56.5	50.1
1013	52.4	55.7	53.4	51.4
1014	53.1	55.2	54.5	51.6
1015	53.8	57.0	55.5	51.6
1016	55.3	61.0	58.4	52.4
1017	54.7	57.8	56.2	52.7
1018	53.1	55.7	54.0	52.0
1019	53.3	56.0	55.0	51.0
<i>Non-Highway Noise</i> none				



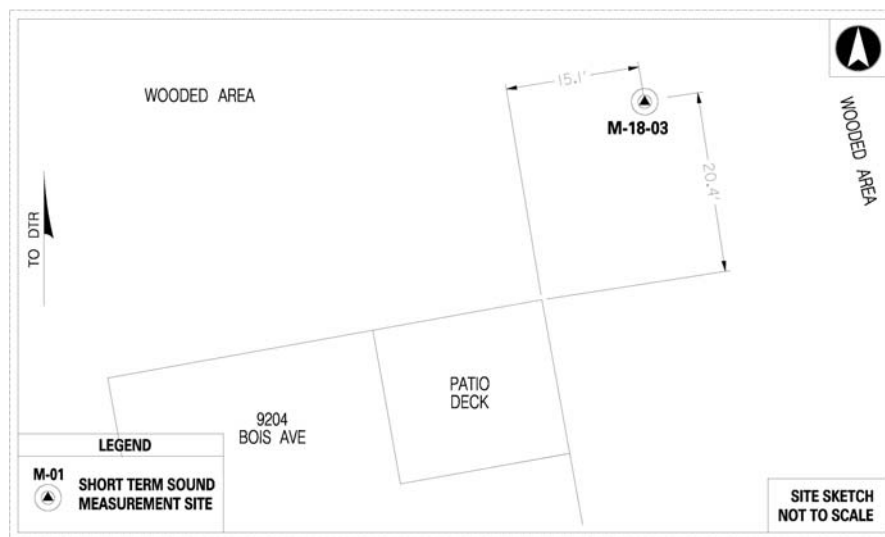
# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-18-03 9204 BOIS AVENUE	
DATE	08/31/2010
START TIME	1000
END TIME	1020
TRAFFIC MONITORING	TMS 14
Leq	57.5
Notes:	

Table 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1000	57.7	63.1	58.7	56.3
1001	57.2	58.6	58.2	56.5
1002	57.1	58.6	57.8	56.1
1003	59.1	64.6	61.3	56.8
1004	56.4	57.6	57.3	55.4
1005	57.3	59.1	58.4	56.1
1006	58.2	61.1	59.7	56.6
1007	57.3	58.8	58.0	56.2
1008	58.3	60.7	60.1	55.7
1009	57.6	63.4	58.3	56.4
1010	56.8	59.5	58.6	55.6
1011	56.7	61.4	58.1	55.1
1012	57.5	61.5	58.7	55.9
1013	57.7	59.9	59.0	56.2
1014	57.4	59.5	58.5	56.2
1015	57.3	59.0	58.1	56.4
1016	58.1	61.2	60.1	56.8
1017	57.8	60.2	59.8	56.3
1018	57.7	62.7	60.7	54.8
1019	56.0	55.7	55.7	55.5
<i>Non-Highway Noise</i> none				





# Dulles Toll Road

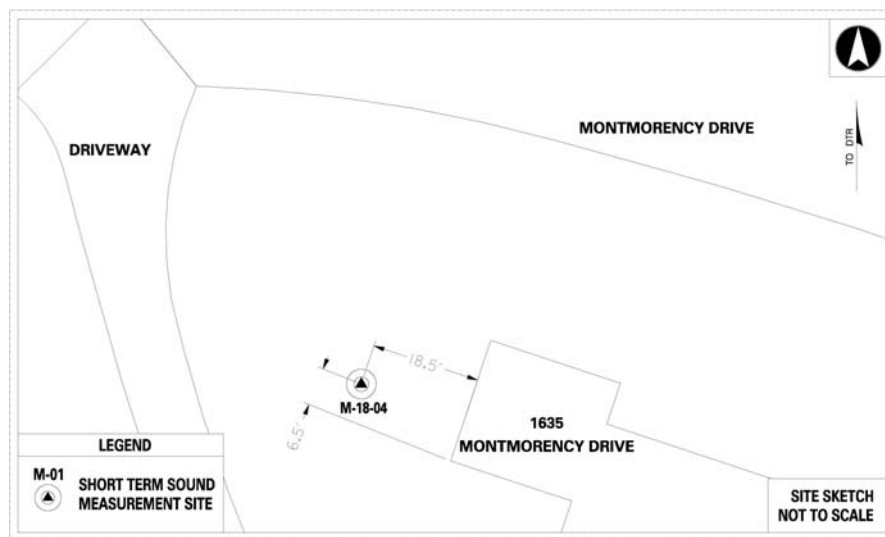
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-18-04 1635 MONTMORENCY DRIVE	
DATE	08/20/2010
START TIME	1030
END TIME	1050
TRAFFIC MONITORING	TMS 17
Leq	55.8
Notes:	



Table 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1030	55.8	58.5	56.8	54.6
1031	54.8	57.1	56.2	53.3
1032	54.6	56.2	55.3	53.8
1033	54.1	55.7	55.1	53.4
1034	54.5	61.4	54.9	53.4
1035	56.2	59.7	58.3	54.5
<del>1036</del>	<del>58.0</del>	<del>62.7</del>	<del>60.1</del>	<del>54.8</del>
1037	57.2	60.2	59.1	55.0
1038	56.1	60.6	57.0	54.9
1039	56.7	65.9	59.3	54.1
1040	54.8	61.8	57.2	52.9
1041	54.9	61.3	56.3	53.2
1042	55.8	60.8	57.9	53.4
1043	56.8	61.8	59.8	53.6
1044	55.8	61.9	58.1	53.5
1045	56.9	63.1	60.4	53.2
1046	55.3	61.0	58.7	52.2
1047	56.4	61.9	60.3	53.7
1048	56.0	59.9	58.7	54.4
1049	54.2	58.9	55.5	53.1
<i>Non-Highway Noise</i> 10:36 Local Car				



# Dulles Toll Road

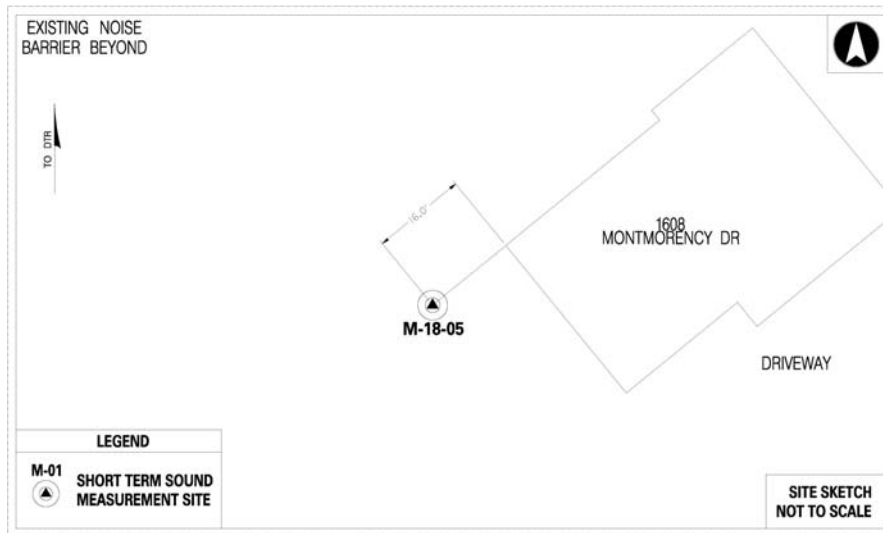
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-18-05 1608 MONTMORENCY DRIVE	
DATE	08/20/2010
START TIME	1100
END TIME	1120
TRAFFIC MONITORING	TMS 16
Leq	60.4
Notes:	



Table C.51 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1100	61.0	63.4	62.2	59.4
1101	62.0	66.3	64.3	58.5
1102	61.8	67.3	64.3	59.8
1103	60.4	65.3	61.8	58.5
1104	61.3	65.0	64.1	58.3
1105	59.9	64.0	61.9	58.0
1106	58.5	61.0	59.6	56.7
1107	59.7	62.2	61.1	58.1
1108	59.3	60.9	60.1	58.1
1109	58.4	60.3	59.4	57.1
1110	59.9	62.8	61.4	57.8
1111	59.6	65.1	61.4	57.7
1112	60.8	63.2	61.8	59.7
1113	60.1	62.6	61.2	58.7
1114	61.7	67.4	64.7	59.2
1115	63.2	69.0	67.3	59.1
1116	62.6	67.5	63.8	59.6
1117	60.0	63.4	62.2	57.8
1118	60.5	63.4	62.1	58.3
1119	60.5	62.9	62.0	58.9
<u>Non-Highway Noise</u> 11:15-11:16 Non-Highway Noise				



# Dulles Toll Road

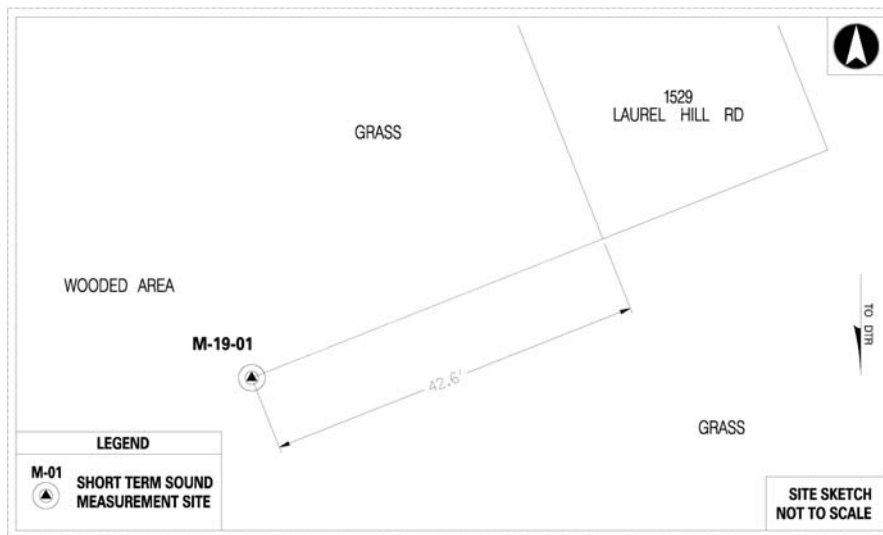
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-19-01 1529 LAUREL HILL ROAD	
DATE	08/31/2010
START TIME	1045
END TIME	1105
TRAFFIC MONITORING	TMS 15
Leq	58.1
Notes:	



Table C.52 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1045	58.1	59.9	59.4	56.1
1046	58.1	60.3	59.6	56.4
1047	58.7	61.1	60.6	56.0
1048	58.0	61.6	59.4	56.2
1049	56.5	58.5	57.5	55.4
1050	58.7	62.0	60.5	56.5
1051	58.0	62.1	59.4	55.6
1052	57.6	58.9	58.5	55.4
1053	57.5	58.9	58.1	56.7
1054	58.2	60.4	59.7	56.7
1055	58.0	59.4	58.8	57.1
1056	58.2	60.3	59.6	56.7
1057	58.8	61.3	60.9	57.3
1058	58.2	60.2	59.4	56.5
1059	56.8	58.8	58.3	53.5
1100	58.7	60.4	60.0	56.3
1101	58.9	62.8	60.5	57.4
1102	58.7	62.5	60.9	55.5
1103	56.7	58.3	57.8	55.5
1104	58.3	66.6	59.2	56.7
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

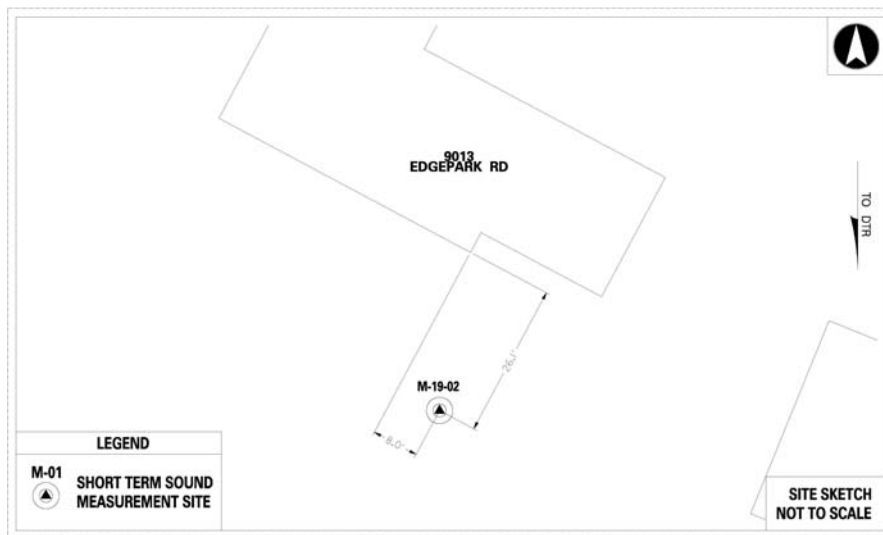
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-19-02 9013 EDGE PARK ROAD	
DATE	08/20/2010
START TIME	1100
END TIME	1120
TRAFFIC MONITORING	TMS 16
Leq	56.2
Notes:	



Table C.53 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1100	53.5	58.7	56.0	50.9
1101	55.3	59.9	58.4	51.7
1102	55.0	59.9	56.7	51.8
1103	55.5	61.2	58.6	52.3
1104	56.5	59.9	58.8	53.3
1105	56.7	60.8	59.0	54.1
1106	60.4	67.1	64.9	55.0
1107	57.8	61.2	60.0	54.8
1108	55.3	57.7	56.9	53.3
1109	56.6	61.3	59.3	53.2
1110	59.4	65.9	63.6	54.3
1111	56.8	66.3	57.9	51.7
1112	56.3	63.2	58.6	52.9
1113	55.9	60.1	58.3	52.5
1114	56.0	59.3	57.8	52.9
1115	54.1	57.5	55.7	52.4
1116	52.2	54.9	53.7	49.9
1117	52.3	54.1	53.4	50.8
1118	52.3	57.2	53.4	50.7
1119	54.9	59.1	57.0	52.8
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

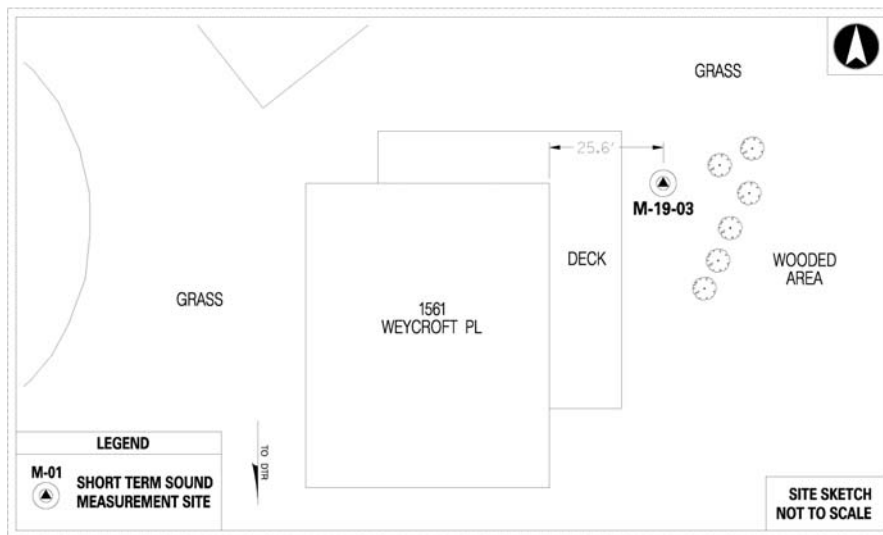
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-19-03 1561 WEYCROFT PLACE	
DATE	08/20/2010
START TIME	1030
END TIME	1050
TRAFFIC MONITORING	TMS 17
Leq	55.4
Notes:	



Table C.54 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1030	54.4	56.2	55.7	52.9
1031	54.7	57.4	56.3	53.1
1032	56.9	60.6	58.5	53.9
1033	55.5	59.2	57.7	52.9
1034	56.8	64.1	59.7	52.3
1035	55.3	58.7	57.3	52.9
1036	54.8	57.6	56.3	53.3
1037	55.6	59.5	58.3	52.1
1038	54.5	57.4	56.2	52.6
1039	55.5	62.9	57.2	51.9
1040	57.4	63.3	61.3	51.7
<del>1041</del>	<del>60.3</del>	<del>67.4</del>	<del>64.0</del>	<del>52.7</del>
1042	54.9	57.5	56.7	52.4
1043	54.7	60.1	56.7	51.4
1044	55.9	63.2	59.0	51.2
1045	54.3	59.2	56.9	51.2
1046	53.5	60.6	55.2	49.3
1047	55.3	61.1	57.0	51.9
1048	55.2	58.7	57.2	52.3
1049	55.6	59.2	58.0	52.3
<i>Non-Highway Noise</i> 10:41 Neighbor sawing				



# Dulles Toll Road

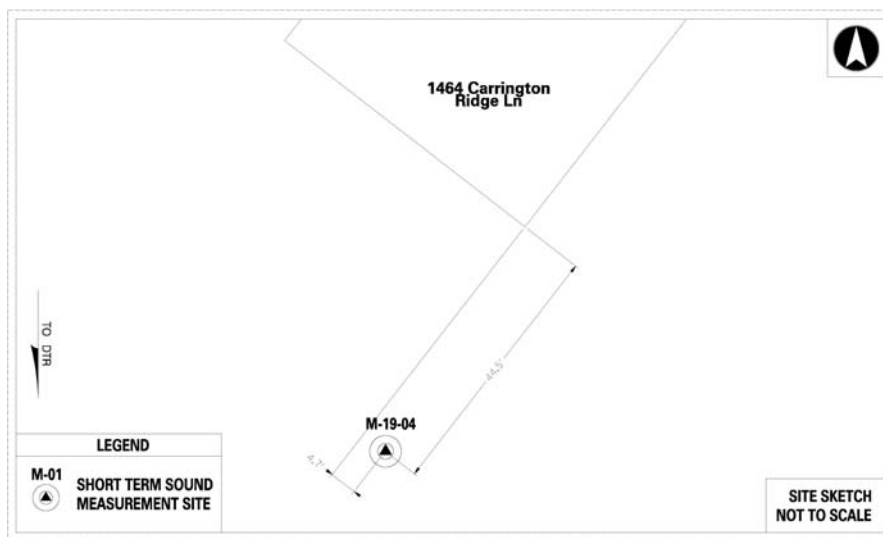
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-19-04 1464 CARRINGTON RIDGE LANE	
DATE	08/20/2010
START TIME	1030
END TIME	1050
TRAFFIC MONITORING	TMS 17
Leq	58.5
Notes:	



Table C.55 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1030	58.4	62.4	59.8	56.5
1031	58.7	64.3	60.2	57.1
1032	59.3	63.0	60.9	57.3
1033	58.6	61.8	60.3	56.0
1034	58.0	60.1	59.3	56.5
1035	58.6	61.4	59.7	56.7
1036	59.0	61.9	60.6	57.7
1037	58.9	60.9	60.0	57.3
1038	59.9	66.1	61.4	57.8
1039	58.1	60.0	59.3	56.4
1040	58.2	60.7	59.6	56.4
1041	57.7	61.8	59.3	55.6
1042	58.8	60.5	59.7	57.6
1043	59.5	61.8	60.8	58.0
1044	57.8	60.6	58.7	56.3
1045	57.8	60.9	59.1	56.4
1046	57.3	60.5	58.6	56.0
1047	57.7	59.9	58.5	56.2
1048	58.8	60.9	60.1	57.2
1049	57.6	59.5	58.6	56.6
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-19-05 8800 JARRETT VALLEY DRIVE	
DATE	08/20/2010
START TIME	0900
END TIME	0920
TRAFFIC MONITORING	TMS 18
Leq	55.7
Notes:	



Looking Northeast towards Church

Table C.56 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0900	57.3	64.2	61.6	52.8
0901	54.4	57.9	55.2	53.4
0902	55.6	67.6	57.2	53.8
0903	54.5	58.7	55.8	53.5
0904	55.0	58.5	56.5	53.3
0905	56.6	62.6	58.5	52.9
0906	55.6	59.7	56.7	54.2
<del>0907</del>	<del>68.0</del>	<del>74.2</del>	<del>72.2</del>	<del>56.4</del>
<del>0908</del>	<del>63.8</del>	<del>72.3</del>	<del>69.3</del>	<del>57.7</del>
0909	56.3	62.6	58.0	53.4
0910	54.5	57.8	56.2	52.6
0911	56.9	64.1	60.3	51.6
0912	55.7	58.6	57.3	53.8
0913	55.5	60.5	58.1	52.4
0914	55.1	59.5	56.4	53.1
0915	54.9	60.1	56.6	53.2
<del>0916</del>	<del>60.0</del>	<del>67.7</del>	<del>65.2</del>	<del>54.7</del>
0917	55.7	61.5	57.9	52.0
<del>0918</del>	<del>65.7</del>	<del>80.4</del>	<del>67.4</del>	<del>53.6</del>
0919	55.8	65.4	56.9	53.1

*Non-Highway Noise*  
 9:07-9:08 Bus turning around on local road  
 9:16, 9:18 Garbage truck on local road



# Dulles Toll Road

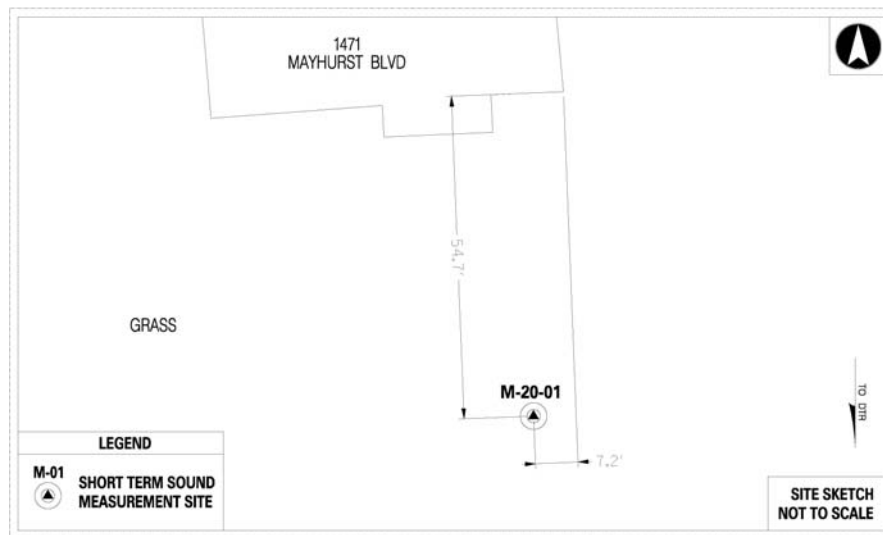
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-20-01 1471 MAYHURST BOULEVARD	
DATE	08/20/2010
START TIME	0900
END TIME	0920
TRAFFIC MONITORING	TMS 18
Leq	50.8
Notes:	



Table C.57 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0900	49.0	52.9	50.6	47.2
0901	48.6	52.0	50.1	46.9
0902	50.4	53.7	51.7	48.7
0903	51.6	58.1	54.2	48.9
0904	48.7	52.5	50.6	46.5
0905	53.5	59.3	56.2	49.0
0906	49.3	57.1	51.1	47.5
0907	49.0	52.0	50.4	47.8
0908	56.4	62.1	59.5	51.5
0909	51.8	55.2	53.7	49.4
0910	48.4	52.9	49.8	47.1
0911	51.5	57.2	53.8	48.5
0912	49.2	52.8	50.9	47.1
0913	51.9	58.9	55.9	46.7
0914	49.2	53.4	50.5	47.6
0915	48.6	53.3	50.9	46.9
0916	47.9	54.1	49.8	46.3
0917	51.2	56.2	53.6	47.7
0918	48.5	50.9	49.6	47.2
0919	49.1	51.6	50.2	48.0
<i>Non-Highway Noise</i> none				





# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

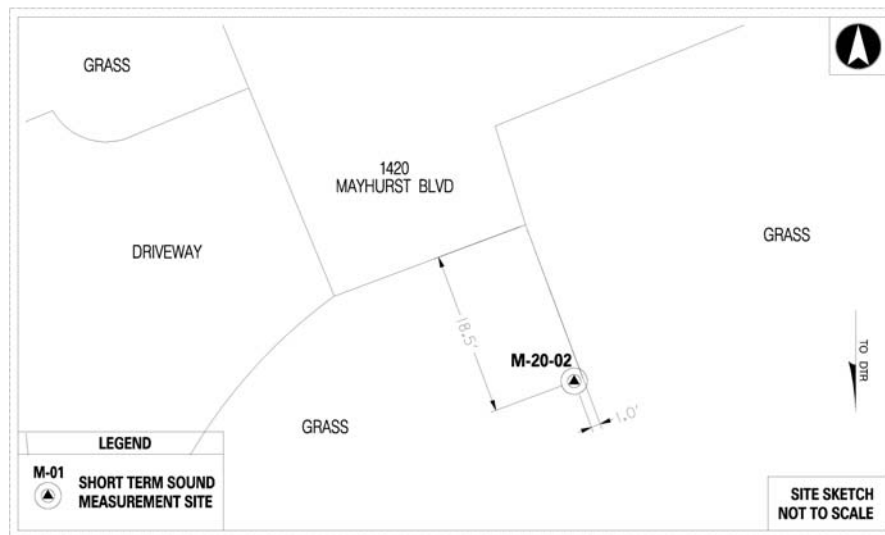
### Appendix C: Sound Measurement Data

<b>M-20-02 1420 MAYHURST BOULEVARD</b>	
DATE	08/20/2010
START TIME	0900
END TIME	0920
TRAFFIC MONITORING	TMS 18
Leq	54.7
Notes:	



Table C.58 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0900	55.5	59.6	57.7	51.3
<del>0901</del>	<del>57.5</del>	<del>62.4</del>	<del>60.3</del>	<del>53.8</del>
0902	54.6	57.7	57.0	52.0
0903	56.5	63.6	61.1	51.2
0904	55.3	62.8	57.2	52.3
0905	54.2	57.4	56.8	51.4
0906	51.7	55.3	53.8	49.9
0907	55.1	58.9	57.8	51.4
0908	55.4	59.1	57.7	52.8
0909	56.4	62.8	60.6	51.1
0910	56.2	64.4	59.2	50.5
0911	54.9	61.5	57.6	50.5
0912	53.5	56.4	55.6	51.3
0913	55.1	63.1	58.0	50.6
0914	54.7	61.7	58.6	50.5
0915	53.0	58.0	55.9	49.1
0916	52.7	56.0	55.4	49.4
0917	53.8	57.7	55.9	51.0
<del>0918</del>	<del>57.6</del>	<del>62.3</del>	<del>62.0</del>	<del>50.6</del>
0919	53.7	56.6	56.1	50.5

*Non-Highway Noise*  
 9:01 Car on local road  
 9:18 Car on local road



# Dulles Toll Road

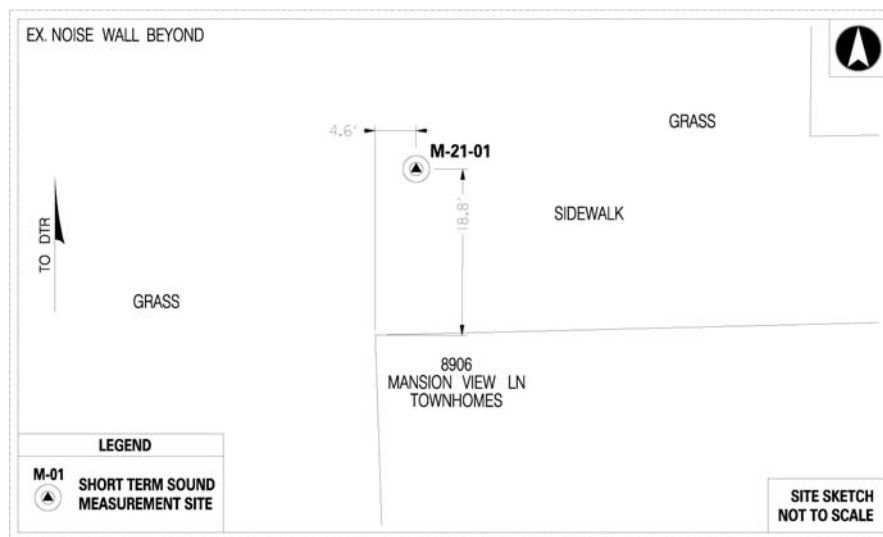
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-21-01 8906 MANSION VIEW COURT	
DATE	08/20/2010
START TIME	0940
END TIME	1000
TRAFFIC MONITORING	TMS 19
Leq	62.2
Notes:	



Table 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0940	62.9	65.5	64.4	60.7
0941	63.0	65.6	64.2	62.0
0942	61.5	63.5	62.6	60.1
0943	62.9	65.1	64.2	61.6
0944	62.4	65.0	64.1	59.3
0945	61.2	64.3	62.3	59.9
0946	61.6	64.3	62.7	60.1
0947	62.5	65.7	64.6	59.5
0948	61.0	63.3	62.2	59.5
0949	62.5	65.5	64.0	61.1
0950	61.9	65.0	63.5	60.0
0951	62.8	65.7	64.2	60.4
0952	63.0	65.6	64.6	61.2
0953	62.3	69.3	63.6	61.1
0954	62.5	65.1	63.9	60.9
0955	61.6	64.8	63.0	59.4
0956	61.7	66.1	63.3	59.9
0957	62.3	65.1	63.7	60.7
0958	61.6	63.8	63.1	59.7
0959	61.8	64.5	62.7	60.6
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

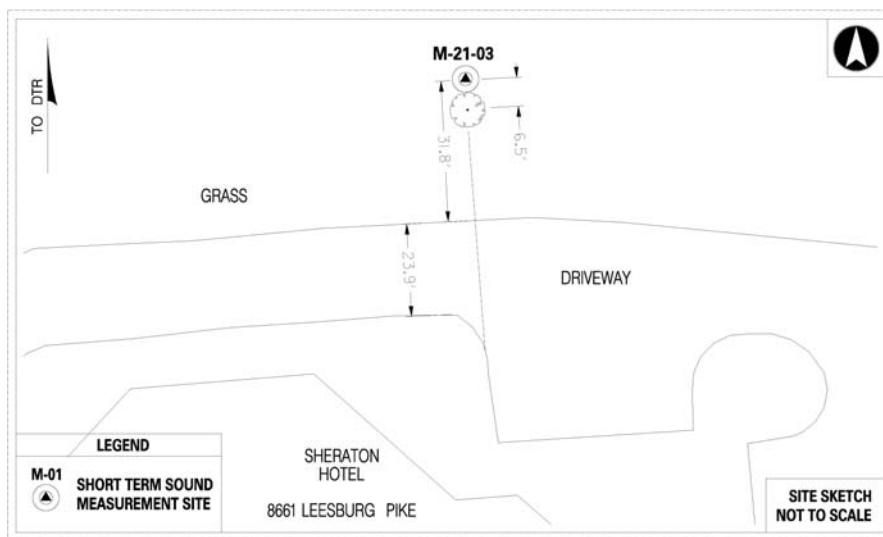
### Appendix C: Sound Measurement Data

M-21-03 8661 LEESBURG PIKE	
DATE	08/20/2010
START TIME	0940
END TIME	1000
TRAFFIC MONITORING	TMS 19
Leq	62.7
Notes:	



Table C.60 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0940	64.9	70.3	67.6	60.7
0941	62.7	68.4	64.4	59.7
0942	59.8	64.1	61.9	57.3
0943	64.5	69.9	67.3	60.7
0944	64.0	68.7	66.2	61.2
0945	62.1	66.8	64.1	59.7
0946	61.6	65.5	63.5	58.6
0947	68.7	79.6	71.7	58.7
0948	63.3	68.3	65.2	60.3
0949	63.7	69.4	66.6	59.9
0950	63.2	67.5	65.4	59.1
0951	63.9	68.7	65.9	60.4
0952	63.0	68.9	65.4	60.4
0953	63.0	68.4	66.0	59.3
0954	62.2	65.3	63.6	59.7
0955	60.5	65.1	62.9	56.8
0956	61.9	65.0	63.5	59.1
0957	62.1	66.1	63.9	58.7
0958	62.5	65.9	64.5	60.0
0959	61.6	64.4	63.4	58.8

*Non-Highway Noise*  
 9:40 Lawnmower  
 9:47 Construction Noise



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

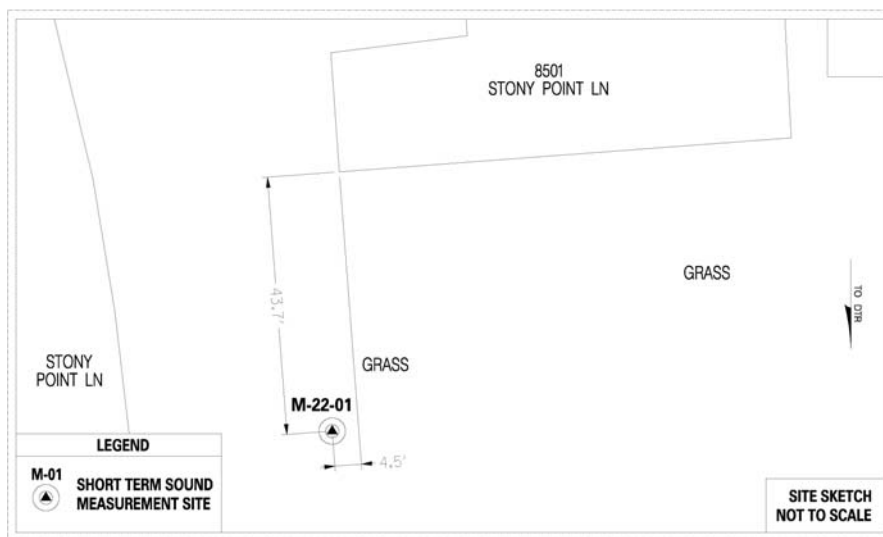
### Appendix C: Sound Measurement Data

M-22-01 8501 STONY POINT LANE	
DATE	08/20/2010
START TIME	1310
END TIME	1330
TRAFFIC MONITORING	TMS 20
Leq	52.1
Notes:	



Table C.61 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
<del>1310</del>	<del>0-0</del>	<del>0-0</del>	<del>0-0</del>	<del>0-0</del>
1311	51.6	55.0	52.6	50.3
1312	52.1	55.5	53.6	50.6
1313	52.7	55.6	54.2	51.3
1314	52.5	56.5	54.1	50.8
1315	53.3	58.0	54.6	51.6
1316	52.0	55.0	53.5	50.1
1317	50.1	53.4	51.3	49.0
1318	51.3	54.8	53.7	48.4
1319	52.3	58.2	54.5	49.6
1320	52.5	58.7	54.3	50.8
1321	51.2	54.3	53.0	49.6
1322	52.4	56.9	54.8	49.5
1323	53.1	56.5	54.6	50.8
1324	52.0	54.3	53.2	50.6
1325	51.6	53.7	52.7	50.4
1326	51.5	55.6	53.1	49.6
1327	52.8	55.5	54.3	51.2
1328	51.4	57.3	54.3	48.1
1329	51.5	56.0	52.4	50.1

*Non-Highway Noise*  
1310: Invalid Measurement



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

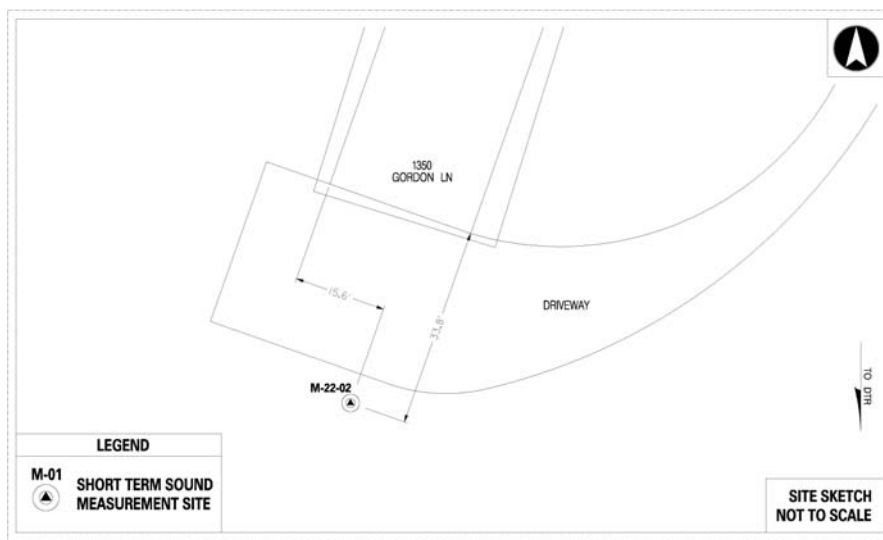
### Appendix C: Sound Measurement Data

M-22-02 1350 GORDON LANE	
DATE	08/20/2010
START TIME	1310
END TIME	1330
TRAFFIC MONITORING	TMS 20
Leq	58.1
Notes:	



Table C.62 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1310	0-0	0-0	0-0	0-0
1311	58.3	61.6	59.3	57.3
1312	57.1	59.6	58.5	55.8
1313	58.7	63.8	60.0	56.9
1314	57.8	64.7	59.2	55.8
1315	57.5	60.5	58.6	55.9
1316	58.3	65.1	60.9	55.5
1317	56.0	58.0	57.0	54.6
1318	55.5	58.4	57.0	53.1
1319	58.2	61.8	59.3	57.3
1320	58.1	60.9	59.4	56.5
1321	57.3	60.8	58.4	55.8
1322	62.1	72.3	64.9	56.6
1323	58.7	61.6	59.9	57.3
1324	59.5	64.7	61.3	57.2
1325	58.2	63.0	59.8	56.8
1326	56.8	59.3	57.9	55.4
1327	57.3	59.3	58.2	56.2
1328	56.3	58.8	57.9	53.2
1329	57.4	60.1	58.4	56.3

*Non-Highway Noise*  
1310: Invalid Measurement



# Dulles Toll Road

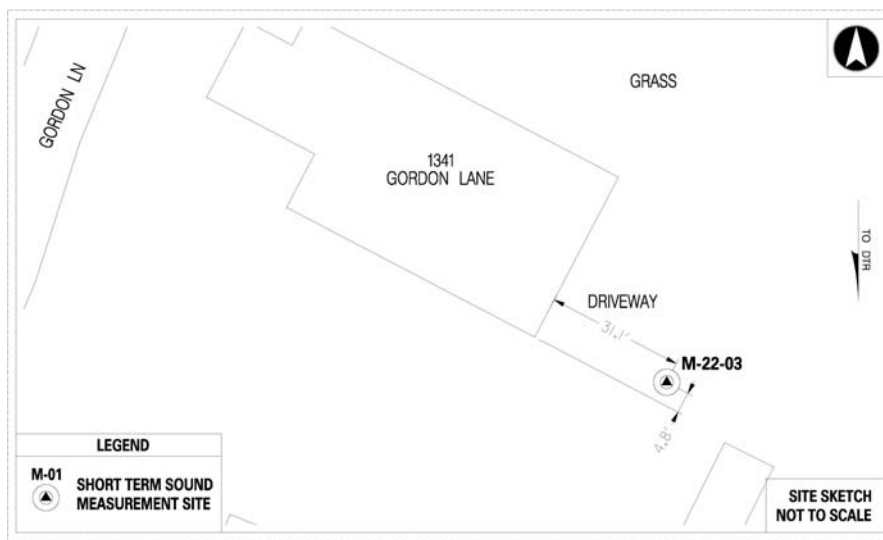
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-22-03 1341 GORDON LANE	
DATE	08/20/21
START TIME	1355
END TIME	1415
TRAFFIC MONITORING	TMS 21
Leq	54.8
Notes:	



Table C.63 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1355	54.7	59.1	56.0	52.7
1356	54.2	56.4	55.4	53.1
1357	54.8	57.2	55.6	53.8
1358	55.5	58.9	57.0	54.5
1359	54.9	56.6	55.7	53.7
1400	55.7	60.1	56.9	54.3
1401	55.0	58.0	56.9	53.5
1402	55.0	57.2	55.9	54.1
1403	55.1	57.2	56.0	54.1
1404	56.3	59.8	57.9	55.0
1405	54.9	60.8	56.2	53.4
1406	55.4	57.8	56.8	53.6
1407	54.5	56.0	55.2	53.8
1408	53.2	55.1	54.1	52.5
1409	53.8	56.2	55.2	52.8
1410	54.6	56.9	55.4	53.8
1411	54.5	58.5	55.9	52.5
1412	53.8	55.8	54.8	52.8
1413	54.5	56.5	55.5	53.6
1414	54.4	61.5	55.2	53.4
<u>Non-Highway Noise</u> none				



# Dulles Toll Road

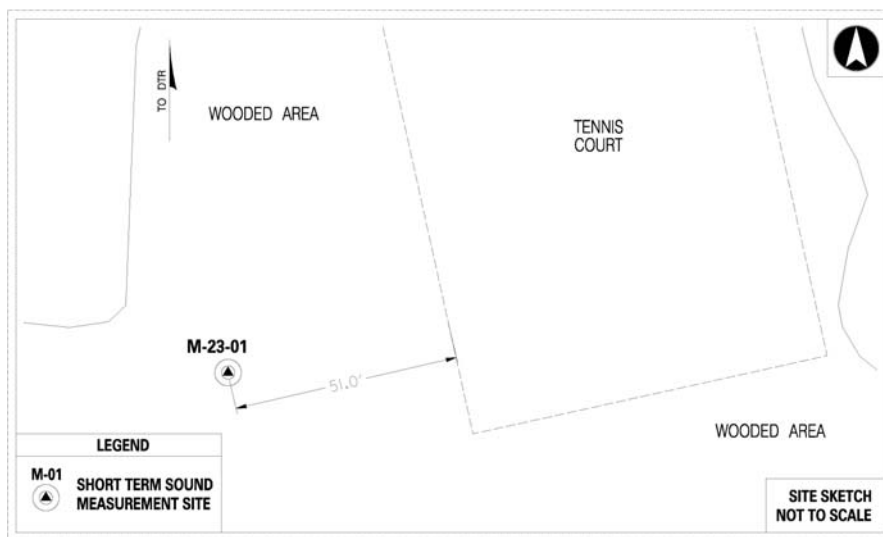
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-23-01 8352 GREENSBORO DRIVE	
DATE	08/20/2010
START TIME	1315
END TIME	1335
TRAFFIC MONITORING	TMS 20
Leq	55.8
Notes:	



Table C.64 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1315	54.1	60.9	55.5	52.8
1316	55.4	59.5	57.9	52.5
1317	56.0	59.3	58.0	53.6
1318	57.4	63.7	61.3	52.9
1319	56.3	65.8	59.0	52.9
1320	57.8	70.9	58.2	53.6
1321	55.8	68.0	55.7	53.2
1322	56.4	63.2	58.0	54.1
1323	54.2	56.6	54.9	53.3
1324	55.0	58.4	56.5	53.3
1325	55.2	57.2	56.0	54.2
1326	54.1	56.8	55.2	53.1
1327	57.1	63.1	60.2	53.7
1328	56.2	62.2	59.3	53.0
1329	54.5	57.0	55.2	53.5
1330	55.2	58.7	56.9	54.0
1331	55.3	63.0	57.1	53.5
<del>1332</del>	<del>60.9</del>	<del>65.2</del>	<del>63.3</del>	<del>56.1</del>
1333	56.8	61.1	58.6	55.1
1334	54.2	62.5	55.8	52.5
<i>Non-Highway Noise</i> 13:32 Siren				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

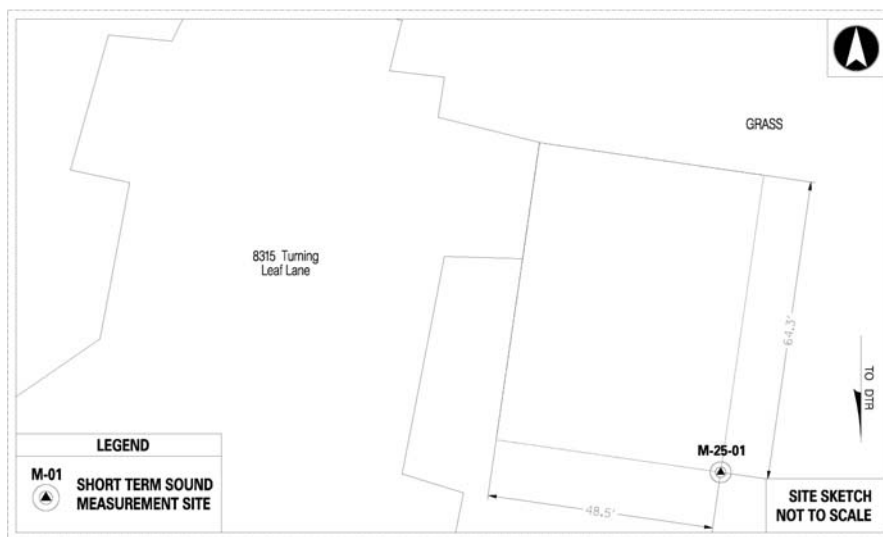
### Appendix C: Sound Measurement Data

M-25-01 8315 TURNING LEAF LANE	
DATE	08/20/2010
START TIME	1355
END TIME	1415
TRAFFIC MONITORING	TMS 21
Leq	61.5
Notes:	



Table 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1355	0-0	0-0	0-0	0-0
1356	58.9	61.8	60.6	56.9
1357	61.5	65.5	64.5	58.3
1358	62.6	66.0	64.1	60.0
1359	63.3	65.2	64.3	62.5
1400	62.6	64.5	63.4	61.8
1401	61.6	64.2	63.0	60.2
1402	61.2	64.3	62.7	59.6
1403	60.8	63.3	62.2	58.7
1404	62.0	65.0	63.8	59.6
1405	61.1	63.3	62.1	59.9
1406	61.4	63.3	62.4	60.5
1407	61.5	64.1	62.7	59.9
1408	61.4	63.4	62.4	60.1
1409	60.4	62.7	61.7	59.1
1410	60.7	63.2	61.6	59.7
1411	62.5	67.9	64.4	60.3
1412	61.5	64.0	62.7	59.5
1413	61.6	63.7	62.5	60.6
1414	60.1	63.6	61.5	58.5

*Non-Highway Noise*  
1355: Invalid Measurements





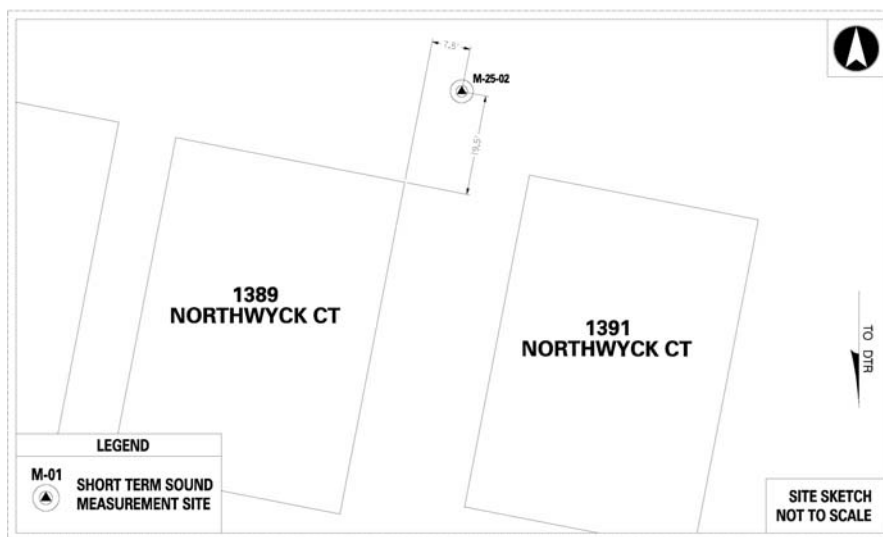
# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

<b>M-25-02 1391 NORTHWYCK COURT</b>	
DATE	08/20/2010
START TIME	1425
END TIME	1445
TRAFFIC MONITORING	TMS 22
Leq	57.9
Notes:	

