Appendix I

Traffic Noise Analysis Report

Traffic Noise Analysis Report

for

I-35W North Corridor Preliminary Design Project
(County Road C to Sunset Avenue)
S.P. 6284-172

In the Cities of Roseville, New Brighton, Arden Hills, Mounds View, Shoreview, Lexington, Blaine, and Lino Lakes
And the Counties of Ramsey and Anoka, Minnesota

April 2016

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I-35W North Corridor Preliminary Design Project
Traffic Noise Analysis Report

The purpose of this noise analysis is to document the effect of the proposed Interstate 35W (I-35W) North Corridor Preliminary Design Project on traffic generated noise levels. This traffic noise analysis was completed consistent with the requirements and guidance of the Minnesota Department of Transportation (MnDOT) traffic noise policy.

Federal and state funding sources are included in the proposed project. An Environmental Assessment (EA) has been prepared to fulfill the requirements of both the federal National Environmental Policy Act (NEPA) and state environmental review process. Traffic noise impacts of the project will be evaluated based on Federal Noise Abatement Criteria and Minnesota State Noise Standards (see discussion in Chapter 1).

Chapter 1: Introduction

General Project Description

The project is located in the cities of Roseville, New Brighton, Mounds View, Arden Hills, Shoreview, Lexington, Blaine, and Lino Lakes in Anoka and Ramsey counties, Minnesota (see Figure 1). The total project length is approximately 12.8 miles. The proposed project includes the following:

- Construction of a new MnPASS lane in each direction within the center median of I-35W from County Road (CR) C in Roseville to Lexington Avenue in Blaine;
- Pavement rehabilitation along I-35W and I-35W interchange ramps from north of CR C to north of Sunset Avenue in Lino Lakes;
- Replacement of the I-35W bridges over the BNSF Railway/Rosegate, CR C, and CR I;
- Construction of auxiliary lanes between interchanges at various locations along the I-35W project corridor;
- Construction of an auxiliary lane along westbound Trunk Highway (TH) 10 from I-35W to the 93rd Avenue interchange; and
- Construction of stormwater ponds at various locations along the I-35W project corridor.

Background Information on Noise

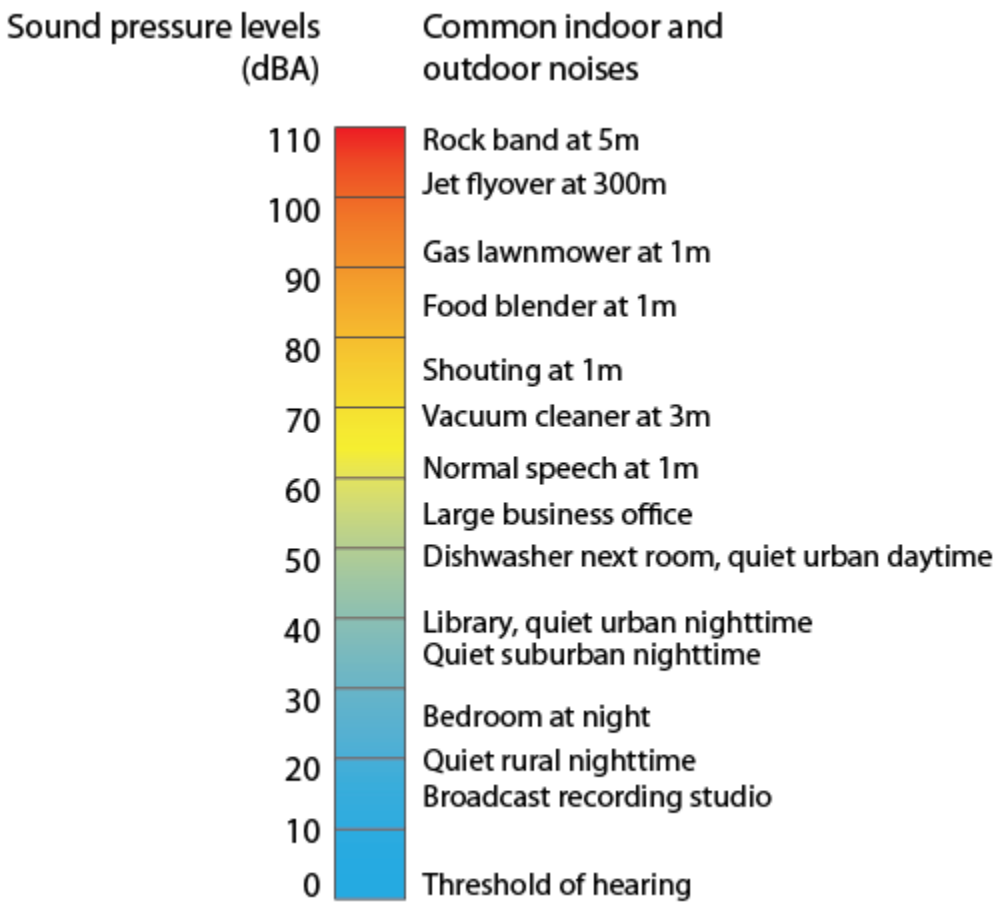
Noise is defined as any unwanted sound. Sound travels in a wave motion and produces a sound pressure level that is commonly measured in decibels (dB). A logarithm of the ratio of a sound energy level relative to a reference sound energy is a decibel. Sound levels are measured in A-weighted decibels (dBA), an adjustment of the high-and-low pitched sound that reflects the way that the average person hears sound. A sound increase of 3 dBA is barely noticeable by the average person, a sound increase of 5 dBA is clearly noticeable, and a 10 dBA increase is

considered to be twice as loud. If a 3 dBA increase was recorded on a roadway segment, it would be inferred that the traffic on that roadway doubled. If a 10 dBA increase was recorded on a roadway segment then it would be inferred that the traffic increased by about 10 times the original amount.

Minnesota evaluates traffic noise impacts by measuring and/or modeling the traffic noise levels that are exceeded 10 percent and 50 percent of the time during the hours of the day and/or night that have the loudest traffic noise levels. The noise level that is exceeded for a total of 10 percent of an hour (six minutes) is the L_{10} value. The noise level that is exceeded for a total of 50 percent of an hour (30 minutes) is the L_{50} value.

Table 1 shows a rough comparison of the noise levels of some common noise sources.

Table 1 - Decibel Levels of Common Sources



Source: "A Guide to Noise Control in Minnesota," Minnesota Pollution Control Agency, https://www.pca.state.mn.us/sites/default/files/p-gen6-01.pdf

There are many factors that contribute to the loudness of traffic noise, including the topography of the area, the number and speed of vehicles, and the percentage of medium/heavy trucks. Another important factor is the distance the receptor is from the source of the sound. As the distance from the source increases, the sound level decreases. Doubling the distance from the line source over hard ground (such as pavement or water) will reduce the sound level by 3 dBA. Doubling the distance over soft ground (such as vegetated or grassy ground) will result in a decrease in the sound level of 4.5 dBA. The change in sound level due to doubling the distance is used generally when the distance from the line source is greater than approximately 50 feet.

Federal Traffic Noise Regulations

23 Code of Federal Regulations (CFR) Part 772 (Procedures for Abatement of Highway Traffic Noise and Construction Noise) describes the Federal Highway Administration's (FHWA) traffic noise regulation. 23 CFR 772 requires the identification of highway traffic noise impacts and the evaluation of potential noise abatement measures, along with other considerations, in conjunction with the planning and design of a Federal-aid highway project. The MnDOT policy for implementation of the requirements of 23 CFR 772 is described in the *MnDOT Noise Policy for Type I Federal-aid Projects* (effective June 15, 2015). The *MnDOT Highway Noise Policy* applies to all projects that receive Federal-aid funds or projects that are subject to FHWA approval.

A traffic noise impact analysis is required for all Type I Federal-aid projects. Type I projects are defined in 23 CFR 772.5. The proposed project meets the definition of a Type I project (i.e., the addition of through traffic lanes on I-35W between CR C and Lexington Avenue and the addition of auxiliary lanes). Therefore, a traffic noise analysis following the requirements of 23 CFR 772 is required for the I-35W North Corridor Preliminary Design Project.

Land use activities and predicted highest hourly L_{10} noise levels under future conditions at modeled receptor locations determines traffic noise impacts. **Table 2** shows the Federal Noise Abatement Criteria (L_{10}). Receptor locations where noise levels are "approaching" or exceeding the criterion levels listed in **Table 2** must be evaluated for noise abatement feasibility and reasonableness. A noise impact is also defined as a "substantial increase" in the future modeled noise levels over the existing modeled noise levels. In Minnesota, "approaching" is defined as 1 dBA or less below the Federal noise abatement criteria. For example, 69 dBA (L_{10}) is defined as "approaching" the Federal noise abatement criteria for residential land uses (activity category B). A "substantial increase" is defined as an increase of 5 dBA or greater from existing to future conditions.

Table 2 – 23 CFR Part 772: Federal Noise Abatement Criteria

Activity Category	Activity Criteria [1] [2] L_{10}(h)	Evaluation Location	Activity Description
A	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential, if the area is to continue to serve its intended purpose
B [3]	70	Exterior	Residential
C [3]	70	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings
D	55	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios
E [3], [4]	75	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
F	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	--	--	Undeveloped lands that are not permitted

(1) In Minnesota, traffic noise impacts are determined using the hourly L_{10} value.
(2) The L_{10}(h) Activity Criteria values are for impact determination only and are not design standards for noise abatement measures.
(3) Includes undeveloped lands permitted for this activity category.
(4) Hotels and motels that function as apartment buildings are classified under Activity Category B.

Minnesota State Noise Standards

The Minnesota state noise standards have been established for both daytime and nighttime periods. The Minnesota Pollution Control Agency (MPCA) defines daytime as 7:00 AM to 10:00 PM and nighttime as 10:00 PM to 7:00 AM. There are three noise area classifications (NACs)

within the Minnesota state noise standards. These include Residential (NAC-1), Commercial (NAC-2), and Industrial (NAC-3). The Minnesota state noise standards include both the L_{10} and L_{50} values for the daytime and nighttime loudest hours. **Table 3** shows the Minnesota state noise standards.

Table 3 – Minnesota State Noise Standards

Noise Area Classification	**Code**	**Daytime (7:00 AM – 10:00 PM) dBA**		**Nighttime (10:00 PM – 7:00 AM) dBA**	
1	**NAC-1** (1)	L_{10} of 65	L_{50} of 60	L_{10} of 55	L_{50} of 50
2	**NAC-2** (2)	L_{10} of 70	L_{50} of 65	L_{10} of 70	L_{50} of 65
3	**NAC-3** (3)	L_{10} of 80	L_{50} of 75	L_{10} of 80	L_{50} of 75

(1) NAC-1 includes household units, transient lodging and hotels, educational, religious, cultural, entertainment, camping, and picnicking land uses. Note the daytime standards apply during the nighttime for NAC-1 activities that do not include overnight sleeping/lodging.
(2) NAC-2 includes retail and restaurants, transportation terminals, professional offices, parks, recreational, and amusement land uses.
(3) NAC-3 includes industrial manufacturing, transportation facilities (except terminals), and utilities land uses.

State noise standards apply to all Interstate and trunk highways in Minnesota. The proposed project includes reconstruction of I-35W and construction of a new auxiliary lane on US 10 west of I-35W. Therefore, traffic noise impacts of the project will also be identified based on State daytime and nighttime standards.

Chapter 2: Analysis Methodology

Affected Environment

The proposed project is located in Ramsey and Anoka Counties, including the cities of Roseville, New Brighton, Arden Hills, Mounds View, Shoreview, Lexington, Blaine, and Lino Lakes. Existing land uses along the project corridor include residential, commercial, and industrial. There are also several trails located in the project corridor:

- On the east side of I-35W south of County Road D
- On the west side of I-35W and north of Abele Street
- On the east side of I-35W between CR H and 85th Avenue
- Next to Centennial Green Park on the east side of I-35W

For the purposes of this traffic noise analysis, the study limits begin approximately 1200 feet south of the I-35W bridges over County Road C and end approximately 500 feet north of Sunset Avenue.

Noise Measurements

Noise Level Measurement Results

Noise level measurements were completed to analyze existing noise at selected locations throughout the corridor and to ensure the noise model is accurately modeling existing noise levels. For this project, noise levels were measured at nine locations along the corridor. These nine sites were selected because they are representative of the surrounding area and the typical cross section for that section of highway. The sites are described below and illustrated in **Figure 1.**

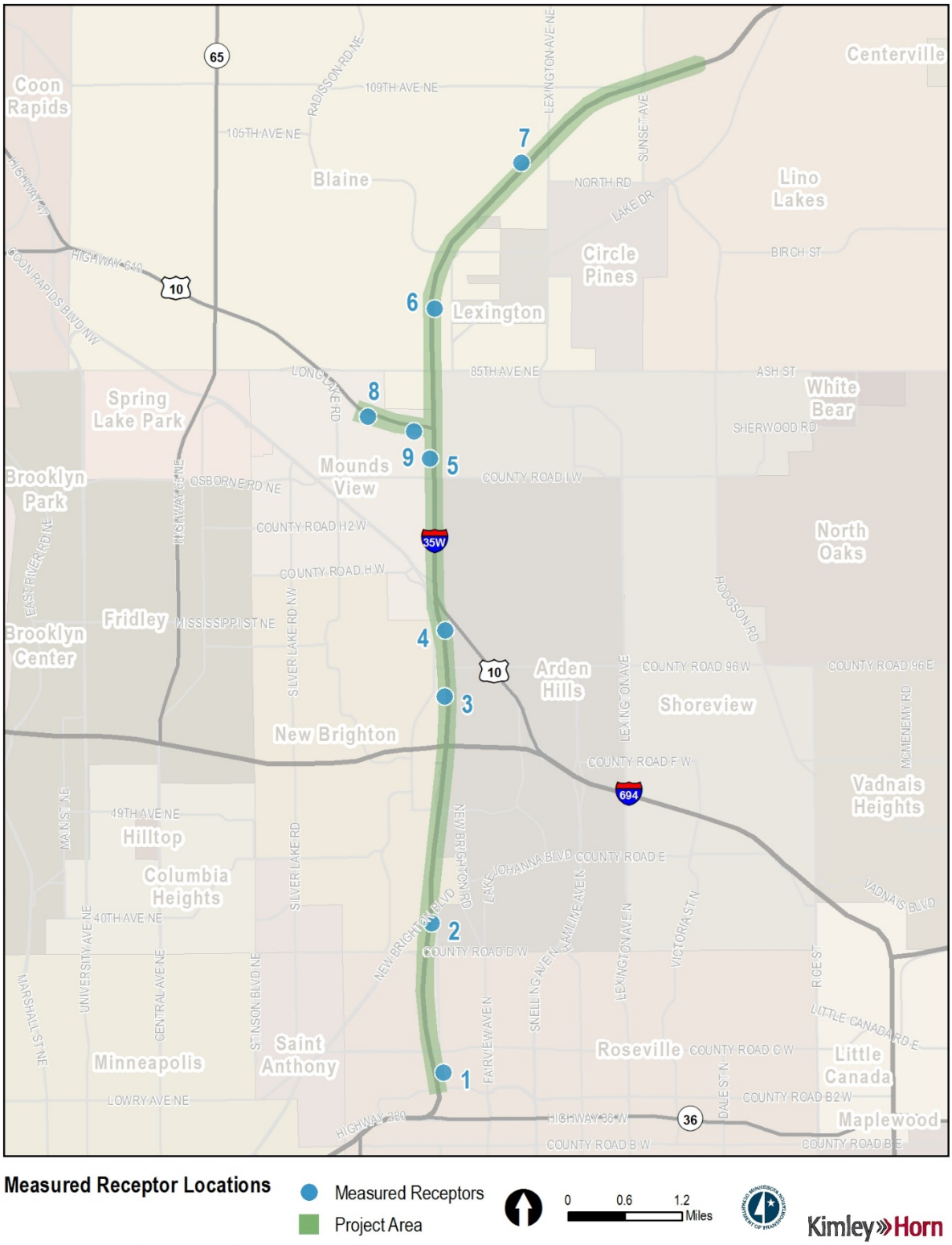
- Measured Site 1: This site represents commercial sites along the eastern side of I-35W.
- Measured Sites 2 – 5: Each one of these sites was chosen to represent an area of dense residential land use.
- Measured Sites 6 and 7: These sites were chosen because they represent residential areas. The northern part of the project does not have any unique features along the road.
- Measured Sites 8 and 9: These sites were added later in the project after a geometric alternative extended the project limits onto US 10. Site 9 sits in a very densely populated residential area where there is currently an existing wall to the east.

Daytime noise levels were collected April through June, 2015 at the nine measurement sites described above. Noise levels were collected at each location twice; once during the morning and again during the afternoon. A trained noise measurement technician was present for the entire field measurement session to ensure correct operation of the sound level meter (SLM). The average of the morning and afternoon measured levels are presented below in **Table 4**. Measured daytime traffic noise levels ranged from 61.9 dBA (L10) to 78.5 dBA (L10).

