Appendix J

Noise Analysis Summary

Benting, Keith

From: Miller, Nita K <Nita.Miller@illinois.gov>
Sent: Monday, February 25, 2013 3:57 PM
To: Benting, Keith; Mary E Cave "Cave, Mary E" "Cave, Mary E" <MCave@decaturil.gov> (MCave@decaturil.gov)
Subject: FW: Decatur, 09-00933-00-BR, Brush College Road, Noise Analysis Report

Please see response below.

-----Original Message-----
From: Danmole, Salmon O
Sent: Monday, February 25, 2013 8:40 AM
To: Miller, Nita K
Subject: RE: Decatur, 09-00933-00-BR, Brush College Road, Noise Analysis Report

Good morning,

Checked and confirmed that type II is good.

Salmon O. Danmole, P.E.
Project Development Engineer
Bureau of Local Roads and Streets
Tel: 217-785-2798
Cel: 217-720-4406

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-----Original Message-----
From: Miller, Nita K
Sent: Thursday, February 21, 2013 3:18 PM
To: Danmole, Salmon O
Subject: FW: Decatur, 09-00933-00-BR, Brush College Road, Noise Analysis Report

Sal

Please see below for remarks and advise.

Nita

-----Original Message-----
From: Benting, Keith [mailto:keith.benting@urs.com]
Sent: Thursday, February 21, 2013 2:41 PM
To: Miller, Nita K
Cc: Mary E Cave "Cave, Mary E" "Cave, Mary E" <MCave@decaturil.gov> (MCave@decaturil.gov)
Subject: FW: Decatur, 09-00933-00-BR, Brush College Road, Noise Analysis Report

Nita,

According to our noise experts:

The noise meter used was a Type II, Quest, Model 2900 Integrating/Logging Sound Level Meter. For traffic noise readings, FHWA requires the use of Type II or better.

In the markup attached to yesterday's email, Sal had corrected the meter to a Type I, but the meter was a Type II.

Keith W. Benting, P.E., S.E.
Group Manager – Structures
URS Corporation
345 East Ash Ave.
Decatur, IL 62526
Phone: (217) 875-4800
FAX: (217) 875-3577
Email: keith.benting@urs.com

-----Original Message-----
From: Miller, Nita K [mailto:Nita.Miller@illinois.gov]
Sent: Wednesday, February 20, 2013 3:44 PM
To: Benting, Keith
Cc: Mary E Cave "Cave, Mary E" "Cave, Mary E" <MCave@decaturil.gov> (MCave@decaturil.gov)
Subject: FW: Decatur, 09-00933-00-BR, Brush College Road, Noise Analysis Report

Keith

Please see comments below and attached

Thanks

Nita Miller
LR&S Field Engineer
Phone 217-342-8325
email Nita.Miller@illinois.gov

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-----Original Message-----
From: Danmole, Salmon O
Sent: Wednesday, February 20, 2013 9:53 AM
To: Miller, Nita K

Subject: Decatur, 09-00933-00-BR, Brush College Road, Noise Analysis Report

Good morning,

I have reviewed the Noise Analysis report for the subject project. see attached for my minor comments. The report is found satisfactory.

Salmon O. Danmole, P.E.
Project Development Engineer
Bureau of Local Roads and Streets
Tel: 217-785-2798
Cel: 217-720-4406

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Noise Analysis Summary

The Brush College Road widening traffic noise analysis was based on FHWA and IDOT noise analysis and abatement policies. The project monitored existing noise levels in the corridor and verified that the noise model reasonably replicated existing noise levels at those locations. Existing, future 2035 no-build and future 2035 build scenario noise levels were predicted for all sensitive receptors in the corridor with the FHWA's Traffic Noise Model (TNM) v.2.5 software. The analysis identified all sensitive receptors that were predicted to approach or exceed the Noise Abatement Criteria (NAC). The analysis then evaluated noise abatement measures to mitigate noise levels where the NAC were approached or exceeded.

For the 2035 build scenario, it is predicted that 24 residences in seven (7) common noise environments would experience traffic noise levels that approach or exceed the Noise Abatement Criteria. Noise walls were evaluated for noise abatement feasibility and effectiveness according to IDOT's 2011 *Highway Traffic Noise Assessment Manual*. In all cases, the noise wall analysis indicated that abatement did not meet the criteria for reasonableness and / or feasibility.