Table C.66 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1425	57.7	61.0	58.7	56.4
1426	57.3	59.3	58.1	56.4
1427	57.7	59.4	58.6	56.9
1428	56.9	58.7	57.8	55.6
1429	57.2	59.5	58.2	56.1
1430	57.1	59.5	58.4	55.8
1431	56.9	59.2	57.9	55.3
1432	57.4	59.8	58.5	56.4
1433	58.4	61.5	59.4	57.4
1434	57.1	59.0	57.9	56.0
1435	57.6	61.7	59.7	56.2
1436	57.6	59.5	58.4	56.7
1437	56.9	59.1	58.1	55.5
1438	57.5	61.7	58.3	56.5
1439	58.4	62.9	59.7	56.9
1440	59.1	61.2	60.1	58.3
1441	59.4	61.9	60.9	57.8
1442	59.1	62.6	60.4	58.0
1443	58.0	60.3	58.7	57.3
1444	58.4	59.9	59.1	57.7
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-26-01 1337 MACBETH STREET	
DATE	08/20/2010
START TIME	1425
END TIME	1445
TRAFFIC MONITORING	TMS 22
Leq	56.1
Notes:	



Table C.67 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1425	55.2	57.4	56.0	54.3
1426	54.8	56.3	55.7	54.0
1427	55.5	59.1	56.1	54.8
1428	54.9	57.3	55.7	53.9
1429	55.2	57.6	55.8	54.6
1430	55.0	56.9	55.7	54.3
1431	54.9	56.6	55.8	53.8
1432	54.8	57.2	55.5	53.9
1433	55.7	58.5	56.6	54.8
1434	54.9	56.8	55.7	53.9
1435	56.1	60.4	57.8	54.2
1436	55.6	57.3	56.3	54.4
1437	54.9	56.5	55.7	53.4
1438	54.1	55.9	55.0	53.2
1439	54.0	57.4	55.9	52.7
1440	54.7	56.5	55.3	54.0
1441	56.0	58.9	58.3	54.7
1442	59.1	62.1	61.2	56.9
1443	60.1	62.9	61.9	57.6
1444	59.0	63.9	62.4	56.5
<u>Non-Highway Noise</u> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

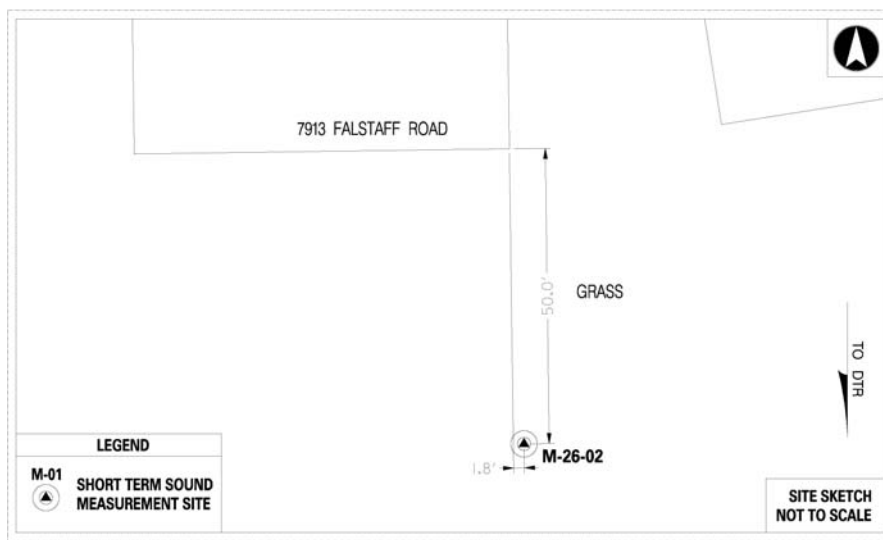
### Appendix C: Sound Measurement Data

M-26-02 7913 FALSTAFF ROAD	
DATE	08/26/2010
START TIME	0955
END TIME	1015
TRAFFIC MONITORING	TMS 23
Leq	61.6
Notes:	



Table 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0955	61.7	62.9	62.5	60.9
0956	61.4	63.9	62.4	60.3
0957	61.9	65.1	64.1	58.2
0958	60.6	62.2	61.9	58.0
0959	61.2	62.6	62.1	60.4
1000	61.8	63.4	62.7	61.3
1001	61.9	63.5	63.1	60.5
1002	61.3	64.8	63.2	58.7
1003	61.4	63.7	62.8	58.9
1004	<del>62.0</del>	<del>63.4</del>	<del>62.7</del>	<del>61.3</del>
1005	<del>63.1</del>	<del>66.8</del>	<del>64.0</del>	<del>61.1</del>
1006	62.5	67.1	65.4	59.3
1007	62.6	64.0	63.6	61.5
1008	61.1	62.9	62.4	59.1
1009	62.7	66.4	65.2	60.7
1010	61.8	63.9	62.8	60.8
1011	60.6	63.4	61.8	59.1
1012	<del>64.4</del>	<del>71.0</del>	<del>69.2</del>	<del>58.0</del>
1013	<del>63.0</del>	<del>66.1</del>	<del>64.6</del>	<del>61.7</del>
1014	<del>61.7</del>	<del>62.6</del>	<del>62.5</del>	<del>62.0</del>

*Non-Highway Noise*  
 10:04-10:05 Guy on Ladder  
 10:12-10:14 Sirens



# Dulles Toll Road

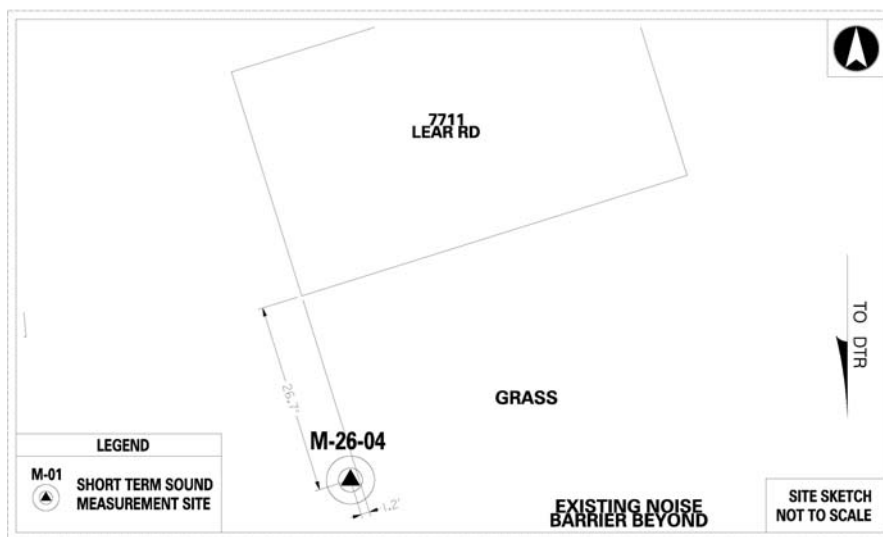
## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

M-26-04 7711 LEAR ROAD	
DATE	08/26/2010
START TIME	1025
END TIME	1045
TRAFFIC MONITORING	TMS 24
Leq	57.8
Notes:	



Table C.69 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1025	57.9	60.5	59.5	56.7
1026	57.3	59.0	58.5	56.2
1027	57.5	60.3	59.0	56.0
1028	57.1	60.6	58.7	55.6
1029	58.5	63.9	60.7	55.7
1030	57.1	59.5	58.4	55.8
1031	57.4	59.0	58.6	55.9
1032	58.2	60.8	59.2	57.0
1033	58.5	61.1	59.8	57.1
1034	56.9	59.1	58.2	56.0
1035	57.3	60.5	58.9	55.4
1036	57.7	60.8	59.8	55.6
1037	59.2	63.6	62.8	56.5
1038	57.6	59.7	59.1	56.3
1039	57.7	60.7	59.1	56.5
1040	58.8	63.4	60.5	56.7
1041	57.4	59.3	58.6	56.2
1042	58.1	60.9	60.2	56.3
1043	57.2	60.6	58.2	56.2
1044	58.1	58.2	58.2	57.1
<i>Non-Highway Noise</i> none				



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

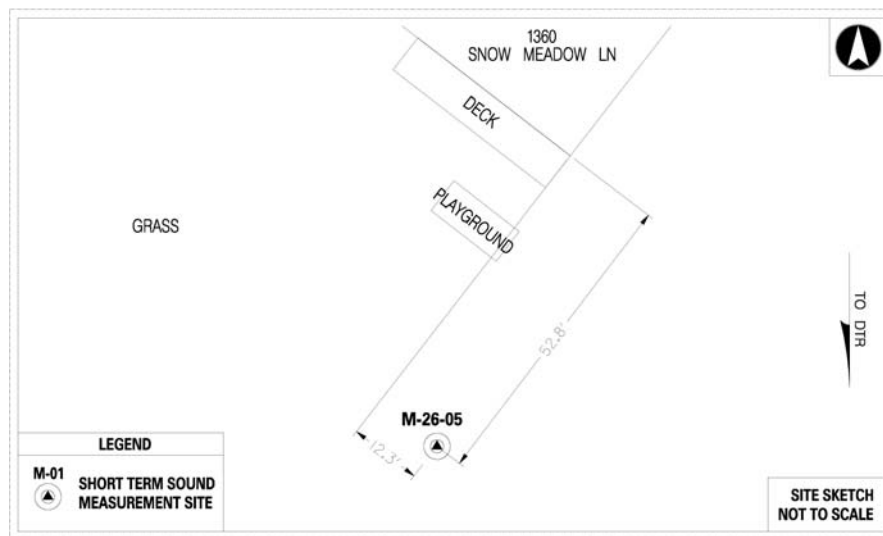
### Appendix C: Sound Measurement Data

M-26-05 1360 SNOW MEADOW LANE	
DATE	08/26/2010
START TIME	1025
END TIME	1045
TRAFFIC MONITORING	TMS 24
Leq	58.5
Notes:	



Table C.70 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1025	57.6	60.5	59.3	55.9
1026	57.0	60.9	58.0	55.4
1027	56.9	60.4	58.3	55.3
1028	56.6	59.2	58.3	54.7
1029	56.9	59.8	58.6	55.1
1030	56.6	61.1	57.4	55.4
1031	57.0	59.3	58.0	56.0
1032	57.2	59.8	58.4	55.9
1033	58.4	60.7	59.9	56.7
1034	58.1	60.2	59.0	57.3
1035	58.8	63.7	60.4	56.7
1036	60.6	67.9	63.2	57.0
1037	61.9	67.8	65.3	58.1
1038	61.3	66.9	64.4	58.0
1039	60.1	63.9	61.7	57.2
1040	59.3	62.5	61.2	57.1
1041	59.5	62.7	61.4	57.0
1042	58.0	61.7	60.0	56.4
1043	59.0	61.6	60.4	57.3
1044	59.0	62.4	61.5	56.9

*Non-Highway Noise*  
10:37-10:38 Cicadas



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

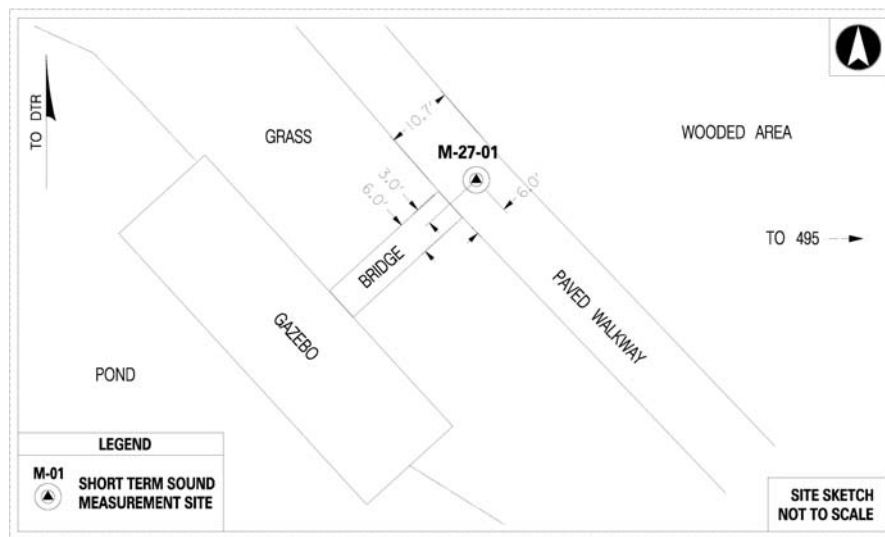
M-27-01 7950 JONES BRANCH ROAD	
DATE	08/26/2010
START TIME	0955
END TIME	1015
TRAFFIC MONITORING	TMS 23
Leq	63.5
Notes:	



Looking Northwest toward Receptor

Table C.71 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
0955	65.7	71.5	68.9	62.7
0956	64.5	68.4	66.5	62.9
0957	64.2	68.4	65.4	62.7
0958	63.4	66.3	64.3	61.9
0959	63.3	67.2	63.9	61.8
1000	73.0	77.8	76.4	63.9
1001	75.0	77.9	76.4	73.1
1002	75.6	80.3	77.8	72.6
1003	74.1	76.5	75.7	71.9
1004	73.3	76.4	75.0	70.9
1005	71.8	75.2	73.7	69.4
1006	71.0	74.2	72.8	68.5
1007	71.1	74.3	73.0	68.6
1008	68.3	73.7	71.8	64.4
1009	62.9	67.7	65.9	59.7
1010	64.3	69.4	67.0	61.7
1011	61.4	63.6	62.8	60.1
1012	63.5	66.0	64.7	62.1
1013	75.2	84.7	80.0	63.3
1014	75.0	78.7	77.2	68.1

*Non-Highway Noise*  
 All above due to construction at interchange of I-495 and DTR. A 'bell' sound rung every 1 second for these minutes. The first 5 minutes was a good representation on the noise.



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix C: Sound Measurement Data

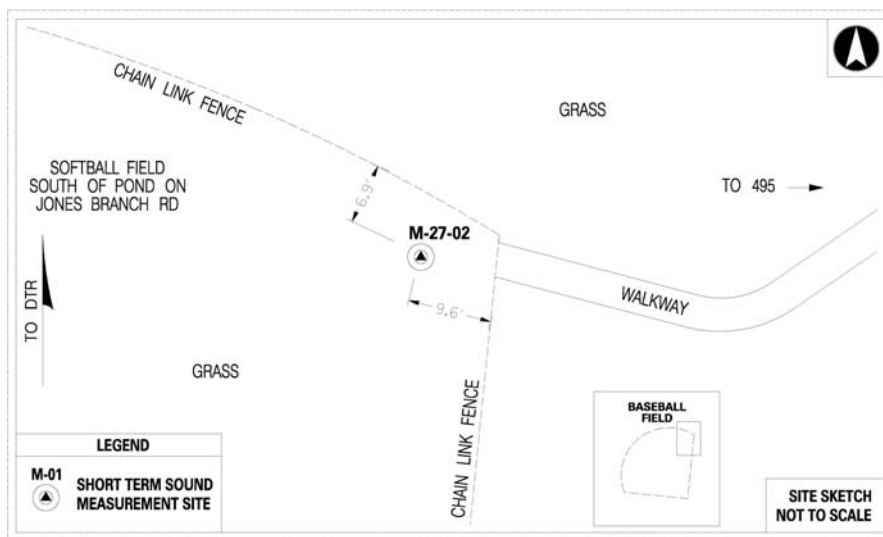
M-27-02 7950 JONES BRANCH ROAD	
DATE	08/26/2010
START TIME	1025
END TIME	1045
TRAFFIC MONITORING	TMS 24
Leq	63.8
Notes:	



Looking East toward Receptor

Table C.72 1-min Equivalent Sound Level (Leq[h]) Time History Report				
TIME	Leq dB(A)	Lmax dB(A)	L(10.0) dB(A)	L(90.0) dB(A)
1025	63.9	66.4	65.2	62.5
1026	63.8	66.9	66.2	61.7
1027	63.9	67.2	65.7	62.2
1028	63.3	67.1	64.8	60.5
1029	62.7	65.0	64.5	60.4
1030	62.9	66.0	64.9	60.9
1031	62.2	64.8	63.1	61.0
1032	63.9	68.2	65.6	61.8
1033	63.8	66.9	65.4	62.2
1034	64.0	70.2	65.5	62.2
1035	64.9	72.5	66.8	62.1
1036	64.1	68.8	66.1	61.9
1037	64.3	66.6	66.1	61.9
1038	63.6	65.4	65.0	62.3
1039	63.8	66.5	65.9	62.3
1040	63.2	65.9	64.8	61.1
1041	63.8	68.7	66.3	61.3
1042	64.4	67.7	65.6	62.6
<del>1043</del>	<del>66.8</del>	<del>69.8</del>	<del>69.3</del>	<del>65.0</del>
1044	63.9	68.3	66.2	61.8

*Non-Highway Noise*  
10:43 Vehicle on local road



# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix D** Traffic Monitoring Sessions

August 2012



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

<b>Table D.1 Traffic Monitoring Session and Weather Data Summary</b>								
<b>Traffic Monitoring Session</b>	<b>Date</b>	<b>Interval</b>	<b>Duration</b>	<b>Temp (degree F)</b>	<b>Relative Humidity (%)</b>	<b>Wind Speed (mph)</b>	<b>Wind Direction<sup>1</sup></b>	<b>Conditions</b>
TMS01	9/1/2010	1310-1330	20-min	92	38	Calm	Calm	Clear
TMS02	9/1/2010	1155-1215	20-min	89.1	46	3.5	Variable	Partly cloudy
TMS03	9/1/2010	1115-1135	20-min	87	50	Calm	Calm	Clear
TMS04	9/1/2010	1030-1050	20-min	84.9	57	Calm	Calm	Clear
TMS05	8/26/2010	1150-1210	20-min	81	44%	10.4	NNW	Mostly cloudy
TMS06	9/1/2010	0935-0955	20-min	82	58	Calm	Calm	Clear
TMS07	8/26/2010	1345-1405	20-min	82	42%	6.9	Variable	Mostly cloudy
TMS08	8/26/2010	1430-1450	20-min	84	37	13.8	WNW	Scattered Clouds
TMS09	8/26/2010	1510-1530	20-min	84	37	13.8	WNW	Scattered Clouds
TMS10	8/31/2010	1200-1220	20-min	89.1	38	Calm	Calm	Clear
TMS11	8/31/2010	1230-1250	20-min	91	34	Calm	Calm	Clear
TMS12	8/31/2010	1300-1320	20-min	91	34	Calm	Calm	Clear
TMS13	8/31/2010	0920-0940	20-min	80.1	54	3.5	NW	Clear
TMS14	8/31/2010	1000-1020	20-min	80.1	54	3.5	NW	Clear
TMS15	8/31/2010	1045-1105	20-min	86	46	Calm	Calm	Clear
TMS16	8/20/2010	1100-1120	20-min	84	53	4.6	NW	Partly cloudy
TMS17	8/20/2010	1030-1050	20-min	84	53	4.6	NW	Partly cloudy
TMS18	8/20/2010	0900-0920	20-min	75.9	74	3.5	NNW	Partly cloudy
TMS19	8/20/2010	0940-1000	20-min	81	62	Calm	Calm	Partly cloudy
TMS20	8/20/2010	1315-1335	20-min	88.1	47	5.1	NNW	Mostly cloudy
TMS21	8/20/2010	1355-1415	20-min	89.1	46	4.6	N	Mostly cloudy
TMS22	8/20/2010	1425-1445	20-min	88	48	3.5	S	Mostly cloudy
TMS23	8/26/2010	0955-1015	20-min	75.9	67	12.7	NW	Mostly cloudy
TMS24	8/26/2010	1025-1045	20-min	78.1	56	9.2	NW	Mostly cloudy

1. Wind direction is defined as the direction the wind is blowing FROM. For example, if the Wind Direction is North, then the wind is blowing FROM the North and TO the South.

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

<b>Table D.2 Volume Summary – Traffic Monitoring Session 1</b>							
<b>Limits</b>		<b>Date</b>		<b>Interval</b>		<b>Duration</b>	
Dulles Toll Road		9/1/2010		1310-1330		20-min	
<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB DTR Inner Lanes After Dulles Green Merge	912	15	48	0	0	975	50
EB DTR Inner Lanes Before On Ramp from Sully Road	1239	6	90	6	3	1344	56
EB DTR Inner Lanes Before Dulles Green Merge	1635	15	96	6	3	1755	50*
EB DTR Outer Lanes After Dulles Green Merge	1161	27	69	6	3	1266	49
EB DTR Outer Lanes After Off Ramp to Centerville Road	894	18	66	0	3	981	49
WB DTR Inner Lanes	900	39	48	3	9	999	62
WB DTR Outer Lanes	954	45	105	6	3	1113	46
EB DIAAH Inner Lane	381	3	41	2	0	427	55
EB DIAAH Outer Lane	381	3	41	2	0	427	55
WB DIAAH Inner Lane	602	11	18	3	3	637	63
WB DIAAH Outer Lane	602	11	18	3	3	637	63
EB Sunrise Valley	312	9	0	3	0	324	41
WB Sunrise Valley	405	120	6	0	3	534	40
Dulles Green to EB DTR	438	36	21	0	0	495	52
Rt. 28 Ramp to EB DTR	396	9	6	0	0	411	46
WB On Ramp from Rt. 28	534	3	18	6	0	561	46
EB and WB on Ramps combined from Rt. 28	930	12	24	6	0	972	46
*Speeds and Traffic Counts taken from TMS02							
†Speeds from TMS02							

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		9/1/2010			1155 – 1215		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes After Dulles Green Merge	912	15	48	0	0	975	61	
EB DTR Inner Two Lanes Before Dulles Green Merge	1902	72	105	6	0	2085	64	
EB DTR Outer Two Lanes After Off Ramp to Elden/Centerville Rd	1161	84	75	0	0	1320	66	
EB DTR Outer Two Lanes Before Off Ramp to Elden/Centerville Rd	1428	93	78	6	0	1605	66	
WB DTR Inner Two Lanes	969	9	54	3	0	1035	60	
WB DTR Outer Two Lanes After On Ramp from Elden/Centerville Rd	1185	6	75	0	3	1269	64	
WB DTR Outer Two Lanes Before On Ramp to Elden/Centerville Rd	900	3	75	0	3	981	64	
EB DIAAH Inner Lane	528	5	20	9	0	562	61	
EB DIAAH Outer Lane	528	5	20	9	0	562	61	
WB DIAAH Inner Lane	320	5	21	5	0	351	61	
WB DIAAH Outer Lane	320	5	21	5	0	351	61	
NB Sunrise Valley Drive	675	12	6	0	0	693	38	
SB Sunrise Valley Drive	405	12	6	3	0	426	38	
Dulles Green to EB DTR	438	36	21	0	0	495	52*	
NB Elden Road	1494	9	12	9	15	1539	36	
SB Elden Road	1215	1515	3	12		1245	36	
EB Off Ramp to Elden/Centerville Rd	267	9	3	6	0	285	43	
WB On Ramp from Elden/Centerville Rd	285	3	0	0	0	288	27	

\*Traffic and Speeds from TMS01

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Table D.4 Volume Summary – Traffic Monitoring Session 3							
Limits		Date		Interval		Duration	
Dulles Toll Road		9/1/2010		1115 – 1135		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB DTR Inner Two Lanes	435	12	21	3	0	471	62
EB DTR Outer Before Off Ramp to Elden/Centerville Rd	1197	45	126	3	6	1377	64
EB DTR Outer After Off Ramp to Elden/Centerville Rd	1011	30	123	0	6	1170	64
EB DTR Outer After On Ramp From Elden/Centerville Rd	1611	42	126	3	6	1788	64
WB DTR Inner Two Lanes	972	15	69	3	3	1062	62
WB DTR Outer Two Lanes Before Off Ramp to Elden/Centerville Rd	1434	57	78	0	3	1572	64
WB DTR Outer Two Lanes After Off Ramp to Elden/Centerville Rd	987	39	78	0	3	1107	64
WB DTR Outer Two Lanes After On Ramp from Elden/Centerville Rd	1176	45	84	0	3	1308	64
EB DIAAH Inner Lane	273	8	35	2	0	318	60
EB DIAAH Outer Lane	273	8	35	2	0	318	60
WB DIAAH Inner Lane	317	9	47	2	0	375	60
WB DIAAH Outer Lane	317	9	47	2	0	375	60
EB Worldgate Drive	414	9	6	3	0	432	23
WB Worldgate Drive Left Two Lanes	195	3	3	3	0	204	18
WB Worldgate Drive Thru Lanes and Right Turn Lane Combined	261	0	6	0	0	267	28
WB Worldgate Drive Thru Lanes	192	0	6	0	0	198	28
WB Worldgate Drive Right Turn Lane	69	0	0	0	0	69	23
WB Worldgate Drive Combined	456	3	9	3	0	471	22
SB Elden Rd	876	9	9	6	0	900	28
NB Elden Rd	1050	18	3	3	3	1077	31
EB Off Ramp to Elden/Centerville Rd	186	15	3	3	0	207	42
EB On Ramp from Elden/Centerville Rd	600	12	3	3	0	618	27
WB Off Ramp from Elden/Centerville Rd	447	18	0	0	0	465	23
WB On Ramp from Elden/Centerville Rd	189	6	6	0	0	201	25

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

<b>Table D.5 Volume Summary – Traffic Monitoring Session 4</b>							
<b>Limits</b>		<b>Date</b>		<b>Interval</b>		<b>Duration</b>	
Dulles Toll Road		9/1/2010		1030 – 1050		20-min	
<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB DTR Inner Two Lanes	1275	21	21	0	3	1320	62
EB DTR Outer Two Lanes	2781	33	90	9	3	2916	70
WB DTR Inner Two Lanes	717	0	27	6	3	753	59
WB DTR Outer Two Lanes	1458	18	141	0	3	1620	63
EB DIAAH Inner Lane	227	3	39	0	2	271	62
EB DIAAH Outer Lane	227	3	39	0	2	271	62
WB DIAAH Inner Lane	282	7	43	0	0	332	63
WB DIAAH Outer Lane	282	7	43	0	0	332	63
NB Van Buren Street	348	0	0	3	0	351	32
SB Monroe Street	357	15	3	0	3	378	32
EB Worldgate Drive Two Left Turn Lanes/Thru Lanes	153	0	0	0	0	153	25
EB Worldgate Drive Right Turn Lane	99	0	0	0	0	99	25
WB Worldgate Drive Left Lane	9	0	0	3	0	9	28
WB Worldgate Drive Right Two Lanes/ Thru Lanes	213	3	0	3	0	219	28

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Table D.6 Volume Summary – Traffic Monitoring Session 5							
Limits		Date		Interval		Duration	
Dulles Toll Road		8/26/2010		1150 – 1210		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB DTR Inner Two Lanes	792	27	21	0	3	843	61
EB DTR Outer Two Lanes Before On Ramp From Fairfax Parkway	870	69	66	0	0	1005	63
EB DTR Outer Two Lanes After On Ramp From Fairfax Parkway	1305	75	66	3	0	1449	63
WB DTR Inner Two Lanes	876	24	36	0	0	936	62
WB DTR Outer Two Lanes After Off Ramp to From Fairfax Parkway	1227	42	96	0	6	1371	62
WB DTR Outer Two Lanes After On Ramp From Fairfax Parkway	1560	51	111	3	6	1731	66
WB DTR Outer Two Lanes Before Off Ramp to Fairfax Parkway	1590	54	99	6	6	1755	66
EB DIAAH Inner Lane	304	8	32	4	0	348	59
EB DIAAH Outer Lane	304	8	32	0	0	344	63
WB DIAAH Inner Lane	300	6	48	3	3	360	64
WB DIAAH Outer Lane	303	6	42	0	0	351	62
EB On Ramp from Fairfax Parkway	435	6	0	3	0	444	28
EB Off Ramp to Fairfax Parkway	411	0	9	3	0	423	29
WB On Ramp from Fairfax Parkway	333	9	15	3	0	360	29
WB Off Ramp to Fairfax Parkway	363	12	3	6	0	384	29
NB Fairfax Parkway Ramp to EB Sunset Hills Road	381	3	6	3	0	393	26
EB Sunset Hills Road to SB Sunset Hills Road	270	21	0	3	0	294	29
NB Fairfax Parkway	1578	18	36	0	0	1632	41
SB Fairfax Parkway	1455	18	36	3	3	1515	42
NB Herndon Parkway	714	9	0	0	0	723	33
SB Herndon Parkway	720	15	3	0	3	741	30
WB Sunset Hills Road	783	6	0	0	0	789	31
EB Sunset Hills Road	879	6	0	6	0	891	34
NB Town Center Parkway / Sunset Hills Road	531	3	3	6	0	543	31
SB Town Center Parkway / Sunset Hills Road	591	12	3	3	9	618	31

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

<b>Table D.7 Volume Summary – Traffic Monitoring Session 6</b>							
<b>Limits</b>		<b>Date</b>		<b>Interval</b>		<b>Duration</b>	
Dulles Toll Road		9/1/2010		0935 – 0955		20-min	
<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB DTR Inner Two Lanes	1959	39	15	9	3	2025	65
EB DTR Outer Two Lanes Before On Ramp From Reston Parkway	1938	21	69	0	3	2031	61
EB DTR Outer Two Lanes After On Ramp From Reston Parkway	2556	21	75	0	3	2655	61
WB DTR Inner Two Lanes	1197	12	39	27	0	1275	65
WB DTR Outer Two Lanes Before Off Ramp to Reston Parkway	3438	27	117	24	5	3611	61
WB DTR Outer Two Lanes After Off Ramp to Reston Parkway	2712	27	117	24	0	2880	61
EB DIAAH Inner Lane	287	14	21	3	2	327	58
EB DIAAH Outer Lane	287	14	21	3	2	327	58
WB DIAAH Inner Lane	314	5	24	0	0	343	65
WB DIAAH Outer Lane	314	5	24	0	0	343	60
EB Off Ramp Left Turn to NB Reston Parkway	426	9	0	0	0	435	31
EB Off Ramp Right Turn to SB Reston Parkway	213	0	3	0	0	216	31
EB Off Ramp Left and Right Turn Lanes Combined to SB Reston Parkway	639	12	0	0	0	651	31
EB On Ramp from NB Reston Parkway	264	0	6	0	0	270	34
EB On Ramp from SB Reston Parkway	354	0	0	0	0	354	27
EB On Ramp from NB and SB Reston Parkway Combined	618	0	6	0	0	624	31
WB Off Ramp to Reston Parkway	771	0	0	0	6	777	31
WB On Ramp from Reston Parkway	330	6	3	0	0	339	34
EB Sunrise Valley Drive	387	6	3	0	0	396	38
WB Sunrise Valley Drive	387	6	3	0	0	396	32
NB Reston Parkway	1395	9	24	6	9	1443	35
SB Reston Parkway	927	24	18	3	3	975	37

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

<b>Table D.8 Volume Summary – Traffic Monitoring Session 7</b>							
<b>Limits</b>		<b>Date</b>		<b>Interval</b>		<b>Duration</b>	
Dulles Toll Road		8/26/2010		1345-1405		20-min	
<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB DTR Inner Two Lanes	1320	45	45	21	3	1434	62
EB DTR Outer Two Lanes Before Off Ramp to Hunter Mill Road	1776	66	51	0	0	1893	62
EB DTR Outer Two Lanes After Off Ramp to Hunter Mill Road	1608	63	39	0	0	1710	62
WB DTR Inner Two Lanes After On Ramp From Hunter Mill Road	1812	63	60	3	0	1938	65
WB DTR Inner Two Lanes Before On Ramp From Hunter Mill Road	1590	39	48	9	9	1695	64
WB DTR Outer Two Lanes	1593	63	54	6	0	1716	65
EB DIAAH Inner Lane	375	18	56	3	0	452	62
EB DIAAH Outer Lane	375	18	56	3	0	452	62
WB DIAAH Inner Lane	512	14	20	3	3	552	62
WB DIAAH Outer Lane	512	14	20	3	3	552	62
EB Off Ramp to Hunter Mill Road	168	3	12	0	0	183	36
WB On Ramp from Hunter Mill Road	219	0	6	0	0	225	25
NB Hunter Mill Road	288	9	9	0	0	306	28
SB Hunter Mill Road	309	3	12	0	0	324	31
Sunset Hills Road – West of Business Center	561	6	0	0	12	579	33
Sunset Hills Road – East of Business Center	540	12	0	0	6	558	30
NB Business Center Drive	84	0	0	0	6	90	25



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/26/2010			1430 – 1450		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	1230	9	66	36	0	1341	62	
EB DTR Outer Two Lanes Before On Ramp From Hunter Mill Road	1497	51	51	6	0	1605	60	
EB DTR Outer Two Lanes After On Ramp From Hunter Mill Road	1737	54	51	6	0	1848	60	
WB DTR Inner Two Lanes	1842	60	51	3	9	1965	66	
WB DTR Outer Two Lanes After Off Ramp To Hunter Mill Road	1677	60	90	9	9	1845	59	
WB DTR Outer Two Lanes Before Off Ramp to Hunter Mill Road	1911	63	93	9	9	2085	59	
EB DIAAH Inner Lane	513	7	21	0	0	541	45	
EB DIAAH Outer Lane	513	7	21	0	0	541	45	
WB DIAAH Inner Lane	634	6	10	1	0	651	61	
WB DIAAH Outer Lane	634	6	10	1	0	651	61	
EB Off Ramp to Hunter Mill Road	228	12	0	0	0	240	35	
EB On Ramp from Hunter Mill Road	240	3	0	0	0	243	27	
WB Off Ramp to Hunter Mill Road	234	3	3	0	0	240	22	
WB 267 on Ramp From Hunter Mill Road	249	9	9	0	3	270	24	
NB Hunter Mill Road	270	9	12	0	3	294	28	
SB Hunter Mill Road	336	6	18	0	0	360	31	
NB and SB Hunter Mill Road Combined	606	15	30	0	3	654	30	
EB and WB Sunset Hills Road Combined	447	6	0	0	9	462	28	
EB and WB Cromwell Road Combined	396183	12	9	3	6	426	36	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/26/2010			1510 – 1530		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	1401	27	21	39	0	1488	68	
EB DTR Outer Two Lanes Before On Ramp From Hunter Mill Road	1635	36	30	0	3	1704	63	
EB DTR Outer Two Lanes After On Ramp From Hunter Mill Road	1947	39	30	0	3	2019	63	
WB DTR Inner Two Lanes	2577	27	45	18	6	2673	64	
WB DTR Outer Two Lanes Before Off Ramp to Hunter Mill Road	2223	45	66	6	3	2337	61	
WB DTR Outer Two Lanes After Off Ramp to Hunter Mill Road	1938	39	66	6	0	2049	61	
EB DIAAH Inner Lane	1038	36	84	3	0	1161	53	
EB DIAAH Outer Lane <sup>1</sup>	-	-	-	-	-	-	-	
WB DIAAH Inner Lane	767	23	24	3	2	819	62	
WB DIAAH Outer Lane	767	23	24	3	2	819	64	
NB Hunter Mill Road	450	18	0	0	0	468	31	
SB Hunter Mill Road	522	30	0	0	0	552	28	
NB and SB Hunter Mill Road Combined	972	48	0	0	0	1020	30	
EB DTR On Ramp	285	6	0	0	3	294	40	
WB DTR Off Ramp	312	3	0	0	0	315	23	

<sup>1</sup> Lane Closed

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

<b>Table D.11 Volume Summary – Traffic Monitoring Session 10</b>							
<b>Limits</b>		<b>Date</b>		<b>Interval</b>		<b>Duration</b>	
Dulles Toll Road		8/31/2010		1200 – 1220		20-min	
<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB DTR Inner Two Lanes	2874	30	63	6	3	2976	64
EB DTR Outer Two Lanes	1428	51	42	9	3	1533	61
WB DTR Inner Two Lanes	1263	9	27	0	0	1299	65
WB DTR Outer Two Lanes	1593	27	117	3	3	1743	64
EB DIAAH Inner Lane	636	18	90	9	3	756	54
EB DIAAH Outer Lane <sup>1</sup>	-	-	-	-	-	-	-
WB DIAAH Inner Lane	266	9	24	5	2	306	62
WB DIAAH Outer Lane	266	9	24	5	2	306	63
NB and SB Beulah Road Combined	372	12	9	0	0	180	34
NB and SB Trap Road Combined	186	0	6	0	0	192	32*
<sup>1</sup> Lane Closed							
*Traffic and Speed data from TMS15							

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/31/2010			1230 – 1250		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	1602	33	60	0	3	1698	63	
EB DTR Outer Two Lanes	1383	48	51	3	3	1488	63	
WB DTR Inner Two Lanes	1248	27	24	0	0	1299	66	
WB DTR Outer Two Lanes	1611	39	66	0	3	1719	67	
EB DIAAH Inner Lane	537	12	63	6	0	618	52	
EB DIAAH Outer Lane <sup>1</sup>	-	-	-	-	-	-	-	
WB DIAAH Inner Lane	302	5	29	5	0	341	63	
WB DIAAH Outer Lane	302	5	29	5	0	341	58	
NB and SB Beulah Road Combined	336	30	0	0	6	372	37	
<sup>1</sup> Lane Closed								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/31/2010			1300-1320		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	1686	15	51	6	0	1758	63	
EB DTR Outer Two Lanes	1086	9	57	3	0	1155	60	
WB DTR Inner Two Lanes	1326	21	45	0	3	1395	65	
WB DTR Outer Two Lanes	1473	39	63	9	3	1587	56	
EB DIAAH Inner Lane	528	21	72	3	0	624	42	
EB DIAAH Outer Lane <sup>1</sup>	-	-	-	-	-	-	-	
WB DIAAH Inner Lane	200	14	33	2	0	249	58	
WB DIAAH Outer Lane	200	14	33	2	0	249	55	
NB and SB Beulah Road Combined	369	9	3	0	3	384	36	
<sup>1</sup> Lane Closed								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/31/2010			0920 – 0940		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	3423	33	30	9	21	3516	57	
EB DTR Outer Two Lanes Before On Ramp to Trap Road	2448	45	42	3	0	2538	50	
EB DTR Outer Two Lanes After On Ramp to Trap Road	2544	45	42	3	0	2634	50	
WB DTR Inner Two Lanes	2208	24	18	6	0	2256	68	
WB DTR Inner Two Lanes Before Off Ramp to Trap Road	1758	24	111	9	3	1905	62	
WB DTR Outer Two Lanes After Ramp to Trap Road	1695	24	111	9	3	1842	62	
EB DIAAH Inner Lane	330	11	38	14	0	393	58	
EB DIAAH Outer Lane	330	11	38	14	0	393	61	
WB DIAAH Inner Lane	270	3	21	20	3	317	63	
WB DIAAH Outer Lane	270	3	21	20	3	317	62	
EB On Ramp from Trap Road	96	0	0	0	0	96	22	
WB Off Ramp to Trap Road	63	0	0	0	0	63	57	
NB Trap Road	138	3	3	0	0	144	29	
NB Trap Road After On Ramp from WB DTR	201	3	3	0	0	207	29	
SB Trap Road	114	3	6	0	0	123	29	
NB and SB Trap Road Combined	252	6	9	0	0	267	29	
NB and SB Trap Road Combined After On Ramp from WB DTR	201	3	3	0	0	207	29	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

**Table D.15 Volume Summary – Traffic Monitoring Session 14**

Limits		Date			Interval		Duration	
Dulles Toll Road		8/31/2010			1000 – 1020		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	2679	66	75	0	9	2829	61	
EB DTR Outer Two Lanes Before On Ramp from Trap Road	1317	42	63	0	3	1425	56	
EB DTR Outer Two Lanes After On Ramp from Trap Road	1407	42	63	0	9	1521	56	
WB DTR Inner Two Lanes	1626	36	63	0	6	1731	67	
WB DTR Outer Two Lanes Before Off Ramp to Trap Road	1701	54	177	0	6	1938	66	
WB DTR Outer Two Lanes After Off Ramp to Trap Road	1653	54	174	0	6	1887	66	
EB DIAAH Inner Lane	251	12	54	2	0	319	58	
EB DIAAH Outer Lane	251	12	54	2	0	319	59	
WB DIAAH Inner Lane	344	12	21	11	0	388	64	
WB DIAAH Outer Lane	344	12	21	11	0	388	61	
EB On Ramp from Trap Road	90	0	0	0	6	96	24	
WB Off Ramp to Trap Road	48	0	3	0	0	51	49	
NB Trap Road	93	0	3	0	0	96	29	
SB Trap Road	93	0	3	0	0	96	29	
NB and SB Tap Road Combined	186	0	6	0	0	192	29	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/31/2010			1045 – 1105		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	2292	42	99	6	9	2448	59	
EB DTR Outer Two Lanes Before On Ramp from Trap Road	1185	15	78	3	3	1284	55	
EB DTR Outer Two Lanes After On Ramp from Trap Road	1260	15	81	3	3	1362	55	
WB DTR Inner Two Lanes	1257	48	33	3	0	1341	66	
WB DTR Outer Two Lanes After Off Ramp to Trap Road	1368	60	108	6	3	1545	64	
WB DTR Outer Two Lanes Before Off Ramp to Trap Road	1446	66	108	6	3	1629	64	
EB DIAAH Inner Lane	275	8	47	3	0	333	59	
EB DIAAH Outer Lane	275	8	47	3	0	333	55	
WB DIAAH Inner Lane	242	0	47	5	0	294	63	
WB DIAAH Outer Lane	242	0	47	5	0	294	59	
NB Trap Road	96	0	0	0	0	96	32	
SB Trap Road	96	0	0	0	0	96	32	
NB and SB Trap Road Combined	192	0	0	0	0	192	32	
EB On Ramp from Trap Road	75	0	3	0	0	78	28	
WB Off Ramp to Trap Road	78	6	0	0	0	84	41	