Table 4: Daytime Field Measurement Summary

Measured Site ID	Location Description	Measured Level, L_{10} (dBA)	Measured Level, L_{50} (dBA)
1	Commercial land use on the east side of I-35W near County Road C in Roseville	62.9	60.1
2	Residential land use on the east side of I-35W near New Brighton Blvd in Arden Hills	75.3	72.7
3	Commercial land use on the west side of I-35W near County Road 96 in New Brighton	78.5	75.3
4	Residential land use on the east side of I-35W south of US 10/I-35W interchange in Arden Hills	66.0	64.0
5	Residential land use on the west side of I-35W south of the northern US 10/I-35W interchange in Mounds View	67.8	65.6
6	Residential land use on the east side of I-35W near Lake Drive in Lexington	72.9	69.5
7	Commercial land use on the west side of I-35W near Lexington Avenue in Blaine	69.5	64.3
8	Residential land use on the southern side of US 10 near Long Lake Road in Mounds View	74.9	71.2
9	Residential land use on the southern side of US 10 near the northern US 10/I-35W interchange in Mounds View	61.9	58.5

Figure 1: Field Measured Validation Sites



Field Measurement and Predicted Noise Levels

Noise measurement results are presented in **Table 5** along with the computer modeling results for existing daytime traffic noise levels. Computer modeling results are based on classified traffic (e.g., cars, medium trucks, and heavy trucks) observed during the field measurements. The speeds used for the model predictions were existing posted speeds. Noise measurement results presented in **Table 5** are an average of the applicable morning and afternoon field measurements described above.

Table 5: Noise Model Validation Summary

Measurement Site ID	Measured Value, L_{10}, dBA	Modeled Value, L_{10}, dBA	Difference	Validated?
1	62.9	65.7	-2.8	Y
2	75.3	73.6	1.7	Y
3	78.5	75.8	2.7	Y
4	66.0	65.4	0.6	Y
5	67.8	68.6	-0.8	Y
6	72.9	73.1	-0.2	Y
7	69.5	69.9	-0.4	Y
8	74.9	73.3	1.6	Y
9	61.9	63.0	-1.1	Y

A discrepancy equal to or less than 3.0 dBA between field measurements and predicted levels is considered acceptable for noise model validation. Measured traffic noise levels (L_{10}) varied from 2.8 dBA below predicted noise levels at Measurement Site 1 to 2.7 dBA above predicted levels at Measurement Site 3. Predicted traffic noise levels for all nine measurement sites were within the 3.0 dBA threshold noted above; therefore, the prediction model was considered validated and was utilized without corrections.

Highest Hourly Traffic Noise Analysis

In general, higher traffic volumes, vehicle speeds, and greater numbers of heavy trucks increase the loudness of highway traffic noise. The highest hourly traffic noise impact typically occurs when traffic is flowing more freely (e.g., no congestion, level of service C conditions) and when heavy truck volumes are the greatest.

The highest traffic noise hour was determined for the I-35W North Corridor Preliminary Design Project by completing a 24-hour noise measurement at one site along the corridor. This was then verified by running the noise modeled using the two highest hourly volumes when no congestion occurs. Based on the 24-hour noise measurements, the sound levels were the loudest and were found to remain relatively consistent between 10:00 AM and 3:00 PM. This correlated well with the two highest truck percentage and speeds during hours of 11:00 AM and 2:00 PM. The receptors that were modeled correlate to the field measurement sites. Based on the loudest hour comparison, 2:00 PM was chosen because the overall noise levels are louder than the 11:00 AM

levels. Truck percentages and vehicles speeds were adjusted in the noise models to match existing truck percentages and speeds along the corridor based on loop detector data along I-35W. The results of the comparison can be seen below in **Table 6**.

Table 6: Loudest Hour Comparison

Report ID	State NAC	Federal Activity Category	11:00 AM		2:00 PM	
			L_{10}	L_{50}	L_{10}	L_{50}
1	NAC-1	Activity E	**68.1**	**65.4**	**68.3**	**65.9**
2	NAC-1	Activity B	**73.8**	**70.1**	**73.8**	**70.6**
3	NAC-3	Activity F	76.4	72.5	77.3	73.6
4	NAC-1	Activity B	**66.2**	**63.3**	**66.5**	**63.9**
5	NAC-1	Activity B	**69.8**	**66.5**	**70.0**	**67.1**
6	NAC-1	Activity B	**72.9**	**67.8**	**74.3**	**69.8**
7	NAC-2	Activity E	**70.3**	**65.6**	**71.5**	**67.2**
8	NAC-1	Activity B	**73.3**	**68.3**	**73.7**	**69.2**
9	NAC-1	Activity B	63.2	**61.0**	64.1	**62.1**
Boldfaced receptors exceed the Minnesota state noise standards and underlined receptors approach or exceed the federal noise abatement criteria						

Traffic Noise Modeling

Noise modeling was completed using Minnoisev31, a version of FHWA's STAMINA model adapted by MnDOT. Minnoisev31 uses basic inputs to model existing noise levels and to predict future noise levels. It also uses elevations of roadways and receptors to capture ground lines and grade changes. The noise model was run for existing conditions (2015), No Build conditions (2040), and Build conditions (2040). Each model was run for daytime (2:00 – 3:00 PM) and nighttime (6:00 – 7:00 AM) hours. All traffic volumes used in the noise model were gathered from the corridor simulation (CORSIM) traffic modeling completed for the project.

Chapter 3: Predicted Noise Levels and Noise Impacts

Noise Receptors

Traffic noise impacts were analyzed by modeling noise levels at receptor sites likely to be affected by the proposed project. Traffic noise levels were modeled at 2,195 receptor locations along the project corridor, representing residential, commercial retail, business office, industrial, institutional (schools, churches), and recreational (trails) uses. Modeled receptor locations are illustrated in **Appendix A**. Land uses associated with modeled receptor location are also identified in the noise analysis results tables in **Appendix B**.

For purposes of evaluating noise walls, the project corridor was broken down into a series of groups, or areas. These areas represent locations between adjacent interchanges and/or intersecting roadways. A total of 27 areas were identified along the project corridor, including

the segment of US 10 west of I-35W. Each area was assigned a unique identification (alphabetically), beginning with "A" at the south end of the corridor near CR C in Roseville to "N" at the north end of the corridor at Sunset Avenue in Lino Lakes. Each area was then subdivided into locations adjacent to southbound I-35W ("S") and locations adjacent to northbound I-35W ("N").

An overview of the 27 areas is illustrated in **Figures 2a – 2c**. Each area is described below, including a summary of land uses and corresponding federal activity categories (see **Table 2**) and state noise area classifications (see **Table 3**).

Area A

- Area SA is located on the west side of I-35W between CR B2 and CR C in Roseville. Six (6) modeled receptor locations were identified in Area SA, representing industrial (state NAC-3, federal activity category F) and office (NAC-2, federal activity category E) uses.

- Area NA is located on the on the east side of I-35W, approximately between CR B2 and CR C in Roseville. Eight (8) model receptor locations were identified in Area NA, representing a hotel (state NAC-1, federal activity category E), a medical office (state NAC-2, federal activity category C), restaurants (state NAC-2, federal activity category E), and retail commercial uses (state NAC-2, federal activity category F).

Area B

- Area SB is located on the west side of I-35W approximately between CR C and CR D in Roseville. Five (5) modeled receptor locations were identified in Area SB, representing retail commercial (state NAC-2, federal activity category F) and industrial (state NAC-3, federal activity category F) uses.

- Area NB is located on the east side of I-35W approximately between CR C and CR D in Roseville. Thirty-four (34) modeled receptor locations were identified in Area NB. Nine of the 34 modeled receptor locations represent hotel (state NAC-1, federal activity category E), office (state NAC-2, federal activity category E), medical (state NAC-2, federal activity category C), and retail commercial uses (state NAC-2, federal activity category F). Twenty-five (25) of the 34 modeled receptor locations in Area NB represent a recreational trail (state NAC-2, federal activity category C) located adjacent to the highway right of way.

Area C

- Area SC is located on the west side of I-35W approximately between CR and the Canadian Pacific Railway Bridge next to Perry Park in New Brighton. Ten (10) modeled receptor locations were identified in Area SC, representing office (state NAC-2, federal activity category E) and industrial uses (NAC-3, federal activity category F).

- Area NC is located on the east side of I-35W approximately between CR D and the Canadian Pacific Railway Bridge in Arden Hills. Two hundred forty-six (246) modeled

receptor locations were identified in Area NC, representing residential (state NAC-1, federal activity category B), office (state NAC-2, federal activity category E), commercial retail (state NAC-2, federal activity category F), and industrial uses (NAC-3, federal activity category F). Nearly 95 percent all of the modeled receptor locations in Area NC represent residential uses, including an apartment complex south of the CR 88 ramps and another apartment complex north of the CR 88 ramps. For each apartment building, modeled receptors were located on the balconies of first, second, and third floor apartment units.

Area D

- Area SD is located on the west side of I-35W approximately between the railroad bridge next to Perry Park and 5th Street NW in New Brighton. Six (6) modeled receptor locations were identified in Area SD, representing office (state NAC-2, federal activity E), retail (state NAC-2, federal activity F), and industrial (state NAC-3, federal activity F).

- Area ND is located on the east side of I-35W approximately between the railroad bridge next to Perry Park and CR E2 in Arden Hills. Twelve (12) modeled receptor locations were identified in Area ND, representing residential (state NAC-1, federal activity B) and office (state NAC-2, federal activity E).

Area E

- Area SE is located on the east side of I-35W approximately between 5th Street NW and 10th Street NW in New Brighton. One hundred and thirty-nine (139) modeled receptor locations were identified in Area SE, representing residential (state NAC-1, federal activity category B) including an apartment complex with a receptor located on each floors balcony, medical office (state NAC-2, federal activity C), and education (state NAC-1, federal activity C) .

Area F

- Area SF is located on the east side of I-35W approximately between I-694 and CR 96 in New Brighton. Eight (8) modeled receptor locations were identified in Area SF, representing office (state NAC-2, federal activity category E), commercial retail (state NAC-2, federal activity F), industrial (state NAC-3, federal activity F), medical (state NAC-2, federal activity C), and hotel (state NAC-1, federal activity E).

- Area NF is located on the west side of I-35W approximately between I-694 and CR 96 in Arden Hills. Six (6) modeled receptor locations were identified in Area NF, representing office (state NAC-2, federal activity category E) and industrial (state NAC-3, federal activity F).

Area G

- Area SG is located on the west side of I-35W approximately between CR 96 and CR H in Mounds View. Forty-five (45) modeled receptor locations were identified in Area SG,

representing residential (state NAC-1, federal activity category B), commercial retail (state NAC-2, federal activity F), industrial (state NAC-3, federal activity F), office (state NAC-2, federal activity E), and recreational trail (state NAC-2, federal activity category C).

- Area NG is located on the east side of I-35W approximately between CR 96 and US 10 in Arden Hills. Ninety (90) modeled receptor locations were identified in Area NG, representing mostly residential (state NAC-1, federal activity category B) and one industrial receptor (state NAC-3, federal activity F).

Area H

- Area SH is located on the west side of I-35W approximately between CR H and CR I in Mounds View. One hundred fifty-two (152) modeled receptor locations were identified in Area SH, representing residential (state NAC-1, federal activity category B), commercial retail (state NAC-2, federal activity F), restaurant (state NAC-2, federal activity E), education (state NAC-1, federal activity C), and industrial (state NAC-3, federal activity F).

- Area NH is located on the east side of I-35W approximately between CR H and CR I in Arden Hills. Twenty-four (24) modeled receptor locations were identified in Area NH, representing recreation (state NAC-2, federal activity category C) and office (state NAC-2, federal activity E).

Area I

- Area SI is located on the west side of I-35W approximately between CR I, 85th Avenue, and Greenfield Park in Mounds View. Three hundred thirty-eight (338) modeled receptor locations were identified in Area SI, representing residential (state NAC-1, federal activity category B), recreation (state NAC-2, federal activity C), and industrial (state NAC-3, federal activity F).

- Area NI is located on the east side of I-35W approximately between CR I and 85th Avenue in Shoreview. Forty-two (42) modeled receptor locations were identified in Area NI, representing residential (state NAC-1, federal activity category B), recreational (state NAC-2, federal activity C), and hotel (state NAC-1, federal activity E).

Area J

- Area SJ is located on the west side of I-35W approximately between Greenfield Park and Sunset Avenue in Mounds View. Ninety-one (91) modeled receptor locations were identified in Area SJ, representing residential (state NAC-1, federal activity category B) and recreation (state NAC-2, federal activity C).

- Area NJ is located on the east side of I-35W approximately between Greenfield Park and Sunset Avenue in Mounds View. Two (2) modeled receptor locations were identified in

Area NJ, representing recreation (state NAC-2, federal activity category C) and office (state NAC-2, federal activity E).

Area K

- Area SK is located on the west side of I-35W approximately between 85th Avenue NE and CR 95th Avenue NE in Blaine. Nineteen (19) modeled receptor locations were identified in Area SK, representing residential (state NAC-1, federal activity category B), commercial retail (state NAC-2, federal activity F), office (state NAC-2, federal activity E), and industrial (state NAC-3, federal activity F).

- Area NK is located on the east side of I-35W approximately between 85th Avenue NE and 95th Avenue NE in Blaine. Five hundred sixty-one (561) modeled receptor locations were identified in Area NK, representing residential (state NAC-1, federal activity category B), industrial (state NAC-3, federal activity F), and office (state NAC-2, federal activity E).

Area L

- NSA SL is located on the west side of I-35W approximately between 95th Avenue NE and Lexington Avenue in Blaine. Two (2) modeled receptor locations were identified in Area SL, representing office (state NAC-2, federal activity category E) and education (state NAC-1, federal activity C).

- Area NL is located on the east side of I-35W approximately between 95th Avenue NE and Lexington Avenue in Blaine. One hundred twenty-two (122) modeled receptor locations were identified in Area NL, representing residential (state NAC-1, federal activity category B), recreation (state NAC-2, federal activity C), education (state NAC-1, federal activity C), commercial retail (state NAC-2, federal activity F), and restaurant (state NAC-2, federal activity E).

Area M

- Area SM is located on the west side of I-35W approximately between Lexington Avenue and Sunset Avenue in Blaine. Eighteen (18) modeled receptor locations were identified in Area SM, representing restaurant (state NAC-2, federal activity category E), commercial retail (state NAC-2, federal activity F), and office (state NAC-2, federal activity E).

- Area NM is located on the east side of I-35W approximately between Lexington Avenue and Sunset Avenue in Blaine. Fifty (50) modeled receptor locations were identified in Area NM, representing residential (state NAC-1, federal activity category B), recreation (state NAC-2, federal activity C), and industrial (state NAC-3, federal activity F).

Area N

- Area SN is located on the west side of approximately between Sunset Avenue and 0.5 miles east of Sunset Avenue in Lino Lakes. Sixty-seven (67) modeled receptor locations

were identified in Area SN, representing residential (state NAC-1, federal activity category B).

- Area NN is located on the east side of I-35W approximately between Sunset Avenue and 0.5 miles east of Sunset Avenue in Lino Lakes. Ninety-three (93) modeled receptor locations were identified in Area NN, representing residential (state NAC-1, federal activity category B) and religious (state NAC-1, federal activity C).