As a planning tool to keep the future levels of noise exposure below Leq 66 dB(A) for Activity Category B and C uses, it is recommended that future development be located at least 80 feet from the Brush College Road edge of pavement.

Table J.1

Predicted Noise Levels for Identified Sensitive Receptors by Scenario

Receptor ID	Land Use	Noise Levels (dB(A)) by Scenario			Activity Category	Activity Leq Threshold	2035 Build Condition in Relation to NAC
		Existing	2035 No-Build	2035 Build			
1	Residence	59	60	60	B	67	No Impact
2	Restaurant	65	66	66	E	72	No Impact
3	Residence	56	58	58	B	67	No Impact
4	Residence	57	58	58	B	67	No Impact
5	Residence	54	55	57	B	67	No Impact
6	Residence	53	55	56	B	67	No Impact
7	Residence	55	57	58	B	67	No Impact
8	Residence	56	57	59	B	67	No Impact
9	Residence	56	58	59	B	67	No Impact
10	Residence	58	59	60	B	67	No Impact
11	Residence	58	60	61	B	67	No Impact
12	Residence	59	61	62	B	67	No Impact
13	Residence	61	63	63	B	67	No Impact
14	Cemetery	63	65	67	C	67	Impact
15	Health Clinic	69	70	*	C	67	Take
16	Residence	62	64	64	B	67	No Impact
17	Residence	64	66	65	B	67	No Impact
18	Residence	64	66	65	B	67	No Impact
19	Residence	65	67	66	B	67	Impact
20	Residence	67	68	69	B	67	Impact
21	Residence	67	68	68	B	67	Impact
22	Residence	66	67	67	B	67	Impact
23	Residence	65	67	67	B	67	Impact
24	Residence	68	70	70	B	67	Impact
25	Residence	68	69	69	B	67	Impact
26	Residence	66	67	67	B	67	Impact
27	Residence	62	64	63	B	67	No Impact
28	Residence	66	68	67	B	67	Impact
29	Residence	51	52	52	B	67	No Impact
30	Residence	65	67	66	B	67	Impact
31	Residence	66	67	66	B	67	Impact
32	Residence	66	67	67	B	67	Impact
33	Residence	67	69	69	B	67	Impact
34	Residence	66	68	67	B	67	Impact
35	Residence	66	68	67	B	67	Impact

Table J.1

Predicted Noise Levels for Identified Sensitive Receptors by Scenario (continued)

Receptor ID	Land Use	Noise Levels (dB(A)) by Scenario			Activity Category	Activity Leq Threshold	2035 Build Condition in Relation to NAC
		Existing	2035 No-Build	2035 Build			
36	Residence	67	68	68	B	67	Impact
37	Residence	67	68	68	B	67	Impact
38	Residence	67	69	69	B	67	Impact
39	Residence	66	68	68	B	67	Impact
40	Restaurant	66	68	68	E	72	No Impact
41	Restaurant	66	68	68	E	72	No Impact
42	School	60	61	62	C	67	No Impact
43	Residence	64	65	63	B	67	No Impact
44	Residence	57	59	59	B	67	No Impact
45	Church	62	64	64	C	67	No Impact
46	Residence	62	64	64	B	67	No Impact
47	Residence	62	64	64	B	67	No Impact
48	Residence	64	66	66	B	67	Impact
49	Residence	63	64	64	B	67	No Impact
50	Residence	64	66	65	B	67	No Impact
51	Residence	66	67	66	B	67	Impact
52	Residence	59	60	60	B	67	No Impact
53	Church	67	69	67	C	67	Impact
54	Church	64	65	65	C	67	No Impact
55	Residence	56	57	58	B	67	No Impact
56	Residence	67	69	*	B	67	Take
57	Residence	59	60	61	B	67	No Impact
58	Residence	57	58	60	B	67	No Impact
59	Residence	55	57	59	B	67	No Impact
60	Residence	66	67	*	B	67	Take
61	Residence	62	63	*	B	67	Take
62	Residence	62	63	*	B	67	Take
63	Residence	59	61	61	B	67	No Impact
64	Residence	51	52	54	B	67	No Impact
65	Bar	69	70	*	E	72	Take
66	Restaurant	67	69	*	E	72	Take
67	Cemetery	69	70	67	C	67	Impact
68	Residence	58	59	58	B	67	No Impact
69	Residence	59	60	58	B	67	No Impact
70	Residence	63	64	61	B	67	No Impact
71	Office	48	49	50	E	71	No Impact

