

**Table 2 Ambient Noise (Leq) Model Results (KY/OH)**

<b>Table 2A: Ambient Noise Levels, Kentucky</b>				<b>Table 2B: Ambient Noise Levels, Ohio</b>			
<b>Site</b>	<b>Land Use</b>	<b>Field Measured Noise Level (Leq)</b>	<b>Comments</b>	<b>Site</b>	<b>Land Use</b>	<b>Field Measured Noise Level (Leq)</b>	<b>Comments</b>
KY-39	Residential	75.9	modeled	OH-46	Residential	72.7	modeled
KY-40	Residential	76.1	modeled	OH-47	Commercial	67.2	modeled
KY-41	Residential	73.2	modeled	OH-48	Commercial	66.4	modeled
KY-42	Residential	71.7	modeled	OH-49	Commercial	68.3	modeled
KY-43	Residential	77.3	modeled	OH-50	Commercial	65.6	modeled
KY-44	Residential	70.9	modeled	OH-51	Commercial	74.7	modeled
KY-45	Residential	78.6	modeled	OH-52	Commercial	70.6	modeled
KY-46	Park	74.5	modeled	OH-53	Commercial	65.7	modeled
KY-47	Residential	77.4	modeled	OH-54	Commercial	71.8	modeled
KY-48	Residential	76	modeled	OH-55	Commercial	75.4	modeled
KY-49	Residential	68.7	modeled				
KY-50	Residential	71.2	modeled				
KY-51	Commercial	75.7	modeled				
KY-52	Commercial	69.3	modeled				
KY-53	Residential	68.8	modeled				
KY-55	Hotel	66.6	modeled				
KY-56	Hotel	68.4	modeled				

## **6.0 PROJECT TRAFFIC**

Certified traffic forecasts for the Brent Spence Bridge Replacement/Rehabilitation Project in Ohio was prepared by the Ohio Department of Transportation (ODOT) and the traffic forecasts for Kentucky was prepared by Burgess and Niple in 2008. These volumes were used in the Traffic Noise Model (TNM 2.5) to predict the existing and future year noise levels for the No Build and five conceptual alternatives. The traffic forecasts include existing traffic (2008), 2035 No Build traffic, and 2035 Build traffic for all five conceptual alternatives. Design year 2035 AM/PM projected intersection counts were also used, as were truck ratio factor traffic plates. As a worst case scenario, the highest peak hour of traffic was modeled. In certain scenarios with incomplete traffic flows, it was assumed that 10 percent of the Annual Average Daily Traffic Volume (AADT) would compose peak hour traffic. Traffic tables were not included for this report, due to the broad scope of highway systems involved within the TNM 2.5 noise models in Kentucky and Ohio.

## **7.0 NOISE CONTOURS**

Contour receptor locations along the I-75/I-71 corridor were established at locations of 100, 300, and 600 feet from the centerline of the outside lane within all five conceptual alternatives within all 2035 build noise models in Kentucky and Ohio. While each location recorded a noise sound level (dBA), noise contours were deemed unacceptable due to frontage roads in both states and the overall highway design conflicts in

Cincinnati. Noise level readings from these individual receptor sites were flawed due to excess traffic noise from adjacent roadways between I-75/I-71 and the location of the contour receptors, and were therefore inconclusive.

## **8.0 NOISE LEVEL PROJECTIONS**

The noise analysis process involves predicting noise levels at various representative locations utilizing the Federal Highway Administration (FHWA) Traffic Noise Model (TNM 2.5) program. The TNM 2.5 program performs the noise level predictions by constructing a three-dimensional terrain model encompassing the location of the noise sources and the receptors. Other input variables include traffic data, as well as any existing noise barrier data.

The traffic parameters necessary for model input are peak hour volumes, speed of automobiles, medium trucks, heavy trucks, buses and motorcycles. Medium trucks are defined to include all cargo vehicles with two axles and six tires, generally with gross vehicle weight between 9,900 and 26,400 pounds (lbs). Heavy trucks include cargo vehicles with three or more axles, generally with gross weight of more than 26,400 lbs.

The input for the roadway model is the geometric data including the horizontal coordinates and elevations of points along the roadway alignment. This creates a roadway in continuous segments. With consideration given to directional flow, positive grades are assigned to provide an additional factor for the calculation of upgraded truck noise.