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/20/2010			1100-1120		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	1959	69	33	0	6	2067	60	
EB DTR Outer Two Lanes Before Off Ramp	1728	30	30	0	9	1797	56	
EB DTR Outer Two Lanes	1236	30	21	0	9	1296	56	
WB DTR Inner Two Lanes	1098	27	12	0	3	1140	66	
WB DTR Outer Two Lanes Before Leesburg Pike On Ramp	1041	51	36	0	0	1128	58	
WB DTR Outer Two Lanes After Leesburg Pike On Ramp	1071	51	36	0	0	1158	58	
EB DIAAH Inner Lane	204	12	6	3	0	225	50	
EB DIAAH Outer Lane After Off Ramp to Leesburg Pike	276	36	33	3	0	348	50	
EB DIAAH Outer Lane Before Off Ramp to Leesburg Pike	330	42	36	6	0	414	50	
WB DIAAH Inner Lane	219	21	0	0	3	243	62	
WB DIAAH Outer Lane	429	18	15	9	0	471	59	
EB Innermost Off Ramp	6	6	3	0	0	15	26	
EB Middle Off Ramp	48	0	0	3	0	51	26	
EB Outermost Off Ramp	492	0	9	0	0	501	26	
EB Innermost and Middle Off Ramp combined	54	6	3	3	0	66	26	
EB Middle and Outermost Off Ramp Combined	540	0	9	3	0	552	26	
EB Outer Ramp Lane at Interchange	411	6	0	3	0	420	18	
EB On Ramp from SB Leesburg Pike	297	33	0	0	0	330	37	
WB On Ramp from NB Leesburg Pike	66	0	0	0	0	66	31	
WB On Ramp from SB Leesburg Pike	30	0	0	0	0	30	25	
NB Leesburg Pike	1242	114	27	12	0	1395	35	
NB Leesburg Pike After Merge	1308	114	27	12	0	1461	35	
SB Leesburg Pike Thru Lanes	1344	42	18	6	3	1413	37	
SB Leesburg Pike WB Ramp	327	33	0	0	0	360	37	
SB Leesburg Pike Combined	1641	75	18	6	3	1743	37	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/20/2010			1030-1050		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	1614	51	45	3	3	1716	56	
EB DTR Outer Two Lanes Before Off Ramp	1191	24	30	3	0	1248	56	
EB DTR Outer Two Lanes After Off Ramp	717	18	3	0	0	738	56	
EB DTR Outer Two Lanes After On Ramp	1056	30	6	0	0	1092	56	
EB DTR Outer Two Lanes After All Ramps	1410	45	9	0	3	1467	56	
WB DTR Inner Two Lanes	1047	15	6	6	0	1074	63	
WB DTR Outer Two Lanes	891	39	60	0	6	996	59	
WB DTR Outer Two Lanes After SB Ramp	930	39	60	0	6	1035	59	
EB DIAAH Inner Lane	189	0	12	6	0	207	40	
EB DIAAH Outer Lane Before Exit	351	24	45	3	0	423	40	
EB DIAAH Outer Lane After Exit	270	24	30	3	0	327	40	
WB DIAAH Inner Lane	213	0	15	0	0	228	63	
WB DIAAH Outer Lane	405	3	30	6	0	444	63	
EB Innermost Off Ramp	6	0	0	0	0	6	26	
EB Middle Off Ramp	75	0	15	0	0	90	26	
EB Innermost and Middle Off Ramps	81	0	15	0	0	96	26	
EB Outermost Off Ramp	474	6	27	3	0	510	26	
EB Outermost and Middle Off Ramp	549	6	42	3	0	600	26	
EB Outer Ramp Lane at Interchange	405	15	3	0	3		56	
EB On Ramp from SB Leesburg Pike	339	12	3	0	0	354	26	
WB On Ramp from NB Leesburg Pike	51	0	0	0	0	51	40	
WB On Ramp From SB Leesburg Pike Combined	378	12	3	0	0	393	26	
WB On Ramp from SB Leesburg Pike	39	0	0	0	0	39	24	
NB Leesburg Pike Before Ramps	1305	111	27	6	6	1455	40	
NB Leesburg Pike After On Ramp from EB DTR	1311	111	27	6	6	1293	40	
NB Leesburg Pike After On Ramp from EB DTR	1362	111	27	6	6	1512	40	
SB Leesburg Pike	1143	60	6	3	0	1212	41	
SB Leesburg Pike Combined Before Off Ramp	1521	72	9	3	0	1605	41	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/20/2010			0900 – 0920		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	3201	42	69	0	6	3318	57	
EB DTR Outer Two Lanes Before Off Ramp	3030	42	27	6	3	3108	60	
EB DTR Outer Two Lanes At Off Ramp	1668	21	27	6	3	1725	60	
EB DTR Outer Two Lanes After On and Off Ramp	2892	42	27	6	3	2970	60	
WB DTR Inner Two Lanes	2193	6	21	0	9	2229	60	
WB DTR Outer Two Lanes Before Off Ramp	1563	18	60	9	6	1656	60	
WB DTR Outer Two Lanes Before On Ramp	1293	9	54	9	6	1371	60	
WB DTR Outer Two Lanes After On Ramp From SB Leesburg Pike	1845	39	81	9	6	1980	60	
WB DTR Outer Two After On Ramp From NB Leesburg Pike	1794	39	78	9	6	1926	60	
EB DIAAH Inner Lane	85	2	8	0	4	99	57	
EB DIAAH Outer Lane	86	3	8	1	5	103	56	
WB DIAAH Inner Lane	132	6	15	15	0	168	59	
WB DIAAH Outer Lane	306	3	15	30	0	354	62	
EB DTR Outer Ramp Lane	1362	21	6	0	0	1383	60	
WB Off Ramp Outer	225	6	6	0	0	237	40	
WB Off Ramp Inner	45	3	0	0	0	48	40	
WB Off Ramp Combined	270	9	6	0	0	285	40	
NB Leesburg Pike Loop on Ramp to WB DTR	501	30	24	0	0	555	32	
SB On Ramp to WB DTR	51	0	3	0	0	54	26	
NB Leesburg Pike After On Ramp	993	51	36	0	0	1080	41	
NB Leesburg Pike After On Ramp	492	21	12	0	0	525	41	
NB Leesburg Pike After Off Ramp	630	21	12	0	0	663	41	
NB Leesburg Pike After On Ramp from WB DTR	885	27	18	0	0	930	41	
NB Leesburg Pike Ramp Lane and Third Lane	639	30	24	0	0	639	36	
NB Leesburg Pike Ramp from EB DTR	138	0	0	0	0	138	40	
SB Leesburg Pike Before On and Off Ramp	1944	39	21	0	3	2007	38	
SB Leesburg Pike After On and Off Ramp	1938	42	18	0	3	2001	38	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/20/2010			0940 – 1000		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	2463	39	42	0	9	2553	65	
EB DTR Outer Two Lanes Before Ramps	2358	27	42	6	9	2442	64	
EB DTR Outer Two Lanes After Off Ramp	1845	24	30	6	6	1911	64	
EB DTR Outer Two Lanes At Ramps	1326	24	27	6	3	1386	64	
EB DTR Outer Two Lanes After Ramps	2010	30	33	9	6	2088	64	
WB DTR Inner Two Lanes	1608	15	42	3	30	1698	64	
WB DTR Outer Two Lanes Before On Ramp	1164	12	39	0	6	1221	62	
WB DTR Outer Two Lanes After On Ramp	1209	12	39	0	6	1266	62	
EB DIAAH Inner Lane	252	3	15	9	2	281	55	
EB DIAAH Outer Lane Before Off Ramp	324	3	21	9	2	359	55	
EB DIAAH Outer Lane After Off Ramp	252	3	15	9	2	281	55	
WB DIAAH Inner Lane	276	6	9	12	0	303	61	
WB DIAAH Outer Lane	273	6	6	6	0	291	63	
NB Leesburg Pike Before Ramps	1272	60	21	0	21	1374	36	
NB Leesburg Pike After Ramp from EB DIAAH Lane	1278	60	24	0	21	1383	36	
NB Leesburg Pike After Ramps	1413	69	21	0	21	1524	36	
EB Off Ramp to NB Leesburg Pike	141	9	0	0	0	150	60	
SB Leesburg Pike Thru Lanes	1341	78	9	0	6	1434	45	
SB Leesburg Pike Ramp	306	15	3	3	0	327	45	
SB On Ramp to WB DTR	45	0	0	0	0	45	24	
SB Leesburg Pike Ramp Lane	351	15	3	3	0	372	36	
EB Outermost Off Ramp	513	3	12	0	3	531	31	
EB Middle Off Ramp	66	0	3	0	0	69	31	
EB Innermost Off Ramp	6	0	3	0	0	9	31	
EB Middle and Innermost Ramps Combined	72	0	6	0	0	78	31	
EB Middle and Outermost Ramps Combined	579	3	15	0	3	600	31	
EB DTR Outermost Lane	825	15	6	3	3	852	60	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/20/2010			1315-1335		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	1587	24	69	9	6	1695	48	
EB DTR Outer Two Lanes Before Off Ramp	1941	45	90	3	6	2085	52	
EB DTR Outer Two Lanes After Off Ramp	1599	42	87	3	6	1737	52	
WB DTR Inner Two Lanes	1839	27	57	3	0	1926	63	
WB DTR Outer Two Lanes Before Off Ramp	1221	6	33	0	3	1263	51	
WB DTR Outer Two Lanes	1188	6	33	0	3	1230	51	
WB DTR Outer Two Lanes After On Ramp	1623	15	39	15	42	1734	51	
EB DIAAH Inner Lane	113	5	2	2	0	122	50	
EB DIAAH Outer Lane	113	5	2	2	0	122	53	
WB DIAAH Inner Lane	530	14	15	12	2	573	58	
WB DIAAH Outer Lane	530	14	15	12	2	573	61	
NB Spring Hill Road (North Leg)	120	6	6	0	0	132	32	
SB Spring Hill Road (North Leg)	102	3	0	0	0	105	29	
NB Spring Hill Road (South Leg)	339	6	3	21	0	369	26	
SB Spring Hill Road (South Leg)	288	0	6	9	3	306	29	
NB Tyco Road	390	17	14	6	0	427	31	
SB Tyco Road	390	17	14	6	0	427	34	
EB Lewinsville Road	219	21	3	3	0	246	35	
WB Lewinsville Road	210	12	0	3	0	225	37	
EB and WB Lewisville Road Combined	429	33	3	6	0	471	36	
Combined Lewisville Road Divided into 4	107	8	0	1	0	116	36	
WB On Ramp from Spring Hill Road	435	9	6	15	39	504	25	
EB Off Ramp to Spring Hill	342	3	3	0	0	348	28	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/20/2010			1355 – 1415		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	1824	6	69	24	3	1926	56	
EB DTR Outer Two Lanes	1590	12	99	6	3	1710	56	
WB DTR Inner Two Lanes	2028	15	66	6	0	2115	62	
WB DTR Outer Two Lanes Before On Ramp	1227	3	24	0	3	1257	54	
WB DTR Outer Two Lanes After On Ramp	1626	15	30	3	3	1677	54	
EB DIAAH Inner Lane	115	1	7	4	0	127	56	
EB DIAAH Outer Lane	115	1	7	4	0	127	54	
WB DIAAH Inner Lane	429	4	24	7	1	465	58	
WB DIAAH Outer Lane	429	4	24	7	1	465	62	
NB Spring Hill Road (South Leg)	708	3	9	0	0	720	30	
SB Spring Hill Road (South Leg)	1104	9	12	21	0	1146	29	
NB Spring Hill Road (North Leg)	507	9	9	0	3	528	32	
SB Spring Hill Road (North Leg)	408	0	12	0	0	420	34	
EB On Ramp from Spring Hill Road	303	6	3	24	0	336	25	
WB On Ramp from Spring Hill Road	399	12	6	3	0	420	22	
EB Dulles Toll Road Off Ramp	270	0	6	0	0	276	26	
WB DTR off ramp to Spring Hill Road	246	12	3	9	0	270	24	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/20/2010			1425 – 1445		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Inner Two Lanes	1749	9	60	39	3	1860	52	
EB DTR Outer Two Lanes After On Ramp	1992	39	75	36	6	2148	48	
EB DTR Outer Two Lanes After Off Ramp	1746	27	72	9	6	1860	48	
EB DTR Outer Two Lanes Before Off Ramp	1992	39	72	9	6	2118	48	
WB DTR Inner Two Lanes	2346	21	63	6	9	2445	58	
WB DTR Outer Two Lanes Before Off Ramp	1419	24	33	12	3	1491	59	
WB DTR Outer Two Lanes After Off Ramp	1263	15	33	3	3	1317	59	
WB DTR Outer Two Lanes After On Ramp	1617	24	33	3	9	1686	59	
EB DIAAH Inner Lane	173	0	123	6	0	302	50	
EB DIAAH Outer Lane	173	0	123	6	0	302	50	
WB DIAAH Inner Lane	657	5	18	11	0	691	54	
WB DIAAH Outer Lane	657	5	18	11	0	691	52	
NB Spring Hill Road (South Leg)	561	0	6	6	0	573	33	
SB Spring Hill Road (South Leg)	846	0	3	30	6	885	34	
NB Springhill Road (North Leg)	579	126	0	0	6	711	35	
SB Spring Hill Road (North Leg)	441	126	0	0	0	567	33	
EB Jones Branch Drive	267	3	3	0	0	273	26	
WB Jones Branch Drive	369	12	0	12	9	402	27	
WB Off Ramp to Spring Hill	156	9	0	9	0	174	27	
WB On Ramp from Spring Hill Road	354	9	0	0	6	369	27	
EB Off Ramp to Spring Hill	246	12	0	0	0	258	24	
EB On Ramp from Spring Hill	246	12	3	27	0	288	27	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/26/2010			0955 – 1015		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Lanes	1935	36	18	12	3	2004	53	
WB DTR Lanes	1251	21	24	9	0	1305	56	
EB DIAAH Inner Lane	102	2	14	5	0	123	54	
EB DIAAH Outer Lane	102	2	14	5	0	123	54	
WB DIAAH Inner Lane	90	5	14	8	0	117	54	
WB DIAAH Outer Lane	90	5	14	8	0	117	54	
NB 495 Inner Two Lanes Before Off Ramp	3363	129	186	0	3	3681	64	
NB 495 Inner Two Lanes After Off Ramp	2622	114	138	0	3	2877	64	
NB 495 Outer Two Lanes Before Ramp From EB DTR	2199	141	231	0	9	2580	59	
NB 495 Outer Two Lanes After Ramp From EB DTR	3087	159	261	0	9	3516	59	
SB 495 Inner Two Lanes Before Off Ramp	3267	66	72	0	9	3414	30	
SB 495 Inner Two Lanes After Off Ramp	2841	51	69	0	6	2967	30	
SB 495 Outer Two Lanes Before Ramp to WB DTR	2829	114	234	6	9	3192	32	
SB 495 Outer Two Lanes After Ramp to WB DTR	1395	75	183	3	3	1659	32	
EB DTR Off Ramp to NB and SB I-495 Combined	1731	39	48	9	0	1827	34	
EB DTR Off Ramp to NB I-495	888	18	30	6	0	942	25	
EB DTR Off Ramp to SB I-495	843	21	18	3	0	885	43	
495 SB Off Ramp to DTR WB	1434	39	51	3	6	1533	48	
495 SB Off Ramp to DTR EB	426	15	3	0	3	447	30	
495 to WB DTR Ramp	741	15	48	0	0	804	48	
EB Jones Branch Road	174	6	0	0	0	180	39	
WB Jones Branch Road	192	15	0	6	0	213	37	



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix D: Traffic Monitoring Sessions

Limits		Date			Interval		Duration	
Dulles Toll Road		8/26/2010			1025 – 1045		20-min	
Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)	
EB DTR Lane	1845	42	9	3	0	1899	53	
WB DTR Lane	744	18	15	6	0	783	56	
EB DIAAH Inner Lane	108	5	9	2	2	126	54	
EB DIAAH Outer Lane	108	5	9	2	2	126	54	
WB DIAAH Inner Lane	96	3	11	3	0	113	54	
WB DIAAH Outer Lane	96	3	11	3	0	113	54	
NB 495 Inner Lanes Before Off Ramp	3144	57	141	9	30	3381	65	
NB 495 Inner Lanes After Off Ramp	2520	27	93	9	27	2676	65	
NB 495 Outer Lanes Before Ramp From DTR EB	1767	99	66	15	0	1947	48	
NB 495 Outer Lanes After Ramp From DTR EB	2571	129	102	27	0	2829	61	
SB 495 Inner Lanes Before Off Ramp	2676	54	84	0	6	2820	27	
SB 495 Inner Lanes After Off Ramp	2346	54	81	0	6	2487	27	
SB 495 Outer Lanes Before Off Ramp to DTR WB	2652	150	150	3	6	2961	22	
SB 495 Outer Lanes After Off Ramp to DTR WB	1215	111	114	3	0	1443	22	
EB DTR Off Ramp to NB and SB I-495	1776	75	81	15	0	1947	38	
EB DTR Off Ramp to NB I-495	804	30	36	12	0	882	34	
EB DTR Off Ramp to SB I-495	972	45	45	3	0	1065	41	
SB 495 Off Ramp to DTR EB	330	0	3	0	0	333	40	
SB 495 Off Ramp to DTR WB	1437	39	36	0	6	1518	36	
WB DTR Ramp Left Most Lane	624	30	48	0	3	705	56	
EB Jones Branch Road	159	3	0	3	0	165	39	
WB Jones Branch Road	171	15	0	0	0	186	29	

# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix E**

### Validation TNM Result Tables

August 2012

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.1 Model Validation Results for M-02-01 and M-02-02 Using TMS 01 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										20 December 2010				
RESULTS: SOUND LEVELS										TNM 2.5				
PROJECT/CONTRACT: Dulles										Calculated with TNM 2.5				
RUN: TNM01 TMS01 M-02-01,02														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 92 deg F, 38% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier						
				Calculated	Crit'n	Increase over existing	Type	Calculated	Noise Reduction	Goal	Calculated minus Goal			
			dB	dB	dB	dB	dB	Impact	dB	dB	dB	dB		
M0201	4	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0		
M0202	5	1	0.0	55.3	66	55.3	10	----	55.3	0.0	8	-8.0		
M0203	6	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M0204	7	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M0205	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		5	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.2 Model Validation Results for M-01-01 and M-01-02 Using TMS 01 Data

RESULTS: SOUND LEVELS													Dulles		
Straughan Environmental KFR						20 December 2010									
RESULTS: SOUND LEVELS						TNM 2.5									
PROJECT/CONTRACT: Dulles						Calculated with TNM 2.5									
RUN: TNM02 TMS01 M-01-01,-02															
BARRIER DESIGN: INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.									
ATMOSPHERICS: 92 deg F, 38% RH															
Receiver															
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier							
				Calculated	Crit'n	Increase over existing		Type	Calculated LAeq1h	Noise Reduction		Calculated minus Goal			
			dBA	dBA	dBA	dB	dB			dBA	dB	dB	dB		
M0101	1	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0			
M0102	2	1	0.0	52.1	66	52.1	10	----	52.1	0.0	8	-8.0			
M0103	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
Dwelling Units		# DUs	Noise Reduction												
			Min	Avg	Max										
			dB	dB	dB										
All Selected		3	0.0	0.0	0.0										
All Impacted		1	0.0	0.0	0.0										
All that meet NR Goal		0	0.0	0.0	0.0										

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.3 Model Validation Results for M-02-03 and M-02-04 Using TMS 02 Data

RESULTS: SOUND LEVELS													Dulles		
Straughan Environmental KFR										23 December 2010					
RESULTS: SOUND LEVELS										TNM 2.5					
PROJECT/CONTRACT: Dulles										Calculated with TNM 2.5					
RUN: TNM01 TMS02 M-02-03,04															
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
ATMOSPHERICS: 89 deg F, 46% RH															
Receiver															
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	With Barrier						
				Calculated	Crit'n	Calculated	Crit'n		Calculated LAeq1h	Noise Reduction		Calculated minus Goal			
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB			
M0201	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M0202	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M0203	6	1	0.0	58.3	66	58.3	10	----	58.3	0.0	8	-8.0			
M0204	7	1	0.0	47.5	66	47.5	10	----	47.5	0.0	8	-8.0			
M0205	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
Dwelling Units		# DUs	Noise Reduction												
			Min	Avg	Max										
			dB	dB	dB										
All Selected		5	0.0	0.0	0.0										
All Impacted		0	0.0	0.0	0.0										
All that meet NR Goal		0	0.0	0.0	0.0										

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.4 Model Validation Results for M-01-03 Using TMS 02 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										23 December 2010				
RESULTS: SOUND LEVELS										TNM 2.5				
PROJECT/CONTRACT:										Dulles				
RUN:										TNM02 TMS 02 M-01-03				
BARRIER DESIGN:										INPUT HEIGHTS				
ATMOSPHERICS:										89 deg F, 46% RH				
Receiver										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier						
				Calculated	Crit'n	Increase over existing		Type	Calculated LAeq1h	Noise Reduction				
			dBA	dBA	dBA	dB	dB	Impact	dBA	dB	dB	Calculated minus Goal		
M0101	1	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M0102	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M0103	3	1	0.0	59.2	66	59.2	10	---	59.2	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		3	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.5 Model Validation Results for M-02-05 Using TMS 03 Data

RESULTS: SOUND LEVELS													Dulles		
Straughan Environmental KFR										7 December 2010			TNM 2.5		
RESULTS: SOUND LEVELS										Calculated with TNM 2.5					
PROJECT/CONTRACT: Dulles															
RUN: TMS03_TNM01 (M-02-05)															
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
ATMOSPHERICS: 87 deg F, 50% RH															
Receiver															
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier							
				Calculated	Crit'n	Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal			
			dBA	dBA	dBA	dB	dB				dBA	dB	dB	dB	
M0201	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	0.0		
M0202	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	0.0		
M0203	6	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	0.0		
M0204	7	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	0.0		
M0205	8	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0			
Dwelling Units		# DUs	Noise Reduction												
			Min	Avg	Max										
			dB	dB	dB										
All Selected		5	0.0	0.0	0.0										
All Impacted		0	0.0	0.0	0.0										
All that meet NR Goal		0	0.0	0.0	0.0										

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.6 Model Validation Results for M-04-01 and M-04-02 Using TMS 03 Data

**RESULTS: SOUND LEVELS**

Dulles

Straughan Environmental  
KFR

23 December 2010  
TNM 2.5  
Calculated with TNM 2.5

**RESULTS: SOUND LEVELS**

PROJECT/CONTRACT:

Dulles

RUN:

TNM03 TMS03 M-04-01

BARRIER DESIGN:

INPUT HEIGHTS

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

ATMOSPHERICS:

87 deg F, 50% RH

Receiver

Name	No.	#DUs	Existing LAeq1h dBA	No Barrier				Type Impact	With Barrier			
				LAeq1h		Increase over existing			Calculated LAeq1h dBA	Noise Reduction		Calculated minus Goal dB
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	
M0401	10	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0
M0402	11	1	0.0	41.4	66	41.4	10	----	41.4	0.0	8	-8.0
M0403	12	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
M0404	13	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
M0405	14	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		5	0.0	0.0	0.0							
All Impacted		1	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.7 Model Validation Results for M-03-01 Using TMS 03 Data

RESULTS: SOUND LEVELS													Dulles		
Straughan Environmental KFR										23 December 2010					
RESULTS: SOUND LEVELS										TNM 2.5					
PROJECT/CONTRACT:										Dulles					
RUN:										TNM04 TMS03 M-03-01					
BARRIER DESIGN:										INPUT HEIGHTS			Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
ATMOSPHERICS:										87 deg F, 50% RH					
Receiver															
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier		Type Impact	Calculated LAeq1h	Noise Reduction			
				Calculated	Crit'n	Calculated	Crit'n	Calculated	Goal			Calculated minus Goal			
			dB	dB	dB	dB	dB			dB	dB	dB	dB		
M0301	9	1	0.0	56.8	66	56.8	10	----		56.8	0.0	8	-8.0		
M0501	16	1	0.0	0.0	66	0.0	10	inactive		0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction												
			Min	Avg	Max										
			dB	dB	dB										
All Selected		2	0.0	0.0	0.0										
All Impacted		0	0.0	0.0	0.0										
All that meet NR Goal		0	0.0	0.0	0.0										

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.8 Model Validation Results for M-04-03, M-04-04 and M-04-05 Using TMS 03 Data

RESULTS: SOUND LEVELS													Dulles			
Straughan Environmental KFR										23 December 2010			TNM 2.5		Calculated with TNM 2.5	
RESULTS: SOUND LEVELS																
PROJECT/CONTRACT: Dulles																
RUN: TNM03 TMS04 M-04-03,04,05																
BARRIER DESIGN: INPUT HEIGHTS															Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 85 deg F, 57% RH																
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier								
				Calculated	Crit'n	Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal				
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	dB			
M0401	10	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M0402	11	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M0403	12	1	0.0	43.8	66	43.8	10	----	43.8	0.0	8	-8.0				
M0404	13	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0				
M0405	14	1	0.0	54.6	66	54.6	10	----	54.6	0.0	8	-8.0				
Dwelling Units		# DUs	Noise Reduction													
			Min	Avg	Max											
			dB	dB	dB											
All Selected		5	0.0	0.0	0.0											
All Impacted		0	0.0	0.0	0.0											
All that meet NR Goal		0	0.0	0.0	0.0											

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.9 Model Validation Results for M-05-01 Using TMS 04 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										23 December 2010				
										TNM 2.5				
										Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: Dulles														
RUN: TMS 04 TNM04 M-05-01														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 85 deg F, 57% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier			Noise Reduction			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Calculated		Calculated minus Goal		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal			
			dB	dB	dB	dB		dB	dB	dB	dB	dB		
M0301	9	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M0501	16	1	0.0	55.3	66	55.3	10	----	55.3	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		2	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.10 Model Validation Results for M-06-01, M-06-02, M-07-01, and M-07-02 Using TMS 05 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental SR										10 January 2012				
RESULTS: SOUND LEVELS										TNM 2.5				
PROJECT/CONTRACT: Dulles										Calculated with TNM 2.5				
RUN: TMS 05 TNM 05 M-06,07-01,2														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 81 deg F, 44% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Crit'n	Increase over existing	Increase over existing	Type	With Barrier	With Barrier	Noise Reduction	Noise Reduction	Calculated minus Goal	
									Calculated	Calculated	Goal	Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	dB	
M0601	1	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	8	-8.0	
M0602	3	1	0.0	53.8	66	53.8	10	----	53.8	0.0	8	8	-8.0	
M0702	4	1	0.0	55.3	66	55.3	10	----	54.7	0.6	8	8	-7.4	
M0701	6	1	0.0	58.4	66	58.4	10	----	58.4	0.0	8	8	-8.0	
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		4	0.0	0.1	0.6									
All Impacted		1	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.11 Model Validation Results for M-08-01, M-08-02, and M-08-03 Using TMS 06 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										29 November 2010				
RESULTS: SOUND LEVELS										TNM 2.5				
PROJECT/CONTRACT: Dulles										Calculated with TNM 2.5				
RUN: TMS06 TNM06 (M-08-01,02,03)														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 82 deg F, 58% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier						
				Calculated	Crit'n	Increase over existing	Type	Calculated	Noise Reduction		Calculated minus Goal			
			dB	dB	dB	dB	dB	Impact	LAeq1h	Calculated		Goal	dB	
M0801	1	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0		
M0802	2	1	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0		
M0803	3	1	0.0	52.0	66	52.0	10	----	52.0	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		3	0.0	0.0	0.0									
All Impacted		1	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.12 Model Validation Results for M-09-01, M-09-02, M-09-03, and M-09-04 Using TMS 07 Data

RESULTS: SOUND LEVELS												Dulles			
Straughan KFR												29 November 2010 TNM 2.5 Calculated with TNM 2.5			
RESULTS: SOUND LEVELS															
PROJECT/CONTRACT: Dulles															
RUN: 07_TMS07															
BARRIER DESIGN: INPUT HEIGHTS												Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS: 82 deg F, 42% RH															
Receiver															
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier						
				LAeq1h		Increase over existing		Type	Calculated LAeq1h	Noise Reduction		Calculated minus Goal			
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Impact		Calculated	Goal				
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB			
HR2401	1	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M0901	2	1	0.0	52.4	66	52.4	10	----	52.4	0.0	8	-8.0			
M0902	3	1	0.0	45.9	66	45.9	10	----	45.9	0.0	8	-8.0			
M0903	4	1	0.0	54.2	66	54.2	10	----	54.2	0.0	8	-8.0			
M0904	5	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0			
Dwelling Units		# DUs	Noise Reduction												
			Min	Avg	Max										
			dB	dB	dB										
All Selected		5	0.0	0.0	0.0										
All Impacted		0	0.0	0.0	0.0										
All that meet NR Goal		0	0.0	0.0	0.0										

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.13 Model Validation Results for M-10-01 Using TMS 08 Data

RESULTS: SOUND LEVELS													DULLES		
STRAUGHAN ENVIRONMENTAL KFR/ANB						15 December 2010 TNM 2.5 Calculated with TNM 2.5									
RESULTS: SOUND LEVELS															
PROJECT/CONTRACT:			DULLES												
RUN:			TNM08 TMS08 M-10-01												
BARRIER DESIGN:			INPUT HEIGHTS			Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.									
ATMOSPHERICS:			84 deg F, 37% RH												
Receiver															
Name	No.	#DUs	Existing LAeq1h dBA	No Barrier				Type Impact	With Barrier						
				LAeq1h dBA	Crit'n dBA	Increase over existing Calculated dB	Crit'n Sub'l Inc dB		Calculated LAeq1h dBA	Noise Reduction		Calculated minus Goal dB			
										Calculated	Goal				
M1001	7	1	0.0	53.8	66	53.8	10	---	53.8	0.0	8	-8.0			
M1002	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M1003	9	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
Dwelling Units		# DUs	Noise Reduction												
			Min	Avg	Max										
		dB	dB	dB											
All Selected		3	0.0	0.0	0.0										
All Impacted		0	0.0	0.0	0.0										
All that meet NR Goal		0	0.0	0.0	0.0										

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.14 Model Validation Results for M-11-01, M-11-02 and M-11-03 Using TMS 08 Data

RESULTS: SOUND LEVELS													DULLES			
STRAUGHAN ENVIRONMENTAL KH													2 February 2011 TNM 2.5 Calculated with TNM 2.5			
RESULTS: SOUND LEVELS																
PROJECT/CONTRACT: DULLES																
RUN: TMS08 TNM10																
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS: 68 deg F, 50% RH																
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier								
				LAeq1h	Increase over existing		Type	Calculated	Noise Reduction		Calculated minus Goal					
			Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Impact	LAeq1h	Calculated	Goal		Calculated				
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB				
M1301	11	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1302	12	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1303	13	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1101	46	1	0.0	57.5	66	57.5	10	----	57.5	0.0	8	-8.0				
M1103	47	1	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0				
M1104	48	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1105	49	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1102	51	1	0.0	50.3	66	50.3	10	----	50.3	0.0	8	-8.0				
Dwelling Units		# DUs	Noise Reduction													
			Min	Avg	Max											
			dB	dB	dB											
All Selected		8	0.0	0.0	0.0											
All Impacted		0	0.0	0.0	0.0											
All that meet NR Goal		0	0.0	0.0	0.0											



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.15 Model Validation Results for M-10-02 and M-10-03 Using TMS 09 Data

RESULTS: SOUND LEVELS													DULLES	
STRAUGHAN ENVIRONMENTAL KFR										29 November 2010 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:			DULLES											
RUN:			TMS09 TMS09 M-10-02,03											
BARRIER DESIGN:			INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:			84 deg F, 37% RH											
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier					
				LAeq1h		Increase over existing		Type	Calculated LAeq1h	Noise Reduction				
				Calculated	Crit'n	Calculated	Crit'n	Impact		Calculated	Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB	
M1001	7	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1002	8	1	0.0	54.9	66	54.9	10	----	54.9	0.0	8	-8.0		
M1003	9	1	0.0	59.2	66	59.2	10	----	59.2	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		3	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.16 Model Validation Results for M-11-04 and M-11-05 Using TMS 09 Data

RESULTS: SOUND LEVELS													DULLES			
STRAUGHAN ENVIRONMENTAL KH													2 February 2011 TNM 2.5 Calculated with TNM 2.5			
RESULTS: SOUND LEVELS																
PROJECT/CONTRACT: DULLES																
RUN: TMS 09 TNM10																
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS: 68 deg F, 50% RH																
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier				Increase over existing			Type Impact	With Barrier				
				Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc	Calculated LAeq1h	Noise Reduction		Calculated minus Goal				
			dBA	dBA	dBA	dB	dB				dBA	dB	dB	dB	dB	
M1301	11	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1302	12	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1303	13	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1101	46	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1103	47	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1104	48	1	0.0	57.3	66	57.3	10	----	57.3	0.0	8	-8.0				
M1105	49	1	0.0	47.3	66	47.3	10	----	47.3	0.0	8	-8.0				
M1102	51	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
Dwelling Units		# DUs	Noise Reduction													
			Min	Avg	Max											
			dB	dB	dB											
All Selected		8	0.0	0.0	0.0											
All Impacted		0	0.0	0.0	0.0											
All that meet NR Goal		0	0.0	0.0	0.0											

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.17 Model Validation Results for M-12-01 and M-12-03 Using TMS 10 Data

RESULTS: SOUND LEVELS												Dulles		
Straughan Environmental KFR						13 December 2010								
RESULTS: SOUND LEVELS						TNM 2.5								
PROJECT/CONTRACT: Dulles						Calculated with TNM 2.5								
RUN: TNM09														
BARRIER DESIGN: INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.								
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	With Barrier					
				Calculated	Crit'n	Calculated	Crit'n		Calculated LAeq1h	Noise Reduction		Calculated minus Goal		
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB	dB
M1201	4	1	0.0	54.7	66	54.7	10	---	54.7	0.0	8	-8.0		
M1203	9	1	0.0	57.1	66	57.1	10	---	57.1	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		2	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.18 Model Validation Results for M-13-01 and M-13-02 Using TMS 10 Data

RESULTS: SOUND LEVELS													DULLES			
STRAUGHAN ENVIRONMENTAL KH													2 February 2011 TNM 2.5 Calculated with TNM 2.5			
RESULTS: SOUND LEVELS																
PROJECT/CONTRACT:			DULLES													
RUN:			T NM10 TMS10													
BARRIER DESIGN:			INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS:			89 deg F, 38% RH													
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier							
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal				
				Calculated	Crit'n	Calculated	Crit'n			Calculated	Goal					
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB				
M1301	11	1	0.0	53.3	66	53.3	10	----	53.3	0.0	8	-8.0				
M1302	12	1	0.0	51.1	66	51.1	10	----	51.1	0.0	8	-8.0				
M1303	13	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1103	47	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1104	48	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1105	49	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1102	51	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
Dwelling Units		# DUs	Noise Reduction													
			Min	Avg	Max											
			dB	dB	dB											
All Selected		7	0.0	0.0	0.0											
All Impacted		0	0.0	0.0	0.0											
All that meet NR Goal		0	0.0	0.0	0.0											

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.19 Model Validation Results for M-12-02 and M-14-01 Using TMS 11 Data

RESULTS: SOUND LEVELS													Dulles			
Straughan Environmental KFR										13 December 2010					TNM 2.5	
RESULTS: SOUND LEVELS										Dulles					Calculated with TNM 2.5	
PROJECT/CONTRACT:										Dulles						
RUN:										TNM09						
BARRIER DESIGN:										INPUT HEIGHTS					Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:										68 deg F, 50% RH						
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier								
				Calculated	Crit'n	Increase over existing	Type	Calculated LAeq1h	Noise Reduction		Calculated minus Goal					
			dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB		
M1202	4	1	0.0	52.1	66	52.1	10	----	52.1	0.0	8	-8.0				
M1401	9	1	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0				
Dwelling Units		# DUs	Noise Reduction													
			Min	Avg	Max											
			dB	dB	dB											
All Selected		2	0.0	0.0	0.0											
All Impacted		0	0.0	0.0	0.0											
All that meet NR Goal		0	0.0	0.0	0.0											

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.20 Model Validation Results for M-13-03 Using TMS 11 Data

RESULTS: SOUND LEVELS													DULLES	
STRAUGHAN ENVIRONMENTAL KH										2 February 2011 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS PROJECT/CONTRACT: DULLES RUN: TMS11 TNM10 BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				Increase over existing		Type Impact	With Barrier			
				Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc	Calculated LAeq1h		Noise Reduction		Calculated minus Goal	
			dBA	dBA	dBA	dB	dB			dBA	dB	dB	dB	dB
M1301	11	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1302	12	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1303	13	1	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0		
M1101	46	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1103	47	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1104	48	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1105	49	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1102	51	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		8	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.21 Model Validation Results for M-14-02 and M-14-03 Using TMS 12 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										23 December 2010				
RESULTS: SOUND LEVELS										TNM 2.5				
PROJECT/CONTRACT: Dulles										Calculated with TNM 2.5				
RUN: TNM09														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier			Increase over existing		Type Impact	With Barrier				
				Calculated	Crit'n		Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
			dBA	dBA	dBA					dBA	dB	dB	dB	
M1402	4	1	0.0	47.2	66		47.2	10	----	47.2	0.0	8	-8.0	
M1403	9	1	0.0	57.0	66		57.0	10	----	57.0	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		2	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.22 Model Validation Results for M-15-01 Using TMS 12 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										23 December 2010				
RESULTS: SOUND LEVELS										TNM 2.5				
PROJECT/CONTRACT: Dulles										Calculated with TNM 2.5				
RUN: TNM12 TMS12 M-15-01														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 91 deg F, 34% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier					
				Calculated	Crit'n	Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
HR03	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1303	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1501	13	1	0.0	52.9	66	52.9	10	----	52.9	0.0	8	-8.0		
M1502	14	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1503	15	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		5	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.23 Model Validation Results for M-16-01 Using TMS 13 Data

RESULTS: SOUND LEVELS													Dulles		
Straughan Environmental KFR						23 December 2010									
RESULTS: SOUND LEVELS						TNM 2.5									
PROJECT/CONTRACT:						Dulles									
RUN:						TNM11 TMS13									
BARRIER DESIGN:						INPUT HEIGHTS									
ATMOSPHERICS:						80 deg F, 54% RH									
Receiver													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	With Barrier						
				Calculated	Crit'n	Calculated	Crit'n		Calculated	Noise Reduction	Calculated	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	dB		
M1601	16	1	0.0	50.8	66	50.8	10	----	50.8	0.0	8	-8.0			
Dwelling Units		# DUs	Noise Reduction												
			Min	Avg	Max										
			dB	dB	dB										
All Selected		1	0.0	0.0	0.0										
All Impacted		0	0.0	0.0	0.0										
All that meet NR Goal		0	0.0	0.0	0.0										

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.24 Model Validation Results for M-15-02 Using TMS 13 Data

RESULTS: SOUND LEVELS													
Straughan Environmental KFR										Dulles			
RESULTS: SOUND LEVELS										23 December 2010			
PROJECT/CONTRACT: Dulles										TNM 2.5			
RUN: TMS13 TNM12 M1502										Calculated with TNM 2.5			
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS: 80 deg F, 54% RH													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact	With Barrier		Noise Reduction		Calculated minus Goal
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Calculated	Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
HR03	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
M1303	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
M1501	13	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
M1502	14	1	0.0	57.7	66	57.7	10	---	57.7	0.0	8	-8.0	
M1503	15	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.25 Model Validation Results for M-15-03 Using TMS 14 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										15 November 2010 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: Dulles														
RUN: TMS14_TNM12 M-15-03														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 80 deg F, 54% RH														
Receiver														
Name	No.	#DUs	Existing	No Barrier	With Barrier									
			LAeq1h	LAeq1h	Increase over existing	Type	Calculated	Noise Reduction	Calculated minus					
			Calculated	Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Goal	Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	dB	
HR03	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	0.0	
M1303	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	0.0	
M1501	13	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	0.0	
M1502	14	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	0.0	
M1503	15	1	0.0	56.4	66	56.4	10	---	56.4	0.0	8	-8.0	-8.0	
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		5	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.26 Model Validation Results for M-18-01, M-18-02 and M-18-03 Using TMS 14 Data

RESULTS: SOUND LEVELS													Dulles			
Straughan Environmental KFR										3 January 2011			TNM 2.5		Calculated with TNM 2.5	
RESULTS: SOUND LEVELS										Dulles						
PROJECT/CONTRACT:										Dulles						
RUN:										TMS14_TNM13 MS05/06						
BARRIER DESIGN:										INPUT HEIGHTS					Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:										80 deg F, 54% RH						
Receiver																
Name	No.	#DUs	Existing LAeq1h		No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier		Noise Reduction		Calculated minus Goal		
			Calculated	Crit'n	Calculated	Crit'n	Calculated	Crit'n		Calculated	Goal					
			dBA	dBA	dBA	dB	dB			dBA	dB	dB	dB			
M1801	1	1	0.0	65.8	66	65.8	10	----		65.8	0.0	8	-8.0			
M1802	5	1	0.0	55.2	66	55.2	10	----		55.2	0.0	8	-8.0			
M1803	8	1	0.0	57.0	66	57.0	10	----		57.0	0.0	8	-8.0			
M1805	10	1	0.0	0.0	66	0.0	10	inactive		0.0	0.0	8	0.0			
M2101	14	1	0.0	0.0	66	0.0	10	inactive		0.0	0.0	8	0.0			
M2102	15	1	0.0	0.0	66	0.0	10	inactive		0.0	0.0	8	0.0			
M2103	16	1	0.0	0.0	66	0.0	10	inactive		0.0	0.0	8	0.0			
M1804	17	1	0.0	0.0	66	0.0	10	inactive		0.0	0.0	8	0.0			
Dwelling Units		# DUs	Noise Reduction													
			Min	Avg	Max											
			dB	dB	dB											
All Selected		8	0.0	0.0	0.0											
All Impacted		0	0.0	0.0	0.0											
All that meet NR Goal		0	0.0	0.0	0.0											

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.27 Model Validation Results for M-16-02 Using TMS 15 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										15 November 2010				
RESULTS: SOUND LEVELS										TNM 2.5				
PROJECT/CONTRACT: Dulles										Calculated with TNM 2.5				
RUN: TNM11 TMS15 M-16-02														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 86 deg F, 46% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Crit'n	Increase over existing	Crit'n	Type	With Barrier	Noise Reduction	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB	Impact	Calculated LAeq1h	Calculated	dB	dB		
M1601	16	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1602	26	1	0.0	51.3	66	51.3	10	---	51.3	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		2	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.28 Model Validation Results for M-19-01 and M-17-03 Using TMS 15 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KH										29 November 2010 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													Dulles	
PROJECT/CONTRACT:													TNM14 TMS15	
RUN:													INPUT HEIGHTS	
BARRIER DESIGN:													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:													86 deg F, 46% RH	
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier					
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal			
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
M1902	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1903	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1904	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1905	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1901	32	1	0.0	59.8	66	59.8	10	---	59.8	0.0	8	-8.0		
M1703	33	1	0.0	54.8	66	54.8	10	---	54.8	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		6	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.29 Model Validation Results for M-18-05 Using TMS 16 Data

RESULTS: SOUND LEVELS													Dulles			
Straughan Environmental KFR										3 January 2011			TNM 2.5		Calculated with TNM 2.5	
RESULTS: SOUND LEVELS																
PROJECT/CONTRACT: Dulles																
RUN: TMS16_TNM13 (M-18-05)																
BARRIER DESIGN: INPUT HEIGHTS															Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 84 deg F, 53% RH																
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier								
				Calculated	Crit'n	Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal				
			dBA	dBA	dBA	dB	dB				dBA	dB	dB	dB		
M1801	1	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1802	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1803	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1805	10	1	0.0	57.5	66	57.5	10	----	57.5	0.0	8	-8.0				
M2101	14	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M2102	15	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M2103	16	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1804	17	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
Dwelling Units		# DUs	Noise Reduction													
			Min	Avg	Max											
			dB	dB	dB											
All Selected		8	0.0	0.0	0.0											
All Impacted		0	0.0	0.0	0.0											
All that meet NR Goal		0	0.0	0.0	0.0											

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.30 Model Validation Results for M-19-02 Using TMS 16 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KH										29 November 2010				
RESULTS: SOUND LEVELS										TNM 2.5				
PROJECT/CONTRACT:										Dulles				
RUN:										TNM14 TMS16				
BARRIER DESIGN:										INPUT HEIGHTS			Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:										80 deg F, 54% RH				
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	Calculated LAeq1h	Noise Reduction				
				Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal		
			dB	dB	dB	dB	dB		dB	dB	dB	dB		
M1902	2	1	0.0	57.9	66	57.9	10	---	57.9	0.0	8	-8.0		
M1903	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1904	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1905	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1901	32	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1703	33	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		6	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.31 Model Validation Results for M-18-04 Using TMS 17 Data

RESULTS: SOUND LEVELS													Dulles			
Straughan Environmental KFR										3 January 2011			TNM 2.5		Calculated with TNM 2.5	
RESULTS: SOUND LEVELS										Dulles						
PROJECT/CONTRACT:										Dulles						
RUN:										TMS17_TNM13 (M-18-04)						
BARRIER DESIGN:										INPUT HEIGHTS		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS:										84 deg F, 53% RH						
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	With Barrier							
				Calculated	Crit'n	Calculated	Crit'n		Sub'l Inc	Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal			
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB				
M1801	1	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1802	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1803	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1805	10	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M2101	14	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M2102	15	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M2103	16	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0				
M1804	17	1	0.0	55.9	66	55.9	10	---	55.9	0.0	8	-8.0				
Dwelling Units		# DUs	Noise Reduction													
			Min	Avg	Max											
			dB	dB	dB											
All Selected		8	0.0	0.0	0.0											
All Impacted		0	0.0	0.0	0.0											
All that meet NR Goal		0	0.0	0.0	0.0											

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.32 Model Validation Results for M-19-03 and M-19-04 Using TMS 17 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KH										23 December 2010 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: Dulles														
RUN: TNM14 TMS17														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 84 deg F, 53% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier					
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction				
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
M1902	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1903	3	1	0.0	53.3	66	53.3	10	----	53.3	0.0	8	-8.0		
M1904	4	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0		
M1905	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1901	32	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1703	33	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		6	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.33 Model Validation Results for M-19-05 Using TMS 18 Data

RESULTS: SOUND LEVELS													Dulles		
Straughan Environmental KH										23 December 2010					
RESULTS: SOUND LEVELS										TNM 2.5					
PROJECT/CONTRACT: Dulles										Calculated with TNM 2.5					
RUN: TNM14 TMS18															
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
ATMOSPHERICS: 76 deg F, 74% RH															
Receiver															
Name	No.	#DUs	No Barrier					With Barrier							
			Existing LAeq1h	Increase over existing		Type	Calculated LAeq1h	Noise Reduction		Calculated minus Goal					
			Calculated	Crit'n	Calculated	Crit'n	Impact	Calculated	Calculated		Goal	Calculated			
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB			
M1902	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M1903	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M1904	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M1905	5	1	0.0	57.3	66	57.3	10	----	57.3	0.0	8	-8.0			
M1901	32	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M1703	33	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
Dwelling Units		# DUs	Noise Reduction												
			Min	Avg	Max										
			dB	dB	dB										
All Selected		6	0.0	0.0	0.0										
All Impacted		0	0.0	0.0	0.0										
All that meet NR Goal		0	0.0	0.0	0.0										

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.34 Model Validation Results for M-20-01 and M-20-02 Using TMS 18 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan KFR													23 December 2010	
RESULTS: SOUND LEVELS													TNM 2.5	
PROJECT/CONTRACT: Dulles													Calculated with TNM 2.5	
RUN: TNM15 TMS 18														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 76 deg F, 74% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier						
				Calculated	Crit'n	Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal		
			dB	dB	dB	dB	dB			dB	dB	dB	dB	dB
M2201	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2202	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2203	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2501	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2502	6	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2001	19	1	0.0	52.8	66	52.8	10	----	52.8	0.0	8	-8.0		
M2002	25	1	0.0	57.5	66	57.5	10	----	57.5	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		7	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.35 Model Validation Results for M-21-01, M-21-02 and M-21-03 Using TMS 19 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										3 January 2011 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:			Dulles											
RUN:			TMS19_TNM13 (M-21-01,02,03)											
BARRIER DESIGN:			INPUT HEIGHTS							Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS:			81 deg F, 63% RH											
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	With Barrier					
				Calculated	Crit'n	Calculated	Crit'n		Calculated	Noise Reduction	Calculated	Goal	Calculated minus Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
M1801	1	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1802	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1803	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M1805	10	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2101	14	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0		
M2102	15	1	0.0	42.6	66	42.6	10	----	42.6	0.0	8	-8.0		
M2103	16	1	0.0	62.9	66	62.9	10	----	62.9	0.0	8	-8.0		
M1804	17	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		8	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.36 Model Validation Results for M-22-01 and M-22-02 Using TMS 20 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan KFR													21 December 2010	
RESULTS: SOUND LEVELS													TNM 2.5	
PROJECT/CONTRACT: Dulles													Calculated with TNM 2.5	
RUN: TNM15 TMS20														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 81 deg F, 47% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h dBA	No Barrier				Type	With Barrier					
				LAeq1h Calculated	Crit'n dBA	Increase over existing Calculated	Crit'n Sub'l Inc dB		Calculated LAeq1h dBA	Noise Reduction Calculated		Goal dB	Calculated minus Goal dB	
M2201	2	1	0.0	53.7	66	53.7	10	---	53.7	0.0	8	-8.0		
M2202	3	1	0.0	58.1	66	58.1	10	---	58.1	0.0	8	-8.0		
M2203	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2501	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2502	6	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2001	19	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2002	25	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min dB	Avg dB	Max dB									
All Selected		7	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.37 Model Validation Results for M-23-01 Using TMS 20 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan													29 November 2010	
KFR													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT:													Dulles	
RUN:													TNM16 TMS20 M-23-01	
BARRIER DESIGN:													INPUT HEIGHTS	
ATMOSPHERICS:													88 deg F, 47% RH	
Receiver													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier						
				Calculated	Crit'n	Increase over existing	Type	Calculated	Noise Reduction		Calculated minus Goal			
			dB	dB	dB	dB	dB	dB	dB	dB		dB	dB	dB
M2301	10	1	0.0	56.3	66	56.3	10	----	56.3	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		1	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.38 Model Validation Results for M-25-03 and M-25-01 Using TMS 21 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan KFR										29 November 2010 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS PROJECT/CONTRACT: Dulles RUN: TNM15 TMS21 BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 89 deg F, 46% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h dBA	No Barrier				Increase over existing		Type Impact	With Barrier			
				LAeq1h Calculated dBA	Crit'n dBA	Calculated dB	Crit'n Sub'l Inc dB	Calculated LAeq1h dBA	Noise Reduction Calculated Goal dB		Calculated minus Goal dB			
M2201	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2202	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2203	4	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0		
M2501	5	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0		
M2502	6	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2001	19	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2002	25	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		7	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.39 Model Validation Results for M-25-02 Using TMS 22 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan KFR													29 November 2010 TNM 2.5 Calculated with TNM 2.5	
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:			Dulles											
RUN:			TNM15TMS 22											
BARRIER DESIGN:			INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:			88 deg F, 48% RH											
Receiver														
Name	No.	#DUs	Existing LAeq1h dBA	No Barrier				Type Impact	With Barrier					
				LAeq1h Calculated dBA	Crit'n dBA	Increase over existing Calculated dB	Crit'n Sub'l Inc dB		Calculated LAeq1h dBA	Noise Reduction		Calculated minus Goal dB		
M2201	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2202	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2203	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2501	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2502	6	1	0.0	55.6	66	55.6	10	---	55.6	0.0	8	-8.0		
M2001	19	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2002	25	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		7	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.40 Model Validation Results for M-26-01 Using TMS 22 Data

RESULTS: SOUND LEVELS												
Straughan ANB										Dulles		
RESULTS: SOUND LEVELS										7 December 2010		
PROJECT/CONTRACT: Dulles										TNM 2.5		
RUN: TNM17 TMS 22 M-26-01										Calculated with TNM 2.5		
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
ATMOSPHERICS: 88 deg F, 48% RH												
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	With Barrier			
				Calculated	Crit'n	Calculated	Crit'n		Calculated LAeq1h	Noise Reduction		Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
HR2404	1	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
M2602	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
M2603	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
M2604	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
M2605	6	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
M2601	11	1	0.0	56.6	66	56.6	10	---	56.6	0.0	8	-8.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		6	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.41 Model Validation Results for M-26-02 Using TMS 23 Data

RESULTS: SOUND LEVELS													Dulles		
Straughan ANB											7 December 2010				
RESULTS: SOUND LEVELS											TNM 2.5				
PROJECT/CONTRACT: Dulles											Calculated with TNM 2.5				
RUN: TNM16 (MS08/07)															
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
ATMOSPHERICS: 68 deg F, 50% RH															
Receiver															
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier							
				Calculated	Crit'n	Increase over existing	Type	Calculated	Noise Reduction						
			dBA	dBA	dBA	dB	dB			dBA	dB	dB	dB		
HR2404	1	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M2602	2	1	0.0	58.6	66	58.6	10	----	58.6	0.0	8	-8.0			
M2603	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M2604	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M2605	6	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
M2601	11	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0			
Dwelling Units		# DUs	Noise Reduction												
			Min	Avg	Max										
			dB	dB	dB										
All Selected		6	0.0	0.0	0.0										
All Impacted		0	0.0	0.0	0.0										
All that meet NR Goal		0	0.0	0.0	0.0										

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.42 Model Validation Results for M-27-01 Using TMS 23 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan													29 November 2010	
ANB													TNM 2.5	
													Calculated with TNM 2.5	
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:													Dulles	
RUN:													TMS23_TNM18 (M-27-01)	
BARRIER DESIGN:													INPUT HEIGHTS	
													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:													76 deg F, 67% RH	
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier						
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal			
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
M2701	7	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0		
M2702	8	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		2	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.43 Model Validation Results for M-26-04 and M-26-05 Using TMS 24 Data

RESULTS: SOUND LEVELS													Dulles	
Straughan													7 December 2010	
ANB													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT:													Dulles	
RUN:													TNM16 (MS08/07)	
BARRIER DESIGN:													INPUT HEIGHTS	
ATMOSPHERICS:													68 deg F, 50% RH	
Receiver													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier					
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal		
				Calculated	Crit'n	Calculated	Crit'n			Sub'l Inc	Calculated		Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB		
HR2404	1	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2602	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2603	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
M2604	4	1	0.0	58.3	66	58.3	10	----	58.3	0.0	8	-8.0		
M2605	6	1	0.0	56.2	66	56.2	10	----	56.2	0.0	8	-8.0		
M2601	11	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		6	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix E: Validation Tables

Figure E.44 Model Validation Results for M-27-02 Using TMS 24 Data

RESULTS: SOUND LEVELS													Dulles					
Straughan													29 November 2010					
KFR													TNM 2.5					
RESULTS: SOUND LEVELS													Calculated with TNM 2.5					
PROJECT/CONTRACT:													Dulles					
RUN:													TMS24_TNM18 (M-27-02)					
BARRIER DESIGN:													INPUT HEIGHTS			Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
ATMOSPHERICS:													78 deg F, 56% RH					
Receiver																		
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier									
				Calculated	Crit'n	Increase over existing		Type	Calculated LAeq1h	Noise Reduction		Calculated minus Goal						
			dB	dB	dB	dB	dB		dB	dB	dB		dB	dB	dB	dB		
M2701	7	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0						
M2702	8	1	0.0	64.1	66	64.1	10	---	64.1	0.0	8	-8.0						
Dwelling Units		# DUs	Noise Reduction															
			Min	Avg	Max													
			dB	dB	dB													
All Selected		2	0.0	0.0	0.0													
All Impacted		0	0.0	0.0	0.0													
All that meet NR Goal		0	0.0	0.0	0.0													

# HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS

## Appendix F Proposed Traffic

August 2012

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix F: Proposed Traffic

Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB Inner Two Toll Lanes	1638	32	63	7	3	1743	65
EB Toll Lanes Outer Two Lanes Before Off Ramp	1004	20	38	4	2	1068	65
EB Toll Lanes Outer Two Lanes After Off Ramp	765	7	28	0	1	801	65
EB Toll Lanes Outer Two Lanes After On Ramp	1396	27	53	6	2	1484	65
WB Inner Two Toll Lanes	1282	25	49	5	2	1363	65
WB Toll Lanes Outer Two Lanes	4293	84	164	18	7	4566	65
EB DIAAH Inner Lane	369	10	29	6	0	414	65
EB DIAAH Outer Lane	530	14	42	9	1	596	65
WB DIAAH Inner Lane	850	23	67	14	1	955	65
WB DIAAH Outer Lane	1726	47	136	29	2	1940	65
EB Sunrise Valley	658	19	10	5	0	692	41
WB Sunrise Valley	311	6	3	0	0	320	40
EB Worldgate Drive	670	9	6	3	0	688	23*
WB Worldgate Drive	489	4	7	7	0	507	28*
WB Worldgate Drive Right Most Lane	127	1	2	2	0	132	24*
WB Worldgate Thru Lanes	64	1	1	1	0	67	28*
WB Worldgate Inner/Outer Left Turn Lanes	298	3	4	4	0	309	24*
NB Centerville Road	1393	14	10	7	10	1434	34
SB Centerville Road	1573	10	7	7	0	1597	32
EB DTR Off Ramp to Centerville Road	239	13	10	5	0	267	43
EB DTR On Ramp from Centerville Road	1217	25	47	6	2	1297	27
WB DTR Off Ramp to Centerville Road	925	39	36	4	2	1006	23
WB DTR On Ramp from Centerville Road	716	14	27	3	1	761	26
*Speeds from TNM03							



## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB Toll Lanes Inner Two Lanes	3457	68	132	15	6	3678	65
EB Toll Lanes Outer Two Lanes	2119	42	81	9	3	2254	65
WB Toll Lanes Inner Two Lanes	533	10	20	2	1	566	65
WB Toll Lanes Outer Two Lanes After Off Ramp	1575	31	60	7	3	1676	65
WB Toll Lanes Outer Two Lanes After On Ramp	1784	35	68	8	3	1898	65
EB DIAAH Inner Lane	1056	28	83	18	1	1186	65
EB DIAAH Outer Lane	1520	41	120	26	2	1709	65
WB DIAAH Inner Lane	279	8	22	5	0	314	65
WB DIAAH Outer Lane	567	15	45	10	1	638	65
EB Sunrise Valley Drive	658	19	10	5	0	692	41*
WB Sunrise Valley Drive	311	6	3	0	0	320	40*
NB Centerville Road Thru Lanes	1393	14	10	7	10	1494	36
SB Centerville Road Thru Lanes	1573	10	7	7	0	1597	36
EB DTR Off Ramp to Centerville Road	584	32	23	12	1	652	43
WB DTR On Ramp from Centerville Road	209	4	8	1	0	222	26*

\*Speeds from TNM01.