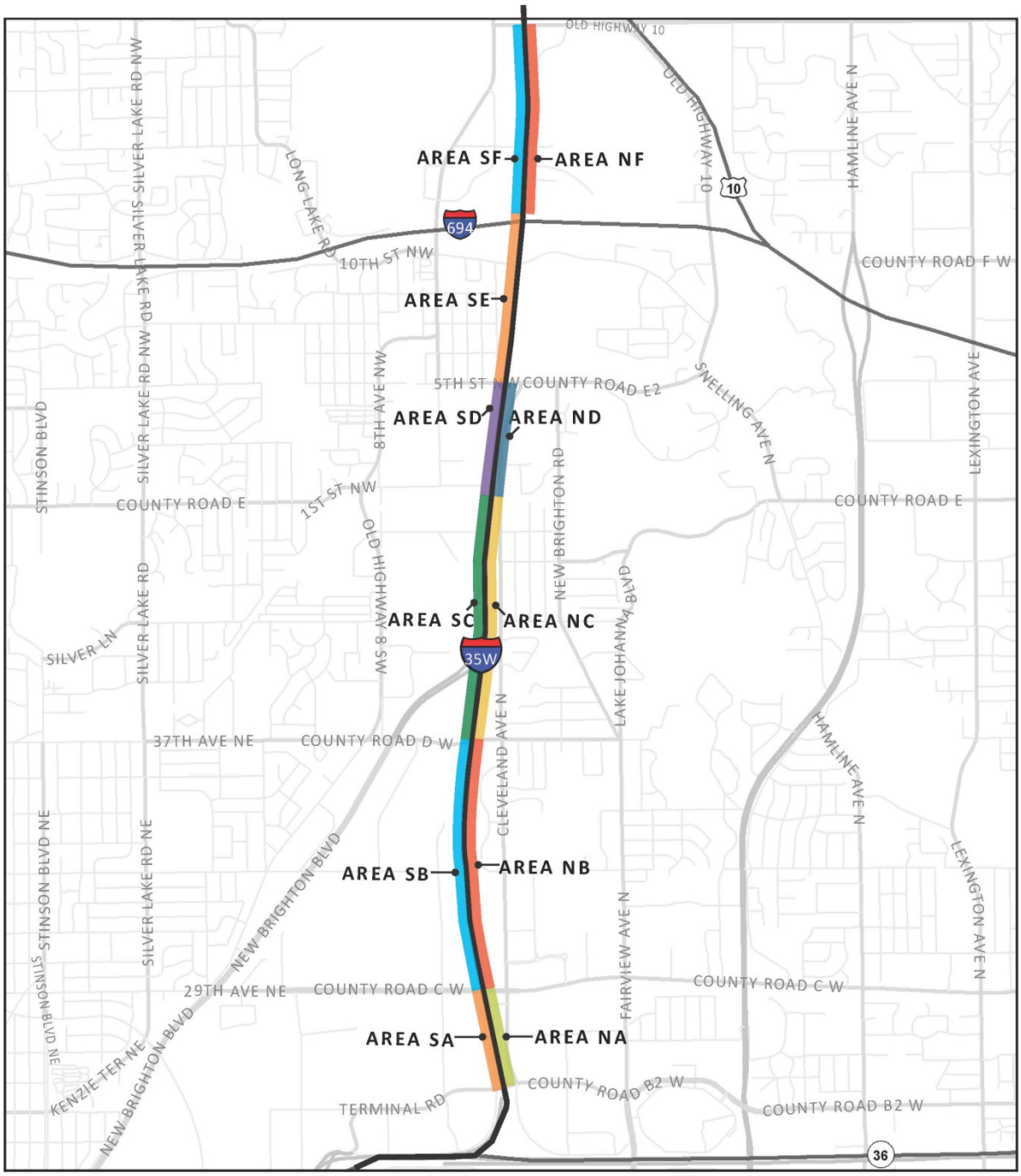


Figure 2a

Areas Evaluated

0 0.3 0.6 Miles

Kimley»Horn

Figure 2b

Areas Evaluated

0 0.3 0.6 Miles

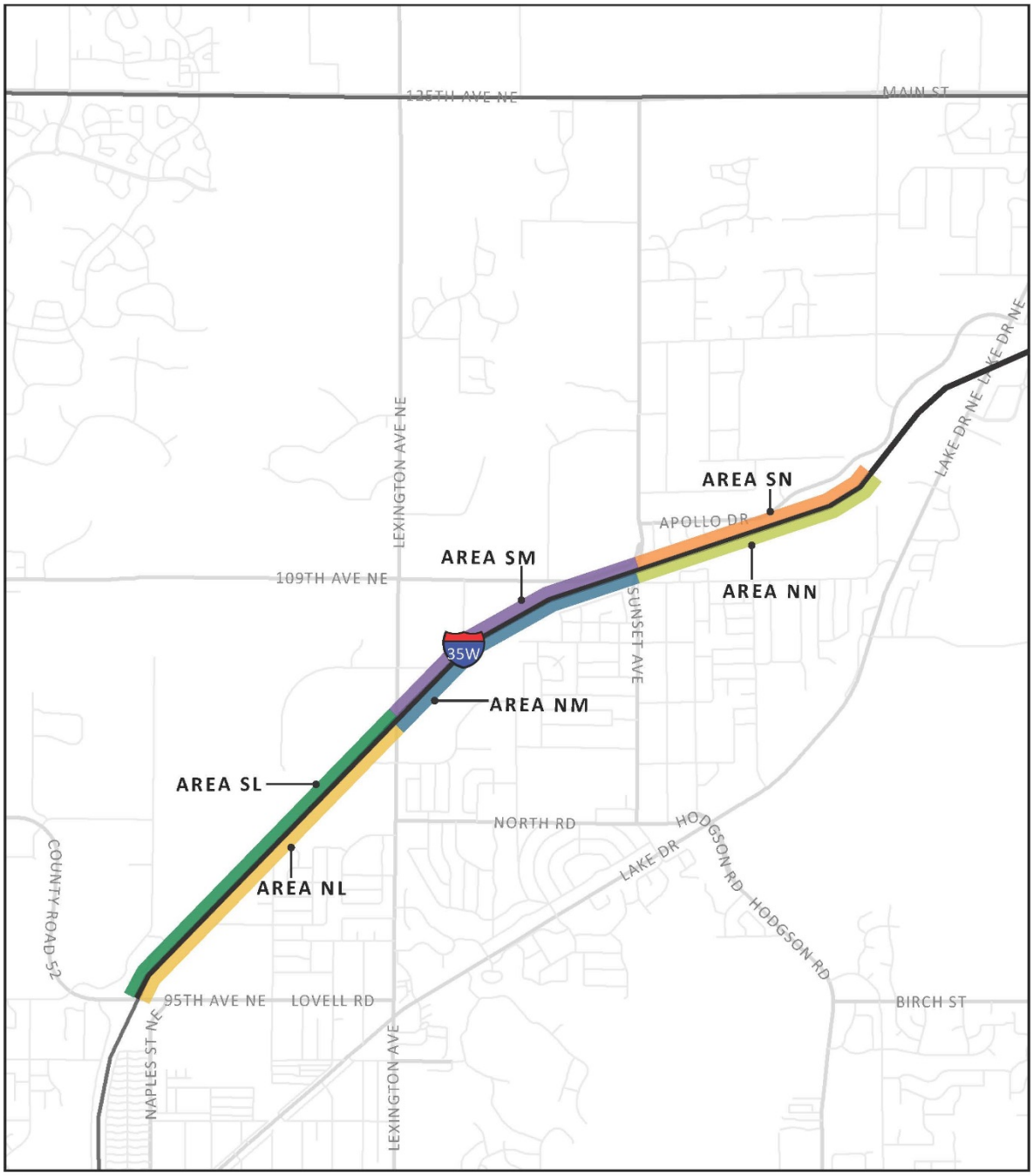


Figure 2c

Areas Evaluated

0 0.3 0.6 Miles

Noise Model Results

The noise model was run for existing conditions (2015), No Build conditions (2040), and Build conditions (2040). The existing, No Build, and Build condition results are provided in **Appendix B**. The results are summarized below in **Table 7**.

The existing daytime L_{10} noise levels at modeled receptors varied between 52.7 dBA and 79.5 dBA, exceeding state noise standards at 787 receptors. The existing nighttime L_{10} noise levels at modeled receptors varied between 51.5 dBA and 79.4 dBA, exceeding state noise standards at 1,996 receptors. The existing daytime L_{10} noise levels approach or exceed federal noise abatement criteria at 338 receptors.

The existing daytime L_{50} noise levels at modeled receptors varied between 49.0 dBA and 74.7 dBA, exceeding state noise standards at 1,103 receptors. The existing nighttime L_{50} noise levels at modeled receptors varied between 47.3 dBA and 74.3 dBA, exceeding state noise standards at 2,036 receptors.

Future 2040 No Build daytime L_{10} noise levels were predicted to range between 53.6 dBA and 80.2 dBA, exceeding state noise standards at 909 receptors. The 2040 No Build nighttime L_{10} noise levels were predicted to range between 52.5 dBA and 80.0 dBA, exceeding state noise standards at 2,037 receptors. The 2040 No build daytime L_{10} noise levels approach or exceed federal noise abatement criteria at 418 receptors.

The No Build daytime L_{50} noise levels at modeled receptors varied between 50.3 dBA and 75.6 dBA, exceeding state noise standards at 1,462 receptors. The No Build nighttime L_{50} noise levels at modeled receptors varied between 48.6 dBA and 75.3 dBA, exceeding state noise standards at 2,070 receptors.

Future 2040 Build daytime L_{10} noise levels were predicted to range between 53.0 dBA and 78.3 dBA, exceeding state noise standards at 827 receptors. The 2040 Build nighttime L_{10} values were predicted to range between 52.5 dBA and 77.9 dBA, exceeding state noise standards at 2,031 receptors. The 2040 build daytime L_{10} noise levels approach or exceed federal noise abatement criteria at 372 receptors.

The 2040 Build daytime L_{50} noise levels at modeled receptors varied between 49.3 dBA and 74.0 dBA, exceeding state noise standards at 1,258 receptors. The 2040 Build nighttime L_{50} noise levels at modeled receptors varied between 48.7 dBA and 73.4 dBA, exceeding state noise standards at 2,061 receptors.

A summary of each area evaluated is included in **Table 7** below. Full details of each area are included in **Appendix B (Tables B1 and B2)**.

Table 7 – 2040 Build Conditions Summary

Area	Number of Receptors					
	Total	Exceeded State L_{10} Standard		Exceeded State L_{50} Standard		Federal Noise Abatement Criteria
		Day-time	Night-time	Day-time	Night-time	Approached or Exceeded
AREA SA	6	2	1	4	4	0
AREA NA	8	7	4	6	6	1
AREA SB	5	3	3	3	3	0
AREA NB	34	27	25	30	28	26
AREA SC	10	3	3	3	3	3
AREA NC	244	191	233	188	239	93
AREA SD	6	1	1	2	2	0
AREA ND	12	6	11	9	11	1
AREA SE	139	85	138	123	139	52
AREA SF	8	5	5	6	6	1
AREA NF	6	3	3	4	4	0
AREA SG	45	18	34	39	33	9
AREA NG	90	5	89	36	89	1
AREA SH	152	135	147	149	148	44
AREA NH	1	1	0	1	1	0
AREA SI	338	93	329	262	329	10
AREA NI	42	12	20	24	25	13
AREA SJ	91	19	88	32	88	8
AREA NJ	2	2	1	2	2	1
AREA SK	22	5	12	16	12	0
AREA NK	561	129	558	228	558	64
AREA SL	2	1	1	1	1	0
AREA NL	122	28	108	43	112	13
AREA SM	18	5	1	7	4	0
AREA NM	50	5	40	6	40	4
AREA SN	67	0	67	0	67	0
AREA NN	93	25	92	27	89	9

Chapter 4: Consideration of Noise Abatement

Noise Abatement Measures

The construction of the I-35W North Corridor Project is considered a Type I project for the purposes of traffic noise analysis (i.e., the addition of an auxiliary lane and MnPASS Lane). 23

CFR 775.15(c) describes noise abatement measures that are to be considered when a traffic noise impact has been identified with a Type I highway project. These noise abatement measures are described below.

- Construction of noise barriers, including acquisition of property rights, either within or outside the highway right of way. Landscaping is not a viable noise abatement measure.
- Traffic management measures, including, but not limited to, traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive lane designations.
- Alteration of horizontal and vertical alignments.
- Acquisition of real property or interests therein (predominantly unimproved property) to serve as a buffer zone to preempt development which would be adversely impacted by traffic noise.
- Noise insulation of certain facilities, including: auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.

Noise Barrier Evaluation

MnDOT's policies and procedures for evaluating noise barrier feasibility and reasonableness are set forth in Section 5.2 (Feasibility) and Section 5.3 (Reasonableness) of the MnDOT Highway Noise Policy. The factors for determining noise barrier feasibility and reasonableness as described in the MnDOT noise policy are summarized below.

Noise Barrier Feasibility

Noise barrier feasibility is determined based on a consideration of two factors: 1) acoustic feasibility and 2) engineering feasibility.

Acoustic Feasibility

For a noise barrier to be considered acoustically effective, it must achieve a noise reduction of a least 5 dBA at the impacted receptors for those receptors to be considered benefited by a noise barrier. Not every impacted receptor must receive this minimum 5 dBA reduction; however, at least one impacted receptor must meet the minimum 5 dBA reduction for a noise barrier to achieve acoustic feasibility.

Engineering Feasibility

Engineering feasibility addresses whether or not it is possible to design and construct a proposed noise abatement measure. Potential constructability considerations include safety, topography, drainage, utilities, and maintenance considerations. Engineering considerations are also taken into consideration in determining noise barrier height. MnDOT has established a maximum noise barrier height of 20 feet above the finished ground line at the noise barrier. In addition, MnDOT has established a maximum noise barrier height of 10 feet above the bridge deck when it is necessary for a noise barrier to be attached to an existing bridge structure.

Noise Barrier Reasonableness

Noise barrier reasonableness decisions are based on consideration of three reasonableness factors, as described below.

Noise Reduction Design Goal

A minimum 7 dBA reduction must be achieved for at least one benefited receptor behind the noise barrier to meet noise reduction design goals.

Cost Effectiveness

To be considered cost-effective, the cost per individual benefited receptor should be equal to or less than $43,500. In order to assess cost effectiveness, at least one benefited receptor behind the noise barrier must meet the noise reduction design goal described above. The following formula is used to determine the cost-effectiveness of the barrier:

> The cost-effectiveness index is equal to the cost of the noise barrier divided by the number of individual benefited receptors (i.e., residences, commercial entities, industrial entities) that are predicted to experience noise level reductions of 5 dBA or more. Only those receptors that experience a 5 dBA or greater decibel decrease are considered in this formula. The result is a cost per benefited receptor value (residence, commercial entity, or industrial entity represented by each modeled receptor). The cost of a noise barrier is calculated using $20 per square foot of barrier, based on historical data over the five year period from 2005 to 2010. To be considered cost-effective, the cost per individual benefited receptor must be equal to or less than $43,500.

There are several steps to assessing the cost effectiveness of noise barriers. First, the cost-effective noise barrier height is determined for each segment of the project area, beginning with the evaluation of a 20-foot high noise barrier (MnDOT's maximum height; see discussion of engineering feasibility above). If a 20-foot high noise barrier meets the reasonableness criteria and is feasible, it would be proposed for construction. If the 20-foot high barrier meets the noise reduction design goal but does not meet the cost effectiveness criteria, then noise barrier heights less than 20 feet are studied. If a noise barrier height less than 20 feet meets the reasonableness criteria and is feasible, it would then be proposed for construction. Noise barrier cost effectiveness is studied up to the point where a modeled barrier does not meet the noise reduction design goal of a minimum 7 dBA reduction for at least one benefited receptor.

Viewpoint of Benefited Residents and Property Owners

The third criterion in determining noise barrier reasonableness is the viewpoint of benefited residents and property owners. A benefited property is defined as a receptor adjacent to a proposed noise abatement measure that receives a noise reduction equal to or greater than 5 dBA. If benefited residents and property owners indicate that a proposed noise barrier is not desired, then the noise barrier is removed from further consideration and would not be constructed with the project.

There are two steps in determining the desires of the benefited property owners and residents regarding the construction of a proposed noise abatement measures. First, the viewpoint of

benefited property owners and residents is solicited through a public involvement process (e.g., open house meeting, direct mailing of a solicitation form). Second, the input received from benefited property owners and residents through this public involvement process is expressed in a vote that is weighted as follows:

> The owner of a benefited property immediately adjacent to the highway right-of-way for the proposed project (i.e., first-row properties) receives 4 points and the resident (owner or renter) receives 2 points. The owner/resident of a benefited property receives a total of 6 points.
>
> The owner of a benefited property not immediately adjacent to the highway right-of-way for the proposed project (e.g., second-row properties, third-row properties) receives 2 points and the resident (owner or renter) receives 1 point. The owner/resident of a benefited property receives a total of 3 points.

Only those benefited property owners and residents, including individual units of multi-family residential building that are considered to be benefited receptors, regardless of floor location (e.g., first floor, second floor, etc.), have a vote according to the point system described above. Non-benefiting receptors do not receive points

Initial Solicitation: If 50 percent or more of all possible voting points from eligible voters are received after the initial request for votes, the majority of points (based upon the votes received) determine the outcome of the noise barrier. If there is a tie, where there are equal numbers of points for and against a noise barrier, the noise barrier will be constructed. If less than 50 percent of the possible voting points for a barrier are received after this initial request, then a second ballot will be distributed to the benefited property owners who did not respond.

Second Solicitation (if required): If 25 percent or more of all possible points for a barrier are received after the second request for votes, then the outcome is determined by the majority of votes received. If less than 25 percent of total possible points for a noise barrier are received after the second request for votes, then the barrier will not be constructed. If there is a tie, where there are equal numbers of points for and against a noise barrier, the noise barrier will be constructed.

Noise Wall Analysis Results

Noise barriers were evaluated at all modeled receptor locations where traffic noise levels are predicted to exceed State daytime and/or State nighttime noise standards under future (2040) Build Alternative conditions. The locations of modeled noise barriers are illustrated in **Map 1 through Map 18, Appendix A**.

Noise barrier cost-effectiveness results are tabulated at the end of this report in **Appendix C**. Multiple noise barrier configurations were evaluated (barrier lengths and heights). The results presented below represent the most acoustically effective and/or cost effective noise barrier configuration. Results for a 20-foot high noise barrier are described with each modeled barrier first, followed by a discussion of additional barrier heights less than 20 feet where applicable. The discussion of noise barrier modeling results presented below includes only daytime results. For reference, nighttime noise barrier cost effectiveness results are also tabulated and presented at the

end of this report in **Appendix C**. In general, results of daytime noise barrier cost effectiveness for the project are consistent with noise barrier cost effectiveness for nighttime conditions. The following discussion of noise barrier analysis results refers to L_{10} levels unless otherwise noted.

Area SA

Three noise walls were modeled in Area SA (Wall SA 1, Wall SA 2, and Wall SA3) along the west side of I-35W approximately between CR B2 and CR C in Roseville. The analysis results for these noise walls are summarized below.

- Wall SA1: Wall SA1 is located along the west side of I-35W approximately between CR B2 and Rosegate and is approximately 2,422 feet long (see **Map 1, Appendix A**). An approximately 2,422-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 4.7 to 8.3 dBA. The cost effectiveness of the approximately 2,422-foot long, 20-foot high noise wall is $190,624 per benefited receptor (see Table C1, Appendix C). The approximately 2,422-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 2,422-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 3.1 to 6.6 dBA (see Table C2, Appendix C). The approximately 2,422-foot long, 15-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall SA2: Since Wall SA1 did not meet the cost-effectiveness criteria at its full length, a shorter wall length wall was considered. Wall SA2 is located along the west side of I-35W approximately between the BNSF Railway and CR C.