Existing noise barriers, buildings, terrain and tree lines can also be input in three dimensions using the coordinate geometry system. Noise barriers can be input to represent existing buildings, fences, hills and back-slopes. Receptor location is the specific location of an outdoor area where frequent human activity occurs that might be impacted by highway traffic noise and may benefit from reduced noise levels. Receptor elevations are selected to be five feet higher than the existing ground level to simulate the height of a person's ear and thus, the noise level that a person perceives.

Noise level projections were conducted for the 2008 existing, 2035 No Build and 2035 Build scenarios (five conceptual alternatives). Noise sensitive land uses were selected along the existing I-75 / I-71 corridor as well as other major/minor arterials that would become impacted from the proposed project. Seventy-three new receptor locations (labeled KY16 - KY56 and OH16 - OH55) and 30 field measurement locations that represent Noise Abatement Criteria (NAC) Category B or C were used to predict existing and future noise levels. All 103 receptors (KY 55 / OH 48) represent either NAC Category B or C.

Tables 3 and 4 represent each receptor site in Kentucky and its 2008 existing, 2035 No Build, and 2035 Build noise levels. Tables 5 and 6 represent those receptor sites in Ohio and its 2008 existing, 2035 No Build, and 2035 Build noise levels. Each respective table has title headings labeled "2008 Impact" and "2035 Impact." These title headings represent sound level noise impacts, if any, for each respective receptor location. If a receptor site location was determined to be impacted, the term "Sound Level" was included within that particular column. Some receptor locations were unable to become validated from the TNM 2.5 noise model and therefore, were given an "n/a" abbreviation.

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**Table 3 Projected No Build / Build Alternatives B Noise (Leq) Levels - KY**

No:	Site	2008 Existing (Leq)	2008 Impact	2035 No Build (Leq)	2035 No Build Impact	Difference 2035 No Build - 2008 Existing	2035 Build Alt B (Leq)	2035 Build Alt B Impact
1	KY-1	66	Sound Level	76.4	Sound Level	10.4	73.9	Sound Level
2	KY-2	69.3	Sound Level	73.8	Sound Level	4.5	69.7	Sound Level
3	KY-3	73.2	Sound Level	81.1	Sound Level	7.9	83.5	Sound Level
4	KY-4	68.2	Sound Level	70.9	Sound Level	2.7	72.1	Sound Level
5	KY-5	65.5		78.1	Sound Level	12.6	72.7	Sound Level