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix F: Proposed Traffic

**Table F.3 Volume Summary – Traffic Noise Model 3**

Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB Toll Lanes Inner Two Lanes	2277	45	87	10	4	2423	65
EB Toll Lanes Outer Two Lanes After Off Ramp	124	2	5	1	0	132	65
EB Toll Lanes Outer Two Lanes After Centerville Road On Ramp	1396	27	53	6	2	1484	65
WB Toll Lanes Inner Two Lanes	1282	25	49	5	2	1363	65
WB Toll Lanes Outer Two Lanes	4293	84	164	18	7	4566	65
WB Off Ramp	925	39	36	4	2	1006	27
WB On Ramp	716	14	27	3	1	762	26
EB Off Ramp	239	13	10	5	0	267	43
EB On Ramp	1217	25	47	6	2	1297	27
EB DIAAH Inner Lane	344	9	27	6	0	386	65
EB DIAAH Outer Lane	496	13	39	8	1	557	65
WB DIAAH Inner Lane	850	23	67	14	1	955	65
WB DIAAH Outer Lane	1726	47	136	29	2	1940	65
EB Worldgate Drive	670	9	6	3	0	688	24
WB Worldgate Drive	489	4	7	7	0	507	28
NB Van Buren Street	856	0	0	8	0	864	28
SB Van Buren Street	1206	0	0	10	0	1216	28
NB/SB Van Buren Street	2062	0	0	18	0	2080	32
NB Monroe/Van Buren Street	1411	59	12	0	12	1494	32
SB Monroe Street	1001	42	8	0	8	1059	32
NB Centerville Road	1393	14	10	7	10	1434	31
SB Centerville Road	1573	10	7	7	0	1597	28

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB Toll Lanes Inner Two Lanes	3457	68	132	15	6	3678	65
EB Toll Lanes Outer Two Lanes	2119	42	81	9	3	2254	65
WB Toll Lanes Outer Two Lanes Before Off Ramp	2404	47	92	10	4	2557	65
WB Toll Lanes Outer Two Lanes After On Ramp	1784	35	68	8	3	1898	65
WB Toll Lanes Outer Two Lanes After Off Ramp	1390	27	53	6	32	1508	65
WB Toll Lanes Inner Two Lanes	718	14	28	3	1	764	65
EB DIAAH Inner Lane	1056	28	83	18	1	1186	65
EB DIAAH Outer Lane	1520	41	120	26	2	1709	65
WB DIAAH Inner Lane	217	6	17	4	0	244	65
WB DIAAH Outer Lane	441	12	35	7	0	495	65
NB Centerville Road	1393	14	10	7	10	1434	31
SB Centerville Road	1573	10	7	7	0	1597	28
EB DTR Off Ramp to Centerville Road	584	32	23	12	1	652	42
EB DTR On Ramp from Centerville Road	783	16	30	4	1	834	27
WB DTR Off Ramp to Centerville Road	798	34	31	3	1	867	23
WB DTR On Ramp from Centerville Road	209	4	8	1	0	222	25
NB Monroe/Van Buren Street	1411	59	12	0	12	1494	32
SB Monroe Street	1001	42	8	0	8	1059	32

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB Toll Lanes Inner Two Lanes	2311	45	89	10	4	2459	65
WB Toll Lanes Inner Two Lanes	1282	25	49	5	2	1363	65
EB DIAAH Inner Lane	344	9	27	6	0	386	65
EB DIAAH Outer Lane	496	13	39	8	1	557	65
WB DIAAH Inner Lane	850	23	67	14	1	955	65
WB DIAAH Outer Lane	1726	47	136	29	2	1940	65
EB On Ramp from Fairfax Parkway	587	12	23	4	1	627	28
EB Off Ramp to Fairfax Parkway	574	11	22	4	1	612	29
WB On Ramp from Fairfax Parkway	835	23	38	8	1	905	29
WB Off Ramp to Fairfax Parkway	1188	41	47	20	2	1298	29
NB Fairfax Parkway Thru Lanes	2751	26	67	0	5	2849	41
SB Fairfax Parkway Thru Lanes	2264	36	28	4	4	2336	42
NB Herndon Parkway	882	11	0	0	0	893	33
SB Herndon Parkway	718	15	3	0	3	739	30
WB Sunset Hills Road	1163	9	0	0	0	1172	31
EB Sunset Hills Road	1657	11	0	11	0	1679	34
EB Toll Lanes Outer Two Lanes After On Ramp	1417	28	54	6	2	1507	65
EB Toll Lanes Outer Two Lanes Before On Ramp	828	16	32	4	1	881	65
WB Toll Lanes Outer Two Lanes	4293	84	164	18	7	4566	65

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix F: Proposed Traffic

**Table F.6 Volume Summary – Traffic Noise Model 6**

Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB Toll Lanes Inner Two Lanes	3457	68	132	15	6	3678	65
EB Toll Lanes Outer Two Lanes	2119	42	81	9	3	2254	65
WB Toll Lanes Inner Two Lanes	869	17	33	4	1	924	65
WB Toll Lanes Outer Two Lanes Before Off Ramp	2908	57	111	12	5	3093	65
WB Toll Lanes Outer Two Lanes After Off Ramp	2160	43	83	9	3	2298	65
EB DIAAH Inner Lane	1056	28	83	18	1	1186	65
EB DIAAH Outer Lane	1520	41	120	26	2	1709	65
WB DIAAH Inner Lane	217	6	17	4	0	244	65
WB DIAAH Outer Lane	441	12	35	7	0	495	65
EB Off Ramp to Reston Parkway	433	9	17	2	1	462	31
EB Off Ramp to Reston Parkway Driver's Left Lane	303	6	12	1	0	322	31
EB Off Ramp to Reston Parkway Driver's Right Lane	130	3	5	1	0	139	31
EB On Ramp from NB Reston Parkway	384	8	15	2	1	410	34
EB On Ramp from SB Reston Parkway	494	10	19	2	1	526	27
WB Off Ramp to Reston Parkway	743	15	29	3	6	796	31
WB On Ramp from Reston Parkway	322	6	12	1	1	342	34
EB Sunrise Valley Drive	1355	40	20	10	0	1425	38
WB Sunrise Valley Drive	647	12	6	0	0	665	32
NB Reston Parkway Thru Lanes	1480	15	19	7	4	1525	35
SB Reston Parkway Thru Lanes	2342	86	26	9	9	2472	37

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB Toll Lanes Inner Two Lanes	2907	57	111	12	5	3092	65
EB Toll Lanes Outer Two Lanes Before Off Ramp	1782	35	68	8	3	1896	65
EB Toll Lanes Outer Two Lanes After Off Ramp	1456	29	56	6	2	1549	65
EB Toll Lanes Outer Two Lanes After On Ramp	2364	47	91	10	4	2516	65
WB Toll Lanes Inner Two Lanes	1234	24	47	5	2	1312	65
WB Toll Lanes Outer Two Lanes	4131	81	158	18	7	4395	65
EB DIAAH Inner Lane	344	9	27	6	0	386	65
EB DIAAH Outer Lane	496	13	39	8	1	557	65
WB DIAAH Inner Lane	783	21	62	13	1	880	65
WB DIAAH Outer Lane	1589	43	125	27	2	1786	65
EB Off Ramp to Hunter Mill Road	319	12	12	1	1	345	36
EB On Ramp from Hunter Mill Road	400	8	15	2	1	426	25
WB On Ramp from Hunter Mill Road	369	7	14	2	2	394	25
WB Off Ramp to Hunter Mill Road	559	11	21	2	3	596	31
NB Hunter Mill Road	739	23	23	0	0	785	29
SB Hunter Mill Road	663	6	26	0	0	695	30
EB/WB Sunset Hills Road	812	4	0	0	19	835	29
Business Center SB/NB	84	0	0	0	6	90	25
EB/WB Crowell Road	722	26	15	4	14	781	36

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB Toll Lanes Inner Two Lanes	2364	47	91	10	4	2516	65
EB Toll Lanes Outer Two Lanes After On Ramp	2364	47	91	10	4	2516	65
EB Toll Lanes Outer Two Lanes After Off Ramp	2000	39	77	9	3	2128	65
WB Toll Lanes Inner Two Lanes	1234	24	47	5	2	1312	65
WB Toll Lanes Outer Two Lanes	4131	81	158	18	7	4395	65
EB DIAAH Inner Lane	332	9	26	6	0	373	65
EB DIAAH Outer Lane	542	15	43	9	1	610	65
WB DIAAH Inner Lane	783	21	62	13	1	880	65
WB DIAAH Outer Lane	1589	43	125	27	2	1786	65
EB Off Ramp to Hunter Mill Road	319	12	12	1	1	345	36
EB On Ramp from Hunter Mill Road	400	8	15	2	1	426	25
WB Off Ramp to Hunter Mill Road	559	11	21	2	3	596	31
WB On Ramp from Hunter Mill Road	369	7	14	2	2	394	25
NB Hunter Mill Road	739	23	23	0	0	785	29
SB Hunter Mill Road	663	6	26	0	0	695	30
EB/WB Sunset Hills Road	812	4	0	0	19	835	29
EB/WB Cromwell Road	722	26	15	4	14	781	36

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

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<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB Toll Lanes Inner Two Lanes	2364	47	91	10	4	2516	65
EB Toll Lanes Outer Two Lanes	2364	47	91	10	4	2516	65
WB Toll Lanes Inner Two Lanes	1234	24	47	5	2	1312	65
WB Toll Lanes Outer Two Lanes	4131	81	158	18	7	4395	65
EB DIAAH Inner Two Lanes	332	9	26	6	0	373	65
EB DIAAH Outer Two Lanes	542	15	43	9	1	610	65
WB DIAAH Inner Two Lanes	783	21	62	13	1	880	65
WB DIAAH Outer Two Lanes	1589	43	125	27	2	1786	65
NB/SB Beulah Road	756	36	6	2	6	806	35



## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

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<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB Toll Lanes Inner Two Lanes	2682	53	103	11	4	2853	65
EB Toll Lanes Outer Two Lanes	2682	53	103	11	4	2853	65
WB Toll Lanes Inner Two Lanes	955	19	37	4	2	1017	65
WB Toll Lanes Outer Two Lanes	3198	63	122	14	5	3402	65
EB DIAAH Inner Two Lanes	901	24	71	15	1	1012	65
EB DIAAH Outer Two Lanes	1471	40	116	25	2	1654	65
WB DIAAH Inner Two Lanes	220	6	17	4	0	247	65
WB DIAAH Outer Two Lanes	447	12	35	8	1	503	65
EB Off Ramp to Hunter Mill	210	8	8	1	0	227	35
EB On Ramp from Hunter Mill Road	941	19	36	4	2	1002	25
WB Off Ramp to Hunter Mill	433	9	17	2	3	464	31
WB On Ramp from Hunter Mill Road	270	5	10	1	2	288	25
NB Hunter Mill Road	739	23	23	0	0	785	29
SB Hunter Mill Rd	663	6	26	0	0	695	30
NB/SB Beulah Road	756	36	6	2	6	806	35

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB Toll Lanes Inner Two Lanes	2364	47	91	10	4	2516	65
EB Toll Lanes Outer Two Lanes Before On Ramp	2364	47	91	10	4	2516	65
EB Toll Lanes Outer Two Lanes After On Ramp	2397	47	92	10	4	2550	65
WB Toll Lanes Inner Two Lanes	1234	24	47	5	2	1312	65
WB Toll Lanes Outer Two Lanes	4131	81	158	18	7	4395	65
EB DIAAH Inner Lane	332	9	26	6	0	373	65
EB DIAAH Outer Lane <sup>1</sup>	542	15	43	9	1	610	65
WB DIAAH Inner Lane	783	21	62	13	1	880	65
WB DIAAH Outer Lane	1589	43	125	27	2	1786	65
NB/SB Trap Road	517	4	15	0	0	536	30
NB Trap Road	293	2	9	0	0	304	30
SB Trap Road	224	2	7	0	0	233	30
EB Trap Road On Ramp to DTR	65	1	3	0	2	71	25
WB DTR Off Ramp to Trap Road	103	3	4	0	0	110	49

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB Toll Lanes Inner Two Lanes	2682	53	103	11	4	2853	65
EB Toll Lanes Outer Two Lanes	2682	53	103	11	4	2853	65
WB Toll Lanes Inner Two Lanes	955	19	37	4	2	1017	65
WB Toll Lanes Outer Two Lanes Before Off Ramp	3245	64	124	14	5	3452	65
WB Toll Lanes Outer Two Lanes After Off Ramp	3198	63	122	14	5	3402	65
EB DIAAH Inner Lane	901	24	71	15	1	1012	65
EB DIAAH Outer Lane <sup>1</sup>	1471	40	116	25	2	1654	65
WB DIAAH Inner Lane	220	6	17	4	0	247	65
WB DIAAH Outer Lane	447	12	35	8	1	503	65
NB/SB Beulah Road at DTR	756	36	6	2	6	806	35
NB/SB Trap Road	517	4	15	0	0	536	30
Trap Road On Ramp to DTR	159	3	6	1	4	173	25
DTR Off Ramp to Trap Road	20	1	1	0	0	22	49

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix F: Proposed Traffic

**Table F.13 Volume Summary – Traffic Noise Model 13**

Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB Toll Lanes Inner Two Lanes	2682	53	103	11	4	2853	65
EB Toll Lanes Outer Two Lanes	2682	53	103	11	4	2853	65
WB Toll Lanes Inner Two Lanes	969	19	37	4	2	1031	65
WB Toll Lanes Outer Two Lanes after Leesburg Pike Off Ramp	2784	55	107	12	4	2962	65
WB Toll Lanes Outer Two Lanes After NB Leesburg Pike On Ramp	3200	63	123	14	5	3405	65
WB Toll Lanes Outer Two Lanes After SB Leesburg Pike On Ramp	3245	64	124	14	5	3452	65
WB Toll Lanes Outer Two Lanes after Trap Road Off Ramp	3198	63	122	14	5	3402	65
EB DIAAH Inner Lane	901	24	71	15	1	1012	65
EB DIAAH Outer Lane <sup>1</sup>	1471	40	116	25	2	1654	65
WB DIAAH Inner Lane	220	6	17	4	0	247	65
WB DIAAH Outer Lane	447	12	35	8	1	503	65
NB/SB Trap Road	517	4	15	0	0	536	30
EB DTR On Ramp from Trap Road	159	3	6	1	4	173	25
EB DTR ramp to NB Leesburg Pike	95	2	4	0	0	101	37
EB DTR Outer Ramp Lane to SB Leesburg Pike	847	17	32	4	1	901	26
EB DTR Middle Ramp Lane to SB Leesburg Pike	175	4	22	4	0	205	26
EB DTR Outer/Middle Ramp Lane to SB Leesburg Pike	1022	20	54	8	2	1106	26
EB DTR Inner/Middle Ramp Lane to SB Leesburg Pike	183	8	24	4	0	219	26
EB DTR Inner Ramp Lane to SB Leesburg Pike	8	4	2	0	0	14	26
EB DTR Loop on Ramp from SB Leesburg Pike	393	29	16	2	1	441	36
WB DRT Inner/ Outer Off Ramp to Leesburg Pike	209	7	8	1	0	225	40
WB DRT Inner Off Ramp to Leesburg Pike	36	1	1	0	0	38	40
WB DRT Outer Off Ramp to Leesburg Pike	174	6	7	1	0	188	40
WB DTR Off Ramp to Trap Road	20	1	1	0	0	22	49
WB DTR On Ramp from SB Leesburg Pike	45	1	2	0	0	48	25
NB Leesburg Pike Thru Lanes	683	48	14	3	1	749	34
SB Leesburg Pike Thru Lanes	2681	125	29	5	5	2845	40
EB DTR on Ramp to NB Leesburg Pike	51	1	2	0	0	54	36
WB DTR On Ramp from NB Leesburg Pike	397	24	19	2	1	443	32

<sup>1</sup> Lane Closed

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB Toll Lanes Inner Two Lanes	2397	47	92	10	4	2550	65
EB Toll Lanes Outer Two Lanes	2397	47	92	10	4	2550	65
WB Toll Lanes Inner Two Lanes	1234	24	47	5	2	1312	65
WB Toll Lanes Outer Two Lanes	4131	81	158	18	7	4395	65
EB DIAAH Inner Two Lanes	297	8	23	5	0	333	65
EB DIAAH Outer Two Lanes	485	13	38	8	1	545	65
WB DIAAH Inner Two Lanes	783	21	62	13	1	880	65
WB DIAAH Outer Two Lanes	1589	43	125	27	2	1786	65
NB Leesburg Pike	683	48	14	3	1	749	34
NB Leesburg Pike Off Ramp to WB DTR	1173	71	57	5	2	1308	32
SB Leesburg Pike Thru Lanes	2681	125	29	5	5	2845	40
NB/SB Trap Road	517	4	15	0	0	536	30
NB Trap Road	293	2	9	0	0	304	30
SB Trap Road	224	2	7	0	0	233	30
WB DTR Ramp To Trap Road	103	3	4	0	0	110	49
Trap Road Ramp To EB DTR	65	1	3	2	0	71	25
SB Leesburg Pike Ramp Lane to EB DTR	276	20	11	1	0	308	36
WB DTR Outer and Middle Ramps to NB/SB Route 7	577	20	22	2	1	622	26
SB On Ramp to WB DTR	76	1	3	0	0	80	25
Innermost and Middle Ramps from DTR EL to NB/SB Route 7	82	7	12	2	0	103	26
Outermost Ramp from DTR to SB Route 7	491	10	19	2	1	523	26
EB Outer Ramp Lane to NB Route 7	100	2	4	0	0	106	37
EB Inner Ramp from DTR EL to SB Route 7	11	5	3	0	0	19	26
EB Middle Ramp from DTR to SB Route 7	72	2	9	2	0	85	26

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix F: Proposed Traffic

Roadway	Autos (vph)	Medium Trucks (vph)	Heavy Trucks (vph)	Buses (vph)	Motorcycles (vph)	Total Volume (vph)	Speed (mph)
EB Toll Lanes Inner Two Lanes	2801	55	107	12	4	2979	65
EB Toll Lanes Outer Two Lanes	1791	35	69	8	3	1906	65
WB Toll Lanes Inner Two Lanes	1395	27	53	6	2	1483	65
WB Toll Lanes Outer Two Lanes	4131	81	158	18	7	4395	65
EB DIAAH Inner Two Lanes	135	4	11	2	0	152	65
EB DIAAH Outer Two Lanes	202	5	16	3	0	226	65
WB DIAAH Inner Two Lanes	949	26	75	16	1	1067	65
WB DIAAH Outer Two Lanes	1423	38	112	24	2	1599	65
NB Leesburg Pike	683	48	14	3	1	749	34
NB Leesburg Pike Ramp to WB DTR	1173	71	57	5	2	1308	32
SB Leesburg Pike Thru Lanes	2681	125	29	5	5	2845	40
EB Lewinsville Road	513	49	7	7	0	576	35
WB Lewinsville Road	209	12	0	3	0	224	37
NB Spring Hill Road	1018	2	12	5	0	1037	33
SB Spring Hill Road	382	2	3	10	1	398	32
EB DTR On Ramp from Spring Hill Road	443	9	17	2	1	471	26
EB DTR Off Ramp to Spring Hill Road	401	14	17	38	1	471	26
WB Spring Hill Road On Ramp to WB DTR	1208	35	47	5	10	1305	25
WB DTR Off Ramp to Spring Hill Road	192	10	8	9	0	219	26
SB Leesburg Pike Ramp Lane to EB DTR	276	20	11	1	0	308	36
WB DTR Outer and Middle Ramps to NB/SB Route 7	577	20	22	2	1	622	26
WB DTR Outer Ramp Lane to NB/SB Route 7	491	10	19	2	1	523	26
WB DTR Inner Ramp Lane to NB/SB Route 7	11	5	3	0	0	19	26
SB On Ramp to WB DTR	76	1	3	0	0	80	25
Innermost and Middle Ramps from DTR EL to NB/SB Route 7	82	7	12	2	0	103	26
Middle Ramp from EB DTR to SB Route 7	72	2	9	2	0	85	26
EB Outer Ramp Lane to NB Route 7	100	2	4	0	0	106	37
<sup>1</sup> Lane Closed							

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB Toll Lanes Inner Two Lanes	3272	64	125	14	5	3480	65
EB Toll Lanes Outer Two Lanes	2092	41	80	9	3	2225	65
WB Toll Lanes Inner Two Lanes	1031	20	39	4	2	1096	65
EB Toll Lanes Outer Two Lanes After On Ramp	2682	53	103	11	4	2853	65
WB Toll Lanes Outer Two Lanes Before Off Ramp	3533	70	135	15	6	3759	65
WB Toll Lanes Outer Two Lanes After On Ramp	2935	58	112	12	5	3122	65
EB DIAAH Inner Lane	949	26	75	16	1	1067	65
EB DIAAH Outer Lane	1423	38	112	24	2	1599	65
WB DIAAH Inner Lane	267	7	21	5	0	300	65
WB DIAAH Outer Lane	401	11	32	7	0	451	65
EB Tyco Road	351	15	12	5	0	383	31
WB Tyco Road	174	7	6	3	0	190	34
NB Spring (North Leg) Thru Lanes	1018	2	12	5	0	1037	33
SB Spring (North Leg) Thru Lanes	382	2	3	10	1	398	32
EB DTR On Ramp from Spring Hill Road	217	7	9	21	0	254	26
EB DTR Off Ramp to Spring Hill Road	1170	23	45	5	2	1245	26
WB DTR On Ramp from Spring Hill Road	116	3	5	1	1	126	25
WB DTR Of Ramp to Spring Hill Road	364	20	15	17	1	417	26

## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB Toll Lanes	5063	100	194	22	8	5387	65
WB Toll Lanes	4131	81	158	18	7	4395	65
EB DIAAH Inner Lane	128	3	10	2	0	143	65
EB DIAAH Outer Lane	209	6	16	4	0	235	65
WB DIAAH Inner Lane	783	21	62	13	1	880	65
WB DIAAH Outer Lane	1589	43	125	27	2	1786	65
EB Jones Branch Road	639	13	4	0	0	656	35
WB Jones Branch Road	298	14	0	10	5	327	34
NB I-495 Inner Lanes	2443	114	80	27	5	2669	65
NB I-495 Outer Lanes	2986	139	98	33	6	3262	65
SB I-495 Inner Lanes	2758	81	89	30	8	2966	65
SB I-495 Outer Lanes	2758	81	89	30	8	2966	65
SB I-495 Off Ramp to EB DTR	426	15	3	0	3	447	33
SB I-495 Off Ramp to WB DTR	2065	42	135	9	3	2254	42
NB I-495 Ramp Left Most Lane to WB DTR	993	20	65	4	2	1084	56
EB DTR Off Ramp to I-495	2024	45	78	12	3	2162	38
EB DTR Off Ramp to NB I-495	1242	25	48	8	2	1325	30
EB DTR Off Ramp to SB I-495	782	20	30	3	1	836	42
EB DTR Before Off Ramp	5063	100	194	22	8	5387	65
EB DTR After On Ramp	3465	69	119	10	8	3671	65
WB DTR After On Ramp	5365	106	205	23	9	5708	65
WB Off Ramp to Spring Hill	192	10	8	9	0	219	27



## Dulles Toll Road

### Highway Sound Measurement and Noise Barrier Analysis

#### Appendix F: Proposed Traffic

<b>Roadway</b>	<b>Autos (vph)</b>	<b>Medium Trucks (vph)</b>	<b>Heavy Trucks (vph)</b>	<b>Buses (vph)</b>	<b>Motorcycles (vph)</b>	<b>Total Volume (vph)</b>	<b>Speed (mph)</b>
EB Toll Lanes Inner Two Lanes	2682	53	103	11	4	2853	65
EB Toll Lanes Outer Two Lanes	2682	53	103	11	4	2853	65
WB Toll Lanes Inner Two Lanes	1055	21	40	4	2	1122	65
WB Toll Lanes Outer Two Lanes	3533	70	135	15	6	3759	65
EB DIAAH Inner Lane	901	24	71	15	1	1012	65
EB DIAAH Outer Lane	1471	40	116	25	2	1654	65
WB DIAAH Inner Lane	111	3	9	2	0	125	65
WB DIAAH Outer Lane	226	6	18	4	0	254	65
EB Jones Branch Road	639	13	4	0	0	656	39
WB Jones Branch Road	298	14	0	10	5	327	33
NB-I-495 Toll Lanes Inner Two Lanes	2443	114	80	27	5	2669	65
NB-I-495 Toll Lanes Outer Two Lanes	2986	139	98	33	6	3262	65
NB-I-495 All Lanes	5429	253	178	59	11	5930	65
SB-I-495 Toll Lanes Inner Two Lanes	2758	81	89	30	8	2966	65
SB-I-495 Toll Lanes Outer Two Lanes	2758	81	89	30	8	2966	65
SB-I-495 All Lanes	5516	162	178	59	16	5931	65
EB DTR From I-495-S Ramp	426	15	3	0	3	447	35
EB DTR Inner Ramp to I-495-S	1748	36	67	12	3	1866	30
EB DTR Outer Ramp to I-495-S	1500	38	58	6	2	1604	42
WB DTR Outer Ramp from I-495-N	900	18	59	4	1	982	48
WB DTR Outer Ramp from I-495-S	2025	41	132	9	3	2210	42

# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix G** Impact Rail Spreadsheets

August 2012

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

24HR-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	915	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

24HR-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	220	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

24HR-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	350	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-01-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	310	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-01-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	51	44	44
Source 1	51	44	44
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars		
<b>Distance (source to receiver)</b>	distance (ft)	1120	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-01-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	320	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-01-01

RESULTS			
Noise Source	#REF!	#REF!	#REF!
All Sources	#REF!	#REF!	#REF!
Source 1	#REF!	#REF!	#REF!
Source 2	#REF!	#REF!	#REF!
Source 3	#REF!	#REF!	#REF!
Source 4	#REF!	#REF!	#REF!
Source 5	#REF!	#REF!	#REF!
Source 6	#REF!	#REF!	#REF!
Source 7	#REF!	#REF!	#REF!
Source 8	#REF!	#REF!	#REF!

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.	#REF!	3	
Distance (source to receiver)	distance (ft)	815	
#REF!	#REF!	70	#REF!
#REF!	#REF!	12	#REF!
#REF!	#REF!	8	#REF!
#REF!	#REF!	70	#REF!
#REF!	#REF!	12	#REF!
#REF!	#REF!	8	#REF!
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	#REF!	N	#REF!
Embedded Track?	#REF!	N	#REF!
Aerial Structure?	#REF!	N	#REF!
Barrier Present?	#REF!	N	#REF!
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-01-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	910			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-01-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	480			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-01-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-01-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	50	44	44
Source 1	50	44	44
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	985	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-01-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	390			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-01-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	365			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	555	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-01A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	555			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-01B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	555	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-01C

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	555	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	750	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	225	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

M-02-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	360	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	420	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	940	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	49	43	43
Source 1	49	43	43
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1310	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	580	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-04

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	49		
Source 1	49		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	1060			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-05

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	53		
Source 1	53		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	605			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars		
Distance (source to receiver)	distance (ft)		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	50	44	44
Source 1	50	44	44
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1015	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-02-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	760	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars		
Distance (source to receiver)	distance (ft)		
Daytime Hours (7 AM - 10 PM)	speed (mph)		
	trains/hour		
	cars/train		
Nighttime Hours (10 PM - 7 AM)	speed (mph)		
	trains/hour		
	cars/train		
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars		
<b>Distance (source to receiver)</b>	distance (ft)		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-02-11

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	475	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	720	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-13

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	55	
Source 1	55	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	430			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-14

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	56	
Source 1	56	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	375			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-15

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	57		
Source 1	57		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	320			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-02-16

<b>RESULTS</b>			
Noise Source	Leq - 1-hr (dB)		
All Sources	58		
Source 1	58		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3		
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	280			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-17

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	56	
Source 1	56	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	365			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-18

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	55		
Source 1	55		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	450			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-19

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	54	
Source 1	54	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	535			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-20

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	53	
Source 1	53	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	605			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-21

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	235	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-22

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	255			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-23

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	54		
Source 1	54		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	545			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-24

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	55		
Source 1	55		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	445			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-25

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	54		
Source 1	54		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	525			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-02-26

<b>RESULTS</b>			
Noise Source	Leq - 1-hr (dB)		
All Sources	55		
Source 1	55		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3		
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	455			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-27

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	54	
Source 1	54	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	515			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-28

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	55	
Source 1	55	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	460			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-29

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	50	
Source 1	50	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	940			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-02-30

<b>RESULTS</b>		
Noise Source	Leq - 1-hr (dB)	
All Sources	51	
Source 1	51	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3		
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	825			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N	45		
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-03-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1530	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-03-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1775	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-03-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	46	40	40
Source 1	46	40	40
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1760	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-03-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	47	41	41
Source 1	47	41	41
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1480	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-03-04

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1525	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-04-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	460			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-04-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	51	44	44
Source 1	51	44	44
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	890			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	2			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

M-04-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	49	43	43
Source 1	49	43	43
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1110	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-04-04

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	390			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-04-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	575	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	850			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	50	43	43
Source 1	50	43	43
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1070	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	745			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	380			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-04A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	380			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-04B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	380	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-04C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	380			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-05

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	850			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	645	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-07

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-07A

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-07B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-07C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-04-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	625	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	830	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-10

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	435			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-11

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	430			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-12

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-04-12A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-12B

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	470	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-12C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-04-13

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-13A

8

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-13B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-13C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-14

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	610			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-15

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	520	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-15A

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	520	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-15B

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	520	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-15C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	520			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-16

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	565			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-17

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	48	48
Source 1	55	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	615			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-05-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	960			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-05-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1125	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-06-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	235			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-06-01A

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	235			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-06-01B

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	235	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-06-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	51	45	45
Source 1	51	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1100	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	290			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	590	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	345	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-04

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	245	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-04A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	245			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-04B

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	245			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-06-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	66	59	59
Source 1	66	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	230	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-05A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	66	59	59
Source 1	66	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	230			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-05B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	66	59	59
Source 1	66	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	230			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-06

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	290			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-06A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	290			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-06B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	290			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	395	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-07A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	395	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-06-07B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	395	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-08A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	320			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-06-08B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	320		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-09A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	360			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-09B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	360			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-10A

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	390	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-10B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	390			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-11A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	320			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-11B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	320			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-06-12A

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	350	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-12B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	350			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-13A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	375	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-13B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	375			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-14A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	500			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-14B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	500	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-07-01

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	49	
Source 1	49	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	1045			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-07-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	775	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-07-01

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	51		
Source 1	51		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	810			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-08-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	300			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-08-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	920			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-08-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	47	41	41
Source 1	47	41	41
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1540	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	565	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	415			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	425			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-08-04

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-05

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	505			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	575			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	665	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	290			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	245			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-10

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	58	58
Source 1	65	58	58
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	265			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-08-11

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	345			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-08-12

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	560	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-08-13

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	665			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-08-14

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	240			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-08-14A

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	240			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-08-14B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	240			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-08-14C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	240			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-14D

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	240			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-08-14E

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	240	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-08-14F

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	240			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-09-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	1105			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-09-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	50	43	43
Source 1	50	43	43
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1365	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-09-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	490			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-09-04

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	55	
Source 1	55	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	450			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-09-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	810			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-09-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	410	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-09-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	375			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-09-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	480	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-09-05

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	51	
Source 1	51	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	855			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-09-06

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	49	
Source 1	49	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	1090			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-09-07

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	53		
Source 1	53		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	585			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-09-08

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	880			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-09-09

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1005	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-09-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	340	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-09-11

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	250			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-09-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	250			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-10-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1170	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-10-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	495	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-10-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	450			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-10-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	810			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	370	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	385			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	690			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-10-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-10-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	600			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-10-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	765	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-08

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	455			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	345			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-10

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	510	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-11

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	400			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-11-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	455	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-11-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	810			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-11-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	195	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-11-04

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	330			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-11-05

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	51	45	45
Source 1	51	45	45
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1020	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-11-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	430			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	1			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	375	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	375	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-11-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	385			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-05

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	330			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	52	45	45
Source 1	52	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	770			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	2			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-11-07

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	290			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-11-08

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	600			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-11-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	255			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	51	45	45
Source 1	51	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1065	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-11

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	870			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	235	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-13

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	295			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-14

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	330			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-15

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	66	59	59
Source 1	66	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	225			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-16

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	300	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-12-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	505			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

M-12-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	750			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	2			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-12-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	210	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-12-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	805			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	405	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	340			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-04

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	58	
Source 1	58	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	295			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-12-05

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	51	
Source 1	51	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	380			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-12-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

219

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

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	355	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-07

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	295	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-12-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	250	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	320			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-12-10

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	57	
Source 1	57	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	330			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-11

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	52	
Source 1	52	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	340			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-12

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	51		
Source 1	51		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	385			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-13-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	450			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-13-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	545			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	1			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-13-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	385			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	660			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	2			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	270			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	640			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	2			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-04

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	480			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-05

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	425			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-13-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	420			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-13-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	285			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-13-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	280			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-13-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	340			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
<b>Source Num.</b>	Commuter Rail Cars	3			
<b>Distance (source to receiver)</b>	distance (ft)	380			
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%			
<b>Jointed Track?</b>	Y/N	N			
<b>Embedded Track?</b>	Y/N	N			
<b>Aerial Structure?</b>	Y/N	N			
<b>Barrier Present?</b>	Y/N	Y			
<b>Intervening Rows of Buildings</b>	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

M-14-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	290	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-14-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	610	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-14-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	275			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-14-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	410			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	670			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	2			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	445			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-04

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	350			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-14-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	405	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-14-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	570			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	2			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-14-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	330			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	530			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-14-09

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	310			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	430	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-11

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	265	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	460			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-15-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	460			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-15-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	680			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-15-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	845		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	375			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	575	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	355			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	485	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-05

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	520			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	730			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	740			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	725			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-09

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	360			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-15-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	475	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-15-11

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	645	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-15-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	820			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-13

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	330			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-15-14

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	48	48
Source 1	55	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	605			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-15

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	360			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-16

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	400			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-17

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	405			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-18

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	675			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-19

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	520	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-20

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-21

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	655	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-22

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	880			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-23

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	740			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-24

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	435	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-25

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	520	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-15-26

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	475	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-27

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
<b>Source Num.</b>	Commuter Rail Cars	3			
<b>Distance (source to receiver)</b>	distance (ft)	645			
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%			
<b>Jointed Track?</b>	Y/N	N			
<b>Embedded Track?</b>	Y/N	N			
<b>Aerial Structure?</b>	Y/N	N			
<b>Barrier Present?</b>	Y/N	N			
<b>Intervening Rows of Buildings</b>	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-28

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	525	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-29

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	535			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-30

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	520			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-31

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	695	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-32

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	610			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-33

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	600			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-34

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
<b>Source Num.</b>	Commuter Rail Cars	3			
<b>Distance (source to receiver)</b>	distance (ft)	800			
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%			
<b>Jointed Track?</b>	Y/N	N			
<b>Embedded Track?</b>	Y/N	N			
<b>Aerial Structure?</b>	Y/N	N			
<b>Barrier Present?</b>	Y/N	N			
<b>Intervening Rows of Buildings</b>	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-35

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	875			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-36

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	690	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-16-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	51	44	44
Source 1	51	44	44
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1060	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-16-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	1395			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-16-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	51	44	44
Source 1	51	44	44
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1135	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-18-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	305			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-18-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	50	44	44
Source 1	50	44	44
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1020	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-18-03

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	550	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-18-04

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	670			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	2			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-18-05

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	305			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-18-01

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	53	
Source 1	53	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	615			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-18-02

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	58		
Source 1	58		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	295			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-18-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	270			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-18-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	655	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	565			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-06

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	245	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-18-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	535			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	1			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	515	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-09

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	515			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-10

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	245	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-11

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	500			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	265			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-13

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	240			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
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Case: R-18-14  
254

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	350			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

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Case:

R-18-15

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	345			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-16

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	345	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-17

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	270			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-18-18

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	315	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-18-19

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	410			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-18-20

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	450			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-18-21

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
<b>Source Num.</b>	Commuter Rail Cars	3			
<b>Distance (source to receiver)</b>	distance (ft)	655			
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%			
<b>Jointed Track?</b>	Y/N	N			
<b>Embedded Track?</b>	Y/N	N			
<b>Aerial Structure?</b>	Y/N	N			
<b>Barrier Present?</b>	Y/N	Y			
<b>Intervening Rows of Buildings</b>	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-19-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	300			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-19-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	625			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-19-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	745	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-19-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	260			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-19-05

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	51	
Source 1	51	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	650			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	640			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-19-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	280	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-19-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	520			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	48	48
Source 1	55	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	585	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-05

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	240	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-06

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	270			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-07

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	850			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	1			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	260	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-19-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	285	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-10

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	450			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-11

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	290			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-12

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	260			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-13

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	255			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-14

RESULTS		
Noise Source	Leq - 1-hr (dB)	
All Sources	52	
Source 1	52	
Source 2	0	
Source 3	0	
Source 4	0	
Source 5	0	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

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

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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	315			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-15

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	280			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-16

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	530			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-17

RESULTS			
Noise Source	Leq - 1-hr (dB)		
All Sources	52		
Source 1	52		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

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

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.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	315			
Noisiest Hour of	speed (mph)	70			
Activity During	trains/hour	12			
Sensitive Hours	cars/train	8			
		70			
		12			
		8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-19-18

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	250			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-19

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	290			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-20

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	320			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-21

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	315			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-22

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	305	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-23

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	530	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-24

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	460			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-25

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	470			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

R-19-26

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	485			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-27

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	335	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-20-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1200	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

**Noise Model Based on Federal Transit Administration General Transit Noise Assessment**

Developed for Chicago Create Project

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Case:

M-20-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	52	45	45
Source 1	52	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1460	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	2	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-20-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1125	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-20-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	48	42	42
Source 1	48	42	42
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	2980	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-20-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	50	43	43
Source 1	50	43	43
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	2220	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

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Case:

R-20-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	1490	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	Y	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-20-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1145	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-20-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1395	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-21-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	300			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-21-02

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	960			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	2			



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-21-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	66	60	60
Source 1	66	60	60
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	400			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-21-01

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	590	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-21-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	67	61	61
Source 1	67	61	61
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	320			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-21-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	465	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-21-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars		
<b>Distance (source to receiver)</b>	distance (ft)	390	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-21-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	48	48
Source 1	55	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	575	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-21-06

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	545			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis  
Appendix G: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-21-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	530			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	Y			



# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix H**

### Impact Analysis TNM Result Tables

August 2012

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.1 Modeled Sound Level Results for NSA 02 (Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										10 January 2012 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: Dulles														
RUN: TNM01														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Crit'n	Increase over existing	Crit'n	Type	With Barrier	Noise Reduction	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB	Impact	Calculated LAeq1h	Calculated	dB	dB		
M0201	4	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0		
M0202	5	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0		
M0203	6	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0		
M0204	7	1	0.0	49.5	66	49.5	10	----	49.5	0.0	8	-8.0		
M0205	8	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0		
R0201	20	1	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0		
R0202	21	1	0.0	49.2	66	49.2	10	----	49.2	0.0	8	-8.0		
R0203	22	1	0.0	50.8	66	50.8	10	----	50.8	0.0	8	-8.0		
R0204	23	1	0.0	48.6	66	48.6	10	----	48.6	0.0	8	-8.0		
R0205	24	1	0.0	50.8	66	50.8	10	----	50.8	0.0	8	-8.0		
R0206	25	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0		
R0207	26	1	0.0	55.2	66	55.2	10	----	55.2	0.0	8	-8.0		
R0208	27	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0		
R0209	28	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0		
R0210	29	1	0.0	58.1	66	58.1	10	----	58.1	0.0	8	-8.0		
R0211	30	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0		
R0212	31	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0		
R0213	32	1	0.0	69.9	66	69.9	10	Snd Lvl	69.9	0.0	8	-8.0		
R0214	33	1	0.0	71.4	66	71.4	10	Snd Lvl	71.4	0.0	8	-8.0		
R0215	34	1	0.0	73.1	66	73.1	10	Snd Lvl	73.1	0.0	8	-8.0		
R0216	35	1	0.0	74.5	66	74.5	10	Snd Lvl	74.5	0.0	8	-8.0		
R0217	36	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0		
R0218	37	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0		
R0219	38	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.1 Modeled Sound Level Results for NSA 02 (Page 2 of 2)

RESULTS: SOUND LEVELS				Dulles								
R0220	39	1	0.0	63.4	66	63.4	10	---	63.4	0.0	8	-8.0
R0221	40	1	0.0	64.9	66	64.9	10	---	64.9	0.0	8	-8.0
R0222	41	1	0.0	61.9	66	61.9	10	---	61.9	0.0	8	-8.0
R0223	42	1	0.0	52.6	66	52.6	10	---	52.6	0.0	8	-8.0
R0224	43	1	0.0	47.8	66	47.8	10	---	47.8	0.0	8	-8.0
R0225	44	1	0.0	48.1	66	48.1	10	---	48.1	0.0	8	-8.0
R0226	45	1	0.0	53.3	66	53.3	10	---	53.3	0.0	8	-8.0
R0227	46	1	0.0	55.1	66	55.1	10	---	55.1	0.0	8	-8.0
R0228	47	1	0.0	61.2	66	61.2	10	---	61.2	0.0	8	-8.0
R0229	48	1	0.0	48.2	66	48.2	10	---	48.2	0.0	8	-8.0
R0230	90	1	0.0	48.0	66	48.0	10	---	48.0	0.0	8	-8.0
M-02-01A	91	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0
M-02-01B	92	1	0.0	70.7	66	70.7	10	Snd Lvl	70.7	0.0	8	-8.0
M-02-01C	93	1	0.0	71.1	66	71.1	10	Snd Lvl	71.1	0.0	8	-8.0
Dwelling Units	# DUs	Noise Reduction										
		Min dB	Avg dB	Max dB								
All Selected	38	0.0	0.0	0.0								
All Impacted	11	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.2 Modeled Sound Level Results for NSA 01

RESULTS: SOUND LEVELS													Dulles	
SES/N&W													10 January 2012	
KFR/RCK													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT:													Dulles	
RUN:													TNM02 (MS01)	
BARRIER DESIGN:													INPUT HEIGHTS	
													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:													68 deg F, 50% RH	
Receiver														
Name	No.	#DUs	Existing	No Barrier			Increase over existing		Type Impact	With Barrier				
			LAeq1h	LAeq1h	Calculated	Crit'n	Calculated	Crit'n		Calculated	Noise Reduction	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	dB	dB
M0101	1	1	0.0	71.6	66	71.6	10	Snd Lvl	71.6	0.0	8	-8.0		
M0102	2	1	0.0	55.1	66	55.1	10	---	55.1	0.0	8	-8.0		
M0103	3	1	0.0	62.1	66	62.1	10	---	62.1	0.0	8	-8.0		
R0101	18	1	0.0	53.6	66	53.6	10	---	53.6	0.0	8	-8.0		
R0102	19	1	0.0	57.8	66	57.8	10	---	57.8	0.0	8	-8.0		
R0103	20	1	0.0	57.4	66	57.4	10	---	57.4	0.0	8	-8.0		
R0104	21	1	0.0	62.1	66	62.1	10	---	62.1	0.0	8	-8.0		
R0105	22	1	0.0	57.3	66	57.3	10	---	57.3	0.0	8	-8.0		
R0106	23	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0		
R0107	24	1	0.0	69.6	66	69.6	10	Snd Lvl	69.6	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		10	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									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.3 Modeled Sound Level Results for NSA 04 (Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
SES/N&W													10 January 2012	
KFR/RCK													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT:													Dulles	
RUN:													TNM03 (MS01)	
BARRIER DESIGN:													INPUT HEIGHTS	
ATMOSPHERICS:													68 deg F, 50% RH	
Receiver													Average pavement type: shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
Name	No.	#DUs	Existing	No Barrier			Increase over existing		Type	With Barrier		Goal	Calculated minus Goal	
			LAeq1h	LAeq1h	Crit'n	Calculated	Crit'n	Sub'l Inc	Impact	Calculated	Noise Reduction			
			dBA	dBA	dBA					dBA	dB	dB	dB	
M0401	10	1	0.0	71.7	66	71.7	10	Snd Lvl	71.7	0.0	8	-8.0		
M0402	11	1	0.0	44.8	66	44.8	10	----	44.8	0.0	8	-8.0		
M0403	12	1	0.0	49.9	66	49.9	10	----	49.9	0.0	8	-8.0		
M0404	13	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0		
M0405	14	1	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0		
R0401	18	1	0.0	59.4	66	59.4	10	----	59.4	0.0	8	-8.0		
R0402	19	1	0.0	51.6	66	51.6	10	----	51.6	0.0	8	-8.0		
R0403	20	1	0.0	50.2	66	50.2	10	----	50.2	0.0	8	-8.0		
R0404	21	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0		
R0405	22	1	0.0	54.6	66	54.6	10	----	54.6	0.0	8	-8.0		
R0406	23	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0		
R0407	24	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0		
R-04-08	25	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0		
R-04-09	26	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0		
R-04-10	27	1	0.0	70.7	66	70.7	10	Snd Lvl	70.7	0.0	8	-8.0		
R-04-11	32	1	0.0	71.3	66	71.3	10	Snd Lvl	71.3	0.0	8	-8.0		
R-04-12	33	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0		
R-04-13	34	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0		
R-04-14	35	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0		
R-04-15	36	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0		
R-04-16	37	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0		
R-04-17	38	1	0.0	57.0	66	57.0	10	----	57.0	0.0	8	-8.0		
R-04-13A	39	1	0.0	68.8	66	68.8	10	Snd Lvl	68.8	0.0	8	-8.0		
R-04-13B	40	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.3 Modeled Sound Level Results for NSA 04 (Page 2 of 2)