  An approximately 1,702-foot long, 20-foot high noise wall provides a reduction in nighttime traffic noise levels of 3.6 dBA to 8.0 dBA. The cost effectiveness of the approximately 1,702-foot long, 20-foot high noise wall is $166,280 per benefited receptor (see **Table C3, Appendix C**). The approximately 1,702-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,702-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 2.1 dBA to 5.5 dBA (see **Table C4, Appendix C**). The approximately 1,702 foot-long, 15-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- *Wall SA3:* Since Walls SA1 and SA2 did not meet the cost-effectiveness criteria at their full length, another shorter wall length wall was considered for Wall SA3.Wall SA3 is located along the west side of I-35W approximately between the BNSF Railway and

CR C and is approximately 145 feet long (see **Map1, Appendix B**). An approximately 145-foot long, 20-foot high noise wall provides a reduction in daytime noise levels of 0.6 dBA (see **Table C5, Appendix C**). The approximately 145-foot long, 20-foot high noise wall does not meet MnDOT's minimum 5 dBA reduction to be considered acoustically feasible. Therefore, the analyzed barrier is not proposed.

Area NA

Three noise walls were modeled in Area NA (Wall NA1, Wall NA 2 and Wall NA3) along the east side of I-35W approximately between CR B2 and CR C. The analysis results for these two noise walls are summarized below:

- Wall NA1: Wall NA1 is located along the east side of I-35W approximately between CR B2 and Rosegate and is approximately 2,516 feet long (see **Map 1, Appendix A**). An approximately 2,516-foot long, 20-foot high noise wall provides a reduction in nighttime traffic noise levels of 1.6 dBA to 9.3 dBA. The cost effectiveness of the approximately 2,516-foot long, 20-foot high noise wall is $260180 per benefited receptor (see **Table C6, Appendix C**). The approximately 2,516-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 2,516-foot long, 15-foot high noise wall provides a reduction in nighttime traffic noise levels of 1.0 dBA to 7.7 dBA. The cost effectiveness of the approximately 2,516-foot long, 15-foot high noise wall is $266,107 per benefited receptor (see **Table C7, Appendix C**). The approximately 2,516-foot long, 15-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 15-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 2,516-foot long, 10-foot high noise wall provides a reduction in nighttime traffic noise levels of 0.1 dBA to 6.6 dBA (see **Table C8, Appendix C**). The approximately 2,516 foot-long, 10-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall NA2: Since Wall NA1 did not meet the cost-effectiveness criteria at its full length, a shorter wall length wall was considered. Wall NA2 is located along the east side of I-35W approximately between the CR B2 and Rosegate and is approximately 1,830 feet long (see **Map 1, Appendix A**). This wall was placed at the highest practical location adjacent to I-35W. An approximately 1,830-foot long, 20-foot high noise wall provides a reduction in nighttime traffic noise levels of 0.4 to 7.6 dBA. The cost effectiveness of the approximately 1,830-foot long, 20-foot high noise wall is $358,160 per benefited receptor (see **Table C9, Appendix C**). The approximately 1,830-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,830-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 0.3 dBA to 5.2 dBA (see **Table C10, Appendix C**). The approximately 1,830 foot-long, 15-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Since none of the above scenarios met the cost effectiveness criteria of $43,500, a shortened length noise wall was analyzed, located immediately south of the BNSF Railway / Rosegate bridge. An approximately 109-foot long, 20-foot high noise wall provided a reduction in daytime traffic noise levels of 0.0 dBA to 2.6 dBA (see **Table C11, Appendix C**). The approximately 109-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall NA3: Wall NA3 is located along the east side of I-35W approximately between the BNSF Railway and CR C and is approximately 112 feet long (see **Map 1, Appendix A**). This wall was placed at the highest practical location adjacent to I-35W. An approximately 112-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 1.5 dBA (see **Table C12, Appendix C**). The approximately 112-foot long, 20-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. There, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective immediately adjacent to I-35W, another wall was analyzed shifted east, at a location as close to the right-of-way as practical. An approximately 112-foot long, 20-foot high noise wall provided a reduction in daytime traffic noise levels of 1.0 dBA (see **Table C13, Appendix C**). The approximately 122-foot long, 20-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed wall is not proposed.

Area SB

One noise wall was modeled in Area SB (Wall SB1) along the west side of I-35W approximately between CR B2 and CR C2 in Roseville. The analysis results for this noise wall are summarized below:

- Wall SB1: Wall SB1 is located along the west side of I-35W approximately between CR B2 and CR C2 and is approximately 1,566 feet long (see **Map 2, Appendix A**). An approximately 1,566-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 7.3 to 7.8 dBA. The cost effectiveness of the approximately 1,566-foot long, 20-foot high noise wall is $203,573 per benefited receptor (see **Table C14, Appendix C**). The approximately 1,566-foot long, 20-foot high noise wall

does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,566-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 4.3 dBA to 4.9 dBA (see **Table C15, Appendix C**). The approximately 1,566 foot-long, 15-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area NB

One noise wall was modeled in Area NB (Wall NB1) along the east side of I-35W approximately between CR C and CR D in Roseville. The analysis results for this noise wall are summarized below:

- Wall NB1: Wall SB1 is located along the east side of I-35W approximately between CR D and CR C and is approximately 4,285 feet long (see **Map 2 and Map 3, Appendix A**). An approximately 4,285-foot long, 20-foot high noise wall provides a reduction in nighttime traffic noise levels of 0.2 dBA to 15.3 dBA. The cost effectiveness of the approximately 4,285-foot long, 20-foot high noise wall is $54,785 per benefited receptor (see **Table C16, Appendix C**). The approximately 4,285-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 4,285-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 0.1 dBA to 13.5 dBA. The cost effectiveness of the approximately 4,285-foot long, 15-foot high noise wall is $45,679 per benefited receptor (see **Table C17, Appendix C**). The approximately 4,285-foot long, 15-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since the 15-foot high noise wall was above the cost effectiveness criteria, a shorter wall was analyzed to determine whether a shorter wall would meet the cost-effectiveness criteria. An approximately 4,182-foot long, 14-foot high noise wall provided a reduction in nighttime traffic noise levels of 0.1 dBA to 13.0 dBA. The cost effectiveness of the approximately 4,182-foot long, 14-foot high noise wall is $43,179 per benefited receptor (see **Table C18, Appendix C**). The approximately 4,182-foot long, 14-foot high noise wall is below MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is proposed.

Area SC

One noise wall was modeled in Area SC (Wall SC1) along the west side of I-35W approximately between CR D and New Brighton Boulevard in New Brighton. The analysis results for this noise wall are summarized below:

- Wall SC1: Wall SC1 is located along the west side of I-35W approximately between New Brighton Boulevard and CR D and is approximately 1,470 feet long (see **Map 4, Appendix A**). An approximately 1,470-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 7.6 dBA to 9.6 dBA. The cost effectiveness of the approximately 1,470-foot long, 20-foot high noise wall is $190,773 per benefited receptor (see **Table C19, Appendix C**). The approximately 1,470-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,470-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 5.4 dBA to 5.9 dBA (see **Table C20, Appendix C**). The approximately 1,470 foot-long, 15-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area NC

One noise wall was modeled along the west side of I-35W approximately between CR D and the Canadian Pacific Railway (Wall NC1). The analysis results for this noise wall are summarized below:

- Wall NC1: Wall NC1 is located along the east side of I-35W approximately between CR D and the Canadian Pacific Railway and is approximately 5,409 feet long (see **Map 5, Appendix A**). An approximately 5,409-foot long, 20-foot high noise wall provides a reduction in nighttime traffic noise levels of 0.0 dBA to 14.2 dBA. The cost effectiveness of the approximately 5,409-foot long, 20-foot high noise wall is $20,854 per benefited receptor (see **Table C21, Appendix C**). The approximately 5,409-foot long, 20-foot high noise wall is below MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is proposed.

Area SD

Two noise walls were modeled in Area SC (Wall SD1 and SD2) along the west side of I-35W approximately between the Canadian Pacific Railway and 5th Street NW in New Brighton. The analysis results for these noise walls are summarized below:

- Wall SD1: Wall SD1 is located along the west side of I-35W approximately between the Canadian Pacific Railway and 5th Street NW and is approximately 914 feet long (see **Map 6, Appendix A**). An approximately 914-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 4.0 dBA to 5.8 dBA (see **Table C22, Appendix C**). The approximately 914 foot-long, 20-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall SD2: Wall SD2 is located along the west side of I-35W along the 5th Street NW southbound on-ramp to I-35W and is approximately 421 feet long (see **Map 6, Appendix A**). An approximately 421-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 3.9 dBA (see **Table C23, Appendix C**). The approximately 421 foot-long, 20-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area ND

One noise wall was modeled in Area ND (Wall ND1) along the east side of I-35W approximately between the Canadian Pacific Railway and 5th Street NW in Arden Hills. The analysis results for this noise wall are summarized below:

- Wall ND1: Wall ND1 is located along the east side of I-35W approximately between the Canadian Pacific Railway and 5th Street NW and is approximately 2,605 feet long (see **Map 6, Appendix A**). An approximately 2,605-foot long, 20-foot high noise wall provides a reduction in nighttime traffic noise levels of 1.3 dBA to 6.2 dBA (see **Table C24, Appendix C**). The approximately 2,605 foot-long, 20-foot high noise wall does not meet MnDOT's minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area SE

One noise wall was modeled in Area SE (Wall SE1) along the west side of I-35W approximately between CR E2 and 10th Street NW in New Brighton. The analysis results for this noise wall are summarized below:

- Wall SE1: Wall SE1 is located along the west side of I-35W approximately between CR E2 and 10th Street NW and is approximately 2,560 feet long (see **Map 7, Appendix A**). An approximately 2,560-foot long, 20-foot high noise wall provides a reduction in nighttime traffic noise levels of 0.0 dBA to 11.6 dBA. The cost effectiveness of the approximately 2,560-foot long, 20-foot high noise wall is $28,809 per benefited receptor (see **Table C25, Appendix C**). The approximately 2,560-foot long, 20-foot high noise wall is below MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is proposed.

Area SF

Two noise walls were modeled in Area SF (Wall SF1 and SF2) along the west side of I-35W approximately between the westbound I-694 exit ramp and CR 96 in New Brighton. The analysis results for these noise walls are summarized below:

- Wall SF1: Wall SF1 is located along the west side of I-35W approximately between the westbound I-694 exit ramp and CR 96 and is 1,750 feet long (see **Map 8, Appendix A**). An approximately 1,750-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 5.9 dBA to 10.8 dBA. The cost effectiveness of the

approximately 1,750-foot long, 20-foot high noise wall is $171,080 per benefited receptor (see **Table C26, Appendix C**). The approximately 1,750-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,750-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 4.7 dBA to 8.9 dBA. The cost effectiveness of the approximately 1,750-foot long, 15-foot high noise wall is $172,840 per benefited receptor (see **Table C27, Appendix C**). The approximately 1,750-foot long, 15-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since a 15-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,750-foot long, 10-foot high noise wall provided a reduction in daytime traffic noise levels of 2.8 dBA to 6.1 dBA (see **Table C28, Appendix C**). The approximately 1,750-foot long, 10-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall SF2: Wall SF2 is located along the west side of I-35W adjacent to the CR 96 southbound on-ramp and is 1,127 feet long (see **Map 8, Appendix A**). An approximately 1,127-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.2 dBA to 11.1 dBA. The cost effectiveness of the approximately 1,127-foot long, 20-foot high noise wall is $145,040 per benefited receptor (see **Table C29, Appendix C**). The approximately 1,127-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,127-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 0.2 dBA to 9.3 dBA. The cost effectiveness of the approximately 1,127-foot long, 15-foot high noise wall is $110,540 per benefited receptor (see **Table C30, Appendix C**). The approximately 1,127-foot long, 15-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 15-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,127-foot long, 10-foot high noise wall provided a reduction in nighttime traffic noise levels of 0.2 dBA to 8.9 dBA (see **Table C31, Appendix C**). The cost effectiveness of the approximately 1,127-foot long, 10-foot high noise wall is $74,707 per benefited receptor. The approximately 1,127-foot long, 10-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Area NF

One noise wall was modeled along the east side of I-35W approximately between 13th Street NE and CR 96 in Arden Hills. The analysis results for this noise wall are summarized below.

- Wall NF1: Wall NF1 is located along the east side of I-35W approximately between 13th Street NE and CR 96 and is 2,708 feet long (see **Map 8, Appendix A**). An approximately 2,708-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 6.5 dBA to 7.5 dBA. The cost effectiveness of the approximately 2,708-foot long, 20-foot high noise wall is $266,880 per benefited receptor (see **Table C32, Appendix C**). The approximately 2,708-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 2,708-foot long, 15-foot high noise wall provided a reduction in nighttime traffic noise levels of 5.1 dBA to 5.7 dBA (see **Table C33, Appendix C**). The approximately 2,708-foot long, 15-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area SG

Three noise walls were modeled in Area SG (Wall SG1, SG2, and Wall SG 3) along the west side of I-35W approximately between to CR 96 and Buckingham Lane in New Brighton. The analysis results for these two noise walls are summarized below:

- Wall SG1: Wall SG1 is located along the west side of I-35W adjacent to the southbound exit to CR 96 (see **Map 9, Appendix A**). An approximately 1,237-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 6.0 dBA to 7.4 dBA. The cost effectiveness of the approximately 1,237-foot long, 20-foot high noise wall is $239,560 per benefited receptor (see **Table C34, Appendix C**). The approximately 1,237-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,237-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 5.6 dBA to 6.5 dBA (see **Table C35, Appendix C**). The approximately 1,237-foot long, 15-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall SG2: Wall SG2 is located along the west side of I-35W approximately between the I-35W exit ramp and the BNSF Railway and is 517 feet long (see **Map 9, Appendix A**). An approximately 517-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 3.8 dBA to 10.4 dBA. The cost effectiveness of the approximately

517-foot long, 20-foot high noise wall is $95,560 per benefited receptor (see **Table C36, Appendix C**). The approximately 517-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 517-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 3.6 dBA to 9.8 dBA. The cost effectiveness of the approximately 517-foot long, 15-foot high noise wall is $74,310 per benefited receptor (see **Table C37, Appendix C**). The approximately 517-foot long, 15-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since a 15-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 517-foot long, 10-foot high noise wall provided a reduction in daytime traffic noise levels of 3.4 dBA to 8.5 dBA. The cost effectiveness of the approximately 517-foot long, 10-foot high noise wall is $51,060 per benefited receptor (see **Table C38, Appendix C**). The approximately 517-foot long, 10-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since none of the above scenarios met the cost effectiveness criteria of $43,500, a shortened length noise wall was analyzed. An approximately 349-foot long, 10-foot high noise wall provided a reduction in daytime traffic noise levels of 1.2 dBA to 5.3 dBA (see **Table C39, Appendix C**). The approximately 349-foot long, 10-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall SG3: Wall SG3 is located along the west side of I-35W approximately between the BNSF Railway and Buckingham Lane and is 2,551 feet long (see **Map 10, Appendix A**). An approximately 2,551-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 2.7 dBA to 6.4 dBA (see **Table C40, Appendix C**). The approximately 2,551-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonalbe. Therefore, the analyzed barrier is not proposed.

Area NG

This area is east of I-35W approximately between CR 96 and Abele Street in Arden Hills. There is an existing 20-foot high noise wall (Wall NG1) that is approximately 2,600 feet long. The analysis results for this noise wall are summarized below:

- Wall NG1: Wall NG1 is an existing 20 foot high noise wall located east of I-35W approximately between CR 96 and Abele Street (see **Map 9, Appendix A**). This wall meets the current criteria for maximizing noise mitigation in terms of length and height.

This wall is therefore not analyzed or considered for replacement, and will remain in place.

Area SH

Two noise walls were analyzed in Area SH (Wall SH1 and SH2) along the west side of I-35W adjacent to the southbound I-35W ramp for CR H and the CR H Interchange in Mounds View. The analysis results for these two noise walls are summarized below:

- Wall SH1: Wall SH1 is located along the west side of I-35W adjacent to the southbound I-35W on-ramp for CR H and is 2,000 feet long (see **Map 11, Appendix A**). An approximately 2,000-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.2 dBA to 9.1 dBA (see **Table C41, Appendix C**). The cost effectiveness of the approximately 2,000-foot long, 20-foot high noise wall is $261,440 per benefited receptor. The approximately 2,000-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 2,000-foot long, 15-foot high noise wall provides a reduction in daytime traffic noise levels of 0.1 dBA to 6.3 dBA (see **Table C42, Appendix C**). The approximately 2,000-foot long, 15-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA reduction to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall SH2: Wall SH2 located on the west side of I-35W approximately between CR H and CR I is a wall that will be constructed as part of the I-35W CR H Interchange Project (see **Map 11, Appendix A**). Therefore, this wall is treated as an existing 20 foot high noise wall. This, soon to be constructed, wall will meet the current criteria for maximizing noise mitigation in terms of length and height. This wall is therefore not analyzed or considered for replacement, and will remain in place once it is constructed as planned for the I-35W CR H Interchange Project.