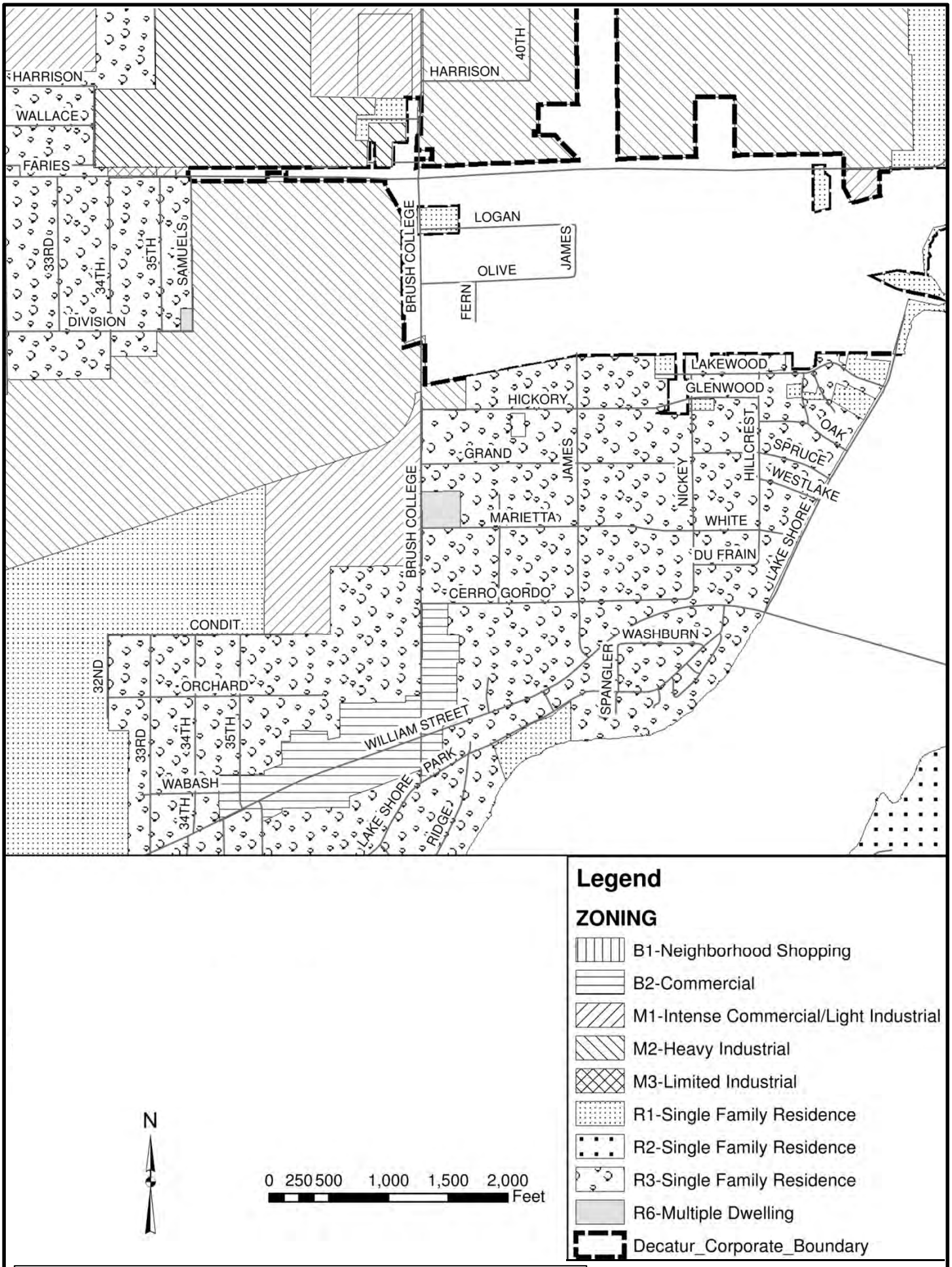

Figure J-1: Zoning Map of Brush College Corridor

Figure J-2: Common Noise Environments (CNE) and Sensitive Receptors