6	KY-6	70.6	Sound Level	80.3	Sound Level	9.7	77.1	Sound Level
7	KY-7	67.9	Sound Level	78.2	Sound Level	10.3	79.9	Sound Level
8	KY-8	69.7	Sound Level	73.8	Sound Level	4.1	n/a	Sound Level
9	KY-9	73.2	Sound Level	73.9	Sound Level	0.7	78.6	Sound Level
10	KY-10	58.1		67.3	Sound Level	9.2	66	Sound Level
11	KY-11	65.7		75.8	Sound Level	10.1	80.6	Sound Level
12	KY-12	59.7		n/a	n/a	n/a	n/a	n/a
13	KY-13	69.7	Sound Level	79.7	Sound Level	3.3	78.6	Sound Level
14	KY-14	68.8	Sound Level	n/a	n/a	n/a	70.7	Sound Level
15	KY-15	69.4	Sound Level	75.8	Sound Level	6.9	76.4	Sound Level
16	KY-16	68.8	Sound Level	76.4	Sound Level	8.5	75.1	Sound Level
17	KY-17	70.4	Sound Level	73.4	Sound Level	3.2	74.5	Sound Level
18	KY-18	76.3	Sound Level	79.4	Sound Level	3	80.3	Sound Level
19	KY-19	67.7	Sound Level	70.2	Sound Level	2.6	70	Sound Level
20	KY-20	72.6	Sound Level	75.8	Sound Level	3.2	76.4	Sound Level
21	KY-21	68.3	Sound Level	72.4	Sound Level	3.5	73.4	Sound Level
22	KY-22	77.0	Sound Level	80.0	Sound Level	3	82.2	Sound Level
23	KY-23	68.7	Sound Level	72.8	Sound Level	4.1	72.6	Sound Level
24	KY-24	76.7	Sound Level	80.3	Sound Level	3.6	82.6	Sound Level
25	KY-25	71.5	Sound Level	74.8	Sound Level	3.3	84.8	Sound Level
26	KY-26	70.2	Sound Level	73.2	Sound Level	3	74.5	Sound Level
27	KY-27	77	Sound Level	80.3	Sound Level	3.3	84.6	Sound Level
28	KY-28	79.3	Sound Level	82.7	Sound Level	3.4	84.9	Sound Level
29	KY-29	65.9		68.5	Sound Level	2.6	67.8	Sound Level
30	KY-30	65.6		68.1	Sound Level	2.5	67.7	Sound Level
31	KY-31	81.6	Sound Level	84.6	Sound Level	3	87.3	Sound Level
32	KY-32	67.2	Sound Level	69.9	Sound Level	2.7	67.3	Sound Level
33	KY-33	75.7	Sound Level	79.1	Sound Level	3.4	80.7	Sound Level
34	KY-34	75.3	Sound Level	79.2	Sound Level	3.9	80.8	Sound Level
35	KY-35	74.3	Sound Level	78.1	Sound Level	3.7	79.5	Sound Level
36	KY-36	68	Sound Level	72.1	Sound Level	4.2	72.3	Sound Level
37	KY-37	76.7	Sound Level	81.0	Sound Level	4.4	83.4	Sound Level
38	KY-38	68.4	Sound Level	72.2	Sound Level	3.8	72.9	Sound Level
39	KY-39	75.9	Sound Level	81.3	Sound Level	5.4	82.7	Sound Level
40	KY-40	76.1	Sound Level	79.6	Sound Level	3.6	76.5	Sound Level
41	KY-41	73.2	Sound Level	77.1	Sound Level	3.7	71.8	Sound Level
42	KY-42	71.7	Sound Level	75.6	Sound Level	3.8	75.2	Sound Level
43	KY-43	77.3	Sound Level	81.2	Sound Level	3.8	77.2	Sound Level
44	KY-44	70.9	Sound Level	74.7	Sound Level	3.7	73	Sound Level
45	KY-45	78.6	Sound Level	82.5	Sound Level	3.9	78.6	Sound Level
46	KY-46	74.5	Sound Level	78.1	Sound Level	3.5	70.1	Sound Level