RESULTS: SOUND LEVELS						Dulles						
R-04-13C	41	1	0.0	72.2	66	72.2	10	Snd Lvl	72.2	0.0	8	-8.0
R-04-12A	42	1	0.0	69.5	66	69.5	10	Snd Lvl	69.5	0.0	8	-8.0
R-04-12B	43	1	0.0	71.2	66	71.2	10	Snd Lvl	71.2	0.0	8	-8.0
R-04-12C	44	1	0.0	72.9	66	72.9	10	Snd Lvl	72.9	0.0	8	-8.0
R-04-04A	45	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0
R-04-04B	46	1	0.0	72.6	66	72.6	10	Snd Lvl	72.6	0.0	8	-8.0
R-04-04C	47	1	0.0	73.9	66	73.9	10	Snd Lvl	73.9	0.0	8	-8.0
R-04-07A	48	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0
R-04-07B	49	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0
R-04-07C	50	1	0.0	72.5	66	72.5	10	Snd Lvl	72.5	0.0	8	-8.0
R-04-15A	51	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
R-04-15B	52	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0
R-04-15C	53	1	0.0	70.2	66	70.2	10	Snd Lvl	70.2	0.0	8	-8.0
Dwelling Units	# DUs	Noise Reduction										
		Min dB	Avg dB	Max dB								
All Selected	37	0.0	0.0	0.0								
All Impacted	23	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.4 Modeled Sound Level Results for NSA 03 and NSA 05

RESULTS: SOUND LEVELS													Dulles	
SES/N&W													7 January 2011	
KFR/RCK													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT:													Dulles	
RUN:													TNM04 (MS01)	
BARRIER DESIGN:													INPUT HEIGHTS	
ATMOSPHERICS:													68 deg F, 50% RH	
Receiver													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	With Barrier					
				Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction		Calculated minus Goal		
			dB	dB	dB	dB	dB		dB	dB	dB	dB		
M0301	9	1	0.0	59.4	66	59.4	10	----	59.4	0.0	8	-8.0		
M0501	16	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0		
R0301	18	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0		
R0302	19	1	0.0	55.0	66	55.0	10	----	55.0	0.0	8	-8.0		
R0501	20	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0		
R0303	21	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0		
R0304	22	1	0.0	55.6	66	55.6	10	----	55.6	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		7	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.5 Modeled Sound Level Results for NSA06 and NSA 07 (Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR													11 January 2012	
RESULTS: SOUND LEVELS													TNM 2.5	
PROJECT/CONTRACT: Dulles													Calculated with TNM 2.5	
RUN: TNM 05														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Increase over existing	With Barrier								
				Calculated	Crit'n	Calculated	Crit'n	Type	Calculated	Noise Reduction	Goal	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB	Impact	dBA	dB	dB	dB	dB	dB
M0801	1	1	0.0	75.3	66	75.3	10	Snd Lvl	75.3	0.0	8	8	-8.0	
M0802	3	1	0.0	59.0	66	59.0	10	---	59.0	0.0	8	8	-8.0	
M0702	4	1	0.0	59.3	66	59.3	10	---	59.8	0.5	8	8	-7.5	
M0701	6	1	0.0	61.6	66	61.6	10	---	61.6	0.0	8	8	-8.0	
R0801	13	1	0.0	65.1	66	65.1	10	---	65.1	0.0	8	8	-8.0	
R0802	14	1	0.0	63.5	66	63.5	10	---	63.5	0.0	8	8	-8.0	
R0803	15	1	0.0	56.2	66	56.2	10	---	56.2	0.0	8	8	-8.0	
R0701	16	1	0.0	64.6	66	64.6	10	---	64.6	0.0	8	8	-8.0	
R0804	19	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	8	-8.0	
R0805	21	1	0.0	74.2	66	74.2	10	Snd Lvl	74.2	0.0	8	8	-8.0	
R0806	22	1	0.0	72.8	66	72.8	10	Snd Lvl	72.8	0.0	8	8	-8.0	
R0807	23	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	8	-8.0	
M-06-01A	25	1	0.0	78.4	66	78.4	10	Snd Lvl	78.4	0.0	8	8	-8.0	
M-06-01B	26	1	0.0	78.5	66	78.5	10	Snd Lvl	78.5	0.0	8	8	-8.0	
R-06-04A	27	1	0.0	78.0	66	78.0	10	Snd Lvl	78.0	0.0	8	8	-8.0	
R-06-04B	28	1	0.0	78.2	66	78.2	10	Snd Lvl	78.2	0.0	8	8	-8.0	
R-06-05A	29	1	0.0	78.4	66	78.4	10	Snd Lvl	78.4	0.0	8	8	-8.0	
R-06-05B	30	1	0.0	78.5	66	78.5	10	Snd Lvl	78.5	0.0	8	8	-8.0	
R-06-06A	31	1	0.0	74.7	66	74.7	10	Snd Lvl	74.7	0.0	8	8	-8.0	
R-06-06B	33	1	0.0	75.0	66	75.0	10	Snd Lvl	75.0	0.0	8	8	-8.0	
R0807A	34	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	8	8	-8.0	
R0807B	35	1	0.0	72.5	66	72.5	10	Snd Lvl	72.5	0.0	8	8	-8.0	
R0808A	36	1	0.0	70.5	66	70.5	10	Snd Lvl	70.5	0.0	8	8	-8.0	
R0808B	37	1	0.0	73.2	66	73.2	10	Snd Lvl	73.2	0.0	8	8	-8.0	



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.5 Modeled Sound Level Results for NSA06 and NSA 07 (Page 2 of 2)

RESULTS: SOUND LEVELS					Dulles							
R0609A	38	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
R0609B	39	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0
R0610A	40	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
R0610B	41	1	0.0	69.9	66	69.9	10	Snd Lvl	69.9	0.0	8	-8.0
R0611A	42	1	0.0	73.6	66	73.6	10	Snd Lvl	73.6	0.0	8	-8.0
R0611B	43	1	0.0	74.0	66	74.0	10	Snd Lvl	74.0	0.0	8	-8.0
R0612A	44	1	0.0	73.0	66	73.0	10	Snd Lvl	73.0	0.0	8	-8.0
R0612B	45	1	0.0	73.5	66	73.5	10	Snd Lvl	73.5	0.0	8	-8.0
R0613A	46	1	0.0	72.3	66	72.3	10	Snd Lvl	72.3	0.0	8	-8.0
R0613B	47	1	0.0	72.9	66	72.9	10	Snd Lvl	72.9	0.0	8	-8.0
R0614	48	1	0.0	65.6	66	65.6	10	---	65.6	0.0	8	-8.0
R0614A	49	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0
R0614B	50	1	0.0	70.4	66	70.4	10	Snd Lvl	70.4	0.0	8	-8.0
Dwelling Units	# DUs	Noise Reduction										
		Min dB	Avg dB	Max dB								
All Selected	37	0.0	0.0	0.5								
All Impacted	29	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.6 Modeled Sound Level Results for NSA 08

RESULTS: SOUND LEVELS													Dulles	
SES													10 January 2012	
KFR													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT:													Dulles	
RUN:													TNM06 (MS03)	
BARRIER DESIGN:													INPUT HEIGHTS	
ATMOSPHERICS:													68 deg F, 50% RH	
Receiver													Average pavement type: shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
Name	No.	#DUs	Existing	No Barrier		Increase over existing		Type	With Barrier		Noise Reduction	Goal	Calculated minus Goal	
			LAeq1h	Calculated	Crit'n	Calculated	Crit'n		Calculated	LAeq1h				Calculated
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	dB	
M0801	1	1	0.0	70.5	66	70.5	10	Snd Lvl	70.5	0.0	8	-8.0		
M0802	2	1	0.0	58.8	66	58.8	10	----	58.8	0.0	8	-8.0		
M0803	3	1	0.0	56.7	66	56.7	10	----	56.7	0.0	8	-8.0		
R0801	5	1	0.0	50.2	66	50.2	10	----	50.2	0.0	8	-8.0		
R0802	6	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0		
R-08-03	7	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0		
R-08-04	8	1	0.0	59.7	66	59.7	10	----	59.7	0.0	8	-8.0		
R-08-05	9	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0		
R-08-06	10	1	0.0	56.7	66	56.7	10	----	56.7	0.0	8	-8.0		
R-08-07	11	1	0.0	53.6	66	53.6	10	----	53.6	0.0	8	-8.0		
R-08-08	12	1	0.0	70.7	66	70.7	10	Snd Lvl	70.7	0.0	8	-8.0		
R-08-09	13	1	0.0	75.3	66	75.3	10	Snd Lvl	75.3	0.0	8	-8.0		
R-08-10	14	1	0.0	75.9	66	75.9	10	Snd Lvl	75.9	0.0	8	-8.0		
R-08-11	15	1	0.0	71.1	66	71.1	10	Snd Lvl	71.1	0.0	8	-8.0		
R-08-12	16	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0		
R-08-13	17	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0		
R-08-14	18	1	0.0	77.9	66	77.9	10	Snd Lvl	77.9	0.0	8	-8.0		
R-08-14A	19	1	0.0	78.2	66	78.2	10	Snd Lvl	78.2	0.0	8	-8.0		
R-08-14B	20	1	0.0	78.2	66	78.2	10	Snd Lvl	78.2	0.0	8	-8.0		
R-08-14C	21	1	0.0	77.9	66	77.9	10	Snd Lvl	77.9	0.0	8	-8.0		
R-08-14D	22	1	0.0	77.9	66	77.9	10	Snd Lvl	77.9	0.0	8	-8.0		
R-08-14E	23	1	0.0	77.7	66	77.7	10	Snd Lvl	77.7	0.0	8	-8.0		
R-08-14F	24	1	0.0	77.7	66	77.7	10	Snd Lvl	77.7	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.7 Modeled Sound Level Results for NSA09

RESULTS: SOUND LEVELS													Dulles DTR	
Straughan													10 January 2012	
KFR													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT:													Dulles DTR	
RUN:													TNM07	
BARRIER DESIGN:													INPUT HEIGHTS	
ATMOSPHERICS:													68 deg F, 50% RH	
Receiver													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
Name	No.	#DUs	Existing			Increase over existing		Type Impact	With Barrier					
			LAeq1h	No Barrier LAeq1h	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
HR2401	1	1	0.0	60.6	66	60.6	10	---	60.6	0.0	8	-8.0		
M0901	2	1	0.0	54.7	66	54.7	10	---	54.7	0.0	8	-8.0		
M0902	3	1	0.0	49.4	66	49.4	10	---	49.4	0.0	8	-8.0		
M0903	4	1	0.0	61.2	66	61.2	10	---	61.2	0.0	8	-8.0		
M0904	5	1	0.0	71.2	66	71.2	10	Snd Lvl	71.2	0.0	8	-8.0		
R0901	8	1	0.0	63.9	66	63.9	10	---	63.9	0.0	8	-8.0		
R0902	9	1	0.0	65.5	66	65.5	10	---	65.5	0.0	8	-8.0		
R0903	10	1	0.0	69.6	66	69.6	10	Snd Lvl	69.6	0.0	8	-8.0		
R0904	12	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0		
R0905	13	1	0.0	62.4	66	62.4	10	---	62.4	0.0	8	-8.0		
R0906	14	1	0.0	59.8	66	59.8	10	---	59.8	0.0	8	-8.0		
R0907	15	1	0.0	63.5	66	63.5	10	---	63.5	0.0	8	-8.0		
R0908	16	1	0.0	62.4	66	62.4	10	---	62.4	0.0	8	-8.0		
R0909	17	1	0.0	59.7	66	59.7	10	---	59.7	0.0	8	-8.0		
R0910	18	1	0.0	70.4	66	70.4	10	Snd Lvl	70.4	0.0	8	-8.0		
R0911	20	1	0.0	69.3	66	69.3	10	Snd Lvl	69.3	0.0	8	-8.0		
R0912	21	1	0.0	70.7	66	70.7	10	Snd Lvl	70.7	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		17	0.0	0.0	0.0									
All Impacted		8	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.8 Modeled Sound Level Results for NSA 10

RESULTS: SOUND LEVELS				DULLES									
STRAUGHAN ENVIRONMENTAL KFR/ANB				26 January 2011 TNM 2.5 Calculated with TNM 2.5									
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		DULLES											
RUN:		TNM08											
BARRIER DESIGN:		INPUT HEIGHTS		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.									
ATMOSPHERICS:		84 deg F, 37% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier				
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	dB
M1001	7	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0	
M1002	8	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0	
M1003	9	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0	
R1001	18	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0	
R1002	19	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0	
R1003	20	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0	
R1004	21	1	0.0	56.8	66	56.8	10	----	56.8	0.0	8	-8.0	
R1005	22	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0	
R1006	23	1	0.0	57.7	66	57.7	10	----	57.7	0.0	8	-8.0	
R1007	24	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0	
R1008	25	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0	
R1009	26	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0	
R1010	27	1	0.0	52.8	66	52.8	10	----	52.8	0.0	8	-8.0	
R1011	28	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0	
Dwelling Units	# DUs	Noise Reduction											
		Min dB	Avg dB	Max dB									
All Selected	14	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									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.9 Modeled Sound Level Results for NSA12 and NSA 14 (Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										2 February 2011 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: Dulles														
RUN: TNM09														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	With Barrier					
				Calculated	Crit'n	Calculated	Crit'n		Calculated	Noise Reduction Calculated	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
M1202	4	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0		
M1401	9	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0		
M1201	31	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0		
M1203	32	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0		
M1402	33	1	0.0	53.5	66	53.5	10	----	53.5	0.0	8	-8.0		
M1403	34	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0		
R1201	35	1	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0		
R1202	36	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0		
R1203	37	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0		
R1401	38	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0		
R1402	39	1	0.0	55.7	66	55.7	10	----	55.7	0.0	8	-8.0		
R1403	40	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0		
R1404	41	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0		
R1405	42	1	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0		
R1406	43	1	0.0	55.5	66	55.5	10	----	55.5	0.0	8	-8.0		
R1407	44	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0		
R1204	45	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0		
R1205	46	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0		
R1206	47	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0		
R1207	48	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0		
R1208	49	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0		
R1209	50	1	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0		
R1210	51	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0		
R1408	52	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.9 Modeled Sound Level Results for NSA12 and NSA 14 (Page 2 of 2)

**RESULTS: SOUND LEVELS**

**Dulles**

R1409	53	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0
R1410	54	1	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0
R1411	55	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0
R1412	56	1	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0
R1211	58	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0
R1212	59	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0
<b>Dwelling Units</b>	<b># DUs</b>	<b>Noise Reduction</b>										
		<b>Min</b>	<b>Avg</b>	<b>Max</b>								
		<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected	30	0.0	0.0	0.0								
All Impacted	1	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.10 Modeled Sound Level Results for NSA 11 and NSA 13 (Page 1 of 2)

RESULTS: SOUND LEVELS													DULLES	
STRAUGHAN ENVIRONMENTAL													10 January 2012	
KH													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT:													DULLES	
RUN:													T NM10	
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 LAeq1h	No Barrier LAeq1h	Increase over existing	Type	With Barrier	Noise Reduction						
			Calculated	Calculated	Crit'n	Calculated	Crit'n	Calculated	Calculated	Goal	Calculated	minus		
			dBA	dBA	dBA	dB	dB	dB	dB	dB	dB	Goal		
M1301	11	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0		
M1302	12	1	0.0	55.5	66	55.5	10	----	55.5	0.0	8	-8.0		
M1303	13	1	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0		
M1101	46	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0		
M1103	47	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0		
M1104	48	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0		
M1105	49	1	0.0	57.5	66	57.5	10	----	57.5	0.0	8	-8.0		
M1102	51	1	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0		
R1101	59	1	0.0	56.1	66	56.1	10	----	56.1	0.0	8	-8.0		
R1102	60	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0		
R1103	61	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0		
R1104	62	1	0.0	59.2	66	59.2	10	----	59.2	0.0	8	-8.0		
R1105	63	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0		
R1301	71	1	0.0	58.0	66	58.0	10	----	58.0	0.0	8	-8.0		
R1302	72	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0		
R1303	73	1	0.0	52.1	66	52.1	10	----	52.1	0.0	8	-8.0		
R1304	74	1	0.0	55.8	66	55.8	10	----	55.8	0.0	8	-8.0		
HR2402	76	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0		
R1106	78	1	0.0	48.9	66	48.9	10	----	48.9	0.0	8	-8.0		
R1107	79	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0		
R1108	81	1	0.0	47.9	66	47.9	10	----	47.9	0.0	8	-8.0		
R1109	82	1	0.0	69.3	66	69.3	10	Snd Lvl	69.3	0.0	8	-8.0		
R1110	83	1	0.0	56.8	66	56.8	10	----	56.8	0.0	8	-8.0		
R1111	84	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.10 Modeled Sound Level Results for NSA 11 and NSA 13 (Page 2 of 2)

RESULTS: SOUND LEVELS				DULLES									
R1112	85	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0	
R1113	86	1	0.0	57.0	66	57.0	10	----	57.0	0.0	8	-8.0	
R1114	87	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0	
R1305	88	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0	
R1306	89	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0	
R1307	90	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0	
R1308	91	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0	
R1309	92	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0	
R1310	94	1	0.0	58.3	66	58.3	10	----	58.3	0.0	8	-8.0	
R1115	95	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	-8.0	
R1116	96	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0	
Dwelling Units	# DUs	Noise Reduction											
		Min dB	Avg dB	Max dB									
All Selected	35	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									



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.11 Modeled Sound Level Results for NSA 16

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										7 January 2011 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: Dulles														
RUN: TNM11														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				With Barrier						
				Calculated	Crit'n	Increase over existing	Type	Calculated	Noise Reduction		Calculated minus Goal			
			dBA	dBA	dBA	dB	dB	Impact	dBA	dB		dB	dB	
M1601	16	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0		
M1602	26	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0		
R1601	31	1	0.0	63.1	66	63.1	10	----	63.1	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		3	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.12 Modeled Sound Level Results for NSA 15 (Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles			
Straughan Environmental KFR											9 March 2011				TNM 2.5	
RESULTS: SOUND LEVELS															Calculated with TNM 2.5	
PROJECT/CONTRACT: Dulles																
RUN: TNM12																
BARRIER DESIGN: INPUT HEIGHTS															Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH																
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type	With Barrier							
				Calculated	Crit'n	Calculated	Crit'n		Sub'l Inc	Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB				
HR03	3	1	0.0	72.9	66	72.9	10	Snd Lvl	72.9	0.0	8	-8.0				
M1501	13	1	0.0	56.4	66	56.4	10	---	56.4	0.0	8	-8.0				
M1502	14	1	0.0	60.3	66	60.3	10	---	60.3	0.0	8	-8.0				
M1503	15	1	0.0	61.9	66	61.9	10	---	61.9	0.0	8	-8.0				
R1501	39	1	0.0	72.9	66	72.9	10	Snd Lvl	72.9	0.0	8	-8.0				
R1502	40	1	0.0	62.9	66	62.9	10	---	62.9	0.0	8	-8.0				
R1503	41	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	8	-8.0				
R1504	42	1	0.0	64.7	66	64.7	10	---	64.7	0.0	8	-8.0				
R1505	46	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0				
R1506	47	1	0.0	64.5	66	64.5	10	---	64.5	0.0	8	-8.0				
R1507	48	1	0.0	62.4	66	62.4	10	---	62.4	0.0	8	-8.0				
R1508	49	1	0.0	63.8	66	63.8	10	---	63.8	0.0	8	-8.0				
R1509	50	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0				
R1510	51	1	0.0	65.2	66	65.2	10	---	65.2	0.0	8	-8.0				
R1511	52	1	0.0	57.0	66	57.0	10	---	57.0	0.0	8	-8.0				
R1512	53	1	0.0	63.0	66	63.0	10	---	63.0	0.0	8	-8.0				
R1513	54	1	0.0	72.9	66	72.9	10	Snd Lvl	72.9	0.0	8	-8.0				
R1514	55	1	0.0	65.5	66	65.5	10	---	65.5	0.0	8	-8.0				
R1515	56	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0				
R1516	57	1	0.0	69.0	66	69.0	10	Snd Lvl	69.0	0.0	8	-8.0				
R1517	58	1	0.0	72.8	66	72.8	10	Snd Lvl	72.8	0.0	8	-8.0				
R1518	59	1	0.0	64.9	66	64.9	10	---	64.9	0.0	8	-8.0				
R1519	60	1	0.0	65.1	66	65.1	10	---	65.1	0.0	8	-8.0				
R1520	61	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0				

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.12 Modeled Sound Level Results for NSA 15 (Page 2 of 2)

**RESULTS: SOUND LEVELS**

**Dulles**

R1521	62	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0
R1522	63	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
R1523	64	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
R1524	65	1	0.0	72.2	66	72.2	10	Snd Lvl	72.2	0.0	8	-8.0
R1525	66	1	0.0	71.3	66	71.3	10	Snd Lvl	71.3	0.0	8	-8.0
R1526	67	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
R1527	68	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
R1528	69	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
R1529	70	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
R1530	71	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
R1531	72	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
R1532	73	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
R1533	74	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
R1534	75	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
R1535	76	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0
R1536	77	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		40	0.0	0.0	0.0							
All Impacted		15	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.13 Modeled Sound Level Results for NSA 18 and 21 (page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR											10 January 2012			
RESULTS: SOUND LEVELS											TNM 2.5			
PROJECT/CONTRACT: Dulles											Calculated with TNM 2.5			
RUN: TNM 13 (MS05/06)														
BARRIER DESIGN: INPUT HEIGHTS											Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	No Barrier			Increase over existing			Type Impact	With Barrier			Calculated minus Goal	
			Existing LAeq1h	Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc		Calculated LAeq1h	Noise Reduction Calculated	Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
M1801	1	1	0.0	69.3	66	69.3	10	Snd Lvl	69.3	0.0	8	-8.0		
M1802	5	1	0.0	62.0	66	62.0	10	---	62.0	0.0	8	-8.0		
M1803	8	1	0.0	64.1	66	64.1	10	---	64.1	0.0	8	-8.0		
M1804	10	1	0.0	61.4	66	61.4	10	---	61.4	0.0	8	-8.0		
M1805	14	1	0.0	61.7	66	61.7	10	---	61.7	0.0	8	-8.0		
M2101	15	1	0.0	65.5	66	65.5	10	---	65.5	0.0	8	-8.0		
M2102	16	1	0.0	44.8	66	44.8	10	---	44.8	0.0	8	-8.0		
M2103	17	1	0.0	63.5	66	63.5	10	---	63.5	0.0	8	-8.0		
R1801	18	1	0.0	62.9	66	62.9	10	---	62.9	0.0	8	-8.0		
R1802	19	1	0.0	72.7	66	72.7	10	Snd Lvl	72.7	0.0	8	-8.0		
R1803	20	1	0.0	61.4	66	61.4	10	---	61.4	0.0	8	-8.0		
R1804	21	1	0.0	60.0	66	60.0	10	---	60.0	0.0	8	-8.0		
R2101	22	1	0.0	56.1	66	56.1	10	---	56.1	0.0	8	-8.0		
R2102	25	1	0.0	60.4	66	60.4	10	---	60.4	0.0	8	-8.0		
R1805	27	1	0.0	63.4	66	63.4	10	---	63.4	0.0	8	-8.0		
R1806	28	1	0.0	63.8	66	63.8	10	---	63.8	0.0	8	-8.0		
R1807	29	1	0.0	64.6	66	64.6	10	---	64.6	0.0	8	-8.0		
R2103	30	1	0.0	55.0	66	55.0	10	---	55.0	0.0	8	-8.0		
R-18-08	31	1	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	8	-8.0		
R-18-09	32	1	0.0	65.6	66	65.6	10	---	65.6	0.0	8	-8.0		
R-18-10	33	1	0.0	63.0	66	63.0	10	---	63.0	0.0	8	-8.0		
R-18-11	34	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0		
R-21-04	35	1	0.0	61.2	66	61.2	10	---	61.2	0.0	8	-8.0		
R-21-05	36	1	0.0	63.6	66	63.6	10	---	63.6	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.13 Modeled Sound Level Results for NSA 18 and 21 (page 2 of 2)

**RESULTS: SOUND LEVELS**

**Dulles**

R-21-06	37	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0
R-21-07	38	1	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0
R-18-12	39	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
R-18-13	40	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
R-18-14	41	1	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0
R-18-15	42	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
R-18-16	43	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0
R-18-17	44	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
R-18-18	45	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
R-18-19	46	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
R-18-20	47	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
R-18-21	48	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0
<b>Dwelling Units</b>	<b># DUs</b>	<b>Noise Reduction</b>										
		<b>Min</b>	<b>Avg</b>	<b>Max</b>								
		<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected	36	0.0	0.0	0.0								
All Impacted	6	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.14 Modeled Sound Level Results for NSA 17 and 19 (page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KH													11 January 2012	
RESULTS: SOUND LEVELS													TNM 2.5	
PROJECT/CONTRACT: Dulles													Calculated with TNM 2.5	
RUN: TNM14														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type	With Barrier					
				Calculated	Crit'n	Calculated	Crit'n	Impact	Calculated LAeq1h	Noise Reduction	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
M1902	2	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0		
M1903	3	1	0.0	58.6	66	58.6	10	----	58.6	0.0	8	-8.0		
M1904	4	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0		
M1905	5	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0		
M1901	32	1	0.0	62.5	66	62.5	10	----	62.5	0.0	8	-8.0		
M1703	33	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
R1902	36	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0		
R1903	37	1	0.0	59.1	66	59.1	10	----	59.1	0.0	8	-8.0		
R1904	38	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0		
R1905	39	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0		
R1901	41	1	0.0	57.3	66	57.3	10	----	57.3	0.0	8	-8.0		
R1701	42	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
R1906	44	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0		
R1702	46	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
R1703	48	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
R1704	50	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
R1705	51	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
R1907	52	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0		
R1908	53	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0		
R1909	54	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0		
R1910	55	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0		
R-17-06	56	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
R-17-07	57	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		
R-17-08	58	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.14 Modeled Sound Level Results for NSA 17 and 19 (page 2 of 2)

RESULTS: SOUND LEVELS												
Dulles												
R-17-09	59	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R-17-10	60	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R-17-11	61	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R-17-12	62	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
R-19-11	63	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
R-19-12	64	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
R-19-13	65	1	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	8	-8.0
R-19-14	66	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
R-19-15	67	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0
R-19-16	68	1	0.0	62.5	66	62.5	10	----	62.5	0.0	8	-8.0
R-19-17	69	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
R-19-18	70	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0
R-19-19	71	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
R-19-20	72	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
R-19-21	73	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
R-19-22	74	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
R-19-23	75	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
R-19-24	76	1	0.0	69.0	66	69.0	10	Snd Lvl	69.0	0.0	8	-8.0
R-19-25	77	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
R-19-26	78	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
R-19-27	79	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
Dwelling Units	# DUs	Noise Reduction										
		Min dB	Avg dB	Max dB								
All Selected	45	0.0	0.0	0.0								
All Impacted	12	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.15 Modeled Sound Level Results for NSA 20, 22, and 25 (page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan													10 August 2012	
KFR													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT: Dulles														
RUN: TNM15														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Increase over existing	Type	With Barrier	Noise Reduction						
			dBA	dBA	Crit'n	Calculated	Crit'n	Sub'l Inc	Impact	Calculated LAeq1h	Calculated	Goal	Calculated minus Goal	
			dBA	dBA	dBA	dB	dB			dBA	dB	dB	dB	
M2201	2	1	0.0	59.4	66	59.4	10	----		59.4	0.0	8	-8.0	
M2202	3	1	0.0	62.8	66	62.8	10	----		62.8	0.0	8	-8.0	
M2203	4	1	0.0	64.8	66	64.8	10	----		64.8	0.0	8	-8.0	
M2501	5	1	0.0	65.5	66	65.5	10	----		65.5	0.0	8	-8.0	
M2502	6	1	0.0	59.0	66	59.0	10	----		59.0	0.0	8	-8.0	
M2001	19	1	0.0	55.7	66	55.7	10	----		55.7	0.0	8	-8.0	
M2002	25	1	0.0	60.0	66	60.0	10	----		60.0	0.0	8	-8.0	
R2001	27	1	0.0	63.2	66	63.2	10	----		63.2	0.0	8	-8.0	
R2201	28	1	0.0	58.8	66	58.8	10	----		58.8	0.0	8	-8.0	
R2202	29	1	0.0	68.6	66	68.6	10	Snd Lvl		68.6	0.0	8	-8.0	
R2203	30	1	0.0	58.4	66	58.4	10	----		58.4	0.0	8	-8.0	
R2204	31	1	0.0	60.8	66	60.8	10	----		60.8	0.0	8	-8.0	
R2501	32	1	0.0	61.3	66	61.3	10	----		61.3	0.0	8	-8.0	
R2502	33	1	0.0	61.8	66	61.8	10	----		61.8	0.0	8	-8.0	
R2503	34	1	0.0	65.3	66	65.3	10	----		65.3	0.0	8	-8.0	
R2504	35	1	0.0	58.4	66	58.4	10	----		58.4	0.0	8	-8.0	
R2505	36	1	0.0	66.8	66	66.8	10	Snd Lvl		66.8	0.0	8	-8.0	
R2506	37	1	0.0	70.0	66	70.0	10	Snd Lvl		70.0	0.0	8	-8.0	
R2205	38	1	0.0	64.9	66	64.9	10	----		64.9	0.0	8	-8.0	
R2206	39	1	0.0	57.6	66	57.6	10	----		57.6	0.0	8	-8.0	
R2207	40	1	0.0	63.0	66	63.0	10	----		63.0	0.0	8	-8.0	
R2208	41	1	0.0	69.7	66	69.7	10	Snd Lvl		69.7	0.0	8	-8.0	
R2209	42	1	0.0	63.4	66	63.4	10	----		63.3	0.1	8	-7.9	
R2507	43	1	0.0	63.7	66	63.7	10	----		63.7	0.0	8	-8.0	



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.15 Modeled Sound Level Results for NSA 20, 22, and 25 (page 2 of 2)

RESULTS: SOUND LEVELS				Dulles									
R2508	44	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0	
R2509	45	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0	
R2510	46	1	0.0	53.8	66	53.8	10	----	53.8	0.0	8	-8.0	
R2210	47	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0	
R2211	48	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0	
R2212	49	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0	
R2511	50	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0	
R2512	51	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0	
R2513	52	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0	
R2514	53	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0	
R2213	54	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0	
R2214	55	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0	
R-20-02	56	1	0.0	56.2	66	56.2	10	----	56.2	0.0	8	-8.0	
R-20-03	57	1	0.0	51.6	66	51.6	10	----	51.6	0.0	8	-8.0	
R-20-04	58	1	0.0	54.4	66	54.4	10	----	54.4	0.0	8	-8.0	
R-20-05	59	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0	
R-20-06	60	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0	
R-22-15	61	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0	
R-22-16	62	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0	
R-22-17	63	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0	
R-22-18	64	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0	
R-25-15	65	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0	
R-25-16	66	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0	
R-25-17	67	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0	
R-25-18	68	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0	
R-25-19	69	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0	
R-25-20	70	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0	
R-25-21	71	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0	
R-25-22	72	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0	
R-25-23	73	1	0.0	68.9	66	68.9	10	Snd Lvl	68.9	0.0	8	-8.0	
R-22-19	74	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0	
R-25-24	75	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0	
Dwelling Units	# DUs	Noise Reduction											
		Min dB	Avg dB	Max dB									
All Selected	56	0.0	0.0	0.1									
All Impacted	12	0.0	0.0	0.0									
All that meet NR Goal	0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.16 Modeled Sound Level Results for NSA 23 and NSA 24

RESULTS: SOUND LEVELS													Dulles	
Straughan													10 January 2012	
KFR													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT: Dulles														
RUN: TNM16														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing	No Barrier	Increase over existing			Type	With Barrier			Calculated minus Goal		
			LAeq1h	LAeq1h	Crit'n	Calculated	Crit'n	Sub'l Inc	Impact	Calculated	Noise Reduction		Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
M2301	10	1	0.0	58.1	66	58.1	10	---	58.1	0.0	8	-8.0		
R2301	13	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0		
R2302	14	1	0.0	70.7	66	70.7	10	Snd Lvl	70.7	0.0	8	-8.0		
R2303	15	1	0.0	59.4	66	59.4	10	---	59.4	0.0	8	-8.0		
R2401	16	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0		
R2402	17	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0		
R2403	18	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0		
R2404	19	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0		
R2405	20	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0		
R2406	22	1	0.0	65.8	66	65.8	10	---	65.8	0.0	8	-8.0		
R2407	23	1	0.0	65.4	66	65.4	10	---	65.4	0.0	8	-8.0		
R2408	24	1	0.0	72.0	66	72.0	10	Snd Lvl	72.0	0.0	8	-8.0		
R2409	25	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0		
R2410	26	1	0.0	64.6	66	64.6	10	---	64.6	0.0	8	-8.0		
R2411	27	1	0.0	49.8	66	49.8	10	---	49.8	0.0	8	-8.0		
R2412	28	1	0.0	63.6	66	63.6	10	---	63.6	0.0	8	-8.0		
R2413	29	1	0.0	57.5	66	57.5	10	---	57.5	0.0	8	-8.0		
R2414	30	1	0.0	61.5	66	61.5	10	---	61.5	0.0	8	-8.0		
R2415	31	1	0.0	51.9	66	51.9	10	---	51.9	0.0	8	-8.0		
R2416	32	1	0.0	43.5	66	43.5	10	---	43.5	0.0	8	-8.0		
R2304	34	1	0.0	64.0	66	64.0	10	---	64.0	0.0	8	-8.0		
R2305	35	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0		
R2306	36	1	0.0	64.2	66	64.2	10	---	64.2	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.17 Modeled Sound Level Results for NSA 26 (page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
N&W													7 March 2011	
RCK													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT:													Dulles	
RUN:													TNM17	
BARRIER DESIGN:													INPUT HEIGHTS	
ATMOSPHERICS:													68 deg F, 50% RH	
Receiver													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
Name	No.	#DUs	Existing	No Barrier		Increase over existing		Type	With Barrier		Noise Reduction		Calculated minus Goal	
			LAeq1h	LAeq1h	Crit'n	Calculated	Crit'n		Calculated	Crit'n	LAeq1h	Calculated		Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
HR2404	1	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0		
M2602	2	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0		
M2603	3	1	0.0	52.8	66	52.8	10	----	52.8	0.0	8	-8.0		
M2604	4	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0		
M2605	6	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0		
M2601	11	1	0.0	60.8	66	60.8	10	----	60.8	0.0	8	-8.0		
R2601	15	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0		
R2602	16	1	0.0	60.8	66	60.8	10	----	60.8	0.0	8	-8.0		
R2603	17	1	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0		
R2604	18	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0		
R2605	19	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0		
R2606	20	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0		
R2607	21	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0		
R2608	22	1	0.0	50.6	66	50.6	10	----	50.6	0.0	8	-8.0		
R2609	23	1	0.0	58.1	66	58.1	10	----	58.1	0.0	8	-8.0		
R-26-10	24	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0		
R-26-11	25	1	0.0	68.9	66	68.9	10	Snd Lvl	68.9	0.0	8	-8.0		
R-26-12	26	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0		
R-26-13	27	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0		
R-26-14	28	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0		
R-26-15	29	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0		
R-26-16	30	1	0.0	62.9	66	62.9	10	----	62.9	0.0	8	-8.0		
R-26-17	31	1	0.0	63.1	66	63.1	10	----	63.1	0.0	8	-8.0		
R-26-18	32	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.17 Modeled Sound Level Results NSA 26 (page 2 of 2)

**RESULTS: SOUND LEVELS**

**Dulles**

R-26-19	33	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0
R-26-20	34	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0
R-26-21	35	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0
R-26-22	36	1	0.0	59.1	66	59.1	10	----	59.1	0.0	8	-8.0
R-26-23	37	1	0.0	61.0	66	61.0	10	----	61.0	0.0	8	-8.0
<b>Dwelling Units</b>	<b># DUs</b>	<b>Noise Reduction</b>										
		<b>Min</b>	<b>Avg</b>	<b>Max</b>								
		<b>dB</b>	<b>dB</b>	<b>dB</b>								
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								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix H: Impact Analysis Tables

Figure H.18 Modeled Sound Level Results for NSA 27

RESULTS: SOUND LEVELS													Dulles			
Straughan/N&W ANB/RCK										10 January 2012			TNM 2.5		Calculated with TNM 2.5	
RESULTS: SOUND LEVELS													Dulles			
PROJECT/CONTRACT:										Dulles			TNM18 (with ROW receivers)		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
RUN:										INPUT HEIGHTS						
BARRIER DESIGN:																
ATMOSPHERICS:										68 deg F, 50% RH						
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type	Calculated	Noise Reduction		Calculated				
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated				
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	minus Goal				
M2701	7	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0				
M2702	8	1	0.0	70.4	66	70.4	10	Snd Lvl	70.4	0.0	8	-8.0				
R2701	10	1	0.0	74.3	66	74.3	10	Snd Lvl	74.3	0.0	8	-8.0				
R2702	11	1	0.0	74.8	66	74.8	10	Snd Lvl	74.8	0.0	8	-8.0				
R-27-03	12	1	0.0	72.1	66	72.1	10	Snd Lvl	72.1	0.0	8	-8.0				
R-27-04	13	1	0.0	70.3	66	70.3	10	Snd Lvl	70.3	0.0	8	-8.0				
R-27-05	14	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0				
R-27-06	15	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0				
R-27-07	16	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0				
R-27-08	17	1	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	8	-8.0				
R-27-09	18	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0				
R-27-10	19	1	0.0	68.9	66	68.9	10	Snd Lvl	68.9	0.0	8	-8.0				
R-27-11	20	1	0.0	72.1	66	72.1	10	Snd Lvl	72.1	0.0	8	-8.0				
R-27-12	21	1	0.0	63.4	66	63.4	10	---	63.4	0.0	8	-8.0				
R-27-13	34	1	0.0	61.7	66	61.7	10	---	61.7	0.0	8	-8.0				
Dwelling Units		# DUs	Noise Reduction													
			Min	Avg	Max											
			dB	dB	dB											
All Selected		15	0.0	0.0	0.0											
All Impacted		13	0.0	0.0	0.0											
All that meet NR Goal		0	0.0	0.0	0.0											

# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix I**

### **Insertion Loss Rail Spreadsheets**

August 2012

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

M-02-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	66	59	59
Source 1	66	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	225	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-02-04

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	355	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	1	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1310	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	580	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	305	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-21

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	235		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-22

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	255	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-10-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	495	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	810	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	370		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	385		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	690	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-05

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	470	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	600	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	455	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-10-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	345	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

24HR-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	66	59	59
Source 1	66	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	220	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-11-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	455	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-11-02

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	810	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-11-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	67	60	60
Source 1	67	60	60
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	195		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-11-04

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	330	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-11-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	51	45	45
Source 1	51	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1020	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	430	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	375		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-03

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3			
<b>Distance (source to receiver)</b>	distance (ft)	375			
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%			
<b>Jointed Track?</b>	Y/N	N			
<b>Embedded Track?</b>	Y/N	N			
<b>Aerial Structure?</b>	Y/N	N			
<b>Barrier Present?</b>	Y/N	N			
<b>Intervening Rows of Buildings</b>	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-04

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	385		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	1		



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Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	330	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-06

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	52	45	45
Source 1	52	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	770	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-07

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	290		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	55	48	48
Source 1	55	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	600		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	1		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	235	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-11-13

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	295	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-11-14

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	330	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-12-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	505	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-12-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	750	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-12-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	66	60	60
Source 1	66	60	60
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	210	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-12-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	805		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

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Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-02

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	405	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	340	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-05

<b>RESULTS</b>			
Noise Source	Leq - 1-hr (dB)		
All Sources	56		
Source 1	56		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	380	
Noisiest Hour of	speed (mph)	70	
Activity During	trains/hour	12	
Sensitive Hours	cars/train	8	
		70	
		12	
		8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

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Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-06

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	355	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

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Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	295		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		



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Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	250		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

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Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	320		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

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Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-11

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	57		
Source 1	57		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	340	
<b>Noisiest Hour of Activity During Sensitive Hours</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

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Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-12-12

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	56		
Source 1	56		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	385	
<b>Noisiest Hour of Activity During</b>	speed (mph)	70	
<b>Sensitive Hours</b>	trains/hour	12	
	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

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Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-13-01

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>						
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3				
<b>Distance (source to receiver)</b>	distance (ft)	450				
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70				
	trains/hour	12				
	cars/train	8				
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70				
	trains/hour	12				
	cars/train	8				
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%				
<b>Jointed Track?</b>	Y/N	N				
<b>Embedded Track?</b>	Y/N	N				
<b>Aerial Structure?</b>	Y/N	N				
<b>Barrier Present?</b>	Y/N	N				
<b>Intervening Rows of Buildings</b>	number of rows	1				

# Dulles Toll Road

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Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-13-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	545	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-13-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	385	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-13-01

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	660	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	2	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-13-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	58	58
Source 1	65	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	270	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-13-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	640	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-13-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	480	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	425	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	420	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	285	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	280		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	340	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-13-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	380	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-14-01

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	290		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-14-02

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	610	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-14-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	275	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	410	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

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Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	670	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-03

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	445	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	350		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	405	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	570	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-07

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	330	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	615	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-09

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	310		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-10

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	430		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-11

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	65	58	58
Source 1	65	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	265		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-14-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	460		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-16-01

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	1060	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-18-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	670	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-18-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	305	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	58	58
Source 1	65	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	270	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

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Highway Sound Measurement and Noise Barrier Analysis

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## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	655	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-18-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	245	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-18-07

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	535	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	515	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	245	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	58	58
Source 1	65	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	265	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-13

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	240		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-14

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	350	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-15

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	345		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-16

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	345	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-17

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	58	58
Source 1	65	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	270	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-18

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	315	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-19

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	410	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-20

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	450	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-18-21

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	655	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-19-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	300	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-19-02

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	625	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-19-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	745	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-19-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	58	58
Source 1	65	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	260		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-19-05

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	56		
Source 1	56		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	650		
<b>Noisiest Hour of</b>	speed (mph)	70		
<b>Activity During</b>	trains/hour	12		
<b>Sensitive Hours</b>	cars/train	8		
		70		
		12		
		8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	Y		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	640		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	280		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	520		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	585		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	240	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	69	62	62
Source 1	69	62	62
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	270	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	50	50
Source 1	57	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	850	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	58	58
Source 1	65	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	260	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	285		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-11

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1		Source 2		Source 3
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	290			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	58	58
Source 1	65	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	260	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-13

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	255	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-14

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	57		
Source 1	57		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	315		
<b>Noisiest Hour of</b>	speed (mph)	70		
<b>Activity During</b>	trains/hour	12		
<b>Sensitive Hours</b>	cars/train	8		
		70		
		12		
		8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-15

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	280		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-16

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	530	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-17

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	57		
Source 1	57		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

*Enter noise receiver land use category below.*

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	315		
<b>Noisiest Hour of</b>	speed (mph)	70		
<b>Activity During</b>	trains/hour	12		
<b>Sensitive Hours</b>	cars/train	8		
		70		
		12		
		8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-18

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	59		
Source 1	59		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	250	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-19

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	58		
Source 1	58		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	290	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-20

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	57		
Source 1	57		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>					
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3			
<b>Distance (source to receiver)</b>	distance (ft)	320			
<b>Noisiest Hour of</b>	speed (mph)	70			
<b>Activity During</b>	trains/hour	12			
<b>Sensitive Hours</b>	cars/train	8			
		70			
		12			
		8			
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%			
<b>Jointed Track?</b>	Y/N	N			
<b>Embedded Track?</b>	Y/N	N			
<b>Aerial Structure?</b>	Y/N	N			
<b>Barrier Present?</b>	Y/N	N			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-21

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	57		
Source 1	57		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	315	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-22

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	57		
Source 1	57		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	305	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-23

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	530			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	N			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-24

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	460	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-25

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	470	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-19-26

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	58	58
Source 1	65	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	485	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-19-27

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	335		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-20-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1200	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-20-02

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	52	45	45
Source 1	52	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	1460	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	Y	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-20-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1125	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-20-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	2980	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-20-03

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	55	48	48
Source 1	55	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	2220	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	Y	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-20-04

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	1490	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	Y	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-20-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1145	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-20-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	1395		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	Y		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

M-21-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	64	57	57
Source 1	64	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	300		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-21-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	465		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	Y		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-21-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	390	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-21-05

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>						
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3				
<b>Distance (source to receiver)</b>	distance (ft)	575				
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70				
	trains/hour	12				
	cars/train	8				
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70				
	trains/hour	12				
	cars/train	8				
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%				
<b>Jointed Track?</b>	Y/N	N				
<b>Embedded Track?</b>	Y/N	N				
<b>Aerial Structure?</b>	Y/N	N				
<b>Barrier Present?</b>	Y/N	N				
<b>Intervening Rows of Buildings</b>	number of rows	1				

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-21-06

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	545	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	Y	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix I: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-21-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1	Source 2	Source 3	Source 4	Source 5
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	530			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	Y			
Barrier Present?	Y/N	N			



# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix J**

### Insertion Loss TNM Results Tables

August 2012

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.1 Modeled Sound Level Results for NSA 02 (Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR										2 February 2011 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: Dulles														
RUN: TNM01 IL														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier					
				LAeq1h	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
MC201	4	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0		
MC202	5	1	0.0	62.6	66	62.6	10	---	62.6	0.0	8	-8.0		
MC203	6	1	0.0	69.5	66	69.5	10	Snd Lvl	69.5	0.0	8	-8.0		
MC204	7	1	0.0	54.1	66	54.1	10	---	54.1	0.0	8	-8.0		
MC205	8	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0		
RC201	20	1	0.0	59.0	66	59.0	10	---	59.0	0.0	8	-8.0		
RC202	21	1	0.0	50.2	66	50.2	10	---	50.2	0.0	8	-8.0		
RC203	22	1	0.0	52.8	66	52.8	10	---	52.8	0.0	8	-8.0		
RC204	23	1	0.0	48.9	66	48.9	10	---	48.9	0.0	8	-8.0		
RC205	24	1	0.0	50.9	66	50.9	10	---	50.9	0.0	8	-8.0		
RC206	25	1	0.0	64.3	66	64.3	10	---	64.3	0.0	8	-8.0		
RC207	26	1	0.0	55.4	66	55.4	10	---	55.4	0.0	8	-8.0		
RC208	27	1	0.0	61.2	66	61.2	10	---	61.2	0.0	8	-8.0		
RC209	28	1	0.0	65.0	66	65.0	10	---	65.0	0.0	8	-8.0		
RC210	29	1	0.0	58.4	66	58.4	10	---	58.4	0.0	8	-8.0		
RC211	30	1	0.0	62.4	66	62.4	10	---	62.4	0.0	8	-8.0		
RC212	31	1	0.0	59.5	66	59.5	10	---	59.5	0.0	8	-8.0		
RC213	32	1	0.0	70.0	66	70.0	10	Snd Lvl	70.0	0.0	8	-8.0		
RC214	33	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0		
RC215	34	1	0.0	73.3	66	73.3	10	Snd Lvl	73.3	0.0	8	-8.0		
RC216	35	1	0.0	74.7	66	74.7	10	Snd Lvl	74.7	0.0	8	-8.0		
RC217	36	1	0.0	71.3	66	71.3	10	Snd Lvl	71.3	0.0	8	-8.0		
RC218	37	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	8	-8.0		
RC219	38	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0		

D:\4907.004.Dulles.Noise\TNM\insertion\TNM01 1 2 February 2011

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.1 Modeled Sound Level Results for NSA 02 (page 2 of 2)

**RESULTS: SOUND LEVELS**

						Dulles						
R0220	39	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
R0221	40	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
R0222	41	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
R0223	42	1	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0
R0224	43	1	0.0	48.3	66	48.3	10	----	48.3	0.0	8	-8.0
R0225	44	1	0.0	48.5	66	48.5	10	----	48.5	0.0	8	-8.0
R0226	45	1	0.0	53.5	66	53.5	10	----	53.5	0.0	8	-8.0
R0227	46	1	0.0	55.2	66	55.2	10	----	55.2	0.0	8	-8.0
R0228	47	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0
R0229	48	1	0.0	48.2	66	48.2	10	----	48.2	0.0	8	-8.0
R0230	90	1	0.0	48.1	66	48.1	10	----	48.1	0.0	8	-8.0
Dwelling Units	# DUs	Noise Reduction										
		Min dB	Avg dB	Max dB								
All Selected	35	0.0	0.0	0.0								
All Impacted	11	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.2 Modeled Sound Level Results for NSA 10