Area NH

One noise wall was modeled in Area NH (Wall NH1) along the east side of I-35W south of CR I in Arden Hills. The analysis results for this wall are summarized below:

- Wall NH1: Wall NH1 is located along the east side of I-35W south of CR I and is 1,860 feet long (see **Map 11 and 12, Appendix A**). An approximately 1,860-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 6.0 dBA (see **Table C43, Appendix C**). The approximately 1,860-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal of 7 dBA reduction to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area SI

One noise wall was modeled in Area SI (Wall SI1) along the west side of I-35W approximately between CR I and Squire Lane in Mounds View. The analysis results for this noise wall are summarized below. Note that an existing noise wall exists adjacent to the west of I-35W.

- Wall SI1: Wall SI1 is located along the west side of I-35W approximately between CR I and Squire Lane and is 3,927 feet long (see **Map 12, Appendix A**). An approximately 3,927-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.2 dBA to 16.3 dBA. The cost effectiveness of the approximately 3,927-foot long, 20-foot high noise wall is $15,946 per benefited receptor (see **Table C44, Appendix C**). The approximately 3,927-foot long, 20-foot high noise wall is below MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is proposed. This proposed wall will replace the existing wall, with the reconstructed wall extending further to the north and east along US 10.

Area NI

Two noise walls were modeled in Area NI (Wall NI1 and NI2) along the east side of I-35W approximately between CR I and 85th Ave NE in Shoreview. The analysis results for these noise walls are summarized below:

- Wall NI1: Wall NI1 is located along the east side of I-35W approximately between CR I and Parkview Drive and is 4,684 feet long (see **Map 12, Appendix A**). An approximately 4,684-foot long, 20-foot high noise wall provides a reduction in nighttime traffic noise levels of 1.2 dBA to 7.2 dBA. The cost effectiveness of the approximately 4,684-foot long, 20-foot high noise wall is $232,240 per benefited receptor (see **Table C45, Appendix C**). The approximately 4,684-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 4,684-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 1.2 dBA to 6.6 dBA (see **Table C46, Appendix C**). The approximately 4,684-foot long, 15-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, and a 15-foot high noise wall did not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable, a shortened length 20-foot high noise wall was analyzed. An approximately 870-foot long, 20-foot high noise wall provided a reduction in daytime traffic noise levels of 0.0 dBA to 5.8 dBA (see **Table C47, Appendix C**). The approximately 870-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall NI2: Wall NI2 is located along the east side of I-35W adjacent to the 85th Ave NE exit ramp and is 570 feet long (see **Map 12, Appendix A**). An approximately 570-foot long, 20-foot high noise wall provides a maximum reduction in nighttime traffic noise levels of 5.2 dBA (see **Table C48, Appendix C**). The approximately 570-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area SJ

Two noise walls were modeled in Area SJ1 (Wall SJ1 and SJ2) along the west side of I-35W along the southern side of US 10 approximately between Edgewood Drive and Jackson Drive in Arden Hills. Wall SJ2 is an existing wall that was analyzed for potential replacement. The analysis results for these two noise walls are summarized below:

- Wall SJ1: Wall SJ1 is located west of I-35W along the southern side of US 10 approximately between Edgewood Drive and Jackson Drive and is 1,411 feet long (see **Map 13, Appendix A**). An approximately 1,411-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.3 dBA to 12.5 dBA. The cost effectiveness of the approximately 1,411-foot long, 20-foot high noise wall is $34,295 per benefited receptor (see **Table C49, Appendix C**). The approximately 1,411-foot long, 20-foot high noise wall is below MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is proposed.

- Wall SJ2: Wall SJ2 is an existing wall located along the west side of I-35W along the southern side of US 10 approximately between Eastwood Drive and Ardan Avenue and is 817 feet long (see **Map 14, Appendix A**). This wall was analyzed to determine whether it would be reasonable and feasible to be replaced. An approximately 817-foot long, 20-foot high noise wall extension provides a reduction in daytime traffic noise levels of 0.0 dBA to 4.2 dBA (see **Table C50, Appendix C**). The approximately 817-foot long, 20-foot high noise wall extension does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed for replacement, and the existing wall will remain unchanged.

Area NJ

One noise wall was modeled in Area NJ (Wall NJ) along the east side of I-35W along the northern side of US 10 adjacent to the Medtronic campus in Mounds View. The analysis results for this noise wall are summarized below:

- Wall NJ1: Wall NJ1 is located along the east side of I-35W along the northern side of US 10 adjacent to the Medtronic campus and is 1,499 feet long (see **Map 13, Appendix A**). An approximately 1,499-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 7.4 dBA. The cost effectiveness of the approximately 1,499-foot long, 20-foot high noise wall is $563,920 per benefited receptor (see **Table C51, Appendix C**). The approximately 1,499-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,499-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 4.6 dBA (see **Table C52, Appendix C**). The approximately 4,684-foot long, 15-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Since a 20-foot high noise wall was not cost-effective, a shortened length noise wall was analyzed. An approximately 156-foot long, 20-foot high noise wall provided a reduction in daytime traffic noise levels of 2.5 dBA (see **Table C53, Appendix C**). The approximately 156-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area SK

Two noise walls were modeled in Area SK (Wall SK1 and SK2) along the west side of I-35W approximately between Lake Drive and 93rd Avenue NE in Blaine. The analysis results for these two noise walls are summarized below.

- Wall SK1: Wall SK1 is located along the west side of I-35W approximately between Lake Drive and 93rd Avenue NE and is 4,122 feet long (see **Map 15, Appendix A**). An approximately 4,122-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 4.1 dBA to 8.8 dBA. The cost effectiveness of the approximately 4,122-foot long, 20-foot high noise wall is $272,153 per benefited receptor (see **Table C54, Appendix C**). The approximately 4,122-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter length wall was analyzed. An approximately 3,302-foot long, 20-foot high noise wall provided a reduction in daytime traffic noise levels of 0.0 dBA to 8.8 dBA. The cost effectiveness of the approximately 3,302-foot long, 20-foot high noise wall is $217,520 per benefited receptor (see **Table C55, Appendix C**). The approximately 3,302-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 3,302-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 5.3 dBA to 6.5 dBA (see **Table C56, Appendix C**). The approximately 3,302-foot long, 15-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Since the 15-foot high noise wall was not acoustically feasible, a shortened length noise wall was analyzed for 20-foot height. An approximately 652-foot long, 20-foot high noise wall provided a reduction in daytime traffic noise levels of 0.0 dBA to 6.4 dBA (see **Table C57, Appendix C**). The approximately 652-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall SK2: Wall SK2 is located along the west side of I-35W adjacent to the 95th Avenue NE entrance ramp to the W I-35W service road NE and is 1,147 long (see **Map 15, Appendix A**). An approximately 1,147-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 2.9 dBA to 6.0 dBA (see **Table C58, Appendix C**). The approximately 1,147-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area NK

One noise wall was modeled in Area NK (Wall NK1) along the east side of I-35W approximately between Lake Drive and 95th Avenue NE in Blaine. The analysis results for this wall are summarized below:

- Wall NK1: Wall NK1 is located along the east side of I-35W approximately between Lake Drive and 95th Avenue NE and is 5,050 feet long (see **Map 15, Appendix A**). An approximately 5,050-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 1.4 dBA to 15.3 dBA. The nighttime cost effectiveness of the approximately 5,050-foot long, 20-foot high noise wall is $12,372 per benefited receptor (see **Table C59, Appendix C**). The approximately 5,050-foot long, 20-foot high noise wall is below MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is proposed.

Area SL

One noise wall was modeled in Area SL (Wall SL1) along the west side of I-35W adjacent to the Minnesota School of Business in Blaine. The analysis results for this noise wall are summarized below:

- Wall SL1: Wall SL1 is located along the west side of I-35W adjacent to the Minnesota School of Business – Blaine campus and is 377 feet long (see **Map 16, Appendix A**). An approximately 377-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 3.0 dBA (see **Table C60, Appendix C**). The approximately 377-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area NL

Two noise walls were modeled in Area NL (Wall NL1 and NL2) along the east side of I-35W approximately between 95th Avenue NE and Lexington Avenue NE in Blaine. The analysis results for these two noise walls are summarized below.

- Wall NL1: Wall NL1 is located along the east side of I-35W approximately between 95th Avenue NE and Lexington and is 4,185 feet long (see **Map 16, Appendix A**). An approximately 4,185-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.0 dBA to 15.6 dBA. The cost effectiveness of the approximately 4,185-foot long, 20-foot high noise wall is $29,093 per benefited receptor (see **Table C61, Appendix C**). The approximately 4,185-foot long, 20-foot high noise wall is below MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is proposed.

- Wall NL2: Wall NL2 is located along the east side of I-35W adjacent to the Lexington Avenue exit ramp and is 1,475 feet long (see **Map 16, Appendix A**). An approximately 1,475-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 6.0 dBA to 11.7 dBA. The cost effectiveness of the approximately 1,475-foot long, 20-foot high noise wall is $191,440 per benefited receptor (see **Table C62, Appendix C**). The approximately 1,475-foot long, 20-foot high noise wall does not MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,475-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 4.1 dBA to 8.9 dBA. The cost effectiveness of the approximately 1,475-foot long, 15-foot high noise wall is $436,020 per benefited receptor (see **Table C63, Appendix C**). The approximately 1,475-foot long, 15-foot high noise wall does not MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 15-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,475-foot long, 10-foot high noise wall provided a reduction in daytime traffic noise levels of 1.9 dBA to 5.3 dBA (see **Table C64, Appendix C**). The approximately 1,475-foot long, 10-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Area SM

One noise wall was modeled in Area SM (Wall SM) along the west side of I-35W approximately between Lexington Avenue and 109th Avenue NE in Blaine. The analysis results for this noise wall are summarized below:

- Wall SM1: Wall SM1 is located along the west side of I-35W approximately between Lexington Avenue and 109th Avenue NE and is 3,390 feet long (see **Map 17,**

Appendix A). An approximately 3,390-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 6.0 dBA to 12.6 dBA. The cost effectiveness of the approximately 3,390-foot long, 20-foot high noise wall is $74,462 per benefited receptor (see **Table C65, Appendix C**). The approximately 3,390-foot long, 20-foot high noise wall does not MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 3,390-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 3.9 dBA to 9.9 dBA. The cost effectiveness of the approximately 3,390-foot long, 15-foot high noise wall is $126,315 per benefited receptor (see **Table C66, Appendix C**). The approximately 3,390-foot long, 15-foot high noise wall does not MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since a 15-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 3,390-foot long, 10-foot high noise wall provided a reduction in daytime traffic noise levels of 1.6 dBA to 6.3 dBA (see **Table C67, Appendix C**). The approximately 3,390-foot long, 10-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Since the 15-foot high noise wall was not acoustically feasible, a shortened length noise wall was analyzed for 20-foot height. An approximately 1,641-foot long, 20-foot high noise wall provided a reduction in daytime traffic noise levels of 0.3 dBA to 12.3 dBA. The cost effectiveness of the approximately 1,641-foot long, 20-foot high noise wall is $64,072 per benefited receptor (see **Table C68, Appendix C**). The approximately 1,641-foot long, 20-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 2,076-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 0.3 dBA to 9.8 dBA. The cost effectiveness of the approximately 2,076-foot long, 15-foot high noise wall is $88,046 per benefited receptor (see **Table C69, Appendix C**). The approximately 2,076-foot long, 15-foot high noise wall does not meet MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

Area NM

Two noise walls were modeled in Area NM (Wall NM1 and Wall NM2) along the east side of I-35W approximately between Lever Street NE and Sunset Avenue in Blaine. The analysis results for these two noise walls are summarized below.

- Wall NM1: Wall NM1 is located along the east side of I-35W approximately between Lever Street NE and Sunset Avenue and is 1,347 feet long (see **Map 17, Appendix A**). An approximately 1,347-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 4.0 dBA to 10.7 dBA. The cost effectiveness of the approximately 1,347-foot long, 20-foot high noise wall is $58,124 per benefited receptor (see **Table C70, Appendix C**). The approximately 1,347-foot long, 20-foot high noise wall does not MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 20-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,347-foot long, 15-foot high noise wall provided a reduction in daytime traffic noise levels of 1.8 dBA to 7.6 dBA. The cost effectiveness of the approximately 1,347-foot long, 15-foot high noise wall is $132,540 per benefited receptor (see **Table C71, Appendix C**). The approximately 1,347-foot long, 15-foot high noise wall does not MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is not proposed.

  Since a 15-foot high noise wall was not cost effective, a shorter height wall was analyzed. An approximately 1,347-foot long, 10-foot high noise wall provided a reduction in daytime traffic noise levels of 0.4 dBA to 3.9 dBA (see **Table C72, Appendix C**). The approximately 1,347-foot long, 10-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

  Since the 10-foot high noise wall was not acoustically feasible, a shortened length noise wall was analyzed for 20-foot height. An approximately 312-foot long, 20-foot high noise wall provided a reduction in daytime traffic noise levels of 0.0 dBA to 5.6 dBA (see **Table C73, Appendix C**). The approximately 312-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

- Wall NM2: Wall NM2 is an existing 20 foot high noise wall located on the east side of I-35W (see **Map 17, Appendix A**). This wall meets the current criteria for maximizing noise mitigation in terms of length and height. This wall is therefore not analyzed or considered for replacement, and will remain in place.

Area NN

Two noise walls were modeled in Area NN (Wall NN1 and Wall NN2) along the east side of I-35W approximately between Sunset Avenue and Rice Lake Drive in Lino Lakes. The analysis results for these two noise walls are summarized below.

Wall NN1: Wall NN1 is located along the east side of I-35W approximately between Sunset Avenue and Rice Lake Drive and is 2,983 feet long (see **Map 18, Appendix A**). An approximately 1,681-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.0 dBA to 10.6 dBA. The cost effectiveness of the

approximately 1,681-foot long, 20-foot high noise wall is $22,646 per benefited receptor (see **Table C74, Appendix C**). The approximately 1,681-foot long, 20-foot high noise wall does is below MnDOT's cost effectiveness criteria of $43,500 per benefited receptor. Therefore, the analyzed barrier is proposed.

- Wall NN2: Wall NN2 is located along the east side of I-35W adjacent to the St. Joseph School and is 1,361 feet long (see **Map 18, Appendix A**). An approximately 1,361-foot long, 20-foot high noise wall provides a reduction in daytime traffic noise levels of 0.0 dBA to 6.2 dBA (see **Table C75, Appendix C**). The approximately 1,361-foot long, 20-foot high noise wall does not meet MnDOT's minimum design goal reduction of 7 dBA to be considered reasonable. Therefore, the analyzed barrier is not proposed.

Other Noise Mitigation Techniques

Noise abatement measures other than noise barriers were considered but determined not feasible and/or reasonable for the proposed project. These measures are summarized below.

- Traffic Management Measures: These measures include such items as prohibition of certain vehicle types and time-use restrictions for certain vehicle types. These traffic management measures are not reasonable for the proposed project because this would be inconsistent with the function of I-35W as an interstate highway, principal arterial roadway, and high priority interregional corridor (IRC).
- Modified Speed Limits: Existing posted speed limits in the project corridor vary between 60 mph and 70 mph. In general, a decrease in speed of approximately 20 mph is necessary for a noticeable decrease in noise levels. However, lower speeds would reduce the capacity of I-35W. Similar to the traffic management measures noted above, lower speed limits are not consistent with the function of I-35W as an interstate highway, principal arterial roadway, and high priority IRC. In addition, motorists would likely not obey a substantially lower speed limit.
- Vertical and Horizontal Alignment: Changes in the horizontal and vertical alignment of the roadway are not part of the project scope. Substantial changes in the horizontal and vertical alignment of the roadway as part of the proposed project are not feasible without potential impacts to adjacent properties east and west of the highway.
- Landscaping/Natural Noise Screening: Vegetation is only effective for reducing noise levels if it is at least 100 to 200 feet deep, a minimum of 15 feet above the line of sight, and dense enough that it cannot be seen through (e.g., evergreen vegetation, which maintains its foliage year round). The project corridor is located within a fully developed urban area, so it is not feasible or reasonable to plant enough vegetation to achieve substantial noise level reductions. As such, vegetation is not a reasonable noise mitigation measure.
- Exclusive Land Use Designations: Buffer zones are undeveloped, open spaces adjacent to a roadway corridor. Land uses adjacent to the project corridor consist of trails, residential, commercial, and industrial uses. Acquisition of developed property to serve as a buffer zone between the project corridor and adjacent lands is not a reasonable noise mitigation measure.

- Noise Insulation of Non-Residential Buildings: Under MnDOT and FHWA policy, only non-residential buildings such as schools, hospitals, and places of worship should be considered for acoustical insulation if there are no exterior areas of frequent human use associated with the property. It is also important to note that acoustical insulation of non-residential buildings would not affect noise levels that exceed Minnesota state noise standards because those standards are intended for exterior uses only. Educational facilities and places of worship may be evaluated for interior noise impacts, and insulation would be a consideration to mitigate federal impacts. However, no educational facilities or places of worship exceed the federal noise abatement criteria. Therefore, noise insulation of buildings is not a reasonable noise mitigation measure for this project.

Construction Noise

The construction activities associated with implementation of the proposed project will result in increased noise levels relative to existing conditions. These impacts will primarily be associated with construction equipment and pile driving.

Table 8 shows peak noise levels measured at 50 feet from various types of construction equipment. This equipment is primarily associated with site grading/site preparation, which is generally the roadway construction phase associated with the greatest noise levels.