**Table 3 Projected No Build / Build Alternatives B Noise (Leq) Levels - KY**

No:	Site	2008 Existing (Leq)	2008 Impact	2035 No Build (Leq)	2035 No Build Impact	Difference 2035 No Build - 2008 Existing	2035 Build Alt B (Leq)	2035 Build Alt B Impact
47	KY-47	77.4	Sound Level	81.4	Sound Level	3.9	n/a	Sound Level
48	KY-48	76	Sound Level	79.8	Sound Level	3.8	76.8	Sound Level
49	KY-49	68.7	Sound Level	75	Sound Level	3.6	75.9	Sound Level
50	KY-50	71.2	Sound Level	75.8	Sound Level	3.8	83.9	Sound Level
51	KY-51	75.7	Sound Level	83.7	Sound Level	3.5	77.6	Sound Level
52	KY-52	69.3	Sound Level	75.6	Sound Level	3.2	72.3	Sound Level
53	KY-53	68.8	Sound Level	73.7	Sound Level	3.7	76.6	Sound Level
54	KY-55	66.6	Sound Level	73.5	Sound Level	2.5	75.6	Sound Level
55	KY-56	68.4	Sound Level	73.9	Sound Level	4	72.3	Sound Level

**Table 4 Projected Build Alternatives C, D, E & G Noise (Leq) Levels - KY**

No:	Site	2035 Build Alt C (Leq)	2035 Build Alt C Impact	2035 Build Alt D (Leq)	2035 Build Alt D Impact	2035 Build Alt E (Leq)	2035 Build Alt E Impact	2035 Build Alt G (Leq)	2035 Build Alt G Impact
1	KY-1	77.6	Sound Level	77.0	Sound Level	77.4	Sound Level	77.5	Sound Level
2	KY-2	74.5	Sound Level	69.3	Sound Level	73.8	Sound Level	74.5	Sound Level
3	KY-3	81.3	Sound Level	73.2	Sound Level	81.6	Sound Level	81.6	Sound Level
4	KY-4	72.7	Sound Level	72.6	Sound Level	72.7	Sound Level	72.8	Sound Level
5	KY-5	78.7	Sound Level	78.5	Sound Level	79	Sound Level	79.2	Sound Level
6	KY-6	80.2	Sound Level	79.8	Sound Level	81.1	Sound Level	81.1	Sound Level
7	KY-7	80.5	Sound Level	80.2	Sound Level	83.4	Sound Level	83.6	Sound Level
8	KY-8	n/a	Sound Level	75.7	Sound Level	74.7	Sound Level	75.9	Sound Level
9	KY-9	73.7	Sound Level	73.5	Sound Level	73.9	Sound Level	73.9	Sound Level
10	KY-10	67.6	Sound Level	67.5	Sound Level	67.6	Sound Level	67.6	Sound Level
11	KY-11	75.2	Sound Level	74.9	Sound Level	75.4	Sound Level	75.4	Sound Level
12	KY-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
13	KY-13	76	Sound Level	75.5	Sound Level	75.9	Sound Level	75.9	Sound Level
14	KY-14	70.9	Sound Level	70.6	Sound Level	71.4	Sound Level	71.4	Sound Level
15	KY-15	76.7	Sound Level	76.2	Sound Level	76.8	Sound Level	76.8	Sound Level
16	KY-16	76.3	Sound Level	75.7	Sound Level	76.8	Sound Level	77.5	Sound Level
17	KY-17	74.4	Sound Level	74.3	Sound Level	75.1	Sound Level	72.8	Sound Level
18	KY-18	78.5	Sound Level	78.3	Sound Level	78.8	Sound Level	78.8	Sound Level
19	KY-19	68.8	Sound Level	68.4	Sound Level	68.7	Sound Level	68.7	Sound Level
20	KY-20	74.6	Sound Level	75.5	Sound Level	75.6	Sound Level	75.6	Sound Level
21	KY-21	71.5	Sound Level	72.1	Sound Level	72.2	Sound Level	72.2	Sound Level
22	KY-22	79.7	Sound Level	79.3	Sound Level	79.8	Sound Level	79.8	Sound Level
23	KY-23	71.9	Sound Level	71.6	Sound Level	72.1	Sound Level	72.1	Sound Level
24	KY-24	75.7	Sound Level	75.3	Sound Level	75.7	Sound Level	75.7	Sound Level
25	KY-25	74.7	Sound Level	74.5	Sound Level	74.9	Sound Level	74.9	Sound Level
26	KY-26	73.9	Sound Level	73.4	Sound Level	73.8	Sound Level	73.8	Sound Level
27	KY-27	80.3	Sound Level	80.1	Sound Level	80.5	Sound Level	80.5	Sound Level
28	KY-28	83	Sound Level	82.7	Sound Level	83.1	Sound Level	83.1	Sound Level
29	KY-29	69.1	Sound Level	68.8	Sound Level	69	Sound Level	69	Sound Level
30	KY-30	68.9	Sound Level	68.5	Sound Level	68.7	Sound Level	68.7	Sound Level
31	KY-31	84.8	Sound Level	84.7	Sound Level	85	Sound Level	85	Sound Level

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**Table 4 Projected Build Alternatives C, D, E & G Noise (Leq) Levels - KY**