RESULTS: SOUND LEVELS										DULLES				
STRAUGHAN ENVIRONMENTAL KFR/ANB										2 February 2011 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: DULLES														
RUN: TNM08 IL														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 84 deg F, 37% RH														
Receiver														
Name	No.	#DUs	Existing		No Barrier			Type	With Barrier					
			LAeq1h	LAeq1h	LAeq1h	Crit'n	Increase over existing		Crit'n	Impact	Calculated	Noise Reduction	Goal	Calculated
			dBA	dBA	dBA	dB	dB		dBA	dB	dB		dB	
													Calculated minus Goal	
M1001	7	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8		-8.0	
M1002	8	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8		-8.0	
M1003	9	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8		-8.0	
R1001	18	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8		-8.0	
R1002	19	1	0.0	70.9	66	70.9	10	Snd Lvl	70.9	0.0	8		-8.0	
R1003	20	1	0.0	68.8	66	68.8	10	Snd Lvl	68.8	0.0	8		-8.0	
R1004	21	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8		-8.0	
R1005	22	1	0.0	69.6	66	69.6	10	Snd Lvl	69.6	0.0	8		-8.0	
R1006	23	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8		-8.0	
R1007	24	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8		-8.0	
R1008	25	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8		-8.0	
R1009	26	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8		-8.0	
R1010	27	1	0.0	56.1	66	56.1	10	----	56.1	0.0	8		-8.0	
R1011	28	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8		-8.0	
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		14	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									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.3 Modeled Sound Level Results for NSA 12 and 14 (page 1 of 2)

RESULTS: SOUND LEVELS													Dulles			
Straughan Environmental KFR										2 February 2011			TNM 2.5		Calculated with TNM 2.5	
RESULTS: SOUND LEVELS													Dulles			
PROJECT/CONTRACT:													TNM09 IL			
RUN:													INPUT HEIGHTS			
BARRIER DESIGN:													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS:													68 deg F, 50% RH			
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier							
				Calculated	Crit'n	Increase over Calculated	existing Crit'n Sub'l Inc	Type Impact	Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal				
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB				
M1202	4	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0				
M1401	9	1	0.0	74.6	66	74.6	10	Snd Lvl	74.6	0.0	8	-8.0				
M1201	31	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0				
M1203	32	1	0.0	63.1	66	63.1	10	----	63.1	0.0	8	-8.0				
M1402	33	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0				
M1403	34	1	0.0	70.5	66	70.5	10	Snd Lvl	70.5	0.0	8	-8.0				
R1201	35	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0				
R1202	36	1	0.0	69.5	66	69.5	10	Snd Lvl	69.5	0.0	8	-8.0				
R1203	37	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0				
R1401	38	1	0.0	68.8	66	68.8	10	Snd Lvl	68.8	0.0	8	-8.0				
R1402	39	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0				
R1403	40	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0				
R1404	41	1	0.0	72.9	66	72.9	10	Snd Lvl	72.9	0.0	8	-8.0				
R1405	42	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0				
R1406	43	1	0.0	59.7	66	59.7	10	----	59.7	0.0	8	-8.0				
R1407	44	1	0.0	74.2	66	74.2	10	Snd Lvl	74.2	0.0	8	-8.0				
R1204	46	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0				
R1205	47	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	-8.0				
R1206	48	1	0.0	74.4	66	74.4	10	Snd Lvl	74.4	0.0	8	-8.0				
R1207	49	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0				
R1208	50	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0				
R1209	51	1	0.0	59.4	66	59.4	10	----	59.4	0.0	8	-8.0				
R1210	52	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0				
R1408	53	1	0.0	63.1	66	63.1	10	----	63.1	0.0	8	-8.0				

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.3 Modeled Sound Level Results for NSA 12 and 14 (Page 2 of 2)

**RESULTS: SOUND LEVELS**

**Dulles**

R1409	54	1	0.0	68.8	66	68.8	10	Snd Lvl	68.8	0.0	8	-8.0
R1410	55	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
R1411	56	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	-8.0
R1412	57	1	0.0	65.7	66	65.7	10	---	65.7	0.0	8	-8.0
R1211	59	1	0.0	71.3	66	71.3	10	Snd Lvl	71.3	0.0	8	-8.0
R1212	60	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0
<b>Dwelling Units</b>	<b># DUs</b>	<b>Noise Reduction</b>										
		<b>Min</b>	<b>Avg</b>	<b>Max</b>								
		<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected	30	0.0	0.0	0.0								
All Impacted	17	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.4 Modeled Sound Level Results for NSA 11 and 13 (Page 1 of 2)

RESULTS: SOUND LEVELS										DULLES				
STRAUGHAN ENVIRONMENTAL KH										2 February 2011 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: DULLES														
RUN: T NM10 IL														
BARRIER DESIGN: INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	With Barrier					
				Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction		Calculated minus Goal		
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	dB	dB
M1301	11	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0		
M1302	12	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0		
M1303	13	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0		
M1101	46	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0		
M1103	47	1	0.0	73.0	66	73.0	10	Snd Lvl	73.0	0.0	8	-8.0		
M1104	48	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0		
M1105	49	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0		
M1102	51	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0		
R1101	59	1	0.0	62.7	66	62.7	10	----	62.7	0.0	8	-8.0		
R1102	60	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0		
R1103	61	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0		
R1104	62	1	0.0	68.8	66	68.8	10	Snd Lvl	68.8	0.0	8	-8.0		
R1105	63	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0		
R1301	71	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0		
R1302	72	1	0.0	74.0	66	74.0	10	Snd Lvl	74.0	0.0	8	-8.0		
R1303	73	1	0.0	56.5	66	56.5	10	----	56.5	0.0	8	-8.0		
R1304	74	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0		
HR2402	76	1	0.0	76.5	66	76.5	10	Snd Lvl	76.5	0.0	8	-8.0		
R1106	78	1	0.0	51.2	66	51.2	10	----	51.2	0.0	8	-8.0		
R1107	79	1	0.0	72.2	66	72.2	10	Snd Lvl	72.2	0.0	8	-8.0		
R1108	81	1	0.0	49.6	66	49.6	10	----	49.6	0.0	8	-8.0		
R1109	82	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0		
R1110	83	1	0.0	56.9	66	56.9	10	----	56.9	0.0	8	-8.0		
R1111	84	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.4 Modeled Sound Level Results for NSA 11 and 13 (Page 2 of 2)

**RESULTS: SOUND LEVELS**

**DULLES**

R1112	85	1	0.0	78.0	66	78.0	10	Snd Lvl	78.0	0.0	8	-8.0
R1113	86	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0
R1114	87	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
R1305	88	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	8	-8.0
R1306	89	1	0.0	73.4	66	73.4	10	Snd Lvl	73.4	0.0	8	-8.0
R1307	90	1	0.0	75.3	66	75.3	10	Snd Lvl	75.3	0.0	8	-8.0
R1308	91	1	0.0	73.6	66	73.6	10	Snd Lvl	73.6	0.0	8	-8.0
R1309	92	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
R1310	94	1	0.0	73.6	66	73.6	10	Snd Lvl	73.6	0.0	8	-8.0
<b>Dwelling Units</b>	<b># DUs</b>	<b>Noise Reduction</b>										
		<b>Min</b>	<b>Avg</b>	<b>Max</b>								
		<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected	33	0.0	0.0	0.0								
All Impacted	16	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.5 Modeled Sound Level Results for NSA 16

RESULTS: SOUND LEVELS													Dulles			
Straughan Environmental KFR										2 February 2011			TNM 2.5		Calculated with TNM 2.5	
RESULTS: SOUND LEVELS																
PROJECT/CONTRACT:			Dulles													
RUN:			TNM11													
BARRIER DESIGN:			INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS:			68 deg F, 50% RH													
Receiver																
Name	No.	#DUs	Existing LAeq1h	No Barrier				Type Impact	With Barrier							
				LAeq1h		Increase over existing			Calculated LAeq1h	Noise Reduction			Calculated minus Goal			
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated				
			dB	dB	dB	dB		dB	dB	dB	dB	dB	dB			
M1601	16	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0				
M1602	26	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0				
R1601	31	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0				
Dwelling Units		# DUs	Noise Reduction													
			Min	Avg	Max											
			dB	dB	dB											
All Selected		3	0.0	0.0	0.0											
All Impacted		0	0.0	0.0	0.0											
All that meet NR Goal		0	0.0	0.0	0.0											

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.6 Modeled Sound Level Results for NSA 18 and 21 (page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental / N&W KFR / RCK											10 January 2012			
RESULTS: SOUND LEVELS											TNM 2.5			
PROJECT/CONTRACT:											Dulles			
RUN:											TNM 13 (MS05/06) IL			
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 LAeq1h	No Barrier LAeq1h	Crit'n	Increase over existing	existing	Type	With Barrier	Noise Reduction	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB	Impact	Calculated LAeq1h	Calculated	dB	dBA		
M1801	1	1	0.0	69.3	66	69.3	10	Snd Lvl	69.3	0.0	8	-8.0		
M1802	5	1	0.0	63.3	66	63.3	10	---	63.3	0.0	8	-8.0		
M1803	8	1	0.0	65.0	66	65.0	10	---	65.0	0.0	8	-8.0		
M1804	10	1	0.0	65.3	66	65.3	10	---	65.3	0.0	8	-8.0		
M1805	14	1	0.0	70.2	66	70.2	10	Snd Lvl	70.2	0.0	8	-8.0		
M2101	15	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0		
M2102	16	1	0.0	45.3	66	45.3	10	---	45.3	0.0	8	-8.0		
M2103	17	1	0.0	63.5	66	63.5	10	---	63.5	0.0	8	-8.0		
R1801	18	1	0.0	62.9	66	62.9	10	---	62.9	0.0	8	-8.0		
R1802	19	1	0.0	72.7	66	72.7	10	Snd Lvl	72.7	0.0	8	-8.0		
R1803	20	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	8	-8.0		
R1804	21	1	0.0	60.8	66	60.8	10	---	60.8	0.0	8	-8.0		
R2101	22	1	0.0	57.1	66	57.1	10	---	57.1	0.0	8	-8.0		
R2102	25	1	0.0	60.4	66	60.4	10	---	60.4	0.0	8	-8.0		
R1805	27	1	0.0	63.5	66	63.5	10	---	63.5	0.0	8	-8.0		
R1806	28	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0		
R1807	29	1	0.0	65.8	66	65.8	10	---	65.8	0.0	8	-8.0		
R2103	30	1	0.0	56.1	66	56.1	10	---	56.1	0.0	8	-8.0		
R-18-08	31	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0		
R-18-09	32	1	0.0	78.2	66	78.2	10	Snd Lvl	78.2	0.0	8	-8.0		
R-18-10	33	1	0.0	76.5	66	76.5	10	Snd Lvl	76.5	0.0	8	-8.0		
R-18-11	34	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0		
R-21-04	35	1	0.0	75.4	66	75.4	10	Snd Lvl	75.4	0.0	8	-8.0		
R-21-05	36	1	0.0	63.9	66	63.9	10	---	63.9	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.6 Modeled Sound Level Results for NSA 18 and 21 (page 2 of 2)

RESULTS: SOUND LEVELS												
Dulles												
R-21-06	37	1	0.0	64.2	66	64.2	10	---	64.2	0.0	8	-8.0
R-21-07	38	1	0.0	61.2	66	61.2	10	---	61.2	0.0	8	-8.0
R-18-12	39	1	0.0	74.0	66	74.0	10	Snd Lvl	74.0	0.0	8	-8.0
R-18-13	40	1	0.0	75.9	66	75.9	10	Snd Lvl	75.9	0.0	8	-8.0
R-18-14	41	1	0.0	65.5	66	65.5	10	---	65.5	0.0	8	-8.0
R-18-15	42	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
R-18-16	43	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
R-18-17	44	1	0.0	73.0	66	73.0	10	Snd Lvl	73.0	0.0	8	-8.0
R-18-18	45	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0
R-18-19	46	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
R-18-20	47	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
R-18-21	48	1	0.0	61.4	66	61.4	10	---	61.4	0.0	8	-8.0
Dwelling Units	# DUs	Noise Reduction										
		Min dB	Avg dB	Max dB								
All Selected	36	0.0	0.0	0.0								
All Impacted	19	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.7 Modeled Sound Level Results for NSA 17 and 19 – Wolf Trap Receptors (page 1 of 2)

RESULTS: SOUND LEVELS													
Straughan Environmental / N&W KH / RCK										Dulles 9 March 2011 TNM 2.5 Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT: Dulles										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
RUN: TNM14 IL													
BARRIER DESIGN: INPUT HEIGHTS													
ATMOSPHERICS: 68 deg F, 50% RH													
Receiver													
Name	No.	#DUs	No Barrier				Increase over existing		Type Impact	With Barrier			
			Existing LAeq1h	Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Calculated LAeq1h		Noise Reduction		Calculated minus Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
M1902	2	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
M1903	3	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
M1904	4	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
M1905	5	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
M1901	32	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
M1703	33	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0	
R1902	36	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1903	37	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1904	38	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1905	39	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1901	41	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1701	42	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0	
R1906	44	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1702	46	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0	
R1703	48	1	0.0	59.2	66	59.2	10	----	59.2	0.0	8	-8.0	
R1704	50	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1705	51	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1907	52	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1908	53	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1909	54	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R1910	55	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-17-06	56	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-17-07	57	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-17-08	58	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.7 Modeled Sound Level Results for NSA 17 and 19 – Wolf Trap Receptors (page 2 of 2)

RESULTS: SOUND LEVELS				Dulles									
R-17-09	59	1	0.0	55.0	66	55.0	10	----	55.0	0.0	8	-8.0	
R-17-10	60	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0	
R-17-11	61	1	0.0	54.7	66	54.7	10	----	54.7	0.0	8	-8.0	
R-17-12	62	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-11	63	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-12	64	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-13	65	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-14	66	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-15	67	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-16	68	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-17	69	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-18	70	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-19	71	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-20	72	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-21	73	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-19-22	74	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
Dwelling Units	# DUs	Noise Reduction											
		Min	Avg	Max									
		dB	dB	dB									
All Selected	40	0.0	0.0	0.0									
All Impacted	1	0.0	0.0	0.0									
All that meet NR Goal	0	0.0	0.0	0.0									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.8 Modeled Sound Level Results for NSA 17 and 19 (page 1 of 2)

RESULTS: SOUND LEVELS												Dulles			
Straughan Environmental KH												11 January 2012 TNM 2.5 Calculated with TNM 2.5			
RESULTS: SOUND LEVELS															
PROJECT/CONTRACT: Dulles															
RUN: TNM14															
BARRIER DESIGN: INPUT HEIGHTS												Average pavement type: shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS: 68 deg F, 50% RH															
Receiver															
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal			
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB			
M1902	2	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0			
M1903	3	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0			
M1904	4	1	0.0	75.6	66	75.6	10	Snd Lvl	75.6	0.0	8	-8.0			
M1905	5	1	0.0	62.9	66	62.9	10	----	62.9	0.0	8	-8.0			
M1901	32	1	0.0	75.5	66	75.5	10	Snd Lvl	75.5	0.0	8	-8.0			
M1703	33	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0			
R1902	36	1	0.0	76.7	66	76.7	10	Snd Lvl	76.7	0.0	8	-8.0			
R1903	37	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0			
R1904	38	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0			
R1905	39	1	0.0	77.4	66	77.4	10	Snd Lvl	77.4	0.0	8	-8.0			
R1901	41	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0			
R1701	42	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0			
R1906	44	1	0.0	75.8	66	75.8	10	Snd Lvl	75.8	0.0	8	-8.0			
R1702	46	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0			
R1703	48	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0			
R1704	50	1	0.0	52.4	66	52.4	10	----	52.4	0.0	8	-8.0			
R1705	51	1	0.0	55.4	66	55.4	10	----	55.4	0.0	8	-8.0			
R1907	52	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0			
R1908	53	1	0.0	77.6	66	77.6	10	Snd Lvl	77.6	0.0	8	-8.0			
R1909	54	1	0.0	76.1	66	76.1	10	Snd Lvl	76.1	0.0	8	-8.0			
R1910	55	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0			
R-17-06	56	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0			
R-17-07	57	1	0.0	48.9	66	48.9	10	----	48.9	0.0	8	-8.0			
R-17-08	58	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0			

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.8 Modeled Sound Level Results for NSA 17 and 19 (page 2 of 2)

RESULTS: SOUND LEVELS					Dulles							
R-17-09	59	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
R-17-10	60	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
R-17-11	61	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
R-17-12	62	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0
R-19-11	63	1	0.0	76.5	66	76.5	10	Snd Lvl	76.5	0.0	8	-8.0
R-19-12	64	1	0.0	77.7	66	77.7	10	Snd Lvl	77.7	0.0	8	-8.0
R-19-13	65	1	0.0	77.8	66	77.8	10	Snd Lvl	77.8	0.0	8	-8.0
R-19-14	66	1	0.0	73.9	66	73.9	10	Snd Lvl	73.9	0.0	8	-8.0
R-19-15	67	1	0.0	73.2	66	73.2	10	Snd Lvl	73.2	0.0	8	-8.0
R-19-16	68	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0
R-19-17	69	1	0.0	74.2	66	74.2	10	Snd Lvl	74.2	0.0	8	-8.0
R-19-18	70	1	0.0	77.3	66	77.3	10	Snd Lvl	77.3	0.0	8	-8.0
R-19-19	71	1	0.0	75.3	66	75.3	10	Snd Lvl	75.3	0.0	8	-8.0
R-19-20	72	1	0.0	74.4	66	74.4	10	Snd Lvl	74.4	0.0	8	-8.0
R-19-21	73	1	0.0	74.9	66	74.9	10	Snd Lvl	74.9	0.0	8	-8.0
R-19-22	74	1	0.0	75.3	66	75.3	10	Snd Lvl	75.3	0.0	8	-8.0
R-19-23	75	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
R-19-24	76	1	0.0	76.6	66	76.6	10	Snd Lvl	76.6	0.0	8	-8.0
R-19-25	77	1	0.0	75.7	66	75.7	10	Snd Lvl	75.7	0.0	8	-8.0
R-19-26	78	1	0.0	74.4	66	74.4	10	Snd Lvl	74.4	0.0	8	-8.0
R-19-27	79	1	0.0	74.7	66	74.7	10	Snd Lvl	74.7	0.0	8	-8.0
<b>Dwelling Units</b>	<b># DUs</b>	<b>Noise Reduction</b>										
		<b>Min</b>	<b>Avg</b>	<b>Max</b>								
		<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected	45	0.0	0.0	0.0								
All Impacted	29	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.9 Modeled Sound Level Results for NSA 20, 22, and 25 (page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan / N&W KFR / RCK						9 March 2011 TNM 2.5 Calculated with TNM 2.5								
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: RUN: BARRIER DESIGN: ATMOSPHERICS:						Dulles TNM15 IL INPUT HEIGHTS 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 LAeq1h	No Barrier LAeq1h			Increase over existing		Type Impact	With Barrier				
				Calculated	Crit'n		Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
M2201	2	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0		
M2202	3	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0		
M2203	4	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0		
M2501	5	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0		
M2502	6	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0		
M2001	19	1	0.0	56.3	66	56.3	10	----	56.3	0.0	8	-8.0		
M2002	25	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0		
R2001	27	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0		
R2201	28	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0		
R2202	29	1	0.0	70.0	66	70.0	10	Snd Lvl	70.0	0.0	8	-8.0		
R2203	30	1	0.0	59.1	66	59.1	10	----	59.1	0.0	8	-8.0		
R2204	31	1	0.0	61.0	66	61.0	10	----	61.0	0.0	8	-8.0		
R2501	32	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0		
R2502	33	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0		
R2503	34	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0		
R2504	35	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0		
R2505	36	1	0.0	73.2	66	73.2	10	Snd Lvl	73.2	0.0	8	-8.0		
R2506	37	1	0.0	74.0	66	74.0	10	Snd Lvl	74.0	0.0	8	-8.0		
R2205	38	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0		
R2206	39	1	0.0	58.1	66	58.1	10	----	58.1	0.0	8	-8.0		
R2207	40	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0		
R2208	41	1	0.0	70.0	66	70.0	10	Snd Lvl	70.0	0.0	8	-8.0		
R2209	42	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0		
R2507	43	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0		

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# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.9 Modeled Sound Level Results for NSA 20, 22, and 25 (page 2 of 2)

RESULTS: SOUND LEVELS					Dulles							
R2508	44	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
R2509	45	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
R2510	46	1	0.0	54.7	66	54.7	10	----	54.7	0.0	8	-8.0
R2210	47	1	0.0	72.4	66	72.4	10	Snd Lvl	72.4	0.0	8	-8.0
R2211	48	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
R2212	49	1	0.0	72.2	66	72.2	10	Snd Lvl	72.2	0.0	8	-8.0
R2511	50	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0
R2512	51	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0
R2513	52	1	0.0	70.0	66	70.0	10	Snd Lvl	70.0	0.0	8	-8.0
R2514	53	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
R2213	54	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
R2214	55	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
R-20-02	56	1	0.0	58.9	66	58.9	10	----	58.9	0.0	8	-8.0
R-20-03	57	1	0.0	52.1	66	52.1	10	----	52.1	0.0	8	-8.0
R-20-04	58	1	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0
R-20-05	59	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0
R-20-06	60	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
R-22-15	61	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0
R-22-16	62	1	0.0	71.4	66	71.4	10	Snd Lvl	71.4	0.0	8	-8.0
R-22-17	63	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
R-22-18	64	1	0.0	65.6	66	65.6	10	----	65.5	0.1	8	-7.9
R-25-15	65	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0
R-25-16	66	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
R-25-17	67	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
R-25-18	68	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
R-25-19	69	1	0.0	70.0	66	70.0	10	Snd Lvl	70.0	0.0	8	-8.0
R-25-20	70	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0
R-25-21	71	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
R-25-22	72	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
R-25-23	73	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0
R-22-19	74	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
R-25-24	75	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0
Dwelling Units	# DUs	Noise Reduction										
		Min dB	Avg dB	Max dB								
All Selected	56	0.0	0.0	0.1								
All Impacted	26	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

Figure J.10 Modeled Sound Level Results for NSA 26 (page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
N&W													9 March 2011	
RCK													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT: Dulles														
RUN: TNM17 IL														
BARRIER DESIGN: INPUT HEIGHTS													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier					
				Calculated	Crit'n	Increase over existing	Type	Calculated	Noise Reduction	Calculated	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB	Impact	dBA	dB	dB	dB		
HR2404	1	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0		
M2602	2	1	0.0	74.3	66	74.3	10	Snd Lvl	74.3	0.0	8	-8.0		
M2603	3	1	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0		
M2604	4	1	0.0	74.5	66	74.5	10	Snd Lvl	74.5	0.0	8	-8.0		
M2605	6	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0		
M2601	11	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0		
R2601	15	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0		
R2602	16	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0		
R2603	17	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0		
R2604	18	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0		
R2605	19	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0		
R2606	20	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0		
R2607	21	1	0.0	71.7	66	71.7	10	Snd Lvl	71.7	0.0	8	-8.0		
R2608	22	1	0.0	54.0	66	54.0	10	----	54.0	0.0	8	-8.0		
R2609	23	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0		
R-26-10	24	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0		
R-26-11	25	1	0.0	69.5	66	69.5	10	Snd Lvl	69.5	0.0	8	-8.0		
R-26-12	26	1	0.0	68.9	66	68.9	10	Snd Lvl	68.9	0.0	8	-8.0		
R-26-13	27	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0		
R-26-14	28	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0		
R-26-15	29	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0		
R-26-16	30	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0		
R-26-17	31	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0		
R-26-18	32	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix J: Insertion Loss Tables

**Figure J.10 Modeled Sound Level Results for NSA 26 (page 2 of 2)**

**RESULTS: SOUND LEVELS**

**Dulles**

R-26-19	33	1	0.0	64.8	66	64.8	10	----	64.8	0.0	8	-8.0
R-26-20	34	1	0.0	74.4	66	74.4	10	Snd Lvl	74.4	0.0	8	-8.0
R-26-21	35	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0
R-26-22	36	1	0.0	72.2	66	72.2	10	Snd Lvl	72.2	0.0	8	-8.0
R-26-23	37	1	0.0	68.9	66	68.9	10	Snd Lvl	68.9	0.0	8	-8.0
<b>Dwelling Units</b>	<b># DUs</b>	<b>Noise Reduction</b>										
		<b>Min</b>	<b>Avg</b>	<b>Max</b>								
		<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected	29	0.0	0.0	0.0								
All Impacted	20	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix K**

### **Barrier Analysis Rail Spreadsheets**

August 2012

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

24HR-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1		Source 2		Source 3
Source Num.	Commuter Rail Cars	3			
Distance (source to receiver)	distance (ft)	350			
Daytime Hours (7 AM - 10 PM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70			
	trains/hour	12			
	cars/train	8			
Wheel Flats?	% of cars w/ wheel flats	0.00%			
Jointed Track?	Y/N	N			
Embedded Track?	Y/N	N			
Aerial Structure?	Y/N	N			
Barrier Present?	Y/N	Y			
Intervening Rows of Buildings	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

M-02-01

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	55	48	48
Source 1	55	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	555	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-02-01A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	48	48
Source 1	55	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	555	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-02-01B

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	555	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-01C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	53	53
Source 1	60	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	555	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	750	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-03

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	225	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-02-04

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	360		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	Y		
<b>Intervening Rows of Buildings</b>	number of rows	1		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-02-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	420	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	51	45	45
Source 1	51	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	940	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	49	43	43
Source 1	49	43	43
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1310	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	580	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	2	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-04

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	49		
Source 1	49		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

*Enter noise receiver land use category below.*

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>					
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3			
<b>Distance (source to receiver)</b>	distance (ft)	1060			
<b>Noisiest Hour of</b>	speed (mph)	70			
<b>Activity During</b>	trains/hour	12			
<b>Sensitive Hours</b>	cars/train	8			
		70			
		12			
		8			
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%			
<b>Jointed Track?</b>	Y/N	N			
<b>Embedded Track?</b>	Y/N	N			
<b>Aerial Structure?</b>	Y/N	N			
<b>Barrier Present?</b>	Y/N	N			
<b>Intervening Rows of Buildings</b>	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-05

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	53		
Source 1	53		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	605	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	795	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-07

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	50	44	44
Source 1	50	44	44
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	1015	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	760	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	700	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	305	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-11

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	475	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	720	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-13

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	50		
Source 1	50		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>					
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3			
<b>Distance (source to receiver)</b>	distance (ft)	430			
<b>Noisiest Hour of</b>	speed (mph)	70			
<b>Activity During</b>	trains/hour	12			
<b>Sensitive Hours</b>	cars/train	8			
		70			
		12			
		8			
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%			
<b>Jointed Track?</b>	Y/N	N			
<b>Embedded Track?</b>	Y/N	N			
<b>Aerial Structure?</b>	Y/N	N			
<b>Barrier Present?</b>	Y/N	Y			
<b>Intervening Rows of Buildings</b>	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-14

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	51		
Source 1	51		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

*Enter noise receiver land use category below.*

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>					
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3			
<b>Distance (source to receiver)</b>	distance (ft)	375			
<b>Noisiest Hour of</b>	speed (mph)	70			
<b>Activity During</b>	trains/hour	12			
<b>Sensitive Hours</b>	cars/train	8			
		70			
		12			
		8			
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%			
<b>Jointed Track?</b>	Y/N	N			
<b>Embedded Track?</b>	Y/N	N			
<b>Aerial Structure?</b>	Y/N	N			
<b>Barrier Present?</b>	Y/N	Y			
<b>Intervening Rows of Buildings</b>	number of rows	0			

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-15

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	52		
Source 1	52		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

*Enter noise receiver land use category below.*

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	320	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

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Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-16

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	53		
Source 1	53		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	280		
<b>Noisiest Hour of</b>	speed (mph)	70		
<b>Activity During</b>	trains/hour	12		
<b>Sensitive Hours</b>	cars/train	8		
		70		
		12		
		8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	Y		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-17

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	51		
Source 1	51		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

*Enter noise receiver land use category below.*

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	365	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-18

<b>RESULTS</b>			
Noise Source	Leq - 1-hr (dB)		
All Sources	50		
Source 1	50		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	450		
Noisiest Hour of	speed (mph)	70		
Activity During	trains/hour	12		
Sensitive Hours	cars/train	8		
		70		
		12		
		8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	Y		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

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Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-19

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	49		
Source 1	49		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

*Enter noise receiver land use category below.*

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	535	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	



# Dulles Toll Road

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## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-20

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	48		
Source 1	48		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

*Enter noise receiver land use category below.*

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	605	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-02-21

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	235	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-22

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	255		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	Y		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-23

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	54		
Source 1	54		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	545	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-24

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	55		
Source 1	55		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	445	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-25

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	54		
Source 1	54		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	525	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-26

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	55		
Source 1	55		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>				
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	455		
<b>Noisiest Hour of</b>	speed (mph)	70		
<b>Activity During</b>	trains/hour	12		
<b>Sensitive Hours</b>	cars/train	8		
		70		
		12		
		8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-27

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	54		
Source 1	54		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	515	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-28

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	55		
Source 1	55		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

*Enter noise receiver land use category below.*

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	460	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-29

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	50		
Source 1	50		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	940	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-02-30

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Leq - 1-hr (dB)</b>		
<b>All Sources</b>	51		
Source 1	51		
Source 2	0		
Source 3	0		
Source 4	0		
Source 5	0		
Source 6	0		
Source 7	0		
Source 8	0		

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	3

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

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	835	
<b>Noisiest Hour of</b>	speed (mph)	70	
<b>Activity During</b>	trains/hour	12	
<b>Sensitive Hours</b>	cars/train	8	
		70	
		12	
		8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-04-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	460		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	N		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-04-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	51	44	44
Source 1	51	44	44
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	890	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-04-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	49	43	43
Source 1	49	43	43
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1110	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-04-04

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	390	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-04-05

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	55	48	48
Source 1	55	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	575	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	1	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-01

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	850	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	50	43	43
Source 1	50	43	43
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1070	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-03

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	745	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-04

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	380	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-04A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	380	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-04B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	380	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-04C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	380		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	850	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	1	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	645	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	470	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-07A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	470	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-07B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	470	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-07C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	470	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	625	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	830	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	435	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	N	
<b>Intervening Rows of Buildings</b>	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-11

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	55	55
Source 1	62	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	430	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	470	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-12A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	470	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-12B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	470		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-12C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	55	55
Source 1	61	55	55
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	470	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-13

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-13A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-13B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-13C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-14

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	610	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-15

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	520	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-04-15A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	520	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-15B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	520	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-04-15C

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	520	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

M-06-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	235	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-06-01A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	235	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

M-06-01B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	235	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-06-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	51	45	45
Source 1	51	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	1100		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	1		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-06-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	290	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	590	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	345		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	Y		
Intervening Rows of Buildings	number of rows	1		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	245	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-04A

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	60	54	54
Source 1	60	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	245	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-04B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	59	59
Source 1	65	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	245	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	230	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-05A

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	230	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-05B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	66	59	59
Source 1	66	59	59
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	230	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	290	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-06A

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	59	53	53
Source 1	59	53	53
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	290	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-06B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	64	58	58
Source 1	64	58	58
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	290	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-07

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	395	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-07A

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<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	395		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	Y		
Intervening Rows of Buildings	number of rows	0		



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-07B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	395	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-08A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	320	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-08B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	320	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-09A

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	360	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-09B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	360		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-10A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	390	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-10B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	390	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-11A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	320	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-11B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	63	57	57
Source 1	63	57	57
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	320	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-12A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	350	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	0
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-12B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	63	56	56
Source 1	63	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	350	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-13A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	375	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-06-13B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	62	56	56
Source 1	62	56	56
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	375		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	N		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-14

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	500		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	Y		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-14A

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	500	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-06-14B

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	500	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-15-01

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	460	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-15-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	680	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-15-03

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	845	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	375	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	55	48	48
Source 1	55	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	575	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-03

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	355	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	485	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	520	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	1	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	730		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	Y		
Intervening Rows of Buildings	number of rows	1		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-07

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	740	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-08

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>
Noise receiver land use category (1, 2 or 3)

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

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	725	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-09

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	360	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-10

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	61	54	54
Source 1	61	54	54
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	475	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-11

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	59	52	52
Source 1	59	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	645	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-12

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	820	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-13

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	330	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-14

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	605	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-15

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	58	51	51
Source 1	58	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	360	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-16

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	400	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-17

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	57	51	51
Source 1	57	51	51
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	405		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	Y		
<b>Intervening Rows of Buildings</b>	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-18

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	675		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	Y		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-19

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
Source Num.	Commuter Rail Cars	3		
Distance (source to receiver)	distance (ft)	520		
Daytime Hours (7 AM - 10 PM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
Wheel Flats?	% of cars w/ wheel flats	0.00%		
Jointed Track?	Y/N	N		
Embedded Track?	Y/N	N		
Aerial Structure?	Y/N	N		
Barrier Present?	Y/N	Y		
Intervening Rows of Buildings	number of rows	0		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-20

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-21

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	655	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-22

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	52	45	45
Source 1	52	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>				
Parameter	Source 1	Source 2	Source 3	
<b>Source Num.</b>	Commuter Rail Cars	3		
<b>Distance (source to receiver)</b>	distance (ft)	880		
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70		
	trains/hour	12		
	cars/train	8		
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%		
<b>Jointed Track?</b>	Y/N	N		
<b>Embedded Track?</b>	Y/N	N		
<b>Aerial Structure?</b>	Y/N	N		
<b>Barrier Present?</b>	Y/N	Y		
<b>Intervening Rows of Buildings</b>	number of rows	1		

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-23

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	740	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	1	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-24

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	56	50	50
Source 1	56	50	50
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	435	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-25

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	520	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-26

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	56	49	49
Source 1	56	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	475	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-27

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	645	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-28

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	525	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-29

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	535	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-30

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	55	49	49
Source 1	55	49	49
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	520	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-31

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	53	47	47
Source 1	53	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	695	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-32

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	610	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-15-33

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	600	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-34

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	800	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-35

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	52	46	46
Source 1	52	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	875	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	N	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-15-36

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	58	52	52
Source 1	58	52	52
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	690	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	N	
Barrier Present?	Y/N	N	
Intervening Rows of Buildings	number of rows	0	



# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-20-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	47	47
Source 1	54	47	47
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1200	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

M-20-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	52	45	45
Source 1	52	45	45
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1460	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	2	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-20-01

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1125	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-20-02

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	48	42	42
Source 1	48	42	42
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	2980	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-20-03

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	50	43	43
Source 1	50	43	43
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
<b>Parameter</b>	<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>Source Num.</b>	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	2220	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
<b>Wheel Flats?</b>	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	N	
<b>Embedded Track?</b>	Y/N	N	
<b>Aerial Structure?</b>	Y/N	Y	
<b>Barrier Present?</b>	Y/N	Y	
<b>Intervening Rows of Buildings</b>	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

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Case:

R-20-04

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	52	46	46
Source 1	52	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1490	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

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Case:

R-20-05

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	54	48	48
Source 1	54	48	48
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1145	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	

# Dulles Toll Road

Highway Sound Measurement and Noise Barrier Analysis

Appendix K: Rail Spreadsheets

## Noise Model Based on Federal Transit Administration General Transit Noise Assessment

Developed for Chicago Create Project

Copyright 2006, HMMH Inc.

Case:

R-20-06

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	53	46	46
Source 1	53	46	46
Source 2	0	0	0
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.

<b>LAND USE CATEGORY</b>	
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.

<b>NOISE SOURCE PARAMETERS</b>			
Parameter	Source 1	Source 2	Source 3
Source Num.	Commuter Rail Cars	3	
Distance (source to receiver)	distance (ft)	1395	
Daytime Hours (7 AM - 10 PM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	70	
	trains/hour	12	
	cars/train	8	
Wheel Flats?	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	N	
Embedded Track?	Y/N	N	
Aerial Structure?	Y/N	Y	
Barrier Present?	Y/N	Y	
Intervening Rows of Buildings	number of rows	0	



# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix L**

### **Barrier Design TNM Result Tables**

August 2012

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.1 Barrier Design Sound Level Results for NSA 02 West (Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR													20 January 2012	
RESULTS: SOUND LEVELS													TNM 2.5	
PROJECT/CONTRACT: Dulles													Calculated with TNM 2.5	
RUN: TNM01														
BARRIER DESIGN: PRBAWest and Middle Extension													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Crit'n	Increase over existing	Type	With Barrier	Noise Reduction	Goal	Calculated minus Goal			
			dBA	dBA	dBA	Calculated	Crit'n	Calculated	Calculated	Calculated	Goal	Calculated	Goal	Calculated
						dB	Sub'l Inc		dB	dB	dB	dB	dB	dB
M0201	4	1	0.0	66.4	66	66.4	10	Snd Lvl	60.1	6.3	8	-1.7		
M0202	5	1	0.0	62.0	66	62.0	10	----	57.9	4.1	8	-3.9		
M0203	6	1	0.0	63.8	66	63.8	10	----	61.9	1.9	8	-6.1		
M0204	7	1	0.0	49.3	66	49.3	10	----	49.2	0.1	8	-7.9		
M0205	8	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0		
R0201	20	1	0.0	58.8	66	58.8	10	----	56.0	2.8	8	-5.2		
R0202	21	1	0.0	49.3	66	49.3	10	----	48.2	1.1	8	-6.9		
R0203	22	1	0.0	51.0	66	51.0	10	----	50.3	0.7	8	-7.3		
R0204	23	1	0.0	49.1	66	49.1	10	----	48.8	0.3	8	-7.7		
R0205	24	1	0.0	51.0	66	51.0	10	----	51.0	0.0	8	-8.0		
R0206	25	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0		
R0207	26	1	0.0	55.3	66	55.3	10	----	52.2	3.1	8	-4.9		
R0208	27	1	0.0	61.0	66	61.0	10	----	56.6	4.4	8	-3.6		
R0209	28	1	0.0	64.9	66	64.9	10	----	58.9	6.0	8	-2.0		
R0210	29	1	0.0	58.2	66	58.2	10	----	56.7	1.5	8	-6.5		
R0211	30	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0		
R0212	31	1	0.0	59.2	66	59.2	10	----	54.3	4.9	8	-3.1		
R0213	32	1	0.0	70.0	66	70.0	10	Snd Lvl	61.1	8.9	8	0.9		
R0214	33	1	0.0	71.4	66	71.4	10	Snd Lvl	61.6	9.8	8	1.8		
R0215	34	1	0.0	73.2	66	73.2	10	Snd Lvl	62.4	10.8	8	2.8		
R0216	35	1	0.0	74.6	66	74.6	10	Snd Lvl	62.9	11.7	8	3.7		
R0217	36	1	0.0	71.0	66	71.0	10	Snd Lvl	62.1	8.9	8	0.9		
R0218	37	1	0.0	67.9	66	67.9	10	Snd Lvl	61.3	6.6	8	-1.4		
R0219	38	1	0.0	65.5	66	65.5	10	----	59.9	5.6	8	-2.4		

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.1 Barrier Design Sound Level Results for NSA 02 West (Page 2 of 2)

**RESULTS: SOUND LEVELS**

												Dulles		
R0220	39	1	0.0	63.4	66	63.4	10	----	58.2	5.2	8	-2.8		
R0221	40	1	0.0	65.0	66	65.0	10	----	61.4	3.6	8	-4.4		
R0222	41	1	0.0	62.0	66	62.0	10	----	60.9	1.1	8	-6.9		
R0223	42	1	0.0	53.9	66	53.9	10	----	53.9	0.0	8	-8.0		
R0224	43	1	0.0	48.5	66	48.5	10	----	48.5	0.0	8	-8.0		
R0225	44	1	0.0	48.9	66	48.9	10	----	48.8	0.1	8	-7.9		
R0226	45	1	0.0	53.4	66	53.4	10	----	53.1	0.3	8	-7.7		
R0227	46	1	0.0	55.1	66	55.1	10	----	55.1	0.0	8	-8.0		
R0228	47	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0		
R0229	48	1	0.0	48.5	66	48.5	10	----	48.4	0.1	8	-7.9		
R0230	90	1	0.0	48.2	66	48.2	10	----	48.1	0.1	8	-7.9		
M-02-01A	103	1	0.0	69.8	66	69.8	10	Snd Lvl	63.4	6.4	8	-1.6		
M-02-01B	104	1	0.0	70.7	66	70.7	10	Snd Lvl	65.2	5.5	8	-2.5		
M-02-01C	105	1	0.0	71.1	66	71.1	10	Snd Lvl	66.3	4.8	8	-3.2		
<b>Dwelling Units</b>	<b># DUs</b>	<b>Noise Reduction</b>												
		<b>Min</b>	<b>Avg</b>	<b>Max</b>										
		<b>dB</b>	<b>dB</b>	<b>dB</b>										
All Selected	38	0.0	3.3	11.7										
All Impacted	11	0.0	7.2	11.7										
All that meet NR Goal	5	8.9	10.0	11.7										

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.2 Barrier Design Sound Level Results for NSA 04 East (Page 1 of 2)

RESULTS: SOUND LEVELS												Dulles	
SES										20 January 2012			
KFR										TNM 2.5			
RESULTS: SOUND LEVELS										Calculated with TNM 2.5			
PROJECT/CONTRACT:				Dulles									
RUN:				TNM03 (MS01)									
BARRIER DESIGN:				PRBA NSA04				Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
ATMOSPHERICS:				68 deg F, 50% RH									
Receiver													
Name	No.	#DUs	Existing	No Barrier			Increase over existing		Type Impact	With Barrier			
			LAeq1h	LAeq1h	Crit'n	Calculated	Crit'n	Calculated		Calculated	Noise Reduction	Goal	Calculated minus Goal
			dBA	dBA	dBA					dBA	dB	dB	dB
M0401	10	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
M0402	11	1	0.0	45.4	66	45.4	10	----	45.4	0.0	8	-8.0	
M0403	12	1	0.0	49.6	66	49.6	10	----	47.0	2.6	8	-5.4	
M0404	13	1	0.0	68.2	66	68.2	10	Snd Lvl	62.7	5.5	8	-2.5	
M0405	14	1	0.0	58.5	66	58.5	10	----	52.3	6.2	8	-1.8	
R0401	18	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R0402	19	1	0.0	51.5	66	51.5	10	----	51.5	0.0	8	-8.0	
R0403	20	1	0.0	50.0	66	50.0	10	----	46.5	3.5	8	-4.5	
R0404	21	1	0.0	67.7	66	67.7	10	Snd Lvl	61.2	6.5	8	-1.5	
R0405	22	1	0.0	54.6	66	54.6	10	----	52.3	2.3	8	-5.7	
R0406	23	1	0.0	62.4	66	62.4	10	----	60.8	1.6	8	-6.4	
R0407	24	1	0.0	67.2	66	67.2	10	Snd Lvl	63.2	4.0	8	-4.0	
R-04-08	25	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-04-09	26	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-04-10	27	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-04-11	32	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0	
R-04-12	33	1	0.0	66.0	66	66.0	10	Snd Lvl	60.0	6.0	8	-2.0	
R-04-13	34	1	0.0	65.5	66	65.5	10	----	58.3	7.2	8	-0.8	
R-04-14	35	1	0.0	60.0	66	60.0	10	----	52.9	7.1	8	-0.9	
R-04-15	36	1	0.0	66.0	66	66.0	10	Snd Lvl	62.1	3.9	8	-4.1	
R-04-16	37	1	0.0	64.9	66	64.9	10	----	61.6	3.3	8	-4.7	
R-04-17	38	1	0.0	57.1	66	57.1	10	----	54.3	2.8	8	-5.2	
R-04-13A	69	1	0.0	68.9	66	68.9	10	Snd Lvl	60.4	8.5	8	0.5	
R-04-13B	70	1	0.0	70.6	66	70.6	10	Snd Lvl	61.8	8.8	8	0.8	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

**Figure L.2 Barrier Design Sound Level Results for NSA 04 East (Page 2 of 2)**

RESULTS: SOUND LEVELS												
Dulles												
R-04-13C	71	1	0.0	72.2	66	72.2	10	Snd Lvl	64.6	7.6	8	-0.4
R-04-12A	73	1	0.0	69.5	66	69.5	10	Snd Lvl	62.4	7.1	8	-0.9
R-04-12B	74	1	0.0	71.3	66	71.3	10	Snd Lvl	63.9	7.4	8	-0.6
R-04-12C	75	1	0.0	72.9	66	72.9	10	Snd Lvl	66.3	6.6	8	-1.4
R-04-04A	77	1	0.0	70.8	66	70.8	10	Snd Lvl	61.9	8.9	8	0.9
R-04-04B	78	1	0.0	72.7	66	72.7	10	Snd Lvl	62.8	9.9	8	1.9
R-04-04C	79	1	0.0	73.9	66	73.9	10	Snd Lvl	65.3	8.6	8	0.6
R-04-07A	81	1	0.0	69.8	66	69.8	10	Snd Lvl	63.9	5.9	8	-2.1
R-04-07B	82	1	0.0	70.9	66	70.9	10	Snd Lvl	64.0	6.9	8	-1.1
R-04-07C	83	1	0.0	72.5	66	72.5	10	Snd Lvl	65.1	7.4	8	-0.6
R-04-15A	84	1	0.0	68.3	66	68.3	10	Snd Lvl	62.6	5.7	8	-2.3
R-04-15B	85	1	0.0	69.3	66	69.3	10	Snd Lvl	62.7	6.6	8	-1.4
R-04-15C	86	1	0.0	70.3	66	70.3	10	Snd Lvl	63.3	7.0	8	-1.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		37	0.0	4.7	9.9							
All Impacted		20	3.9	6.9	9.9							
All that meet NR Goal		5	8.5	8.9	9.9							

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.3 Barrier Design Sound Level Results for NSA 06 (Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR													20 January 2012	
RESULTS: SOUND LEVELS													TNM 2.5	
PROJECT/CONTRACT: Dulles													Calculated with TNM 2.5	
RUN: PRBA 06														
BARRIER DESIGN: PRBA 06													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier			Increase over existing			Type	With Barrier			
				Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc	Impact	Calculated LAeq1h	Noise Reduction	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB	dB		dB	dB	dB	dB	
M0601	1	1	0.0	75.3	66	75.3	10	Snd Lvl		64.4	10.9	8	2.9	
M0602	3	1	0.0	59.0	66	59.0	10	----		58.4	0.6	8	-7.4	
R0601	13	1	0.0	65.2	66	65.2	10	----		58.6	6.6	8	-1.4	
R0602	14	1	0.0	63.6	66	63.6	10	----		60.7	2.9	8	-5.1	
R0603	15	1	0.0	56.2	66	56.2	10	----		53.1	3.1	8	-4.9	
R0604	19	1	0.0	71.7	66	71.7	10	Snd Lvl		63.4	8.3	8	0.3	
R0605	21	1	0.0	74.3	66	74.3	10	Snd Lvl		63.7	10.6	8	2.6	
R0606	22	1	0.0	72.9	66	72.9	10	Snd Lvl		64.5	8.4	8	0.4	
R0607	23	1	0.0	68.8	66	68.8	10	Snd Lvl		63.5	5.3	8	-2.7	
M-06-01A	31	1	0.0	78.4	66	78.4	10	Snd Lvl		67.0	11.4	8	3.4	
M-06-01B	32	1	0.0	78.6	66	78.6	10	Snd Lvl		70.5	8.1	8	0.1	
R-06-04A	37	1	0.0	78.1	66	78.1	10	Snd Lvl		67.9	10.2	8	2.2	
R-06-04B	38	1	0.0	78.3	66	78.3	10	Snd Lvl		70.3	8.0	8	0.0	
R-06-05A	41	1	0.0	78.5	66	78.5	10	Snd Lvl		67.2	11.3	8	3.3	
R-06-05B	43	1	0.0	78.6	66	78.6	10	Snd Lvl		71.2	7.4	8	-0.6	
R-06-06A	44	1	0.0	74.8	66	74.8	10	Snd Lvl		66.2	8.6	8	0.6	
R-06-06B	46	1	0.0	75.1	66	75.1	10	Snd Lvl		68.5	6.6	8	-1.4	
R0607A	47	1	0.0	71.9	66	71.9	10	Snd Lvl		65.8	6.1	8	-1.9	
R0607B	48	1	0.0	72.6	66	72.6	10	Snd Lvl		67.2	5.4	8	-2.6	
R0608A	49	1	0.0	70.6	66	70.6	10	Snd Lvl		64.6	6.0	8	-2.0	
R0608B	50	1	0.0	73.3	66	73.3	10	Snd Lvl		67.9	5.4	8	-2.6	
R0609A	51	1	0.0	68.6	66	68.6	10	Snd Lvl		63.4	5.2	8	-2.8	
R0609B	52	1	0.0	71.5	66	71.5	10	Snd Lvl		66.1	5.4	8	-2.6	
R0610A	53	1	0.0	67.5	66	67.5	10	Snd Lvl		62.4	5.1	8	-2.9	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.3 Barrier Design Sound Level Results for NSA 06 (Page 2 of 2)