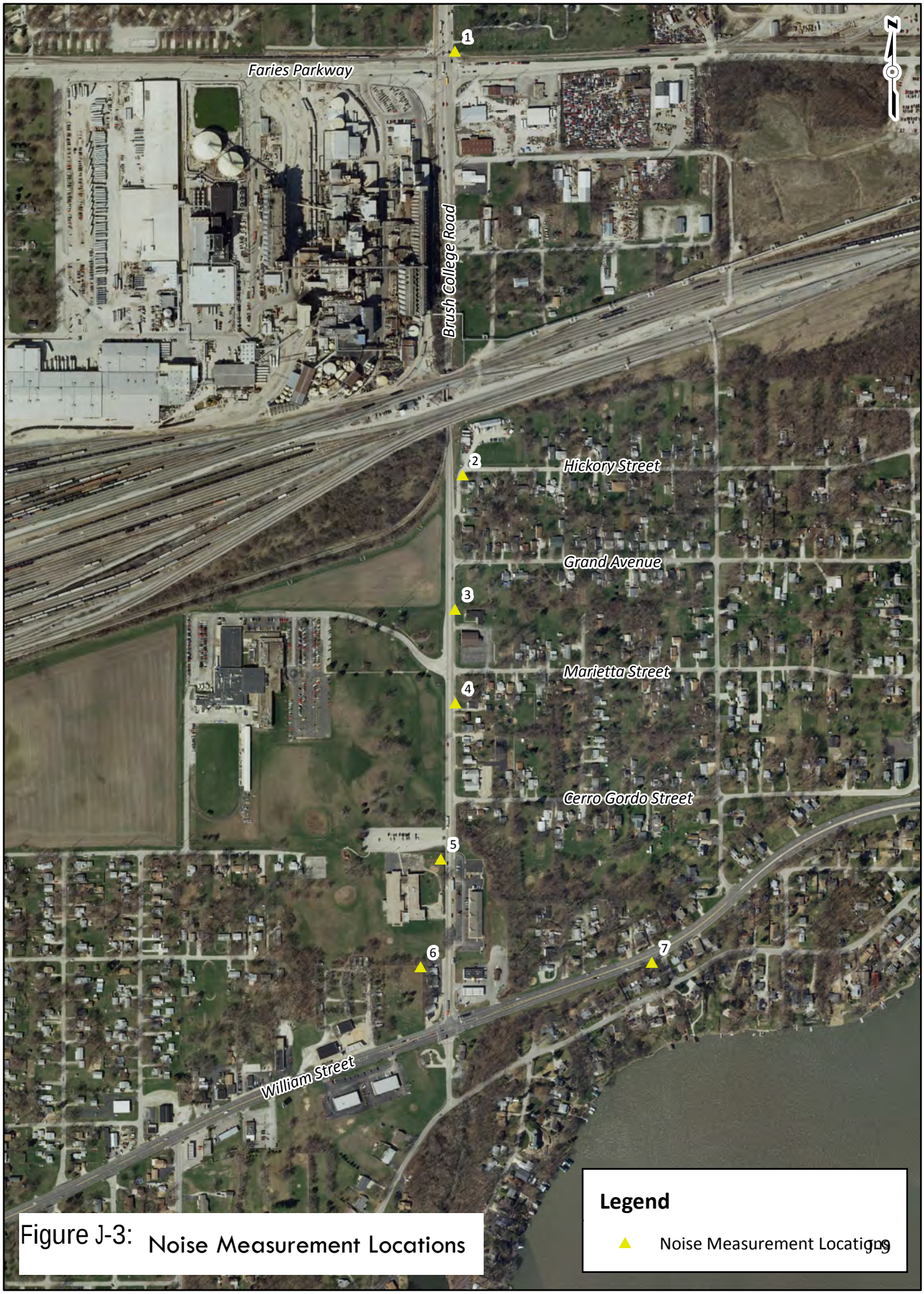

Figure J-3: Noise Measurement Locations

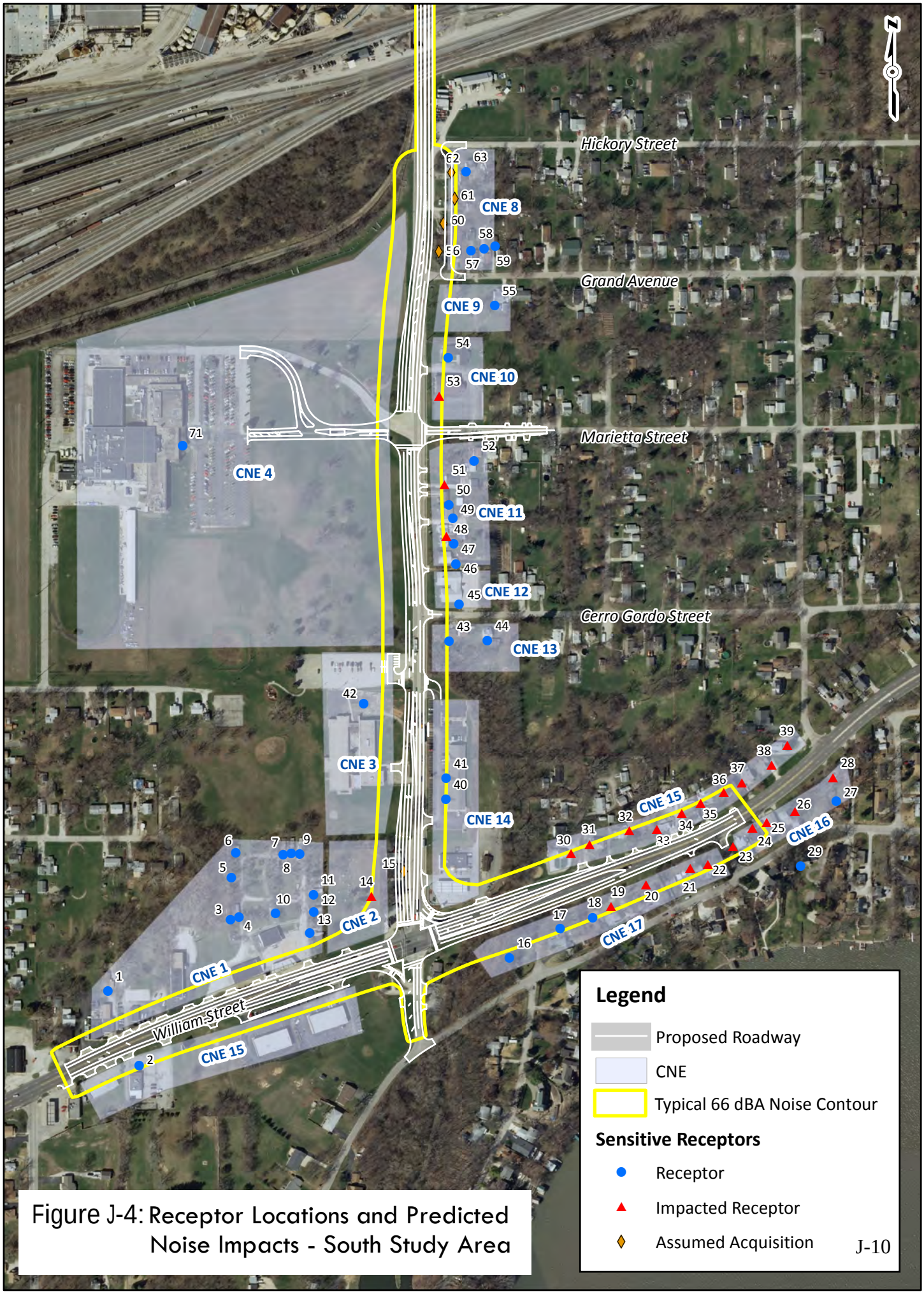

Figure J-4: Receptor Locations and Predicted Noise Impacts - South Study Area

Figure J-5: Receptor Locations and Predicted Noise Impacts - North Study Area