No:	Site	2035 Build Alt C (Leq)	2035 Build Alt C Impact	2035 Build Alt D (Leq)	2035 Build Alt D Impact	2035 Build Alt E (Leq)	2035 Build Alt E Impact	2035 Build Alt G (Leq)	2035 Build Alt G Impact
32	KY-32	70.2	Sound Level	70.1	Sound Level	70.2	Sound Level	70.2	Sound Level
33	KY-33	79.2	Sound Level	79	Sound Level	79.4	Sound Level	79.4	Sound Level
34	KY-34	79.3	Sound Level	79	Sound Level	79.6	Sound Level	79.6	Sound Level
35	KY-35	78.2	Sound Level	77.8	Sound Level	78.5	Sound Level	78.5	Sound Level
36	KY-36	71.8	Sound Level	71.5	Sound Level	73	Sound Level	73	Sound Level
37	KY-37	81.1	Sound Level	80.9	Sound Level	81.5	Sound Level	81.5	Sound Level
38	KY-38	72.7	Sound Level	72.3	Sound Level	72.8	Sound Level	72.8	Sound Level
39	KY-39	82.1	Sound Level	81.7	Sound Level	81.9	Sound Level	81.9	Sound Level
40	KY-40	77	Sound Level	76.9	Sound Level	80	Sound Level	80	Sound Level
41	KY-41	76.1	Sound Level	75.7	Sound Level	73.2	Sound Level	77.2	Sound Level
42	KY-42	74.8	Sound Level	74.1	Sound Level	75.7	Sound Level	76	Sound Level
43	KY-43	82.4	Sound Level	81.9	Sound Level	82.3	Sound Level	82.4	Sound Level
44	KY-44	76.5	Sound Level	76.2	Sound Level	76.2	Sound Level	76.6	Sound Level
45	KY-45	83.8	Sound Level	83.3	Sound Level	83.5	Sound Level	83.9	Sound Level
46	KY-46	79.5	Sound Level	79.6	Sound Level	79.4	Sound Level	79	Sound Level
47	KY-47	83.6	Sound Level	83.1	Sound Level	83.5	Sound Level	83.5	Sound Level
48	KY-48	80.9	Sound Level	80.5	Sound Level	80.8	Sound Level	80.8	Sound Level
49	KY-49	75.5	Sound Level	74.7	Sound Level	72.8	Sound Level	75.5	Sound Level
50	KY-50	77.2	Sound Level	76.7	Sound Level	77.1	Sound Level	77.3	Sound Level
51	KY-51	81	Sound Level	80.3	Sound Level	n/a	Sound Level	80.4	Sound Level
52	KY-52	73.9	Sound Level	73.5	Sound Level	73.2	Sound Level	73.9	Sound Level
53	KY-53	74.2	Sound Level	73.8	Sound Level	73.9	Sound Level	74.9	Sound Level
54	KY-55	74.9	Sound Level	74.9	Sound Level	74.7	Sound Level	75.5	Sound Level
55	KY-56	71.9	Sound Level	72.4	Sound Level	72.8	Sound Level	72.8	Sound Level

**Table 5 Projected No Build and Build Alternatives B Noise (Leq) Levels (OH)**

No:	Site	2008 Existing (Leq)	2008 Impact	2035 No Build (Leq)	2035 No Build Impact	Difference 2035 No Build 2008 Existing	2035 Build Alt B (Leq)	2035 Build Alt B Impact
1	OH-1	69.2	Sound Level	76.5	Sound Level	7.3	78.6	Sound Level
2	OH-2	70.1	Sound Level	77.4	Sound Level	7.3	78.8	Sound Level
3	OH-3	72.5	Sound Level	n/a	n/a	n/a	71.4	Sound Level
4	OH-4	68	Sound Level	78.6	Sound Level	10.6	80.1	Sound Level
5	OH-5	72.3	Sound Level	72.5	Sound Level	0.2	75.4	Sound Level
6	OH-6	76	Sound Level	77.6	Sound Level	1.6	79.6	Sound Level
7	OH-7	72.5	Sound Level	n/a	n/a	n/a	74.3	Sound Level
8	OH-8	71.3	Sound Level	n/a	n/a	n/a	77	Sound Level
9	OH-9	74	Sound Level	75.4	Sound Level	1.4	78.8	Sound Level
10	OH-10	72.8	Sound Level	80.3	Sound Level	7.5	81.4	Sound Level
11	OH-11	64.6		65.7		1.1	71	Sound Level
12	OH-12	70.5	Sound Level	75.4	Sound Level	4.9	75.5	Sound Level
13	OH-13	70.6	Sound Level	77	Sound Level	6.4	78.3	Sound Level
14	OH-14	72	Sound Level	73.2	Sound Level	1.2	74.5	Sound Level
15	OH-16	73.8	Sound Level	76.2	Sound Level	2.4	77.6	Sound Level
16	OH-17	65.6		68.3	Sound Level	2.7	73.4	Sound Level