Table 8 - Typical Construction Equipment Noise Levels at 50 feet[1]

Equipment Type	Manufacturers Sampled	Total Number of Models in Sample	Peak Noise Level (dBA)	
			Range	Average
Backhoes	5	6	74-92	83
Front Loaders	5	30	75-96	85
Dozers	8	41	65-95	85
Graders	3	15	72-92	84
Scrapers	2	27	76-98	87
Pile Drivers	N/A	N/A	95-105	101

Elevated noise levels are, to a degree, unavoidable for this type of project. MnDOT will require that construction equipment be properly muffled and in proper working order. While MnDOT and its contractor(s) are exempt from local noise ordinances, it is the practice to require contractor(s) to comply with applicable local noise restrictions and ordinances to the extent that is reasonable. Advanced notice will be provided to affected communities of any planned abnormally loud construction activities. It is anticipated that night construction may sometimes be required to minimize traffic impacts and to improve safety. However, construction will be limited to daytime hours as much as possible. This project is expected to be under construction for four years.

[1] Source: United States Environmental Protection Agency and Federal Highway Administration

Any associated high-impact equipment noise, such as pile driving, pavement sawing, or jack hammering, will be unavoidable with construction of the proposed project. Pile-driving noise is associated with any bridge construction and sheet piling necessary for retaining wall construction. While pile-driving equipment results in the highest peak noise level, as shown in **Table 8**, it is limited in duration to the activities noted above (e.g., bridge construction). Noisy work at night for I-35W construction will be limited as much as possible, but may need to occur periodically. Construction or maintenance activities that are generally prohibited during 8:30 p.m. and 7 a.m. include pile driving/removal, concrete pavement demolition, pavement sawing, concrete crushing operations and jack-hammering. However, there will be times when noise producing operations will have to occur at night because of the need for pavement to cure or be sawed, or lanes closures that allow access to the work area.

Chapter 5: Conclusions and Recommendations

Proposed Noise Barriers

Based upon the analysis completed following the guidelines and procedures laid out by the MnDOT Noise Policy, MnDOT intends to construct eight noise walls along the proposed project. Proposed noise barriers would be constructed as early as the early stages of construction. The preliminary location of each proposed noise wall can be found in **Figure 3** and in **Appendix A (see Maps 1 through 18b)**. A brief summary of each proposed wall can be found below.

Wall NB1

Wall NB1 has a preliminary cost per benefited receptor of $43,179. There are a total of 27 benefited receptors, and the wall is proposed at 14 feet high with a length of 4,182 feet.

Wall NC1

Wall NC1 has a preliminary cost per benefited receptor of $20,653. There are a total of 104 benefited receptors (nighttime), and the wall is proposed at 20 feet high with a length of 5,409 feet.

Wall SE1

Wall SE1 has a preliminary cost per benefited receptor of $19,153. There are a total of 53 benefited receptors (nighttime), and the wall is proposed at 20 feet high with a length of 2,577 feet.

Wall SI1

Wall SI1 has a preliminary cost per benefited receptor of $15,946. There are a total of 106 benefited receptors, and the wall is proposed at 20 feet high with a length of 3,927 feet.

Wall SJ1

Wall SJ1 has a preliminary cost per benefited receptor of $34,295. There are a total of 16 benefited receptors, and the wall is proposed at 20 feet high with a length of 1,411 feet.

Wall NK1

Wall NK1 has a preliminary cost per benefited receptor of $12,527. There are a total of 160 benefited receptors (nighttime), and the wall is proposed at 20 feet high with a length of 5,050 feet.

Wall NL1

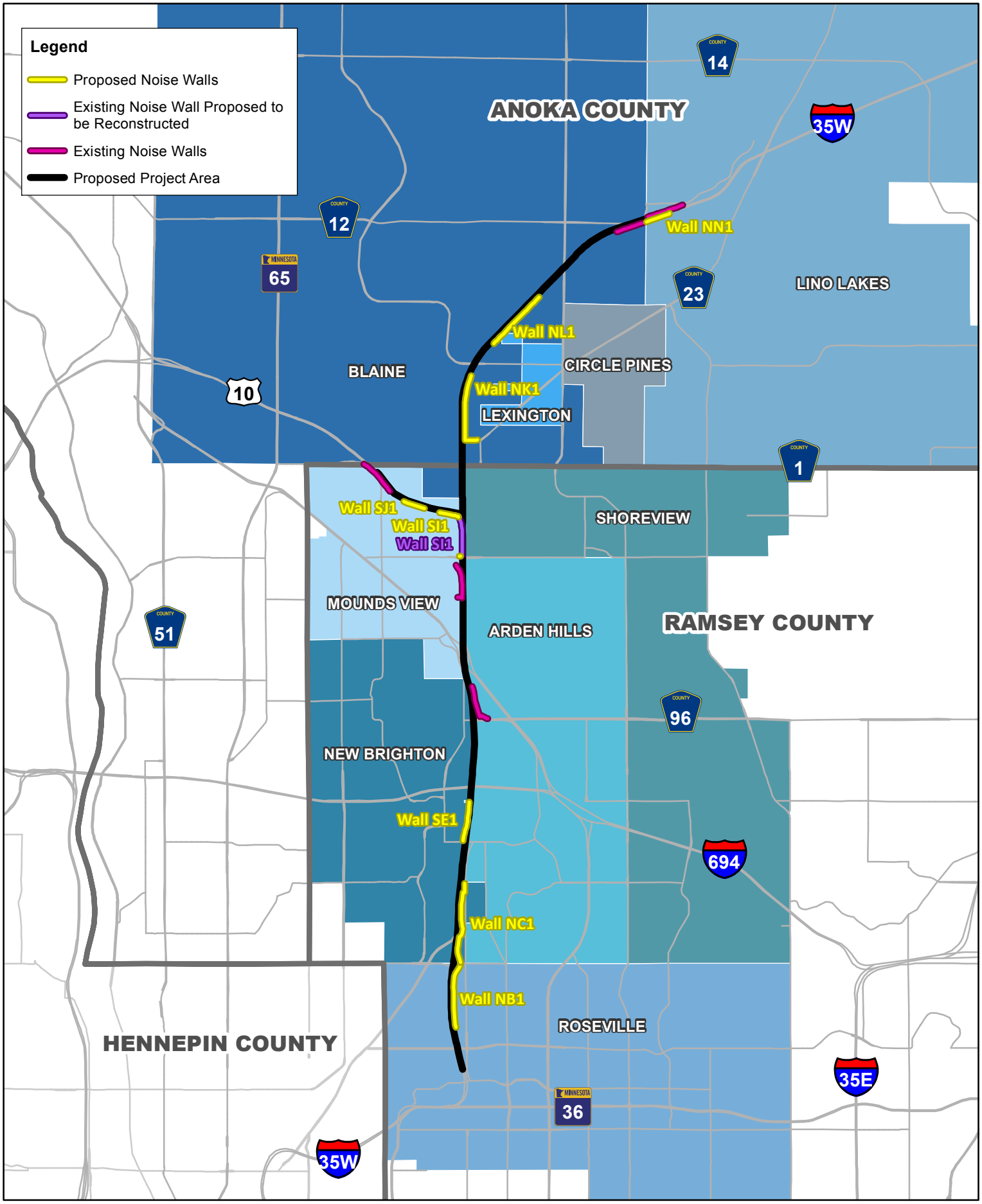
Wall NL1 has a preliminary cost per benefited receptor of $29,613. There are a total of 56 benefited receptors (nighttime), and the wall is proposed at 20 feet high with a length of 4,185 feet.

Wall NN1

Wall NN1 has a preliminary cost per benefited receptor of $29,851. There are a total of 22 benefited receptors, and the wall is proposed at 20 feet high with a length of 1,681 feet.

Statement of Likelihood

The traffic noise analysis for the proposed noise barriers described above is based upon preliminary design studies completed to date. Final mitigation decisions will be subject to final design considerations and the viewpoint of benefited residents and property owners. If it subsequently develops during final design that conditions have substantially changed, noise abatement measures may not be provided. Affected benefited receptors and local officials would be notified of plans to eliminate or substantially modify a noise abatement measure prior to the completion of the final design process. This notification would explain changes in site conditions (if any), additional site information, any design changes implemented during the final design process, and an explanation of noise barrier feasibility and reasonableness. A final decision regarding installation of the proposed abatement measure will be made upon completion of the project's final design and the public involvement process.



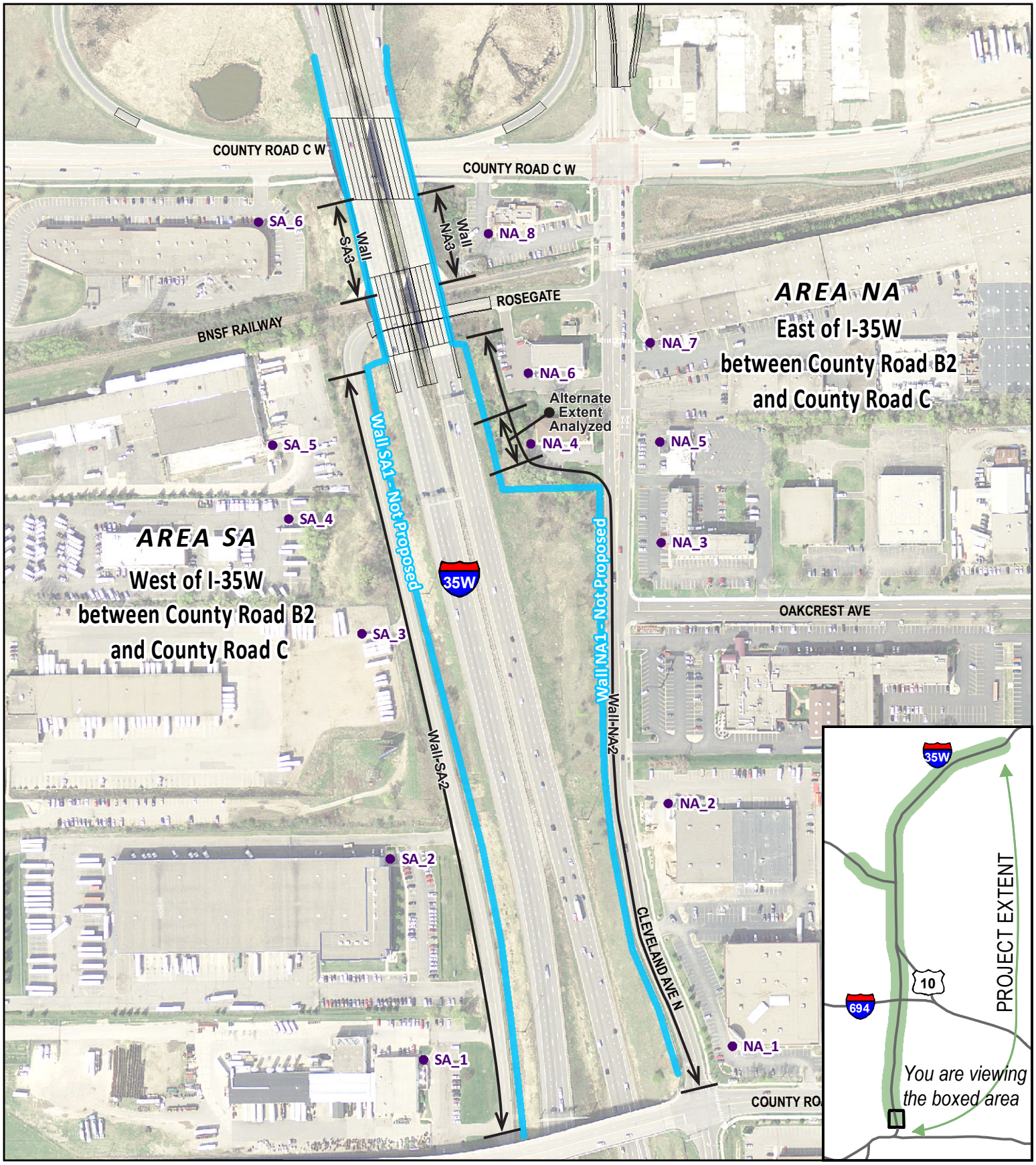
0 4,000 8,000 Feet

Figure 3: Existing and Proposed Noise Walls

I-35W North Corridor Preliminary Design Project
Traffic Noise Analysis Report

Appendix A

Figures



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

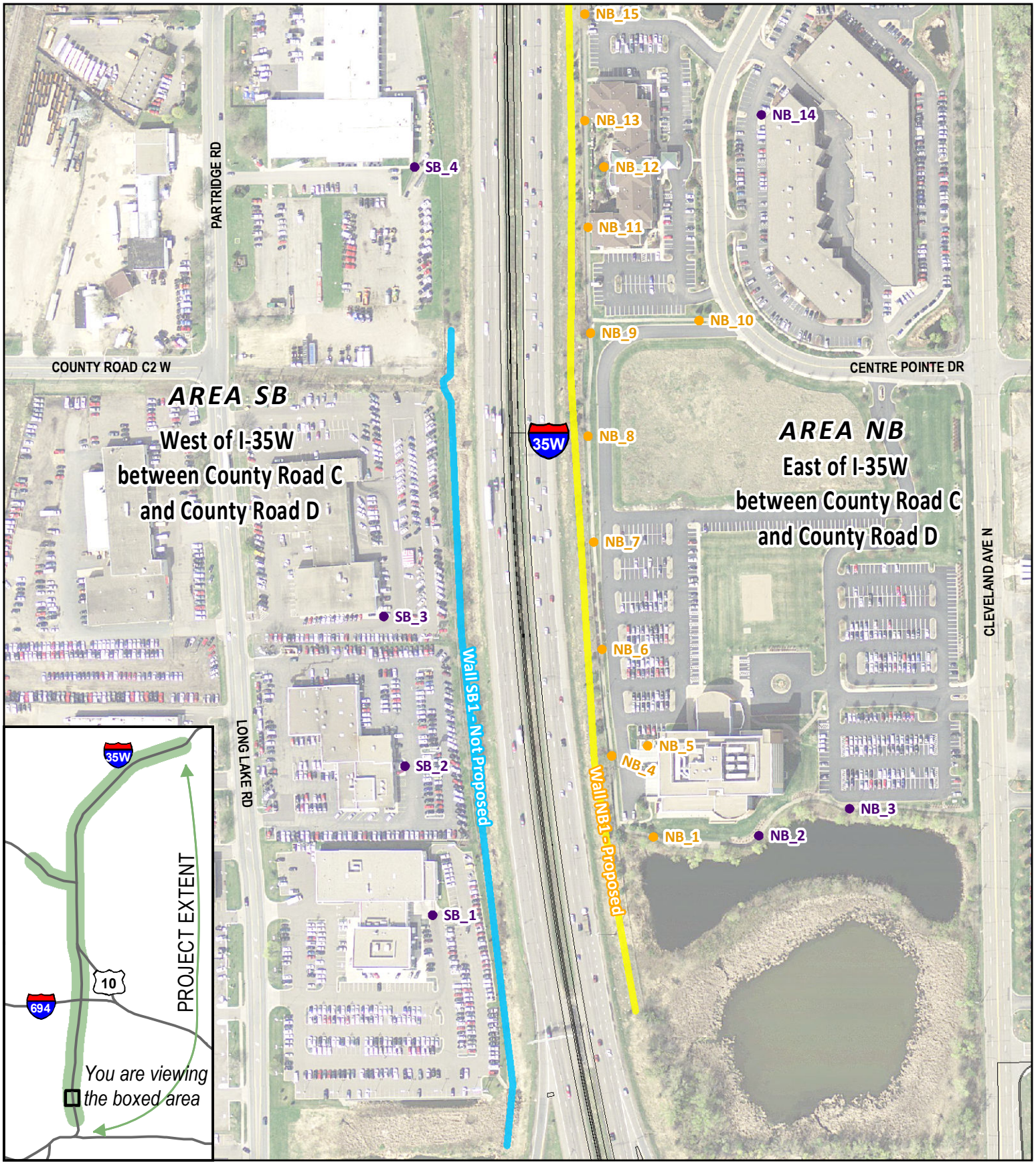
I-35W North Corridor Preliminary Design Project