**RESULTS: SOUND LEVELS**

**Dulles**

R0610B	54	1	0.0	69.9	66	69.9	10	Snd Lvl	65.2	4.7	8	-3.3
R0611A	55	1	0.0	73.7	66	73.7	10	Snd Lvl	66.1	7.6	8	-0.4
R0611B	56	1	0.0	74.1	66	74.1	10	Snd Lvl	67.9	6.2	8	-1.8
R0612A	57	1	0.0	73.1	66	73.1	10	Snd Lvl	66.0	7.1	8	-0.9
R0612B	58	1	0.0	73.6	66	73.6	10	Snd Lvl	67.7	5.9	8	-2.1
R0613A	59	1	0.0	72.4	66	72.4	10	Snd Lvl	65.8	6.6	8	-1.4
R0613B	60	1	0.0	73.0	66	73.0	10	Snd Lvl	67.4	5.6	8	-2.4
R0614	61	1	0.0	65.7	66	65.7	10	---	61.8	3.9	8	-4.1
R0614A	62	1	0.0	69.5	66	69.5	10	Snd Lvl	65.1	4.4	8	-3.6
R0614B	63	1	0.0	70.6	66	70.6	10	Snd Lvl	66.2	4.4	8	-3.6
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		34	0.6	6.6	11.4							
All Impacted		29	4.4	7.1	11.4							
All that meet NR Goal		10	8.0	9.6	11.4							

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.4 Barrier Design Sound Level Results for NSA15 Entire – 50%(Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan Environmental KFR													20 January 2012 TNM 2.5 Calculated with TNM 2.5	
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT: Dulles														
RUN: TNM12														
BARRIER DESIGN: PRBA15_ENT50													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing			No Barrier			Type Impact	With Barrier				
			LAeq1h	Calculated	Crit'n	LAeq1h	Calculated	Crit'n		Sub'l Inc	Calculated LAeq1h	Noise Reduction		
												Calculated	Goal	Calculated minus Goal
dBA	dBA	dBA	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB		
HR03	3	1	0.0	73.1	66	73.1	10	Snd Lvl	65.3	7.8	8	-0.2		
M1501	13	1	0.0	56.5	66	56.5	10	----	53.1	3.4	8	-4.6		
M1502	14	1	0.0	60.3	66	60.3	10	----	57.4	2.9	8	-5.1		
M1503	15	1	0.0	61.4	66	61.4	10	----	59.0	2.4	8	-5.6		
R1501	39	1	0.0	72.9	66	72.9	10	Snd Lvl	68.8	4.1	8	-3.9		
R1502	40	1	0.0	62.9	66	62.9	10	----	56.0	6.9	8	-1.1		
R1503	41	1	0.0	71.9	66	71.9	10	Snd Lvl	65.2	6.7	8	-1.3		
R1504	42	1	0.0	64.8	66	64.8	10	----	61.0	3.8	8	-4.2		
R1505	46	1	0.0	66.2	66	66.2	10	Snd Lvl	60.4	5.8	8	-2.2		
R1506	47	1	0.0	64.7	66	64.7	10	----	61.9	2.8	8	-5.2		
R1507	48	1	0.0	63.0	66	63.0	10	----	60.2	2.8	8	-5.2		
R1508	49	1	0.0	63.9	66	63.9	10	----	60.8	3.1	8	-4.9		
R1509	50	1	0.0	71.0	66	71.0	10	Snd Lvl	67.0	4.0	8	-4.0		
R1510	51	1	0.0	65.0	66	65.0	10	----	61.0	4.0	8	-4.0		
R1511	52	1	0.0	57.2	66	57.2	10	----	55.4	1.8	8	-6.2		
R1512	53	1	0.0	60.3	66	60.3	10	----	60.2	0.1	8	-7.9		
R1513	54	1	0.0	72.9	66	72.9	10	Snd Lvl	70.2	2.7	8	-5.3		
R1514	55	1	0.0	65.5	66	65.5	10	----	62.8	2.7	8	-5.3		
R1515	56	1	0.0	67.5	66	67.5	10	Snd Lvl	58.8	8.7	8	0.7		
R1516	57	1	0.0	68.7	66	68.7	10	Snd Lvl	62.3	6.4	8	-1.6		
R1517	58	1	0.0	73.0	66	73.0	10	Snd Lvl	67.0	6.0	8	-2.0		
R1518	59	1	0.0	65.1	66	65.1	10	----	62.0	3.1	8	-4.9		
R1519	60	1	0.0	65.3	66	65.3	10	----	59.9	5.4	8	-2.6		
R1520	61	1	0.0	69.1	66	69.1	10	Snd Lvl	63.4	5.7	8	-2.3		



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.4 Barrier Design Sound Level Results for NSA15 Entire – 50% (Page 2 of 2)

**RESULTS: SOUND LEVELS**

**Dulles**

R1521	62	1	0.0	62.9	66	62.9	10	----	60.2	2.7	8	-5.3
R1522	63	1	0.0	61.4	66	61.4	10	----	55.0	6.4	8	-1.6
R1523	64	1	0.0	65.2	66	65.2	10	----	58.1	7.1	8	-0.9
R1524	65	1	0.0	72.3	66	72.3	10	Snd Lvl	69.0	3.3	8	-4.7
R1525	66	1	0.0	71.3	66	71.3	10	Snd Lvl	63.4	7.9	8	-0.1
R1526	67	1	0.0	68.5	66	68.5	10	Snd Lvl	59.0	9.5	8	1.5
R1527	68	1	0.0	62.3	66	62.3	10	----	57.2	5.1	8	-2.9
R1528	69	1	0.0	63.1	66	63.1	10	----	58.7	4.4	8	-3.6
R1529	70	1	0.0	63.3	66	63.3	10	----	60.1	3.2	8	-4.8
R1530	71	1	0.0	65.1	66	65.1	10	----	62.2	2.9	8	-5.1
R1531	72	1	0.0	63.6	66	63.6	10	----	59.5	4.1	8	-3.9
R1532	73	1	0.0	66.5	66	66.5	10	Snd Lvl	62.2	4.3	8	-3.7
R1533	74	1	0.0	66.9	66	66.9	10	Snd Lvl	63.2	3.7	8	-4.3
R1534	75	1	0.0	63.9	66	63.9	10	----	61.4	2.5	8	-5.5
R1535	76	1	0.0	60.7	66	60.7	10	----	57.8	2.9	8	-5.1
R1536	77	1	0.0	60.2	66	60.2	10	----	57.7	2.5	8	-5.5

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	40	0.1	4.4	9.5
All Impacted	15	2.7	5.8	9.5
All that meet NR Goal	2	8.7	9.1	9.5

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.5 Barrier Design Sound Level Results for NSA 15 West – 50% (Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles		
Straughan Environmental KFR													20 January 2012		
RESULTS: SOUND LEVELS													TNM 2.5		
PROJECT/CONTRACT: Dulles													Calculated with TNM 2.5		
RUN: TNM12															
BARRIER DESIGN: PRBA15_W50													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
ATMOSPHERICS: 68 deg F, 50% RH															
Receiver															
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Crit'n	Increase over existing	Type	Calculated	Noise Reduction	Goal	Calculated minus Goal				
			dBA	dBA	dBA	dB	Impact	dBA	Calculated	dB	dB	Calculated minus Goal			
							Sub'l Inc								
HR03	3	1	0.0	73.1	66	73.1	10	Snd Lvl	68.0	5.1	8	-2.9			
M1501	13	1	0.0	56.5	66	56.5	10	----	53.9	2.6	8	-5.4			
M1502	14	1	0.0	60.3	66	60.3	10	----	58.8	1.5	8	-6.5			
M1503	15	1	0.0	61.4	66	61.4	10	----	61.3	0.1	8	-7.9			
R1501	39	1	0.0	72.9	66	72.9	10	Snd Lvl	69.7	3.2	8	-4.8			
R1502	40	1	0.0	62.9	66	62.9	10	----	57.8	5.1	8	-2.9			
R1503	41	1	0.0	71.9	66	71.9	10	Snd Lvl	68.1	3.8	8	-4.2			
R1504	42	1	0.0	64.8	66	64.8	10	----	63.3	1.5	8	-6.5			
R1505	46	1	0.0	66.2	66	66.2	10	Snd Lvl	62.5	3.7	8	-4.3			
R1506	47	1	0.0	64.7	66	64.7	10	----	63.2	1.5	8	-6.5			
R1507	48	1	0.0	63.0	66	63.0	10	----	61.8	1.2	8	-6.8			
R1508	49	1	0.0	63.9	66	63.9	10	----	63.6	0.3	8	-7.7			
R1509	50	1	0.0	71.0	66	71.0	10	Snd Lvl	71.0	0.0	8	-8.0			
R1510	51	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0			
R1511	52	1	0.0	57.2	66	57.2	10	----	57.1	0.1	8	-7.9			
R1512	53	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0			
R1513	54	1	0.0	72.9	66	72.9	10	Snd Lvl	71.1	1.8	8	-6.2			
R1514	55	1	0.0	65.5	66	65.5	10	----	63.5	2.0	8	-6.0			
R1515	56	1	0.0	67.5	66	67.5	10	Snd Lvl	59.8	7.7	8	-0.3			
R1516	57	1	0.0	68.7	66	68.7	10	Snd Lvl	63.8	4.9	8	-3.1			
R1517	58	1	0.0	73.0	66	73.0	10	Snd Lvl	69.1	3.9	8	-4.1			
R1518	59	1	0.0	65.1	66	65.1	10	----	64.4	0.7	8	-7.3			
R1519	60	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0			
R1520	61	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0			

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.5 Barrier Design Sound Level Results for NSA 15 West – 50% (Page 2 of 2)

#### RESULTS: SOUND LEVELS

													Dulles	
R1521	62	1	0.0	62.9	66	62.9	10	----	61.9	1.0	8	-7.0		
R1522	63	1	0.0	61.4	66	61.4	10	----	56.4	5.0	8	-3.0		
R1523	64	1	0.0	65.2	66	65.2	10	----	59.7	5.5	8	-2.5		
R1524	65	1	0.0	72.3	66	72.3	10	Snd Lvl	69.8	2.5	8	-5.5		
R1525	66	1	0.0	71.3	66	71.3	10	Snd Lvl	65.1	6.2	8	-1.8		
R1526	67	1	0.0	68.5	66	68.5	10	Snd Lvl	60.0	8.5	8	0.5		
R1527	68	1	0.0	62.3	66	62.3	10	----	58.3	4.0	8	-4.0		
R1528	69	1	0.0	63.1	66	63.1	10	----	60.0	3.1	8	-4.9		
R1529	70	1	0.0	63.3	66	63.3	10	----	62.4	0.9	8	-7.1		
R1530	71	1	0.0	65.1	66	65.1	10	----	64.0	1.1	8	-6.9		
R1531	72	1	0.0	63.6	66	63.6	10	----	61.2	2.4	8	-5.6		
R1532	73	1	0.0	66.5	66	66.5	10	Snd Lvl	63.9	2.6	8	-5.4		
R1533	74	1	0.0	66.9	66	66.9	10	Snd Lvl	65.5	1.4	8	-6.6		
R1534	75	1	0.0	63.9	66	63.9	10	----	63.2	0.7	8	-7.3		
R1535	76	1	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0		
R1536	77	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0		
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>											
			<b>Min</b>	<b>Avg</b>	<b>Max</b>									
			<b>dB</b>	<b>dB</b>	<b>dB</b>									
All Selected		40	0.0	2.4	8.5									
All Impacted		15	0.0	3.7	8.5									
All that meet NR Goal		1	8.5	8.5	8.5									

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.6 Barrier Design Sound Level Results for NSA 20 East, NSA 22 Entire, and 25 Entire (Page 1 of 2)

RESULTS: SOUND LEVELS													Dulles	
Straughan													20 January 2012	
KFR													TNM 2.5	
RESULTS: SOUND LEVELS													Calculated with TNM 2.5	
PROJECT/CONTRACT: Dulles														
RUN: TNM15														
BARRIER DESIGN: All Barriers													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS: 68 deg F, 50% RH														
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Crit'n	Increase over existing	Crit'n	Type	With Barrier	Noise Reduction	Goal	Calculated minus Goal		
			dBA	dBA	dBA	dB	dB	Impact	Calculated LAeq1h	Calculated	dB	dB	dB	
M2201	2	1	0.0	60.4	66	60.4	66	10	---	56.9	3.5	8	-4.5	
M2202	3	1	0.0	63.6	66	63.6	66	10	---	60.8	2.8	8	-5.2	
M2203	4	1	0.0	66.2	66	66.2	66	10	Snd Lvl	59.6	6.6	8	-1.4	
M2501	5	1	0.0	66.0	66	66.0	66	10	Snd Lvl	59.9	6.1	8	-1.9	
M2502	6	1	0.0	60.8	66	60.8	66	10	---	56.2	4.6	8	-3.4	
M2001	19	1	0.0	56.3	66	56.3	66	10	---	55.7	0.6	8	-7.4	
M2002	25	1	0.0	61.8	66	61.8	66	10	---	58.0	3.8	8	-4.2	
R2001	27	1	0.0	65.4	66	65.4	66	10	---	60.9	4.5	8	-3.5	
R2201	28	1	0.0	60.0	66	60.0	66	10	---	57.1	2.9	8	-5.1	
R2202	29	1	0.0	70.0	66	70.0	66	10	Snd Lvl	61.7	8.3	8	0.3	
R2203	30	1	0.0	59.4	66	59.4	66	10	---	56.4	3.0	8	-5.0	
R2204	31	1	0.0	61.1	66	61.1	66	10	---	60.5	0.6	8	-7.4	
R2501	32	1	0.0	61.6	66	61.6	66	10	---	59.3	2.3	8	-5.7	
R2502	33	1	0.0	62.3	66	62.3	66	10	---	58.5	3.8	8	-4.2	
R2503	34	1	0.0	68.2	66	68.2	66	10	Snd Lvl	62.1	6.1	8	-1.9	
R2504	35	1	0.0	59.4	66	59.4	66	10	---	55.8	3.6	8	-4.4	
R2505	36	1	0.0	73.2	66	73.2	66	10	Snd Lvl	62.9	10.3	8	2.3	
R2506	37	1	0.0	73.8	66	73.8	66	10	Snd Lvl	63.2	10.6	8	2.6	
R2205	38	1	0.0	65.2	66	65.2	66	10	---	60.0	5.2	8	-2.8	
R2206	39	1	0.0	58.6	66	58.6	66	10	---	55.7	2.9	8	-5.1	
R2207	40	1	0.0	65.9	66	65.9	66	10	---	60.1	5.8	8	-2.2	
R2208	41	1	0.0	70.0	66	70.0	66	10	Snd Lvl	67.5	2.5	8	-5.5	
R2209	42	1	0.0	64.7	66	64.7	66	10	---	60.1	4.6	8	-3.4	
R2507	43	1	0.0	65.0	66	65.0	66	10	---	61.5	3.5	8	-4.5	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix L: Barrier Design Sound Level Results Tables

Figure L.6 Barrier Design Sound Level Results for NSA 20 East, NSA 22 Entire, and 25 Entire (Page 2 of 2)

RESULTS: SOUND LEVELS					Dulles							
R2508	44	1	0.0	66.8	66	66.8	10	Snd Lvl	63.4	3.4	8	-4.6
R2509	45	1	0.0	66.8	66	66.8	10	Snd Lvl	63.9	2.9	8	-5.1
R2510	46	1	0.0	54.2	66	54.2	10	---	53.0	1.2	8	-6.8
R2210	47	1	0.0	72.5	66	72.5	10	Snd Lvl	62.7	9.8	8	1.8
R2211	48	1	0.0	64.6	66	64.6	10	---	62.5	2.1	8	-5.9
R2212	49	1	0.0	72.2	66	72.2	10	Snd Lvl	65.0	7.2	8	-0.8
R2511	50	1	0.0	69.8	66	69.8	10	Snd Lvl	62.1	7.7	8	-0.3
R2512	51	1	0.0	65.5	66	65.5	10	---	60.8	4.7	8	-3.3
R2513	52	1	0.0	69.8	66	69.8	10	Snd Lvl	64.3	5.5	8	-2.5
R2514	53	1	0.0	62.8	66	62.8	10	---	60.2	2.6	8	-5.4
R2213	54	1	0.0	65.9	66	65.9	10	---	60.8	5.1	8	-2.9
R2214	55	1	0.0	66.0	66	66.0	10	Snd Lvl	60.5	5.5	8	-2.5
R-20-02	56	1	0.0	58.9	66	58.9	10	---	56.2	2.7	8	-5.3
R-20-03	57	1	0.0	52.1	66	52.1	10	---	51.6	0.5	8	-7.5
R-20-04	58	1	0.0	56.1	66	56.1	10	---	54.3	1.8	8	-6.2
R-20-05	59	1	0.0	59.8	66	59.8	10	---	58.4	1.4	8	-6.6
R-20-06	60	1	0.0	62.4	66	62.4	10	---	58.2	4.2	8	-3.8
R-22-15	61	1	0.0	68.0	66	68.0	10	Snd Lvl	61.6	6.4	8	-1.6
R-22-16	62	1	0.0	71.5	66	71.5	10	Snd Lvl	63.6	7.9	8	-0.1
R-22-17	63	1	0.0	66.3	66	66.3	10	Snd Lvl	60.9	5.4	8	-2.6
R-22-18	64	1	0.0	65.6	66	65.6	10	---	63.7	1.9	8	-6.1
R-25-15	65	1	0.0	69.2	66	69.2	10	Snd Lvl	65.4	3.8	8	-4.2
R-25-16	66	1	0.0	65.4	66	65.4	10	---	60.6	4.8	8	-3.2
R-25-17	67	1	0.0	66.0	66	66.0	10	Snd Lvl	63.2	2.8	8	-5.2
R-25-18	68	1	0.0	67.7	66	67.7	10	Snd Lvl	61.9	5.8	8	-2.2
R-25-19	69	1	0.0	70.0	66	70.0	10	Snd Lvl	62.1	7.9	8	-0.1
R-25-20	70	1	0.0	70.8	66	70.8	10	Snd Lvl	62.5	8.3	8	0.3
R-25-21	71	1	0.0	66.0	66	66.0	10	Snd Lvl	60.3	5.7	8	-2.3
R-25-22	72	1	0.0	66.0	66	66.0	10	Snd Lvl	60.9	5.1	8	-2.9
R-25-23	73	1	0.0	71.1	66	71.1	10	Snd Lvl	64.8	6.3	8	-1.7
R-22-19	74	1	0.0	67.2	66	67.2	10	Snd Lvl	66.3	0.9	8	-7.1
R-25-24	75	1	0.0	66.4	66	66.4	10	Snd Lvl	63.3	3.1	8	-4.9
Dwelling Units	# DUs	Noise Reduction										
		Min dB	Avg dB	Max dB								
All Selected	56	0.5	4.5	10.6								
All Impacted	27	0.9	6.0	10.6								
All that meet NR Goal	5	8.3	9.5	10.6								

# **HIGHWAY SOUND MEASUREMENT AND NOISE BARRIER ANALYSIS**

## **Appendix M**

### **Barrier Segment Descriptions**

August 2012

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.1 Barrier Segment Descriptions for NSA 02 West (Page 1 of 3)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS												
Dulles											10 August 2012	
Straughan Environmental											TNM 2.5	
KFR												
RESULTS: BARRIER-SEGMENT DESCRIPTIONS												
PROJECT/CONTRACT: Dulles												
RUN: TNM01												
BARRIER DESIGN: PRBAWest and Middle Extension												
Barriers												
Name	Type	Segments										
		Name	No.	Heights		Average		Length	If Wall		If Berm	Cost
				First Point	Average	Second Point	ft	Area	On	Important	Volume	
				ft	ft	ft	ft	sq ft	Struc?	Reflections?	cu yd	\$
PRBA0201	W	PRBA020101	885	0.00	0.00	0.00	0	0				0
		PRBA020102	886	0.00	0.00	0.00	0	0				0
		PRBA020103	887	0.00	0.00	0.00	0	0				0
		PRBA020104	888	0.00	0.00	0.00	0	0				0
		PRBA020105	889	0.00	0.00	0.00	0	0				0
		PRBA020106	890	0.00	0.00	0.00	0	0				0
		PRBA020107	891	0.00	0.00	0.00	0	0				0
		PRBA020108	892	0.00	0.00	0.00	0	0				0
		PRBA020109	893	0.00	0.00	0.00	0	0				0
		PRBA020110	894	0.00	0.00	0.00	0	0				0
		PRBA020111	895	0.00	0.00	0.00	0	0				0
		PRBA020112	896	0.00	0.00	0.00	0	0				0
		PRBA020113	897	0.00	0.00	0.00	0	0				0
		PRBA020114	898	0.00	0.00	0.00	0	0				0
		PRBA020115	899	0.00	0.00	0.00	0	0				0
		PRBA020116	900	0.00	0.00	0.00	0	0				0
		PRBA020117	901	0.00	0.00	0.00	0	0				0
		PRBA020118	902	0.00	0.00	0.00	0	0				0
		PRBA020119	903	0.00	0.00	0.00	0	0				0
		PRBA020120	904	0.00	0.00	0.00	0	0				0
		PRBA020121	905	0.00	0.00	0.00	0	0				0
		PRBA020122	906	0.00	0.00	0.00	0	0				0
		PRBA020123	907	0.00	0.00	0.00	0	0				0
		PRBA020124	908	0.00	0.00	0.00	0	0				0
		PRBA020125	909	0.00	6.00	12.00	25	150				0
		PRBA020126	910	0.00	0.00	0.00	0	0				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.1 Barrier Segment Descriptions for NSA 02 West (Page 2 of 3)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS						Dulles				
	PRBA020127	911	0.00	0.00	0.00	0	0			0
	PRBA020128	912	0.00	0.00	0.00	0	0			0
	PRBA020129	913	20.00	20.00	20.00	25	506			0
	PRBA020130	914	20.00	20.00	20.00	25	502			0
	PRBA020131	915	20.00	20.00	20.00	25	506			0
	PRBA020132	916	20.00	20.00	20.00	25	502			0
	PRBA020133	917	20.00	20.00	20.00	24	488			0
	PRBA020134	918	20.00	20.00	20.00	25	502			0
	PRBA020135	919	20.00	20.00	20.00	25	502			0
	PRBA020136	920	20.00	20.00	20.00	25	502			0
	PRBA020137	921	20.00	20.00	20.00	25	502			0
	PRBA020138	922	18.00	18.00	18.00	25	455			0
	PRBA020139	923	18.00	18.00	18.00	25	451			0
	PRBA020140	924	18.00	18.00	18.00	25	451			0
	PRBA020141	925	18.00	18.00	18.00	24	435			0
	PRBA020142	926	18.00	18.00	18.00	25	451			0
	PRBA020143	927	18.00	18.00	18.00	25	451			0
	PRBA020144	928	18.00	18.00	18.00	25	451			0
	PRBA020145	929	18.00	18.00	18.00	25	451			0
	PRBA020146	930	18.00	18.00	18.00	25	451			0
	PRBA020147	931	16.00	16.00	16.00	25	401			0
	PRBA020148	932	16.00	16.00	16.00	25	401			0
	PRBA020149	933	16.00	16.00	16.00	25	401			0
	PRBA020150	934	16.00	16.00	16.00	25	401			0
	PRBA020151	935	16.00	16.00	16.00	25	401			0
	PRBA020152	936	16.00	17.00	18.00	24	411			0
	PRBA020153	937	18.00	18.00	18.00	25	455			0
	PRBA020154	938	18.00	18.00	18.00	25	451			0
	PRBA020155	939	18.00	18.00	18.00	25	448			0
	PRBA020156	940	16.00	17.00	18.00	25	426			0
	PRBA020157	941	16.00	16.00	16.00	25	401			0
	PRBA020158	942	16.00	17.00	18.00	25	426			0
	PRBA020159	943	16.00	16.00	16.00	25	398			0
	PRBA020160	944	16.00	17.00	18.00	25	426			0
	PRBA020161	945	18.00	18.00	18.00	25	451			0
	PRBA020162	946	18.00	18.00	18.00	25	448			0
	PRBA020163	947	18.00	18.00	18.00	25	451			0
	PRBA020164	948	18.00	18.00	18.00	25	451			0
	PRBA020165	949	18.00	18.00	18.00	25	448			0



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.1 Barrier Segment Descriptions for NSA 02 West (Page 3 of 3)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS									
Dulles									
		PRBA020166	950	18.00	18.00	18.00	25	451	0
		PRBA020167	951	18.00	18.00	18.00	25	448	0
		PRBA020168	952	18.00	18.00	18.00	25	451	0
		PRBA020169	953	18.00	18.00	18.00	12	217	0
		PRBA020170	954	18.00	18.00	18.00	13	234	0
		PRBA020171	955	18.00	18.00	18.00	17	302	0
		PRBA020172	956	18.00	17.50	17.00	32	562	0
EXB01	W	EXB0101	511	19.00	18.50	18.00	100	1842	0
		EXB0102	512	18.00	17.50	17.00	200	3504	0
		EXB0103	513	17.00	14.50	12.00	200	2903	0
		EXB0104	514	12.00	12.50	13.00	200	2503	0
		EXB0105	515	13.00	11.00	9.00	200	2202	0
		EXB0106	516	9.00	7.00	5.00	124	870	0
PRBA0202	W	EXB0107	968	0.00	0.00	0.00	0	0	0
		PRBA020266	969	0.00	0.00	0.00	0	0	0
		PRBA020267	970	0.00	0.00	0.00	0	0	0
		PRBA020268	971	0.00	0.00	0.00	0	0	0
		PRBA020269	972	0.00	0.00	0.00	0	0	0
		PRBA020270	973	0.00	0.00	0.00	0	0	0
		PRBA020271	974	0.00	0.00	0.00	0	0	0
		PRBA020272	975	0.00	0.00	0.00	0	0	0
		PRBA020273	976	0.00	0.00	0.00	0	0	0
		PRBA020274	977	0.00	0.00	0.00	0	0	0
		PRBA020275	978	0.00	0.00	0.00	0	0	0
		PRBA020276	979	0.00	0.00	0.00	0	0	0
		PRBA020277	980	0.00	0.00	0.00	0	0	0
		PRBA020278	981	0.00	0.00	0.00	0	0	0
		PRBA020279	982	0.00	0.00	0.00	0	0	0
		PRBA020280	983	0.00	0.00	0.00	0	0	0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.2 Barrier Segment Descriptions for NSA 04 East (Page 1 of 4)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS												Dulles	
SES										10 August 2012			
KFR										TNM 2.5			
RESULTS: BARRIER-SEGMENT DESCRIPTIONS													
PROJECT/CONTRACT:										Dulles			
RUN:										TNM03 (MS01)			
BARRIER DESIGN:										PRBA NSA04			
Barriers			Segments										
Name	Type	Name	No.	Heights	Average	Second	Length	If Wall			If Berm	Cost	
				First		Point		Area	On	Important	Volume		
				Point	ft	ft	ft	sq ft	Struc?	Reflections?	cu yd	\$	
				ft									
PRBA0401	W	PRBA04101	1146	0.00	0.00	0.00	0	0				0	
		PRBA04102	1147	0.00	0.00	0.00	0	0				0	
		PRBA04103	1148	0.00	0.00	0.00	0	0				0	
		PRBA04104	1149	0.00	0.00	0.00	0	0				0	
		PRBA04105	1150	0.00	0.00	0.00	0	0				0	
		PRBA04106	1151	0.00	0.00	0.00	0	0				0	
		PRBA04107	1152	0.00	0.00	0.00	0	0				0	
		PRBA04108	1153	0.00	0.00	0.00	0	0				0	
		PRBA04109	1154	0.00	0.00	0.00	0	0				0	
		PRBA04110	1155	0.00	0.00	0.00	0	0				0	
		PRBA04111	1156	0.00	0.00	0.00	0	0				0	
		PRBA04112	1157	0.00	0.00	0.00	0	0				0	
		PRBA04113	1158	0.00	0.00	0.00	0	0				0	
		PRBA04114	1159	0.00	0.00	0.00	0	0				0	
		PRBA04115	1160	0.00	0.00	0.00	0	0				0	
		PRBA04116	1161	0.00	0.00	0.00	0	0				0	
		PRBA04117	1162	0.00	0.00	0.00	0	0				0	
		PRBA04118	1163	0.00	0.00	0.00	0	0				0	
		PRBA04119	1164	0.00	0.00	0.00	0	0				0	
		PRBA04120	1165	0.00	0.00	0.00	0	0				0	
		PRBA04121	1166	0.00	0.00	0.00	0	0				0	
		PRBA04122	1167	0.00	0.00	0.00	0	0				0	
		PRBA04123	1168	0.00	0.00	0.00	0	0				0	
		PRBA04124	1169	0.00	0.00	0.00	0	0				0	
		PRBA04125	1170	0.00	0.00	0.00	0	0				0	
		PRBA04126	1171	0.00	0.00	0.00	0	0				0	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.2 Barrier Segment Descriptions for NSA 04 East (Page 2 of 4)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS						Dulles					
		PRBA04127	1172	0.00	0.00	0.00	0	0			0
		PRBA04128	1173	0.00	0.00	0.00	0	0			0
		PRBA04129	1174	0.00	0.00	0.00	0	0			0
		PRBA04130	1175	0.00	0.00	0.00	0	0			0
		PRBA04131	1176	0.00	0.00	0.00	0	0			0
		PRBA04132	1177	0.00	0.00	0.00	0	0			0
		PRBA04133	1178	0.00	0.00	0.00	0	0			0
		PRBA04134	1179	0.00	0.00	0.00	0	0			0
		PRBA04135	1180	0.00	0.00	0.00	0	0			0
		PRBA04136	1181	0.00	0.00	0.00	0	0			0
		PRBA04137	1182	0.00	0.00	0.00	0	0			0
		PRBA04138	1185	0.00	0.00	0.00	0	0			0
		PRBA04139	1184	0.00	0.00	0.00	0	0			0
PRBA0402	W	PRBA04201	940	0.00	0.00	0.00	0	0			0
		PRBA04202	941	0.00	0.00	0.00	0	0			0
		PRBA04203	942	0.00	0.00	0.00	0	0			0
		PRBA04204	943	0.00	0.00	0.00	0	0			0
		PRBA04205	944	0.00	0.00	0.00	0	0			0
		PRBA04206	945	0.00	0.00	0.00	0	0			0
		PRBA04207	946	0.00	0.00	0.00	0	0			0
		PRBA04208	947	0.00	0.00	0.00	0	0			0
		PRBA04209	948	0.00	0.00	0.00	0	0			0
		PRBA04210	949	0.00	0.00	0.00	0	0			0
		PRBA04211	950	0.00	0.00	0.00	0	0			0
		PRBA04212	951	0.00	0.00	0.00	0	0			0
		PRBA04213	952	0.00	0.00	0.00	0	0			0
		PRBA04214	953	0.00	0.00	0.00	0	0			0
		PRBA04215	954	0.00	0.00	0.00	0	0			0
		PRBA04216	955	0.00	1.00	2.00	16	16			0
		PRBA04217	956	0.00	0.00	0.00	0	0			0
		PRBA04218	957	0.00	0.00	0.00	0	0			0
		PRBA04219	958	0.00	0.00	0.00	0	0			0
		PRBA04220	959	0.00	0.00	0.00	0	0			0
		PRBA04221	960	0.00	0.00	0.00	0	0			0
		PRBA04222	961	0.00	0.00	0.00	0	0			0
		PRBA04223	962	0.00	0.00	0.00	0	0			0
		PRBA04224	963	0.00	0.00	0.00	0	0			0
		PRBA04225	964	0.00	0.00	0.00	0	0			0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.2 Barrier Segment Descriptions for NSA 04 East (Page 3 of 4)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS										Dulles	
		PRBA04226	965	0.00	0.00	0.00	0	0		0	
		PRBA04227	966	0.00	0.00	0.00	0	0		0	
		PRBA04228	967	0.00	0.00	0.00	0	0		0	
		PRBA04229	968	0.00	0.00	0.00	0	0		0	
		PRBA04230	969	20.00	22.00	24.00	15	337		0	
		PRBA04231	970	24.00	24.00	24.00	16	391		0	
		PRBA04232	971	24.00	24.00	24.00	16	393		0	
		PRBA04233	972	24.00	24.00	24.00	15	367		0	
		PRBA04234	973	24.00	24.00	24.00	16	393		0	
		PRBA04235	974	24.00	24.00	24.00	16	391		0	
		PRBA04236	975	24.00	24.00	24.00	15	367		0	
		PRBA04237	976	24.00	24.00	24.00	16	393		0	
		PRBA04238	977	24.00	24.00	24.00	16	391		0	
		PRBA04239	978	24.00	24.00	24.00	16	393		0	
		PRBA04240	979	24.00	24.00	24.00	15	367		0	
		PRBA04241	980	24.00	24.00	24.00	16	391		0	
		PRBA04242	981	24.00	24.00	24.00	15	370		0	
		PRBA04243	982	24.00	24.00	24.00	16	391		0	
		PRBA04244	983	24.00	24.00	24.00	8	195		0	
		PRBA04245	984	24.00	24.00	24.00	50	1200		0	
		PRBA04246	985	24.00	24.00	24.00	50	1200		0	
		PRBA04247	986	22.00	24.00	26.00	50	1200		0	
		PRBA04248	987	26.00	26.00	26.00	50	1300		0	
		PRBA04249	988	26.00	26.00	26.00	50	1300		0	
		PRBA04250	989	26.00	26.00	26.00	50	1300		0	
		PRBA04251	990	26.00	26.00	26.00	50	1300		0	
		PRBA04252	991	26.00	26.00	26.00	50	1300		0	
		PRBA04253	992	28.00	28.00	28.00	50	1400		0	
		PRBA04254	993	30.00	30.00	30.00	50	1500		0	
		PRBA04255	994	30.00	30.00	30.00	50	1500		0	
		PRBA04256	995	30.00	30.00	30.00	50	1500		0	
		PRBA04257	996	30.00	30.00	30.00	50	1500		0	
		PRBA04258	997	30.00	30.00	30.00	46	1377		0	
		PRBA04259	998	28.00	28.00	28.00	16	459		0	
		PRBA04260	999	28.00	28.00	28.00	16	456		0	
		PRBA04261	1000	28.00	28.00	28.00	16	456		0	
		PRBA04262	1001	26.00	28.00	30.00	15	431		0	
		PRBA04263	1002	28.00	28.00	28.00	16	456		0	
		PRBA04264	1003	28.00	28.00	28.00	16	456		0	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.2 Barrier Segment Descriptions for NSA 04 East (Page 4 of 4)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles									
		PRBA04265	1004	28.00	28.00	28.00	15	431					0
		PRBA04266	1005	28.00	28.00	28.00	16	456					0
		PRBA04267	1006	28.00	28.00	28.00	16	456					0
		PRBA04268	1007	28.00	28.00	28.00	15	431					0
		PRBA04269	1008	28.00	28.00	28.00	16	456					0
		PRBA04270	1009	28.00	28.00	28.00	16	456					0
		PRBA04271	1010	28.00	28.00	28.00	15	431					0
		PRBA04272	1011	28.00	28.00	28.00	16	456					0
		PRBA04273	1012	28.00	28.00	28.00	16	456					0
		PRBA04274	1013	28.00	25.00	22.00	16	409					0
		PRBA04275	1014	28.00	28.00	28.00	15	428					0
		PRBA04276	1015	28.00	28.00	28.00	16	456					0
		PRBA04277	1016	0.00	0.00	0.00	0	0					0
		PRBA04278	1017	0.00	0.00	0.00	0	0					0
		PRBA04279	1018	0.00	0.00	0.00	0	0					0
		PRBA04280	1019	0.00	0.00	0.00	0	0					0
		PRBA04281	1020	0.00	0.00	0.00	0	0					0
		PRBA04282	1021	0.00	0.00	-2.00	0	0					0
		PRBA04283	1022	0.00	0.00	0.00	0	0					0
		PRBA04284	1023	0.00	0.00	0.00	0	0					0
		PRBA04285	1024	0.00	0.00	0.00	0	0					0
		PRBA04286	1025	0.00	0.00	0.00	0	0					0
		PRBA04287	1026	0.00	0.00	0.00	0	0					0
		PRBA04288	1027	0.00	0.00	0.00	0	0					0
		PRBA04289	1028	0.00	0.00	-2.00	0	0					0
		PRBA04290	1029	0.00	0.00	0.00	0	0					0
		PRBA04291	1030	0.00	0.00	0.00	0	0					0
		PRBA04292	1031	0.00	0.00	0.00	0	0					0
		PRBA04293	1032	0.00	0.00	0.00	0	0					0
		PRBA04294	1033	0.00	0.00	0.00	0	0					0
		PRBA04295	1034	0.00	0.00	0.00	0	0					0
		PRBA04296	1035	0.00	0.00	0.00	0	0					0
		PRBA04297	1036	0.00	0.00	0.00	0	0					0
		PRBA04298	1037	0.00	0.00	0.00	0	0					0
		PRBA04299	1038	0.00	0.00	0.00	0	0					0
		PRBA042100	1039	0.00	0.00	0.00	0	0					0
		PRBA042101	1040	0.00	0.00	0.00	0	0					0
		PRBA042102	1041	0.00	0.00	0.00	0	0					0
		PRBA042103	1042	0.00	0.00	0.00	0	0					0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.3 Barrier Segment Descriptions for NSA 06 (Page 1 of 2)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS												
Straughan Environmental KFR										10 August 2012 TNM 2.5		
RESULTS: BARRIER-SEGMENT DESCRIPTIONS												
PROJECT/CONTRACT: Dulles												
RUN: TNM 05												
BARRIER DESIGN: PRBA 06												
Barriers		Segments										
Name	Type	Name	No.	Heights			Length	If Wall			If Berm	Cost
				First Point	Average	Second Point		Area	On Struc?	Important Reflections?	Volume	
				ft	ft	ft	ft	sq ft			cu yd	\$
PRBA06	W	PRBA0601	808	0.00	0.00	0.00	0	0				0
		PRBA0602	809	0.00	0.00	0.00	0	0				0
		PRBA0603	810	0.00	0.00	0.00	0	0				0
		PRBA0604	811	0.00	0.00	0.00	0	0				0
		PRBA0605	812	0.00	0.00	0.00	0	0				0
		PRBA0606	813	0.00	0.00	0.00	0	0				0
		PRBA0607	814	0.00	0.00	0.00	0	0				0
		PRBA0608	815	0.00	0.00	0.00	0	0				0
		PRBA0609	816	22.00	22.00	22.00	15	332				0
		PRBA0610	817	22.00	22.00	22.00	16	355				0
		PRBA0611	818	22.00	22.00	22.00	16	354				0
		PRBA0612	819	22.00	22.00	22.00	16	354				0
		PRBA0613	820	24.00	24.00	24.00	16	386				0
		PRBA0614	821	24.00	24.00	24.00	16	386				0
		PRBA0615	822	24.00	24.00	24.00	16	387				0
		PRBA0616	823	24.00	24.00	24.00	16	386				0
		PRBA0617	824	26.00	26.00	26.00	16	418				0
		PRBA0618	825	26.00	26.00	26.00	16	419				0
		PRBA0619	826	26.00	26.00	26.00	16	419				0
		PRBA0620	827	26.00	26.00	26.00	16	419				0
		PRBA0621	828	26.00	26.00	26.00	15	392				0
		PRBA0622	829	26.00	26.00	26.00	16	419				0
		PRBA0623	830	26.00	26.00	26.00	16	419				0
		PRBA0624	831	26.00	26.00	26.00	17	445				0
		PRBA0626	833	26.00	26.00	26.00	49	1284				0
		PRBA0627	834	26.00	26.00	26.00	50	1306				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.3 Barrier Segment Descriptions for NSA 06 (Page 2 of 2)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS							Dulles					
	PRBA0628	835	26.00	26.00	26.00	50	1308					0
	PRBA0629	836	26.00	26.00	26.00	50	1308					0
	PRBA0630	837	24.00	24.00	24.00	49	1182					0
	PRBA0631	838	24.00	24.00	24.00	50	1207					0
	PRBA0632	839	24.00	24.00	24.00	50	1206					0
	PRBA0633	840	24.00	24.00	24.00	47	1133					0
	PRBA0634	841	22.00	22.00	22.00	15	332					0
	PRBA0635	842	22.00	22.00	22.00	16	354					0
	PRBA0636	843	22.00	22.00	22.00	16	354					0
	PRBA0637	844	22.00	22.00	22.00	16	354					0
	PRBA0638	845	22.00	22.00	22.00	16	354					0
	PRBA0639	846	22.00	22.00	22.00	16	354					0
	PRBA0640	847	22.00	22.00	22.00	16	354					0
	PRBA0641	848	22.00	22.00	22.00	16	354					0
	PRBA0642	849	22.00	22.00	22.00	16	355					0
	PRBA0643	850	0.00	0.00	0.00	0	0					0
	PRBA0644	851	0.00	0.00	0.00	0	0					0
	PRBA0645	852	0.00	0.00	0.00	0	0					0
	PRBA0646	853	0.00	0.00	0.00	0	0					0
	PRBA0647	854	0.00	0.00	0.00	0	0					0
	PRBA0648	855	0.00	0.00	0.00	0	0					0
	PRBA0649	856	0.00	0.00	0.00	0	0					0
	PRBA0650	857	0.00	0.00	0.00	0	0					0
	PRBA0651	858	0.00	0.00	0.00	0	0					0
	PRBA0652	859	0.00	0.00	0.00	0	0					0
	PRBA0653	860	0.00	0.00	0.00	0	0					0
	PRBA0654	861	0.00	0.00	0.00	0	0					0
	PRBA0655	862	0.00	0.00	0.00	0	0					0
	PRBA0656	863	0.00	0.00	0.00	0	0					0
	PRBA0657	864	0.00	0.00	0.00	0	0					0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.4 Barrier Segment Descriptions for NSA 15 West 50 Percent (Page 1 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS													Dulles	
Straughan Environmental KFR										10 August 2012 TNM 2.5				
RESULTS: BARRIER-SEGMENT DESCRIPTIONS														
PROJECT/CONTRACT:			Dulles											
RUN:			TNM12											
BARRIER DESIGN:			PRBA15_W50											
Barriers		Segments												
Name	Type	Name	No.	Heights			Length	If Wall			If Berm	Cost		
				First Point	Average	Second Point		Area	On Struc?	Important Reflections?	Volume			
				ft	ft	ft	ft	sq ft			cu yd	\$		
PRBA1501	W	PRBA150101	464	0.00	0.00	0.00	0	0				0		
		PRBA150102	465	0.00	0.00	0.00	0	0				0		
		PRBA150103	466	0.00	0.00	0.00	0	0				0		
		PRBA150104	467	0.00	0.00	0.00	0	0				0		
		PRBA150105	468	0.00	0.00	0.00	0	0				0		
		PRBA150106	469	0.00	0.00	0.00	0	0				0		
		PRBA150107	470	0.00	0.00	0.00	0	0				0		
		PRBA150108	471	0.00	0.00	0.00	0	0				0		
		PRBA150109	472	0.00	0.00	0.00	0	0				0		
		PRBA150110	473	0.00	0.00	0.00	0	0				0		
		PRBA150111	474	0.00	0.00	0.00	0	0				0		
		PRBA150112	475	0.00	0.00	0.00	0	0				0		
		PRBA150113	476	0.00	0.00	0.00	0	0				0		
		PRBA150114	477	0.00	0.00	0.00	0	0				0		
		PRBA150115	478	0.00	0.00	0.00	0	0				0		
		PRBA150116	479	0.00	0.00	0.00	0	0				0		
		PRBA150117	480	12.00	12.00	12.00	25	302				0		
		PRBA150118	481	12.00	12.00	12.00	25	301				0		
		PRBA150119	482	12.00	12.00	12.00	25	302				0		
		PRBA150120	483	12.00	12.00	12.00	25	301				0		
		PRBA150121	484	12.00	12.00	12.00	25	301				0		
		PRBA150122	485	12.00	12.00	12.00	24	290				0		
		PRBA150123	486	12.00	12.00	12.00	25	301				0		
		PRBA150124	487	12.00	12.00	12.00	25	301				0		
		PRBA150125	488	12.00	12.00	12.00	25	301				0		
		PRBA150126	489	12.00	12.00	12.00	25	301				0		