**Table 5 Projected No Build and Build Alternatives B Noise (Leq) Levels (OH)**

No:	Site	2008 Existing (Leq)	2008 Impact	2035 No Build (Leq)	2035 No Build Impact	Difference 2035 No Build 2008 Existing	2035 Build Alt B (Leq)	2035 Build Alt B Impact
17	OH-18	75.8	Sound Level	78.2	Sound Level	2.4	81	Sound Level
18	OH-20	69	Sound Level	71	Sound Level	2.0	76.6	Sound Level
19	OH-22	71.7	Sound Level	73.9	Sound Level	2.2	78.6	Sound Level
20	OH-25	69.2	Sound Level	70.7	Sound Level	1.5	73.8	Sound Level
21	OH-26	67.4	Sound Level	n/a	Sound Level	n/a	76.6	Sound Level
22	OH-27	71.5	Sound Level	74.1	Sound Level	2.6	76.9	Sound Level
23	OH-29	69.9	Sound Level	72.5	Sound Level	2.6	78.7	Sound Level
24	OH-31	76.2	Sound Level	78.8	Sound Level	2.6	81.8	Sound Level
25	OH-32	72.7	Sound Level	75.4	Sound Level	2.7	79.8	Sound Level
26	OH-33	75.4	Sound Level	77.8	Sound Level	2.4	82.6	Sound Level
27	OH-34	71.2	Sound Level	73.9	Sound Level	2.7	76.2	Sound Level
28	OH-35	69.1	Sound Level	n/a	Sound Level	n/a	77.1	Sound Level
29	OH-36	74.9	Sound Level	77.4	Sound Level	2.5	79.9	Sound Level
30	OH-37	74.1	Sound Level	76.6	Sound Level	2.5	78.9	Sound Level
31	OH-38	68.4	Sound Level	70.9	Sound Level	2.5	75.2	Sound Level
32	OH-39	74.9	Sound Level	77.4	Sound Level	2.5	80.3	Sound Level
33	OH-40	73.8	Sound Level	76.2	Sound Level	2.5	77.4	Sound Level
34	OH-41	77.6	Sound Level	79.8	Sound Level	2.2	80.8	Sound Level
35	OH-42	70	Sound Level	72.5	Sound Level	2.5	76.7	Sound Level
36	OH-43	69.3	Sound Level	71.8	Sound Level	2.5	73.6	Sound Level
37	OH-44	75.8	Sound Level	78	Sound Level	2.2	79.3	Sound Level
38	OH-45	73.5	Sound Level	75.9	Sound Level	2.4	77.5	Sound Level
39	OH-46	72.7	Sound Level	75.2	Sound Level	2.5	77.3	Sound Level
40	OH-47	67.2	Sound Level	69	Sound Level	1.8	71.8	Sound Level
41	OH-48	66.4	Sound Level	67.6	Sound Level	1.2	71.9	Sound Level
42	OH-49	68.3	Sound Level	n/a	n/a	n/a	68.8	Sound Level
43	OH-50	65.6		69.7	Sound Level	4.1	71.6	Sound Level
44	OH-51	74.7	Sound Level	76.9	Sound Level	2.2	77.6	Sound Level
45	OH-52	70.6	Sound Level	73.6	Sound Level	3.0	73.4	Sound Level
46	OH-53	65.7		70.9	Sound Level	5.2	72	Sound Level
47	OH-54	71.8	Sound Level	76.1	Sound Level	4.3	76.8	Sound Level
48	OH-55	75.4	Sound Level	79.8	Sound Level	4.4	80.6	Sound Level

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**Table 6 Projected Build Alternatives C, D, E & G Noise (Leq) Levels (OH)**