April 2016

Noise Receptor and Wall Locations: Map Area 1 of 18

Kimley»Horn

0 140 280 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

April 2016

Noise Receptor and Wall Locations: Map Area 2 of 18

Kimley»Horn

Minnesota Department of Transportation

0 125 250 Feet

Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

April 2016

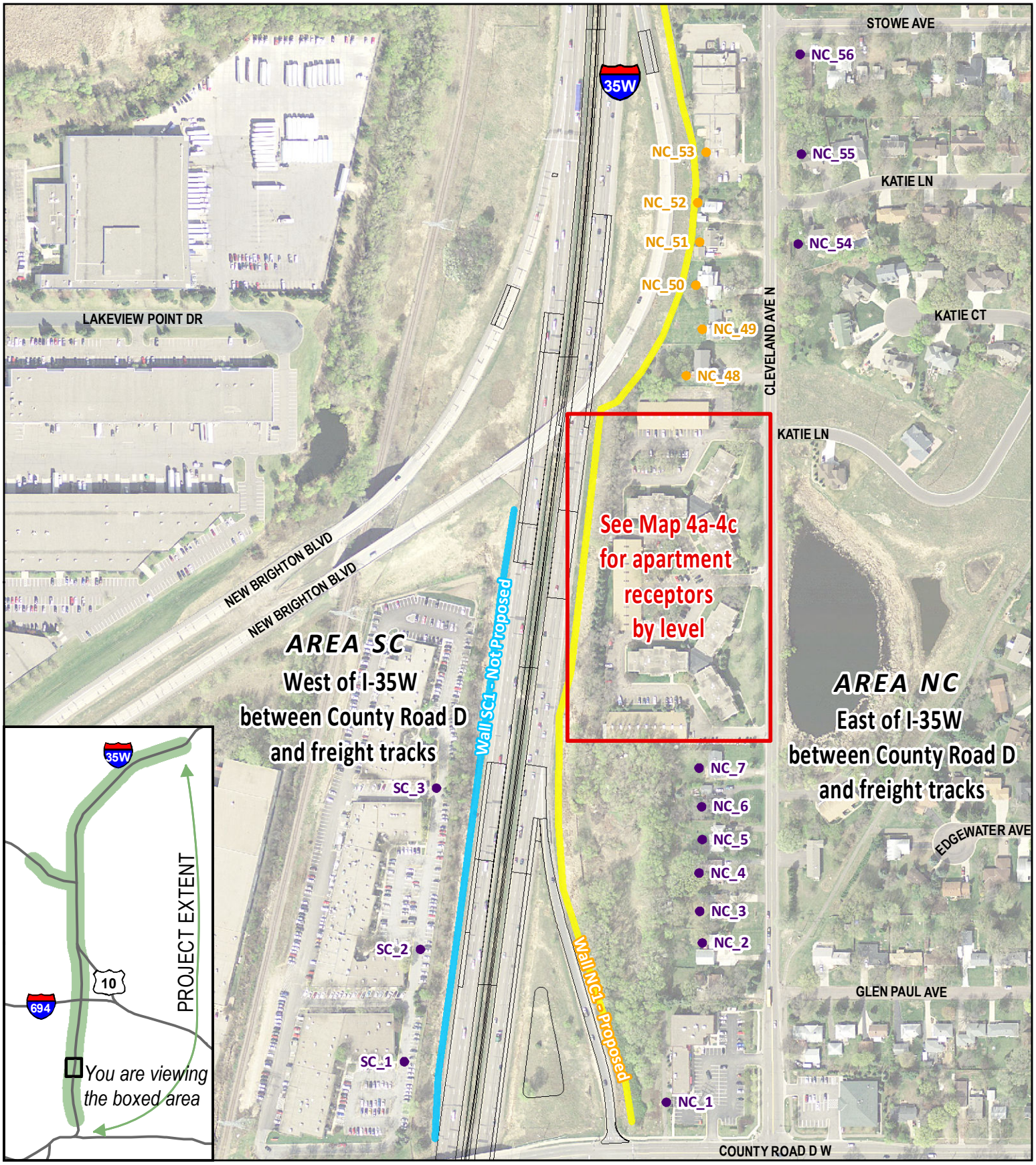
I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map Area 3 of 18

Kimley»Horn

MINNESOTA DEPARTMENT OF TRANSPORTATION

0 125 250 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

April 2016

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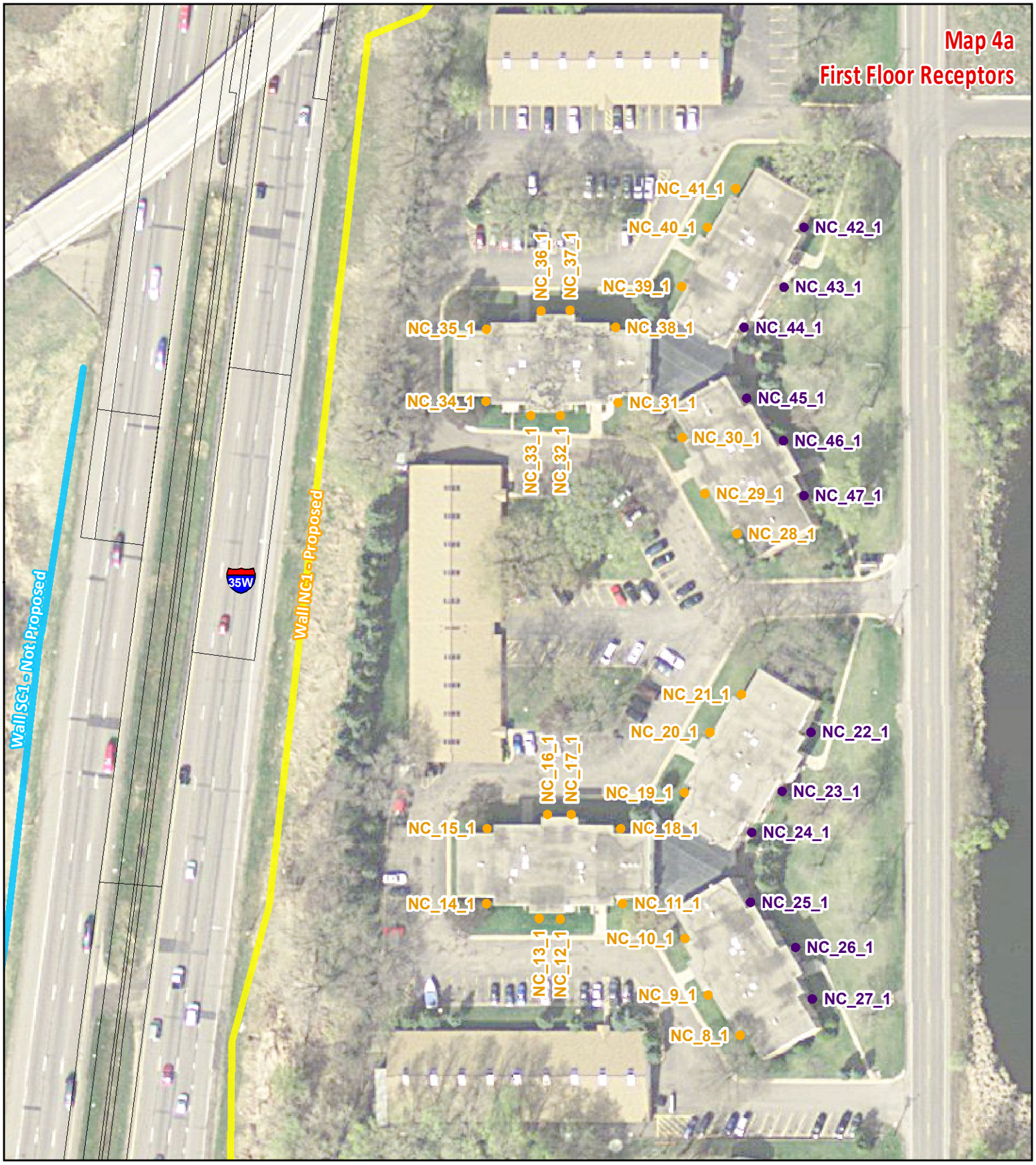
0 150 300 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map Area 4 of 18



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

April 2016

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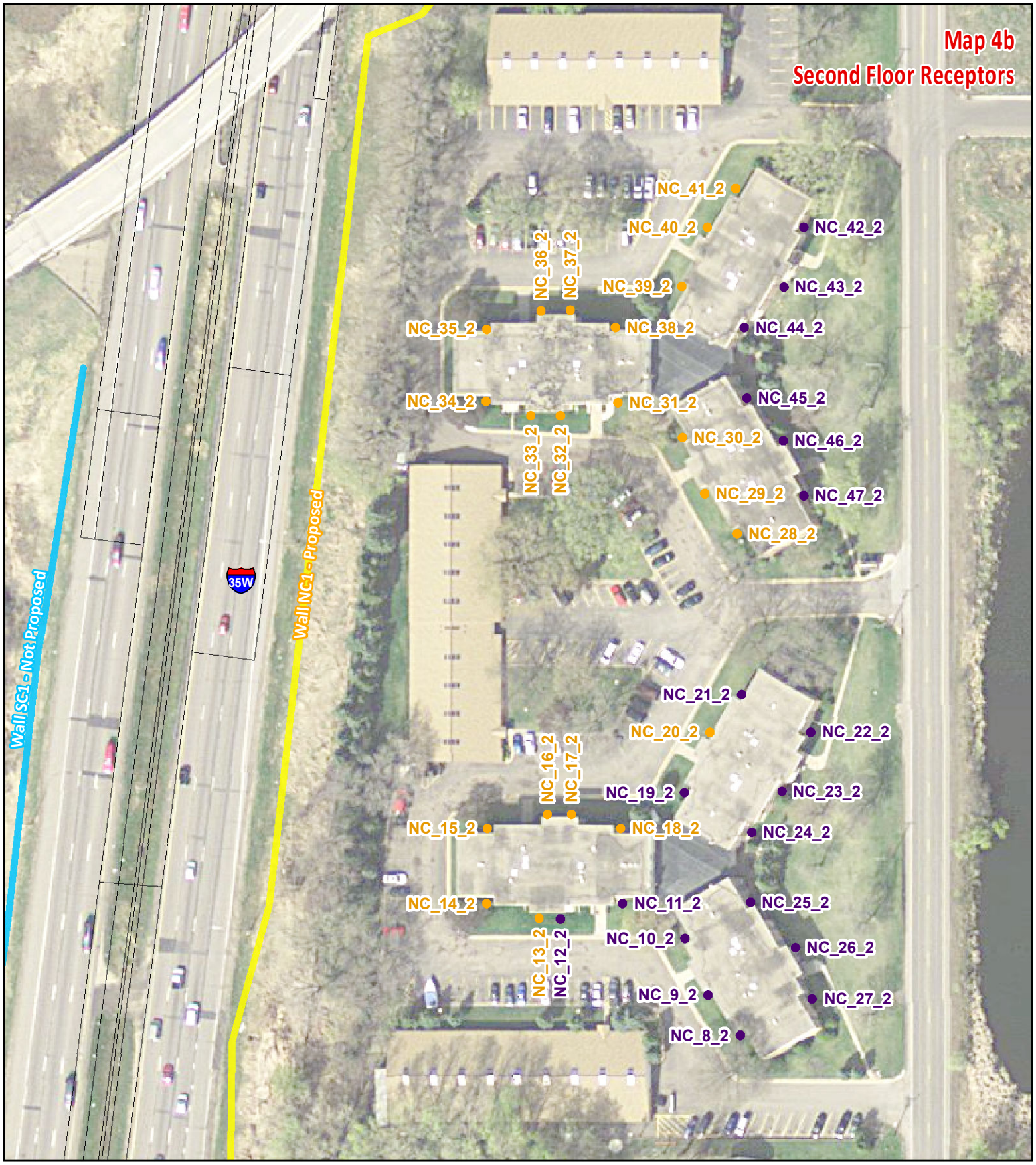
0 40 80 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 4a

FIRST FLOOR RECEPTORS



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

April 2016

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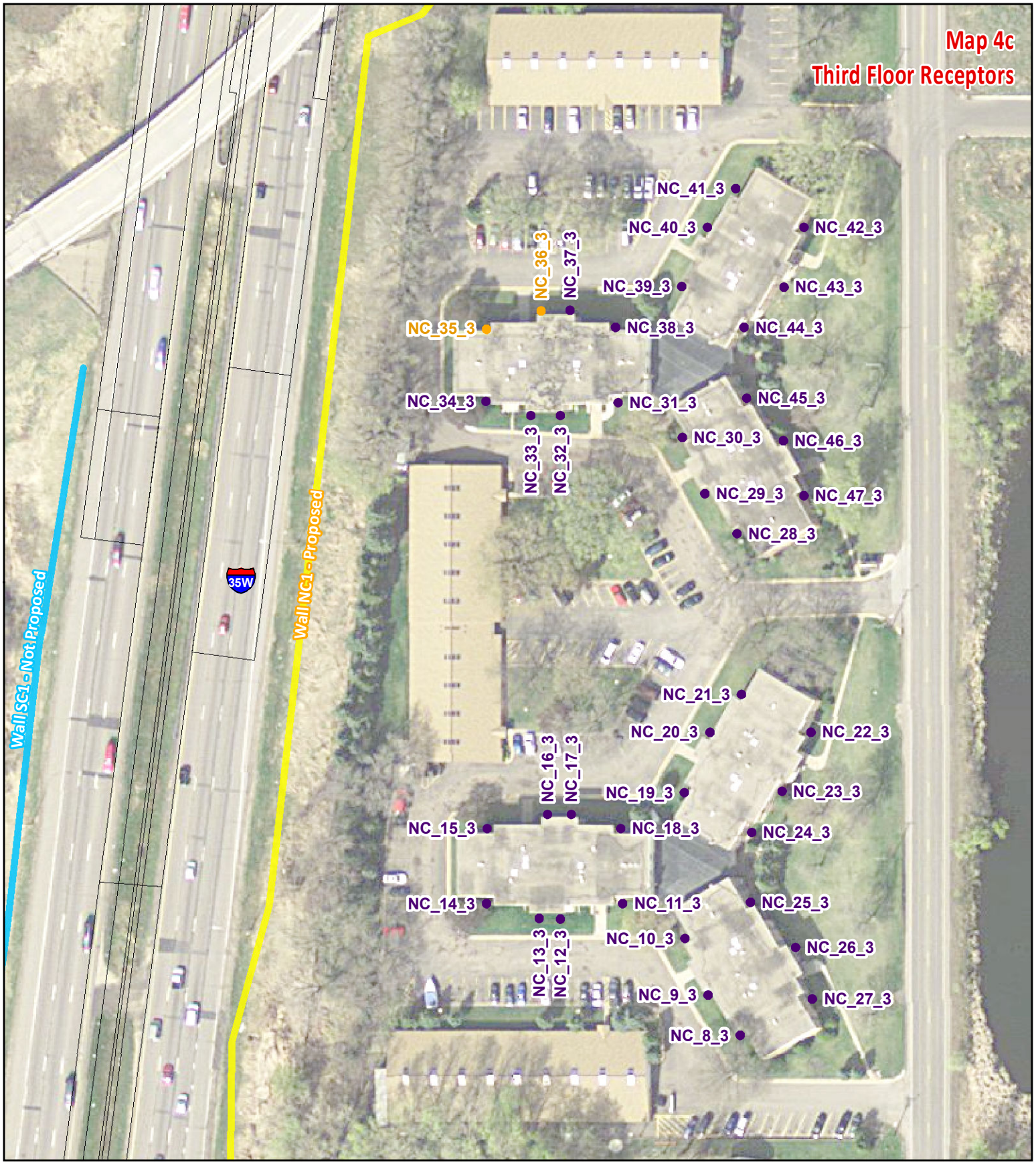
0 40 80 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 4b

SECOND FLOOR RECEPTORS



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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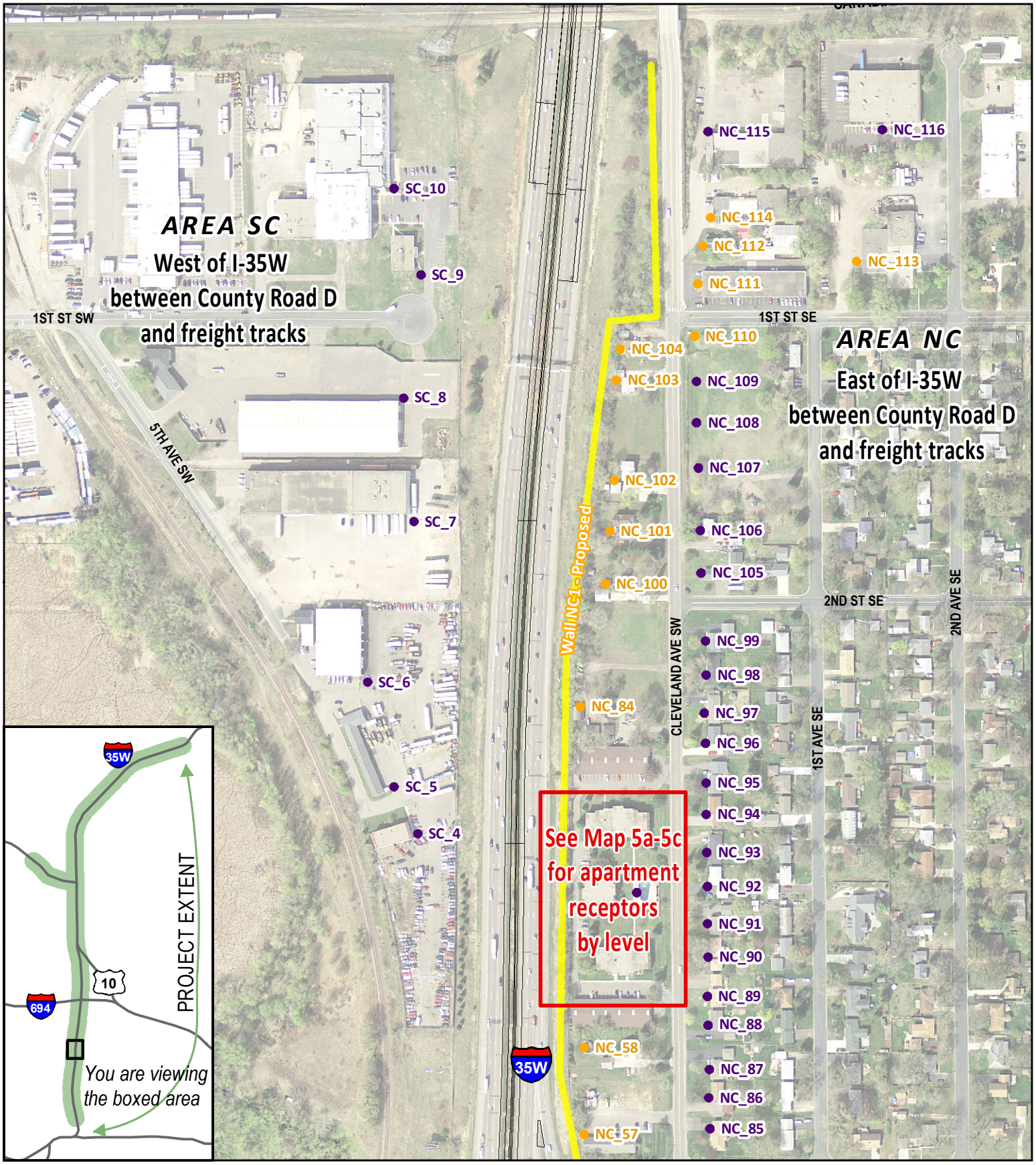
0 40 80 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 4c