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.4 Barrier Segment Descriptions for NSA 15 West50 Percent (Page 2 of 7)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles								
		PRBA150127	490	12.00	12.00	12.00	25	301				0
		PRBA150128	491	12.00	12.00	12.00	25	301				0
		PRBA150129	492	12.00	12.00	12.00	25	301				0
		PRBA150130	493	12.00	12.00	12.00	25	301				0
		PRBA150131	494	12.00	12.00	12.00	25	301				0
		PRBA150132	495	12.00	12.00	12.00	25	301				0
		PRBA150133	496	12.00	12.00	12.00	24	289				0
		PRBA150134	497	12.00	12.00	12.00	25	301				0
		PRBA150135	498	12.00	12.00	12.00	25	301				0
		PRBA150136	499	12.00	12.00	12.00	25	301				0
		PRBA150137	500	12.00	12.00	12.00	25	301				0
		PRBA150138	501	12.00	12.00	12.00	25	301				0
		PRBA150139	502	12.00	12.00	12.00	19	228				0
		PRBA150140	503	12.00	12.00	12.00	6	73				0
		PRBA150141	504	12.00	12.00	12.00	25	304				0
		PRBA150142	505	14.00	14.00	14.00	24	340				0
		PRBA150143	506	14.00	14.00	14.00	25	354				0
		PRBA150144	507	14.00	14.00	14.00	25	354				0
		PRBA150145	508	14.00	14.00	14.00	25	353				0
		PRBA150146	509	14.00	14.00	14.00	24	341				0
		PRBA150147	510	14.00	14.00	14.00	25	354				0
		PRBA150148	511	14.00	14.00	14.00	25	353				0
		PRBA150149	512	14.00	14.00	14.00	14	198				0
		PRBA150150	513	14.00	14.00	14.00	11	153				0
		PRBA150151	514	14.00	14.00	14.00	5	71				0
		PRBA150152	515	14.00	14.00	14.00	21	289				0
		PRBA150153	516	14.00	14.00	14.00	25	346				0
		PRBA150154	517	14.00	14.00	14.00	25	348				0
		PRBA150155	518	14.00	14.00	14.00	25	346				0
		PRBA150156	519	14.00	14.00	14.00	9	129				0
		PRBA150157	520	14.00	14.00	14.00	16	227				0
		PRBA150158	521	14.00	14.00	14.00	25	354				0
		PRBA150159	522	14.00	14.00	14.00	24	340				0
		PRBA150160	523	14.00	14.00	14.00	25	354				0
		PRBA150161	524	14.00	14.00	14.00	25	354				0
		PRBA150162	525	14.00	14.00	14.00	24	340				0
		PRBA150163	526	14.00	14.00	14.00	25	354				0
		PRBA150164	527	14.00	14.00	14.00	7	99				0
		PRBA150165	528	14.00	14.00	14.00	18	253				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.4 Barrier Segment Descriptions for NSA 15 West50 Percent (Page 3 of 7)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles								
		PRBA150166	529	14.00	14.00	14.00	25	351				0
		PRBA150167	530	14.00	14.00	14.00	25	351				0
		PRBA150168	531	14.00	14.00	14.00	25	351				0
		PRBA150169	532	14.00	14.00	14.00	25	351				0
		PRBA150170	533	14.00	14.00	14.00	25	345				0
		PRBA150171	534	14.00	14.00	14.00	25	345				0
		PRBA150172	535	14.00	14.00	14.00	26	360				0
		PRBA150173	536	14.00	14.00	14.00	25	346				0
		PRBA150174	537	14.00	14.00	14.00	28	389				0
		PRBA150175	538	14.00	14.00	14.00	22	308				0
		PRBA150176	539	14.00	14.00	14.00	25	350				0
		PRBA150177	540	14.00	14.00	14.00	25	350				0
		PRBA150178	541	14.00	14.00	14.00	25	350				0
		PRBA150179	542	14.00	14.00	14.00	25	350				0
		PRBA150180	543	14.00	14.00	14.00	25	350				0
		PRBA150181	544	14.00	14.00	14.00	25	350				0
		PRBA150182	545	14.00	14.00	14.00	25	350				0
		PRBA150183	546	14.00	14.00	14.00	25	350				0
		PRBA150184	547	14.00	14.00	14.00	25	350				0
		PRBA150185	548	14.00	14.00	14.00	25	350				0
		PRBA150186	549	14.00	14.00	14.00	25	350				0
		PRBA150187	550	14.00	14.00	14.00	25	350				0
		PRBA150188	551	14.00	14.00	14.00	25	350				0
		PRBA150189	552	14.00	14.00	14.00	6	84				0
		PRBA150190	553	14.00	14.00	14.00	20	273				0
		PRBA150191	554	14.00	14.00	14.00	25	346				0
		PRBA150192	555	14.00	14.00	14.00	25	346				0
		PRBA150193	556	14.00	14.00	14.00	26	360				0
		PRBA150194	557	14.00	14.00	14.00	25	348				0
		PRBA150195	558	14.00	14.00	14.00	25	346				0
		PRBA150196	559	14.00	14.00	14.00	25	350				0
		PRBA150197	560	16.00	16.00	16.00	25	400				0
		PRBA150198	561	16.00	16.00	16.00	25	402				0
		PRBA150199	562	16.00	16.00	16.00	24	390				0
		PRBA150110	563	16.00	16.00	16.00	25	405				0
		PRBA150110	564	16.00	16.00	16.00	25	407				0
		PRBA150110	565	18.00	18.00	18.00	25	441				0
		PRBA150110	566	18.00	18.00	18.00	26	461				0
		PRBA150110	567	18.00	18.00	18.00	25	445				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.4 Barrier Segment Descriptions for NSA 15 West50 Percent (Page 4 of 7)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles							
		PRBA150110	588	18.00	18.00	18.00	25	448			0
		PRBA150110	569	18.00	18.00	18.00	25	448			0
		PRBA150110	570	18.00	18.00	18.00	25	448			0
		PRBA150110	571	16.00	16.00	16.00	25	405			0
		PRBA150110	572	16.00	16.00	16.00	25	401			0
		PRBA150111	573	16.00	16.00	16.00	25	405			0
		PRBA150111	574	16.00	16.00	16.00	25	397			0
		PRBA150111	575	16.00	16.00	16.00	25	397			0
		PRBA150111	576	16.00	16.00	16.00	25	397			0
		PRBA150111	577	16.00	16.00	16.00	25	397			0
		PRBA150111	578	16.00	16.00	16.00	25	397			0
		PRBA150111	579	16.00	16.00	16.00	25	401			0
		PRBA150111	580	16.00	16.00	16.00	25	401			0
		PRBA150111	581	16.00	16.00	16.00	25	405			0
		PRBA150111	582	16.00	16.00	16.00	25	401			0
		PRBA150112	583	16.00	16.00	16.00	26	409			0
		PRBA150112	584	16.00	16.00	16.00	24	391			0
		PRBA150112	585	16.00	16.00	16.00	25	399			0
		PRBA150112	586	16.00	16.00	16.00	25	395			0
		PRBA150112	587	16.00	16.00	16.00	25	399			0
		PRBA150112	588	16.00	16.00	16.00	25	404			0
		PRBA150112	589	0.00	0.00	0.00	0	0			0
		PRBA150112	590	16.00	16.00	16.00	6	93			0
		PRBA150112	591	0.00	0.00	0.00	0	0			0
		PRBA150112	592	0.00	0.00	0.00	0	0			0
		PRBA150113	593	0.00	0.00	0.00	0	0			0
		PRBA150113	594	0.00	0.00	0.00	0	0			0
		PRBA150113	595	0.00	0.00	0.00	0	0			0
		PRBA150113	596	0.00	0.00	0.00	0	0			0
		PRBA150113	597	0.00	0.00	0.00	0	0			0
		PRBA150113	598	0.00	0.00	0.00	0	0			0
		PRBA150113	599	0.00	0.00	0.00	0	0			0
		PRBA150113	600	0.00	0.00	0.00	0	0			0
		PRBA150113	601	0.00	0.00	0.00	0	0			0
		PRBA150113	602	0.00	0.00	0.00	0	0			0
		PRBA150114	603	0.00	0.00	0.00	0	0			0
		PRBA150114	604	0.00	0.00	0.00	0	0			0
		PRBA150114	605	0.00	0.00	0.00	0	0			0
		PRBA150114	606	0.00	0.00	0.00	0	0			0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.4 Barrier Segment Descriptions for NSA 15 West50 Percent (Page 5 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS						Dulles					
	PRBA150114	607	0.00	0.00	0.00	0	0				0
	PRBA150114	608	0.00	0.00	0.00	0	0				0
	PRBA150114	609	0.00	0.00	0.00	0	0				0
	PRBA150114	610	0.00	0.00	0.00	0	0				0
	PRBA150114	611	0.00	0.00	0.00	0	0				0
	PRBA150114	612	0.00	0.00	0.00	0	0				0
	PRBA150115	613	0.00	0.00	0.00	0	0				0
	PRBA150115	614	0.00	0.00	0.00	0	0				0
	PRBA150115	615	0.00	0.00	0.00	0	0				0
	PRBA150115	616	0.00	0.00	0.00	0	0				0
	PRBA150115	617	0.00	0.00	0.00	0	0				0
	PRBA150115	618	0.00	0.00	0.00	0	0				0
	PRBA150115	619	0.00	0.00	0.00	0	0				0
	PRBA150115	620	0.00	0.00	0.00	0	0				0
	PRBA150115	621	0.00	0.00	0.00	0	0				0
	PRBA150115	622	0.00	0.00	0.00	0	0				0
	PRBA150116	623	0.00	0.00	0.00	0	0				0
	PRBA150116	624	0.00	0.00	0.00	0	0				0
	PRBA150116	625	0.00	0.00	0.00	0	0				0
	PRBA150116	626	0.00	0.00	0.00	0	0				0
	PRBA150116	627	0.00	0.00	0.00	0	0				0
	PRBA150116	628	0.00	0.00	0.00	0	0				0
	PRBA150116	629	0.00	0.00	0.00	0	0				0
	PRBA150116	630	0.00	0.00	0.00	0	0				0
	PRBA150116	631	0.00	0.00	0.00	0	0				0
	PRBA150116	632	0.00	0.00	0.00	0	0				0
	PRBA150117	633	0.00	0.00	0.00	0	0				0
	PRBA150117	634	0.00	0.00	0.00	0	0				0
	PRBA150117	635	0.00	0.00	0.00	0	0				0
	PRBA150117	636	0.00	0.00	0.00	0	0				0
	PRBA150117	637	0.00	0.00	0.00	0	0				0
	PRBA150117	638	0.00	0.00	0.00	0	0				0
	PRBA150117	639	0.00	0.00	0.00	0	0				0
	PRBA150117	640	0.00	0.00	0.00	0	0				0
	PRBA150117	641	0.00	0.00	0.00	0	0				0
	PRBA150117	642	0.00	0.00	0.00	0	0				0
	PRBA150118	643	0.00	0.00	0.00	0	0				0
	PRBA150118	644	0.00	0.00	0.00	0	0				0
	PRBA150118	645	0.00	0.00	0.00	0	0				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.4 Barrier Segment Descriptions for NSA 15 West50 Percent (Page 6 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles							
	PRBA150118	646	0.00	0.00	0.00	0	0				0
	PRBA150118	647	0.00	0.00	0.00	0	0				0
	PRBA150118	648	0.00	0.00	0.00	0	0				0
	PRBA150118	649	0.00	0.00	0.00	0	0				0
	PRBA150118	650	0.00	0.00	0.00	0	0				0
	PRBA150118	651	0.00	0.00	0.00	0	0				0
	PRBA150118	652	0.00	0.00	0.00	0	0				0
	PRBA150118	653	0.00	0.00	0.00	0	0				0
	PRBA150118	654	0.00	0.00	0.00	0	0				0
	PRBA150118	655	0.00	0.00	0.00	0	0				0
	PRBA150118	656	0.00	0.00	0.00	0	0				0
	PRBA150118	657	0.00	0.00	0.00	0	0				0
	PRBA150118	658	0.00	0.00	0.00	0	0				0
	PRBA150118	659	0.00	0.00	0.00	0	0				0
	PRBA150118	660	0.00	0.00	0.00	0	0				0
	PRBA150118	661	0.00	0.00	0.00	0	0				0
	PRBA150118	662	0.00	0.00	0.00	0	0				0
	PRBA150120	663	0.00	0.00	0.00	0	0				0
	PRBA150120	664	0.00	0.00	0.00	0	0				0
	PRBA150120	665	0.00	0.00	0.00	0	0				0
	PRBA150120	666	0.00	0.00	0.00	0	0				0
	PRBA150120	667	0.00	0.00	0.00	0	0				0
	PRBA150120	668	0.00	0.00	0.00	0	0				0
	PRBA150120	669	0.00	0.00	0.00	0	0				0
	PRBA150120	670	0.00	0.00	0.00	0	0				0
	PRBA150120	671	0.00	0.00	0.00	0	0				0
	PRBA150120	672	0.00	0.00	0.00	0	0				0
	PRBA150120	673	0.00	0.00	0.00	0	0				0
	PRBA150120	674	0.00	0.00	0.00	0	0				0
	PRBA150120	675	0.00	0.00	0.00	0	0				0
	PRBA150120	676	0.00	0.00	0.00	0	0				0
	PRBA150120	677	0.00	0.00	0.00	0	0				0
	PRBA150120	678	0.00	0.00	0.00	0	0				0
	PRBA150120	679	0.00	0.00	0.00	0	0				0
	PRBA150120	680	0.00	0.00	0.00	0	0				0
	PRBA150120	681	0.00	0.00	0.00	0	0				0
	PRBA150120	682	0.00	0.00	0.00	0	0				0
	PRBA150120	683	0.00	0.00	0.00	0	0				0
	PRBA150120	684	0.00	0.00	0.00	0	0				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.4 Barrier Segment Descriptions for NSA 15 West50 Percent (Page 7 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS						Dulles					
		PRBA150121	685	0.00	0.00	0.00	0	0			0
		PRBA150122	686	0.00	0.00	0.00	0	0			0
		PRBA150123	687	0.00	0.00	0.00	0	0			0
		PRBA150124	688	0.00	0.00	0.00	0	0			0
		PRBA150125	689	0.00	0.00	0.00	0	0			0
		PRBA150126	690	0.00	0.00	0.00	0	0			0
		PRBA150127	691	0.00	0.00	0.00	0	0			0
		PRBA150128	692	0.00	0.00	0.00	0	0			0
		PRBA150129	693	0.00	0.00	0.00	0	0			0
PRBA1801	W	PRBA180101	696	0.00	0.00	0.00	0	0			0
		PRBA180102	697	0.00	0.00	0.00	0	0			0
		PRBA180103	698	0.00	0.00	0.00	0	0			0
		PRBA180104	699	0.00	0.00	0.00	0	0			0
		PRBA180105	700	0.00	0.00	0.00	0	0			0
		PRBA180106	701	0.00	0.00	0.00	0	0			0
		PRBA180107	702	0.00	0.00	0.00	0	0			0
		PRBA180108	703	0.00	0.00	0.00	0	0			0
		PRBA180109	704	0.00	0.00	0.00	0	0			0
		PRBA180110	705	0.00	0.00	0.00	0	0			0
		PRBA180111	706	0.00	0.00	0.00	0	0			0
		PRBA180112	707	0.00	0.00	0.00	0	0			0
		PRBA180113	708	0.00	0.00	0.00	0	0			0
		PRBA180114	709	0.00	0.00	0.00	0	0			0
		PRBA180115	710	0.00	0.00	0.00	0	0			0
		PRBA180116	711	0.00	0.00	0.00	0	0			0
		PRBA180117	712	0.00	0.00	0.00	0	0			0
		PRBA180118	713	0.00	0.00	0.00	0	0			0
		PRBA180119	714	0.00	0.00	0.00	0	0			0
		PRBA180120	715	0.00	0.00	0.00	0	0			0
		PRBA180121	716	0.00	0.00	0.00	0	0			0
		PRBA180122	717	0.00	0.00	0.00	0	0			0
		PRBA180123	718	0.00	0.00	0.00	0	0			0
		PRBA180124	719	0.00	0.00	0.00	0	0			0
		PRBA180125	720	0.00	0.00	0.00	0	0			0
		PRBA180126	721	0.00	0.00	0.00	0	0			0
		PRBA180127	722	0.00	0.00	0.00	0	0			0
		PRBA180128	723	0.00	0.00	0.00	0	0			0
		PRBA180129	724	0.00	5.00	10.00	16	80			0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA 15 West50 Percent (Page 8 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles							
	PRBA180130	725	0.00	0.00	0.00	0	0				0
	PRBA180131	726	0.00	2.00	4.00	16	32				0
	PRBA180132	727	0.00	0.00	0.00	0	0				0
	PRBA180133	728	0.00	0.00	0.00	0	0				0
	PRBA180134	729	0.00	0.00	0.00	0	0				0
	PRBA180135	730	0.00	0.00	0.00	0	0				0
	PRBA180136	731	0.00	0.00	0.00	0	0				0
	PRBA180137	732	0.00	0.00	0.00	0	0				0
	PRBA180138	733	0.00	0.00	0.00	0	0				0
	PRBA180139	734	0.00	0.00	0.00	0	0				0
	PRBA180140	735	0.00	0.00	0.00	0	0				0
	PRBA180141	736	0.00	0.00	0.00	0	0				0
	PRBA180142	737	0.00	0.00	0.00	0	0				0
	PRBA180143	738	0.00	0.00	0.00	0	0				0
	PRBA180144	739	0.00	1.00	2.00	18	18				0
	PRBA180145	740	0.00	0.00	0.00	0	0				0
	PRBA180146	741	0.00	0.00	0.00	0	0				0
	PRBA180147	742	0.00	0.00	0.00	0	0				0
	PRBA180148	743	0.00	0.00	0.00	0	0				0
	PRBA180149	744	0.00	0.00	0.00	0	0				0
	PRBA180150	745	0.00	0.00	0.00	0	0				0
	PRBA180151	746	0.00	0.00	0.00	0	0				0
	PRBA180152	747	0.00	0.00	0.00	0	0				0
	PRBA180153	748	0.00	0.00	0.00	0	0				0
	PRBA180154	749	0.00	0.00	0.00	0	0				0
	PRBA180155	750	0.00	0.00	0.00	0	0				0
	PRBA180156	751	0.00	0.00	0.00	0	0				0
	PRBA180157	752	0.00	0.00	0.00	0	0				0
	PRBA180158	753	0.00	0.00	0.00	0	0				0
	PRBA180159	754	0.00	0.00	0.00	0	0				0
	PRBA180160	755	0.00	0.00	0.00	0	0				0
	PRBA180161	756	0.00	0.00	0.00	0	0				0
	PRBA180162	757	0.00	0.00	0.00	0	0				0
	PRBA180163	758	0.00	0.00	0.00	0	0				0
	PRBA180164	759	0.00	0.00	0.00	0	0				0
	PRBA180165	760	0.00	0.00	0.00	0	0				0
	PRBA180166	761	0.00	0.00	0.00	0	0				0
	PRBA180167	762	0.00	0.00	0.00	0	0				0
	PRBA180168	763	0.00	0.00	0.00	0	0				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA 15 West50 Percent (Page 9 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles									
		PRBA180169	764	0.00	0.00	0.00	0	0					0
		PRBA180170	765	0.00	0.00	0.00	0	0					0
		PRBA180171	766	0.00	0.00	0.00	0	0					0
		PRBA180172	767	0.00	0.00	0.00	0	0					0
		PRBA180173	768	0.00	0.00	0.00	0	0					0
		PRBA180174	769	0.00	0.00	0.00	0	0					0
		PRBA180175	770	0.00	0.00	0.00	0	0					0
		PRBA180176	771	0.00	0.00	0.00	0	0					0
		PRBA180177	772	0.00	0.00	0.00	0	0					0
		PRBA180178	773	0.00	0.00	0.00	0	0					0
		PRBA180179	774	0.00	0.00	0.00	0	0					0
		PRBA180180	775	0.00	0.00	0.00	0	0					0
		PRBA180181	776	0.00	0.00	0.00	0	0					0
		PRBA180182	777	0.00	0.00	0.00	0	0					0
		PRBA180183	778	0.00	0.00	0.00	0	0					0
		PRBA180184	779	0.00	0.00	0.00	0	0					0
		PRBA180185	780	0.00	0.00	0.00	0	0					0
		PRBA180186	781	0.00	0.00	0.00	0	0					0
		PRBA180187	782	0.00	0.00	0.00	0	0					0
		PRBA180188	783	0.00	0.00	0.00	0	0					0
		PRBA180189	784	0.00	0.00	0.00	0	0					0
		PRBA180190	785	0.00	1.00	2.00	17	17					0
		PRBA180191	786	0.00	0.00	0.00	0	0					0
		PRBA180192	787	0.00	0.00	0.00	0	0					0
		PRBA180193	788	0.00	0.00	-4.00	0	0					0
EXBA05	W	EXBA0501	239	0.00	1.50	3.00	149	224					0
		EXBA0502	240	0.00	2.00	4.00	150	300					0
		EXBA0503	241	0.00	1.00	2.00	150	150					0



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA15 Entire 50 Percent (Page 1 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS												Dulles	
Straughan Environmental KFR										10 August 2012 TNM 2.5			
RESULTS: BARRIER-SEGMENT DESCRIPTIONS													
PROJECT/CONTRACT:		Dulles											
RUN:		TNM12											
BARRIER DESIGN:		PRBA15_ENT50											
Barriers			Segments										
Name	Type	Name	No.	Heights First Point	Average	Second Point	Length	If Wall Area	On Struc?	Important Reflections?	If Berm Volume	Cost	
				ft	ft	ft	ft	sq ft			cu yd	\$	
PRBA1501	W	PRBA150101	464	0.00	0.00	0.00	0	0				0	
		PRBA150102	465	0.00	0.00	0.00	0	0				0	
		PRBA150103	466	0.00	0.00	0.00	0	0				0	
		PRBA150104	467	0.00	0.00	0.00	0	0				0	
		PRBA150105	468	0.00	0.00	0.00	0	0				0	
		PRBA150106	469	0.00	0.00	0.00	0	0				0	
		PRBA150107	470	0.00	0.00	0.00	0	0				0	
		PRBA150108	471	0.00	0.00	0.00	0	0				0	
		PRBA150109	472	0.00	0.00	0.00	0	0				0	
		PRBA150110	473	0.00	0.00	0.00	0	0				0	
		PRBA150111	474	0.00	0.00	0.00	0	0				0	
		PRBA150112	475	0.00	0.00	0.00	0	0				0	
		PRBA150113	476	0.00	0.00	0.00	0	0				0	
		PRBA150114	477	0.00	0.00	0.00	0	0				0	
		PRBA150115	478	12.00	12.00	12.00	24	290				0	
		PRBA150116	479	12.00	12.00	12.00	25	302				0	
		PRBA150117	480	12.00	12.00	12.00	25	302				0	
		PRBA150118	481	12.00	12.00	12.00	25	301				0	
		PRBA150119	482	12.00	12.00	12.00	25	302				0	
		PRBA150120	483	12.00	12.00	12.00	25	301				0	
		PRBA150121	484	14.00	14.00	14.00	25	351				0	
		PRBA150122	485	14.00	14.00	14.00	24	338				0	
		PRBA150123	486	14.00	14.00	14.00	25	351				0	
		PRBA150124	487	14.00	14.00	14.00	25	352				0	
		PRBA150125	488	14.00	14.00	14.00	25	351				0	
		PRBA150126	489	14.00	14.00	14.00	25	352				0	

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA15 Entire 50 Percent (Page 2 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles							
	PRBA150127	490	14.00	14.00	14.00	25	351				0
	PRBA150128	491	14.00	14.00	14.00	25	351				0
	PRBA150129	492	14.00	14.00	14.00	25	351				0
	PRBA150130	493	14.00	14.00	14.00	25	351				0
	PRBA150131	494	14.00	14.00	14.00	25	351				0
	PRBA150132	495	14.00	14.00	14.00	25	351				0
	PRBA150133	0 6	14.00	14.00	14.00	24	337				0
	PRBA150134	497	14.00	14.00	14.00	25	351				0
	PRBA150135	498	16.00	16.00	16.00	25	401				0
	PRBA150136	499	16.00	16.00	16.00	25	401				0
	PRBA150137	500	16.00	16.00	16.00	25	401				0
	PRBA150138	501	16.00	16.00	16.00	25	401				0
	PRBA150139	502	16.00	16.00	16.00	19	304				0
	PRBA150140	503	16.00	16.00	16.00	6	97				0
	PRBA150141	504	16.00	16.00	16.00	25	405				0
	PRBA150142	505	16.00	16.00	16.00	24	388				0
	PRBA150143	506	16.00	16.00	16.00	25	405				0
	PRBA150144	507	16.00	16.00	16.00	25	405				0
	PRBA150145	508	16.00	16.00	16.00	25	404				0
	PRBA150146	509	16.00	16.00	16.00	24	389				0
	PRBA150147	510	16.00	16.00	16.00	25	405				0
	PRBA150148	511	16.00	16.00	16.00	25	404				0
	PRBA150149	512	16.00	16.00	16.00	14	226				0
	PRBA150150	513	16.00	16.00	16.00	11	175				0
	PRBA150151	514	16.00	16.00	16.00	5	82				0
	PRBA150152	515	18.00	18.00	18.00	21	371				0
	PRBA150153	516	18.00	18.00	18.00	25	445				0
	PRBA150154	517	18.00	18.00	18.00	25	448				0
	PRBA150155	518	18.00	18.00	18.00	25	445				0
	PRBA150156	519	18.00	18.00	18.00	9	166				0
	PRBA150157	520	18.00	18.00	18.00	16	291				0
	PRBA150158	521	18.00	18.00	18.00	25	456				0
	PRBA150159	522	18.00	18.00	18.00	24	437				0
	PRBA150160	523	18.00	18.00	18.00	25	456				0
	PRBA150161	524	18.00	18.00	18.00	25	456				0
	PRBA150162	525	18.00	18.00	18.00	24	437				0
	PRBA150163	526	18.00	18.00	18.00	25	456				0
	PRBA150164	527	18.00	18.00	18.00	7	127				0
	PRBA150165	528	18.00	18.00	18.00	18	325				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA15 Entire 50 Percent (Page 3 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles								
		PRBA150166	529	14.00	14.00	14.00	25	351				0
		PRBA150167	530	14.00	14.00	14.00	25	351				0
		PRBA150168	531	14.00	14.00	14.00	25	351				0
		PRBA150169	532	14.00	14.00	14.00	25	351				0
		PRBA150170	533	14.00	14.00	14.00	25	345				0
		PRBA150171	534	14.00	14.00	14.00	25	345				0
		PRBA150172	535	14.00	14.00	14.00	26	360				0
		PRBA150173	536	14.00	14.00	14.00	25	346				0
		PRBA150174	537	14.00	14.00	14.00	28	389				0
		PRBA150175	538	14.00	14.00	14.00	22	308				0
		PRBA150176	539	14.00	14.00	14.00	25	350				0
		PRBA150177	540	14.00	14.00	14.00	25	350				0
		PRBA150178	541	14.00	14.00	14.00	25	350				0
		PRBA150179	542	14.00	14.00	14.00	25	350				0
		PRBA150180	543	14.00	14.00	14.00	25	350				0
		PRBA150181	544	14.00	14.00	14.00	25	350				0
		PRBA150182	545	14.00	14.00	14.00	25	350				0
		PRBA150183	546	14.00	14.00	14.00	25	350				0
		PRBA150184	547	14.00	14.00	14.00	25	350				0
		PRBA150185	548	14.00	14.00	14.00	25	350				0
		PRBA150186	549	14.00	14.00	14.00	25	350				0
		PRBA150187	550	14.00	14.00	14.00	25	350				0
		PRBA150188	551	14.00	14.00	14.00	25	350				0
		PRBA150189	552	14.00	14.00	14.00	6	84				0
		PRBA150190	553	14.00	14.00	14.00	20	273				0
		PRBA150191	554	14.00	14.00	14.00	25	346				0
		PRBA150192	555	14.00	14.00	14.00	25	346				0
		PRBA150193	556	14.00	14.00	14.00	26	360				0
		PRBA150194	557	14.00	14.00	14.00	25	348				0
		PRBA150195	558	14.00	14.00	14.00	25	346				0
		PRBA150196	559	14.00	14.00	14.00	25	350				0
		PRBA150197	560	16.00	16.00	16.00	25	400				0
		PRBA150198	561	16.00	16.00	16.00	25	402				0
		PRBA150199	562	16.00	16.00	16.00	24	390				0
		PRBA150110	563	16.00	16.00	16.00	25	405				0
		PRBA150110	564	16.00	16.00	16.00	25	407				0
		PRBA150110	565	18.00	18.00	18.00	25	441				0
		PRBA150110	566	18.00	18.00	18.00	26	461				0
		PRBA150110	567	18.00	18.00	18.00	25	445				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA15 Entire 50 Percent (Page 4 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS										Dulles	
		PRBA150114	607	18.00	18.00	18.00	25	455			0
		PRBA150114	608	18.00	18.00	18.00	25	441			0
		PRBA150114	609	18.00	18.00	18.00	9	166			0
		PRBA150114	610	18.00	18.00	18.00	16	294			0
		PRBA150114	611	18.00	18.00	18.00	25	459			0
		PRBA150114	612	18.00	18.00	18.00	5	97			0
		PRBA150115	613	18.00	18.00	18.00	19	344			0
		PRBA150115	614	18.00	18.00	18.00	25	446			0
		PRBA150115	615	18.00	18.00	18.00	25	452			0
		PRBA150115	616	18.00	18.00	18.00	22	401			0
		PRBA150115	617	18.00	18.00	18.00	28	504			0
		PRBA150115	618	18.00	18.00	18.00	25	447			0
		PRBA150115	619	18.00	18.00	18.00	25	447			0
		PRBA150115	620	18.00	18.00	18.00	25	447			0
		PRBA150115	621	14.00	14.00	14.00	26	363			0
		PRBA150115	622	14.00	14.00	14.00	12	169			0
		PRBA150116	623	14.00	14.00	14.00	12	175			0
		PRBA150116	624	14.00	14.00	14.00	25	350			0
		PRBA150116	625	14.00	14.00	14.00	25	350			0
		PRBA150116	626	14.00	14.00	14.00	25	350			0
		PRBA150116	627	14.00	14.00	14.00	25	350			0
		PRBA150116	628	14.00	14.00	14.00	25	350			0
		PRBA150116	629	14.00	14.00	14.00	25	350			0
		PRBA150116	630	14.00	14.00	14.00	25	350			0
		PRBA150116	631	14.00	14.00	14.00	25	350			0
		PRBA150116	632	14.00	14.00	14.00	25	354			0
		PRBA150117	633	14.00	14.00	14.00	25	350			0
		PRBA150117	634	14.00	14.00	14.00	25	350			0
		PRBA150117	635	14.00	14.00	14.00	5	70			0
		PRBA150117	636	14.00	14.00	14.00	20	283			0
		PRBA150117	637	14.00	14.00	14.00	24	338			0
		PRBA150117	638	14.00	14.00	14.00	25	353			0
		PRBA150117	639	14.00	14.00	14.00	25	350			0
		PRBA150117	640	14.00	14.00	14.00	26	357			0
		PRBA150117	641	14.00	14.00	14.00	25	346			0
		PRBA150117	642	14.00	14.00	14.00	25	346			0
		PRBA150118	643	14.00	14.00	14.00	25	350			0
		PRBA150118	644	14.00	14.00	14.00	13	186			0
		PRBA150118	645	14.00	14.00	14.00	12	170			0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA15 Entire 50 Percent (Page 5 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS		Dulles									
	PRBA150114	607	18.00	18.00	18.00	25	455				0
	PRBA150114	608	18.00	18.00	18.00	25	441				0
	PRBA150114	609	18.00	18.00	18.00	9	166				0
	PRBA150114	610	18.00	18.00	18.00	16	294				0
	PRBA150114	611	18.00	18.00	18.00	25	459				0
	PRBA150114	612	18.00	18.00	18.00	5	97				0
	PRBA150115	613	18.00	18.00	18.00	19	344				0
	PRBA150115	614	18.00	18.00	18.00	25	446				0
	PRBA150115	615	18.00	18.00	18.00	25	452				0
	PRBA150115	616	18.00	18.00	18.00	22	401				0
	PRBA150115	617	18.00	18.00	18.00	28	504				0
	PRBA150115	618	18.00	18.00	18.00	25	447				0
	PRBA150115	619	18.00	18.00	18.00	25	447				0
	PRBA150115	620	18.00	18.00	18.00	25	447				0
	PRBA150115	621	14.00	14.00	14.00	26	363				0
	PRBA150115	622	14.00	14.00	14.00	12	169				0
	PRBA150116	623	14.00	14.00	14.00	12	175				0
	PRBA150116	624	14.00	14.00	14.00	25	350				0
	PRBA150116	625	14.00	14.00	14.00	25	350				0
	PRBA150116	626	14.00	14.00	14.00	25	350				0
	PRBA150116	627	14.00	14.00	14.00	25	350				0
	PRBA150116	628	14.00	14.00	14.00	25	350				0
	PRBA150116	629	14.00	14.00	14.00	25	350				0
	PRBA150116	630	14.00	14.00	14.00	25	350				0
	PRBA150116	631	14.00	14.00	14.00	25	350				0
	PRBA150116	632	14.00	14.00	14.00	25	354				0
	PRBA150117	633	14.00	14.00	14.00	25	350				0
	PRBA150117	634	14.00	14.00	14.00	25	350				0
	PRBA150117	635	14.00	14.00	14.00	5	70				0
	PRBA150117	636	14.00	14.00	14.00	20	283				0
	PRBA150117	637	14.00	14.00	14.00	24	338				0
	PRBA150117	638	14.00	14.00	14.00	25	353				0
	PRBA150117	639	14.00	14.00	14.00	25	350				0
	PRBA150117	640	14.00	14.00	14.00	26	357				0
	PRBA150117	641	14.00	14.00	14.00	25	346				0
	PRBA150117	642	14.00	14.00	14.00	25	346				0
	PRBA150118	643	14.00	14.00	14.00	25	350				0
	PRBA150118	644	14.00	14.00	14.00	13	186				0
	PRBA150118	645	14.00	14.00	14.00	12	170				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA15 Entire 50 Percent (Page 6 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles								
		PRBA150118	646	14.00	14.00	14.00	24	342				0
		PRBA150118	647	14.00	14.00	14.00	25	356				0
		PRBA150118	648	14.00	14.00	14.00	17	243				0
		PRBA150118	649	14.00	14.00	14.00	7	99				0
		PRBA150118	650	14.00	14.00	14.00	25	357				0
		PRBA150118	651	14.00	14.00	14.00	25	352				0
		PRBA150118	652	14.00	14.00	14.00	24	342				0
		PRBA150118	653	14.00	14.00	14.00	25	357				0
		PRBA150118	654	14.00	14.00	14.00	24	342				0
		PRBA150118	655	14.00	14.00	14.00	25	357				0
		PRBA150118	656	14.00	14.00	14.00	25	348				0
		PRBA150118	657	14.00	14.00	14.00	25	348				0
		PRBA150118	658	14.00	14.00	14.00	17	243				0
		PRBA150118	659	14.00	14.00	14.00	8	115				0
		PRBA150118	660	14.00	14.00	14.00	25	344				0
		PRBA150118	661	14.00	14.00	14.00	14	196				0
		PRBA150118	662	14.00	14.00	14.00	11	154				0
		PRBA150120	663	14.00	14.00	14.00	25	352				0
		PRBA150120	664	14.00	14.00	14.00	25	348				0
		PRBA150120	665	14.00	14.00	14.00	25	348				0
		PRBA150120	666	14.00	14.00	14.00	25	357				0
		PRBA150120	667	14.00	14.00	14.00	25	348				0
		PRBA150120	668	14.00	14.00	14.00	24	342				0
		PRBA150120	669	14.00	14.00	14.00	25	357				0
		PRBA150120	670	14.00	14.00	14.00	25	348				0
		PRBA150120	671	14.00	14.00	14.00	25	348				0
		PRBA150120	672	14.00	14.00	14.00	21	287				0
		PRBA150121	673	14.00	14.00	14.00	5	74				0
		PRBA150121	674	14.00	14.00	14.00	25	347				0
		PRBA150121	675	14.00	14.00	14.00	2	35				0
		PRBA150121	676	14.00	14.00	14.00	22	313				0
		PRBA150121	677	14.00	14.00	14.00	26	358				0
		PRBA150121	678	16.00	16.00	16.00	25	394				0
		PRBA150121	679	16.00	16.00	16.00	25	401				0
		PRBA150121	680	16.00	16.00	16.00	25	402				0
		PRBA150121	681	16.00	16.00	16.00	25	401				0
		PRBA150121	682	16.00	16.00	16.00	25	402				0
		PRBA150122	683	16.00	16.00	16.00	25	394				0
		PRBA150122	684	16.00	16.00	16.00	25	401				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA15 Entire 50 Percent (Page 7 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles								
		PRBA150122	685	16.00	16.00	16.00	25	402				0
		PRBA150122	686	16.00	16.00	16.00	25	401				0
		PRBA150122	687	16.00	16.00	16.00	25	394				0
		PRBA150122	688	16.00	16.00	16.00	26	409				0
		PRBA150122	689	16.00	16.00	16.00	25	394				0
		PRBA150122	690	16.00	16.00	16.00	16	258				0
		PRBA150122	691	16.00	16.00	16.00	9	148				0
		PRBA150122	692	0.00	0.00	0.00	0	0				0
		PRBA150122	693	0.00	0.00	0.00	0	0				0
PRBA1801	W	PRBA180101	696	0.00	0.00	0.00	0	0				0
		PRBA180102	697	0.00	0.00	0.00	0	0				0
		PRBA180103	698	0.00	0.00	0.00	0	0				0
		PRBA180104	699	0.00	0.00	0.00	0	0				0
		PRBA180105	700	0.00	0.00	0.00	0	0				0
		PRBA180106	701	0.00	0.00	0.00	0	0				0
		PRBA180107	702	0.00	0.00	0.00	0	0				0
		PRBA180108	703	0.00	0.00	0.00	0	0				0
		PRBA180109	704	0.00	0.00	0.00	0	0				0
		PRBA180110	705	0.00	0.00	0.00	0	0				0
		PRBA180111	706	0.00	0.00	0.00	0	0				0
		PRBA180112	707	0.00	0.00	0.00	0	0				0
		PRBA180113	708	0.00	0.00	0.00	0	0				0
		PRBA180114	709	0.00	0.00	0.00	0	0				0
		PRBA180115	710	0.00	0.00	0.00	0	0				0
		PRBA180116	711	0.00	0.00	0.00	0	0				0
		PRBA180117	712	0.00	0.00	0.00	0	0				0
		PRBA180118	713	0.00	0.00	0.00	0	0				0
		PRBA180119	714	0.00	0.00	0.00	0	0				0
		PRBA180120	715	0.00	0.00	0.00	0	0				0
		PRBA180121	716	0.00	0.00	0.00	0	0				0
		PRBA180122	717	0.00	0.00	0.00	0	0				0
		PRBA180123	718	0.00	0.00	0.00	0	0				0
		PRBA180124	719	0.00	0.00	0.00	0	0				0
		PRBA180125	720	0.00	0.00	0.00	0	0				0
		PRBA180126	721	0.00	0.00	0.00	0	0				0
		PRBA180127	722	0.00	0.00	0.00	0	0				0
		PRBA180128	723	0.00	0.00	0.00	0	0				0
		PRBA180129	724	0.00	5.00	10.00	16	80				0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA15 Entire 50 Percent (Page 8 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles								
		PRBA180130	725	10.00	10.00	10.00	16	159				0
		PRBA180131	726	10.00	12.00	14.00	16	191				0
		PRBA180132	727	14.00	14.00	14.00	16	230				0
		PRBA180133	728	14.00	14.00	14.00	16	223				0
		PRBA180134	729	14.00	14.00	14.00	16	223				0
		PRBA180135	730	14.00	14.00	14.00	16	223				0
		PRBA180136	731	14.00	14.00	14.00	16	223				0
		PRBA180137	732	14.00	14.00	14.00	16	228				0
		PRBA180138	733	14.00	14.00	14.00	16	223				0
		PRBA180139	734	14.00	14.00	14.00	16	223				0
		PRBA180140	735	14.00	14.00	14.00	16	228				0
		PRBA180141	736	14.00	14.00	14.00	16	219				0
		PRBA180142	737	14.00	14.00	14.00	16	223				0
		PRBA180143	738	14.00	14.00	14.00	16	230				0
		PRBA180144	739	14.00	15.00	16.00	18	277				0
		PRBA180145	740	16.00	16.00	16.00	50	792				0
		PRBA180146	741	16.00	16.00	16.00	51	808				0
		PRBA180147	742	16.00	16.00	16.00	14	222				0
		PRBA180148	743	16.00	16.00	16.00	36	578				0
		PRBA180149	744	16.00	16.00	16.00	50	802				0
		PRBA180150	745	16.00	16.00	16.00	50	802				0
		PRBA180151	746	16.00	16.00	16.00	52	825				0
		PRBA180152	747	16.00	16.00	16.00	49	785				0
		PRBA180153	748	16.00	16.00	16.00	49	785				0
		PRBA180154	749	16.00	16.00	16.00	50	804				0
		PRBA180155	750	16.00	16.00	16.00	14	222				0
		PRBA180156	751	16.00	16.00	16.00	36	572				0
		PRBA180157	752	16.00	16.00	16.00	50	803				0
		PRBA180158	753	16.00	16.00	16.00	50	803				0
		PRBA180159	754	16.00	16.00	16.00	50	799				0
		PRBA180160	755	16.00	16.00	16.00	50	803				0
		PRBA180161	756	16.00	16.00	16.00	49	790				0
		PRBA180162	757	16.00	16.00	16.00	50	804				0
		PRBA180163	758	16.00	16.00	16.00	20	320				0
		PRBA180164	759	16.00	16.00	16.00	4	72				0
		PRBA180165	760	16.00	16.00	16.00	7	111				0
		PRBA180166	761	16.00	16.00	16.00	9	147				0
		PRBA180167	762	16.00	16.00	16.00	7	107				0
		PRBA180168	763	16.00	16.00	16.00	16	258				0



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.5 Barrier Segment Descriptions for NSA15 Entire 50 Percent (Page 9 of 9)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS										Dulles			
		PRBA180169	764	16.00	16.00	16.00	16	254					0
		PRBA180170	765	16.00	16.00	16.00	16	254					0
		PRBA180171	766	16.00	16.00	16.00	16	250					0
		PRBA180172	767	16.00	16.00	16.00	17	268					0
		PRBA180173	768	16.00	16.00	16.00	16	250					0
		PRBA180174	769	16.00	16.00	16.00	16	250					0
		PRBA180175	770	16.00	16.00	16.00	17	265					0
		PRBA180176	771	16.00	16.00	16.00	16	250					0
		PRBA180177	772	16.00	16.00	16.00	16	262					0
		PRBA180178	773	16.00	16.00	16.00	16	250					0
		PRBA180179	774	16.00	16.00	16.00	16	262					0
		PRBA180180	775	16.00	16.00	16.00	15	247					0
		PRBA180181	776	16.00	16.00	16.00	16	262					0
		PRBA180182	777	16.00	16.00	16.00	16	262					0
		PRBA180183	778	16.00	16.00	16.00	15	247					0
		PRBA180184	779	16.00	16.00	16.00	16	258					0
		PRBA180185	780	16.00	16.00	16.00	8	122					0
		PRBA180186	781	16.00	16.00	16.00	16	250					0
		PRBA180187	782	16.00	16.00	16.00	15	247					0
		PRBA180188	783	16.00	16.00	16.00	17	265					0
		PRBA180189	784	16.00	16.00	16.00	16	250					0
		PRBA180190	785	16.00	17.00	18.00	17	281					0
		PRBA180191	786	18.00	18.00	18.00	15	278					0
		PRBA180192	787	18.00	18.00	18.00	17	298					0
		PRBA180193	788	18.00	16.00	14.00	8	125					0
EXBA05	W	EXBA0501	239	12.00	13.50	15.00	149	2012					0
		EXBA0502	240	15.00	17.00	19.00	150	2551					0
		EXBA0503	241	19.00	20.00	21.00	150	3009					0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.6 Barrier Segment Descriptions for NSA 20 East, NSA 22 Entire, and 25 Entire (Page 1 of 5)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS												Dulles	
Straughan KFR										10 August 2012 TNM 2.5			
RESULTS: BARRIER-SEGMENT DESCRIPTIONS													
PROJECT/CONTRACT:		Dulles											
RUN:		TNM15											
BARRIER DESIGN:		All Barriers											
Barriers		Segments											
Name	Type	Name	No.	Heights			Length	If Wall			If Berm	Cost	
				First Point	Average	Second Point		Area	On Struc?	Important Reflections?	Volume		
				ft	ft	ft	ft	sq ft			cu yd	\$	
EXBA03	W	EXBA0302	174	12.00	12.00	12.00	75	902				0	
		EXBA0303	175	12.00	12.00	12.00	75	902				0	
		EXBA0304	176	12.00	12.00	12.00	75	900				0	
		EXBA0305	177	12.00	12.00	12.00	74	893				0	
		EXBA0306	178	12.00	12.50	13.00	76	944				0	
		EXBA0307	179	13.00	15.00	17.00	75	1123				0	
		EXBA0308	180	17.00	18.50	20.00	75	1394				0	
		EXBA0309	181	20.00	20.00	20.00	75	1500				0	
		EXBA0310	182	20.00	19.00	18.00	75	1425				0	
		EXBA0311	183	18.00	16.50	15.00	75	1238				0	
		EXBA0312	184	15.00	14.00	13.00	75	1050				0	
		EXBA0313	185	13.00	12.50	12.00	75	938				0	
		EXBA0314	186	12.00	12.00	12.00	75	900				0	
		EXBA0315	187	14.00	14.00	14.00	75	1050				0	
		EXBA0316	188	16.00	16.00	16.00	203	3248				0	
		EXBA0317	189	18.00	18.00	18.00	160	2880				0	
		EXBA0318	190	18.00	18.00	18.00	12	216				0	
		EXBA0319	191	20.00	20.00	20.00	272	5435				0	
PRBA2201	W	PRBA220101	297	13.00	13.00	13.00	23	302				0	
		PRBA220102	298	13.00	13.00	13.00	24	317				0	
		PRBA220103	299	13.00	13.00	13.00	25	330				0	
		PRBA220104	300	13.00	13.00	13.00	25	329				0	
		PRBA220105	301	13.00	14.00	15.00	24	342				0	
		PRBA220106	302	15.00	15.00	15.00	25	379				0	
		PRBA220107	303	15.00	15.00	15.00	24	365				0	



# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.6 Barrier Segment Descriptions for NSA 20 East, NSA 22 Entire, and 25 Entire (Page 3 of 5)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS				Dulles									
		PRBA220147	343	15.00	15.00	15.00	25	375					0
		PRBA220148	344	15.00	15.00	15.00	25	375					0
		PRBA220149	345	15.00	15.00	15.00	50	750					0
		PRBA220150	346	15.00	15.00	15.00	25	375					0
		PRBA220151	347	15.00	15.00	15.00	25	376					0
		PRBA220152	348	15.00	15.00	15.00	25	376					0
		PRBA220153	349	15.00	16.00	17.00	24	385					0
		PRBA220154	350	17.00	17.00	17.00	25	427					0
		PRBA220155	351	17.00	18.00	19.00	25	452					0
		PRBA220156	352	19.00	19.00	19.00	25	477					0
		PRBA220157	353	19.00	19.00	19.00	25	478					0
		PRBA220158	354	19.00	19.00	19.00	25	478					0
		PRBA220159	355	19.00	19.00	19.00	25	478					0
		PRBA220160	356	19.00	19.00	19.00	24	460					0
		PRBA220161	357	19.00	19.00	19.00	50	955					0
		PRBA220162	358	19.00	19.00	19.00	25	477					0
		PRBA220163	359	19.00	19.00	19.00	25	478					0
		PRBA220164	360	19.00	19.00	19.00	25	477					0
		PRBA220165	361	19.00	18.00	17.00	25	453					0
		PRBA220166	362	17.00	17.00	17.00	49	838					0
		PRBA220167	363	17.00	16.00	15.00	25	402					0
		PRBA220168	364	15.00	15.00	15.00	25	378					0
		PRBA220169	365	15.00	15.00	15.00	4	60					0
EXBA04	W	EXBA0401	206	16.00	15.00	14.00	250	3750					0
		EXBA0402	207	14.00	14.00	14.00	200	2795					0
		EXBA0403	208	14.00	15.00	16.00	200	2999					0
		EXBA0404	209	16.00	16.00	16.00	100	1605					0
		EXBA0405	210	16.00	19.50	23.00	100	1952					0
		EXBA0406	211	23.00	23.00	23.00	100	2310					0
		EXBA0407	212	23.00	25.00	27.00	128	3209					0
		EXBA0408	213	27.00	27.00	27.00	45	1213					0
		EXBA0409	214	27.00	27.00	27.00	99	2686					0
		EXBA0410	215	27.00	26.00	25.00	150	3912					0
		EXBA0411	216	25.00	25.00	25.00	150	3743					0
		EXBA0412	217	25.00	22.50	20.00	150	3367					0
		EXBA0413	218	20.00	20.00	20.00	150	2998					0
		EXBA0414	219	20.00	21.00	22.00	125	2624					0
		EXBA0415	220	22.00	27.50	33.00	125	3446					0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.6 Barrier Segment Descriptions for NSA 20 East, NSA 22 Entire, and 25 Entire (Page 4 of 5)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS										Dulles			
		EXBA0416	221	33.00	30.50	28.00	220	6710					0
		EXBA0417	222	28.00	25.50	23.00	175	4452					0
		EXBA0418	223	23.00	24.50	26.00	100	2455					0
		EXBA0419	224	26.00	29.00	32.00	100	2904					0
		EXBA0420	225	32.00	33.50	35.00	176	5880					0
		EXBA0421	226	35.00	33.50	32.00	175	5858					0
		EXBA0422	227	32.00	31.00	30.00	175	5433					0
		EXBA0423	228	30.00	30.00	30.00	175	5249					0
		EXBA0424	229	30.00	30.00	30.00	175	5240					0
		EXBA0425	230	30.00	31.00	32.00	150	4648					0
		EXBA0426	231	32.00	32.00	32.00	150	4804					0
		EXBA0427	232	32.00	33.00	34.00	320	10584					0
		EXBA0428	233	34.00	32.00	30.00	125	3996					0
		EXBA0429	234	30.00	30.00	30.00	192	5749					0
		EXBA0430	235	30.00	29.00	28.00	230	6681					0
		EXBA0431	236	28.00	28.00	28.00	34	947					0
		EXBA0432	237	28.00	27.50	27.00	173	4745					0
PRBA2501	W	PRBA250101	368	16.00	16.00	16.00	16	258					0
		PRBA250102	369	16.00	16.00	16.00	16	257					0
		PRBA250103	370	16.00	16.00	16.00	16	258					0
		PRBA250104	371	16.00	16.00	16.00	16	257					0
		PRBA250105	372	16.00	16.00	16.00	15	242					0
		PRBA250106	373	16.00	16.00	16.00	16	257					0
		PRBA250107	374	16.00	16.00	16.00	16	258					0
		PRBA250108	375	16.00	16.00	16.00	16	257					0
		PRBA250109	376	16.00	16.00	16.00	16	258					0
		PRBA250110	377	14.00	14.00	14.00	16	225					0
		PRBA250111	378	14.00	14.00	14.00	16	226					0
		PRBA250112	379	14.00	14.00	14.00	16	225					0
		PRBA250113	380	14.00	14.00	14.00	16	226					0
		PRBA250114	381	14.00	14.00	14.00	16	226					0
		PRBA250115	382	14.00	14.00	14.00	14	197					0
		PRBA250116	383	14.00	14.00	14.00	2	28					0
		PRBA250117	384	14.00	14.00	14.00	16	226					0
		PRBA250118	385	14.00	14.00	14.00	17	231					0
EXBA01	W	EXBA0101	150	8.00	8.00	8.00	655	5242					0
		EXBA0102	151	8.00	8.00	8.00	79	629					0

# Dulles Toll Road

## Highway Sound Measurement and Noise Barrier Analysis

### Appendix M: Barrier Segment Descriptions

Figure M.6 Barrier Segment Descriptions for NSA 20 East, NSA 22 Entire, and 25 Entire (Page 5 of 5)

RESULTS: BARRIER-SEGMENT DESCRIPTIONS										Dulles		
		EXBA0103	152	8.00	8.00	8.00	44	351				0
		EXBA0104	153	8.00	8.00	8.00	64	513				0
		EXBA0105	154	8.00	8.00	8.00	58	467				0
		EXBA0106	155	8.00	8.00	8.00	1130	9040				0
		EXBA0107	156	8.00	8.00	8.00	143	1142				0
		EXBA0108	157	8.00	8.00	8.00	140	1122				0
		EXBA0109	158	8.00	8.00	8.00	486	3884				0
		EXBA0110	159	8.00	8.00	8.00	170	1361				0
		EXBA0111	160	8.00	8.00	8.00	505	4037				0
		EXBA0112	161	14.00	16.00	18.00	268	4295				0
		EXBA0113	162	18.00	18.00	18.00	100	1800				0
		EXBA0114	163	18.00	18.00	18.00	196	3537				0
		point248	248	18.00	17.00	16.00	197	3357				0
		point249	249	16.00	16.00	16.00	196	3144				0
		EXBA0115	164	16.00	15.00	14.00	251	3765				0
		EXBA0116	165	14.00	14.50	15.00	72	1045				0
		EXBA0117	166	15.00	15.00	15.00	153	2297				0