No:	Site	2035 Build Alt C (Leq)	2035 Build Alt C Impact	2035 Build Alt D (Leq)	2035 Build Alt D Impact	2035 Build Alt E (Leq)	2035 Build Alt E Impact	2035 Build Alt G	2035 Build Alt G Impact
1	OH-1	77.7	Sound Level	78.2	Sound Level	76.9	Sound Level	77.4	Sound Level
2	OH-2	77.9	Sound Level	78.3	Sound Level	77.1	Sound Level	77.5	Sound Level
3	OH-3	73.3	Sound Level	72.9	Sound Level	73.4	Sound Level	72	Sound Level
4	OH-4	78.8	Sound Level	78.9	Sound Level	78.6	Sound Level	79.2	Sound Level
5	OH-5	74.4	Sound Level	74.6	Sound Level	73.6	Sound Level	74.1	Sound Level
6	OH-6	78.4	Sound Level	78.5	Sound Level	77.5	Sound Level	78	Sound Level
7	OH-7	77.4	Sound Level	79.6	Sound Level	76	Sound Level	74.2	Sound Level
8	OH-8	76.7	Sound Level	77.9	Sound Level	76.1	Sound Level	76.7	Sound Level
9	OH-9	78	Sound Level	78.7	Sound Level	77.2	Sound Level	77.7	Sound Level
10	OH-10	80.4	Sound Level	80.8	Sound Level	79.6	Sound Level	80.1	Sound Level
11	OH-11	71	Sound Level	66.8	Sound Level	65.7		65.7	
12	OH-12	74.7	Sound Level	75.8	Sound Level	76	Sound Level	75.5	Sound Level
13	OH-13	77.3	Sound Level	77.8	Sound Level	79.9	Sound Level	77.9	Sound Level
14	OH-14	73.4	Sound Level	75.8	Sound Level	74.7	Sound Level	73.4	Sound Level
15	OH-16	76.3	Sound Level	76.2	Sound Level	77.1	Sound Level	76	Sound Level
16	OH-17	68.8	Sound Level	67.9	Sound Level	68.9	Sound Level	68.5	Sound Level
17	OH-18	80.4	Sound Level	78.2	Sound Level	78.9	Sound Level	80.1	Sound Level
18	OH-20	77.3	Sound Level	71.7	Sound Level	75.5	Sound Level	76	Sound Level
19	OH-22	78	Sound Level	78.5	Sound Level	77.3	Sound Level	77.9	Sound Level
20	OH-25	73.5	Sound Level	74.7	Sound Level	72.6	Sound Level	73.8	Sound Level
21	OH-26	76.2	Sound Level	77.3	Sound Level	75.6	Sound Level	76.4	Sound Level
22	OH-27	76	Sound Level	76.1	Sound Level	75.1	Sound Level	75.7	Sound Level
23	OH-29	78	Sound Level	78.4	Sound Level	77.4	Sound Level	78.2	Sound Level
24	OH-31	75.9	Sound Level	81.2	Sound Level	80.4	Sound Level	80.9	Sound Level
25	OH-32	79	Sound Level	79.1	Sound Level	78.4	Sound Level	79.1	Sound Level
26	OH-33	82	Sound Level	82.4	Sound Level	81.4	Sound Level	82	Sound Level
27	OH-34	74.7	Sound Level	75.1	Sound Level	74.4	Sound Level	74.8	Sound Level
28	OH-35	76.8	Sound Level	77.9	Sound Level	76.1	Sound Level	76.7	Sound Level
29	OH-36	79.7	Sound Level	77.6	Sound Level	77.8	Sound Level	78.8	Sound Level
30	OH-37	77.6	Sound Level	78	Sound Level	77.2	Sound Level	77.8	Sound Level
31	OH-38	74.6	Sound Level	74.3	Sound Level	73.7	Sound Level	74.4	Sound Level
32	OH-39	79.4	Sound Level	77.3	Sound Level	78.2	Sound Level	79.5	Sound Level
33	OH-40	76.8	Sound Level	76.5	Sound Level	76	Sound Level	76.5	Sound Level
34	OH-41	80	Sound Level	80.2	Sound Level	79.4	Sound Level	80	Sound Level
35	OH-42	72.9	Sound Level	72.9	Sound Level	72.4	Sound Level	72.6	Sound Level
36	OH-43	73.5	Sound Level	72.2	Sound Level	72.5	Sound Level	72.9	Sound Level
37	OH-44	78.3	Sound Level	78.6	Sound Level	77.4	Sound Level	77.9	Sound Level
38	OH-45	76.4	Sound Level	76.5	Sound Level	75.7	Sound Level	76.1	Sound Level
39	OH-46	75.4	Sound Level	75.2	Sound Level	75.5	Sound Level	76.3	Sound Level
40	OH-47	73.2	Sound Level	74	Sound Level	73.9	Sound Level	70.7	Sound Level
41	OH-48	67.9	Sound Level	67.3	Sound Level	68.1	Sound Level	68.1	Sound Level
42	OH-49	72.6	Sound Level	68.8	Sound Level	63.1		62.8	
43	OH-50	69.1	Sound Level	66.9	Sound Level	69.9	Sound Level	69.2	Sound Level
44	OH-51	76.9	Sound Level	76.9	Sound Level	76.9	Sound Level	77.2	Sound Level
45	OH-52	72.7	Sound Level	73.5	Sound Level	73.2	Sound Level	72.9	Sound Level
46	OH-53	69.6	Sound Level	69.5	Sound Level	69.9	Sound Level	69.3	Sound Level
47	OH-54	75.4	Sound Level	75.3	Sound Level	74.6	Sound Level	74.9	Sound Level
48	OH-55	79.2	Sound Level	79.9	Sound Level	79	Sound Level	79.8	Sound Level

## **9.0 NOISE LEVEL IMPACTS**

Receptor locations along the I-75/I-71 corridor were established at noise sensitive locations throughout the study area in Kentucky and Ohio. Sound Level impacts are based upon Activity Category B – 66 dBA criterion. Refer to Table 1 for both Kentucky and Ohio land use Federal Highway Administration (FHWA) - Activity Category types, when comparing impacts at certain receptor sites. While one receptor may not have an impact for an Activity Category B land use, it may be impacted for an Activity Category C land use. Knowing the land use type will help determine the potential noise impact at any receptor within Table 2. Potential impact locations are identified within Exhibits 8 and 9 in Kentucky, and also Exhibit 10 for the state of Ohio.

Table 3 indicates that, in 2008, existing noise levels approached or exceeded the FHWA Noise Abatement Criteria (NAC) of 66 dBA (Category B) at all but six noise receptors in Kentucky. These receptors include KY-5, 10, 11, 12, 29 and 30. Table 3 also indicates that receptors OH-11, 16, 42 and 46 did not approach or exceed the FHWA (NAC) of 66 dBA in Ohio in 2008.

In 2035, noise levels for the No Build Alternative approach or exceed the NAC of 66 dBA (Category B) at all receptor locations in Kentucky and Ohio. Noise levels for the No Build Alternative will approach or exceed the NAC of 71 dBA (Category C) at all but six noise receptors in Kentucky. Only receptors KY-4, 10, 19, 29, 30 and 32 fall below this criterion. In Ohio, noise receptors approach or exceed the FHWA NAC of 71 dBA at all but eight locations. These locations include receptors OH-11, 17, 25, 38, 47, 48, 50 and 53.

In 2035, noise levels for the conceptual alternatives approach or exceed the NAC of 66 dBA (Category B) at all receptor locations in Kentucky. Ohio has two receptors; OH-11 and OH-49 which fall under the NAC 66 dBA criterion for build alternatives E and G.

In 2035, noise levels for Alternative B approach or exceed the NAC of 71 dBA (Category C) at all but eight receptor locations in Kentucky. These locations include KY-2, 10, 14, 19, 29, 30, 32 and 46. In Ohio, noise levels for all conceptual alternatives would exceed 71 dBA at all but one receptor location, OH-49.

In 2035, noise levels for Alternative C approach or exceed the NAC of 71 dBA (Category C) at all but six noise receptor locations in Kentucky. These locations include KY-10, 14, 19, 29, 30, and 32. In Ohio, noise levels exceeding 71 dBA include all but four noise receptor locations OH-17, 48, 50 and 53.

In 2035, noise levels for Alternative D approach or exceed the NAC of 71 dBA (Category C) at all but seven noise receptor locations in Kentucky. These locations include KY-2, 10, 14, 19, 29, 30 and 32. In Ohio, noise levels exceeding 71 dBA include all but six noise receptor locations, OH-11, 16, 48, 49, 50 and 53.

In 2035, noise levels for Alternative E approach or exceed the NAC of 71 dBA (Category C) at all but six noise receptor locations in Kentucky. These locations include KY-10, 19, 29, 30, 31 and 32. In Ohio, noise levels exceeding 71 dBA include all but six noise receptors, receptors OH-11, 17, 48, 49, 50 and 53.