THIRD FLOOR RECEPTORS



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

April 2016

Noise Receptor and Wall Locations: Map Area 5 of 18

Kimley»Horn

0 150 300 Feet

Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

April 2016

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0 25 50 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 5a

FIRST FLOOR RECEPTORS

Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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0 25 50 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 5b

SECOND FLOOR RECEPTORS

Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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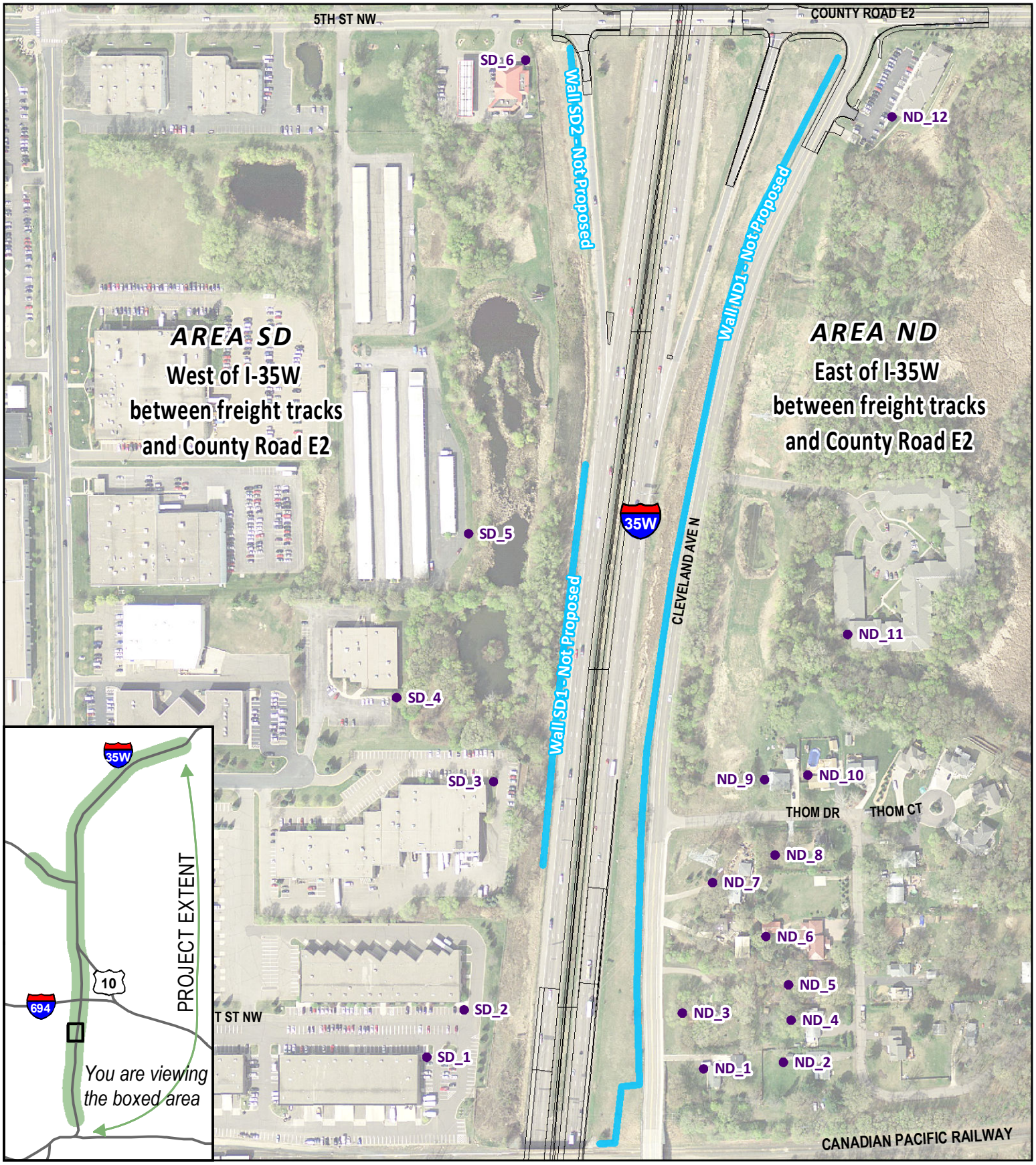
MINNESOTA DEPARTMENT OF TRANSPORTATION

0 25 50 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 5c

THIRD FLOOR RECEPTORS



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

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Noise Receptor and Wall Locations: Map Area 6 of 18

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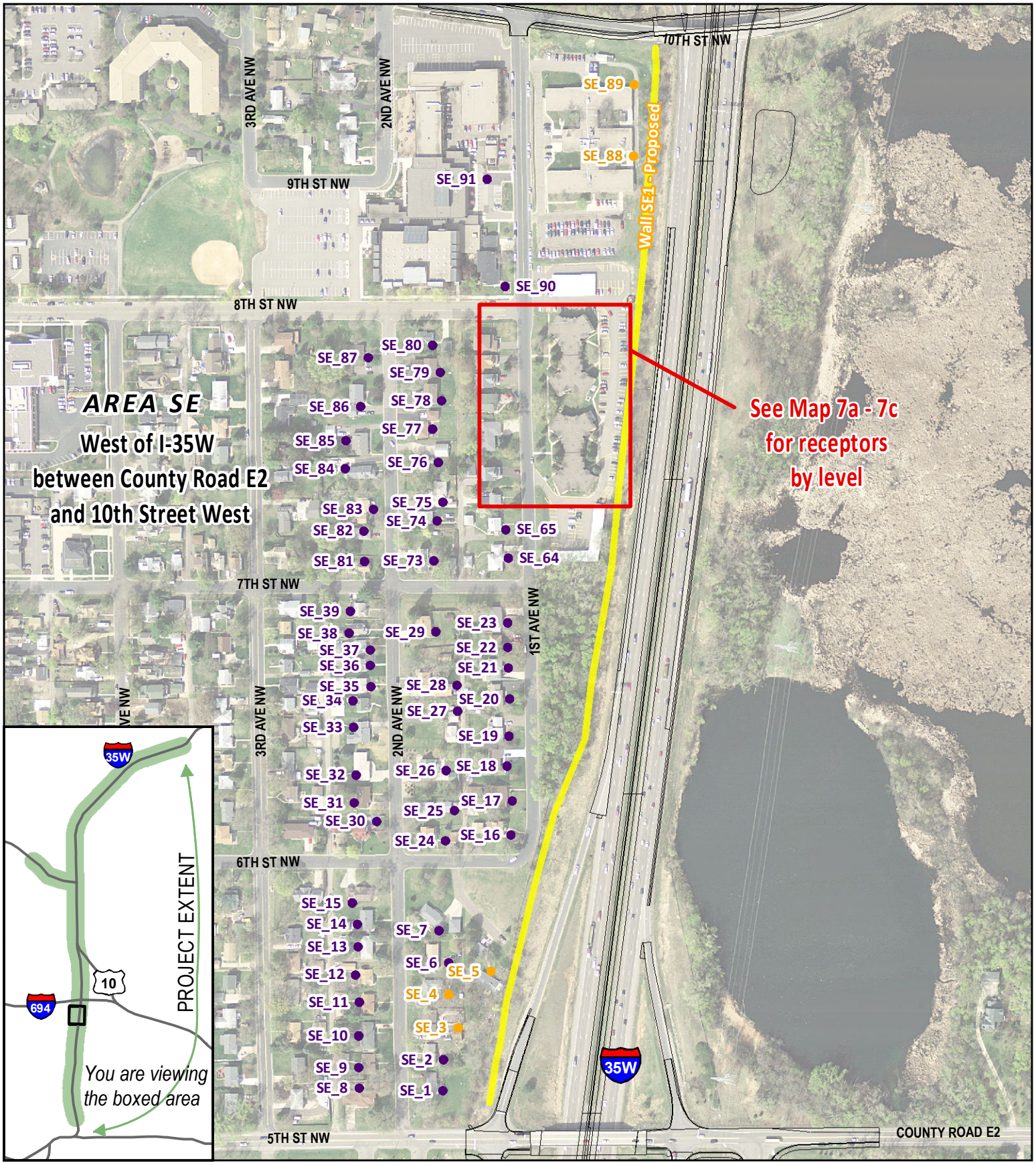
0 145 290 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

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Noise Receptor and Wall Locations: Map Area 7 of 18

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0 155 310 Feet

Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 7a

0 25 50 Feet

FIRST FLOOR RECEPTORS

Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 7b

0 25 50 Feet

SECOND FLOOR RECEPTORS

Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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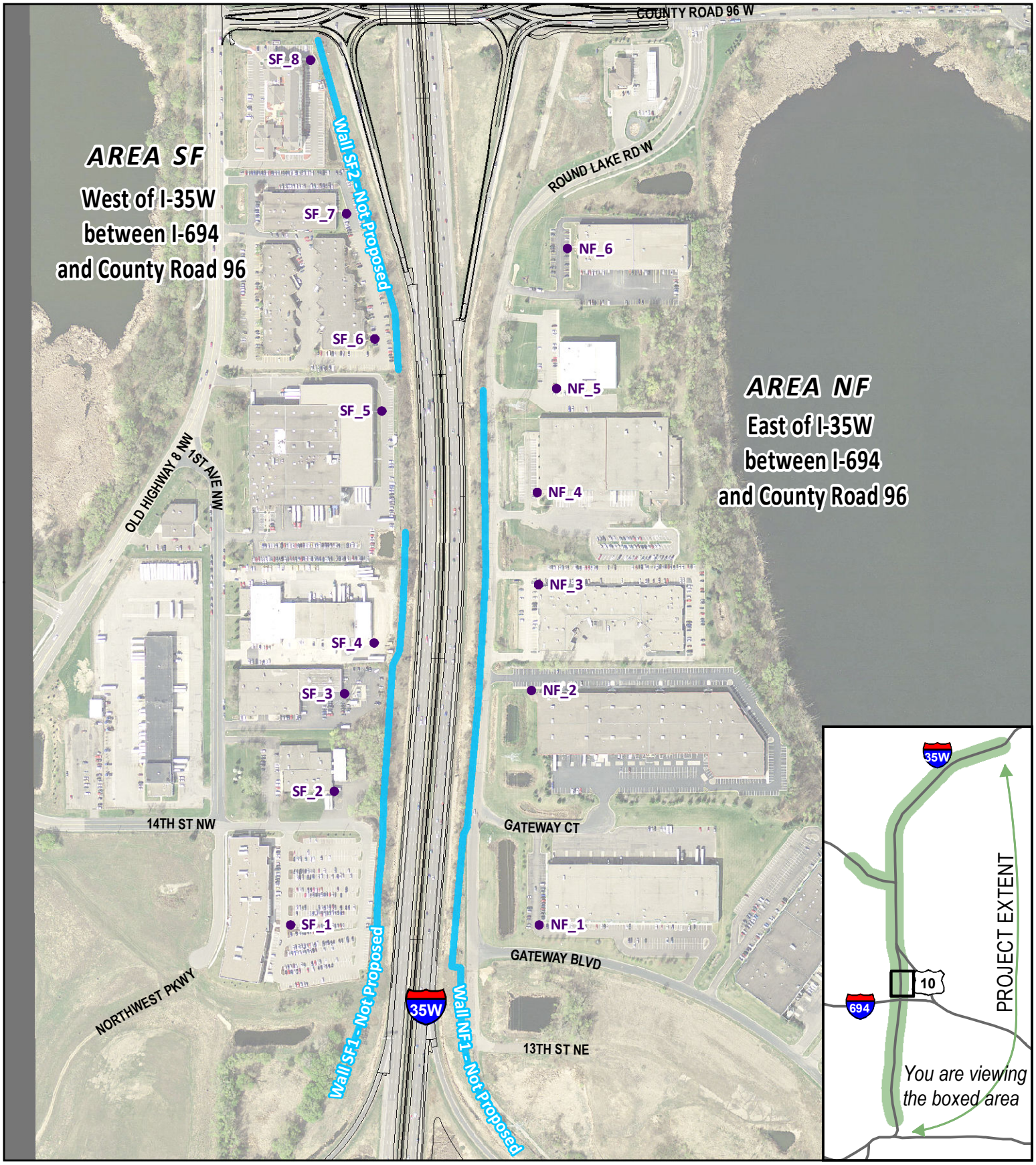
I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 7c

0 25 50 Feet

THIRD FLOOR RECEPTORS



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

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Noise Receptor and Wall Locations: Map Area 8 of 18

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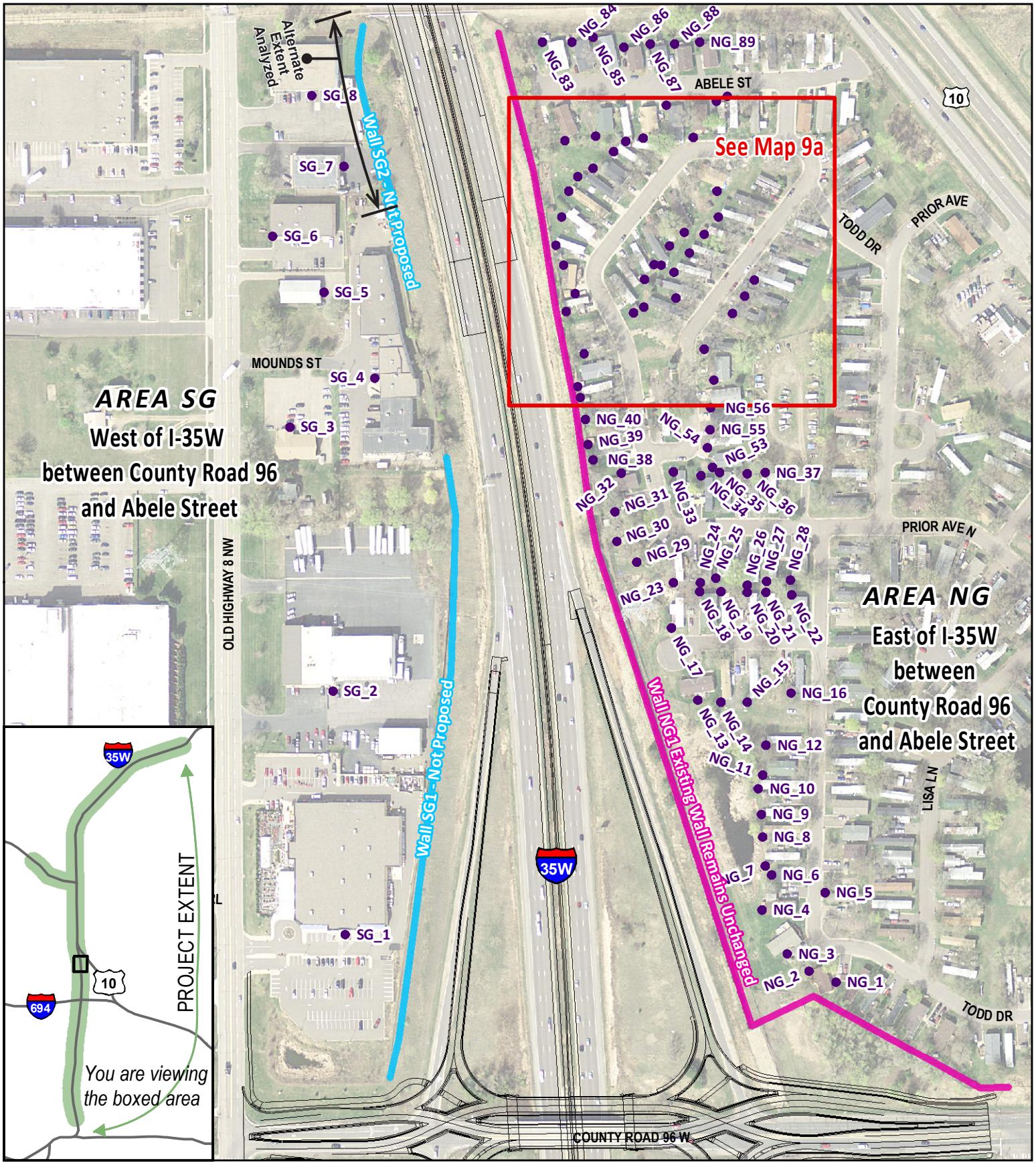
0 215 430 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

April 2016

Noise Receptor and Wall Locations: Map Area 9 of 18

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0 125 250 Feet

Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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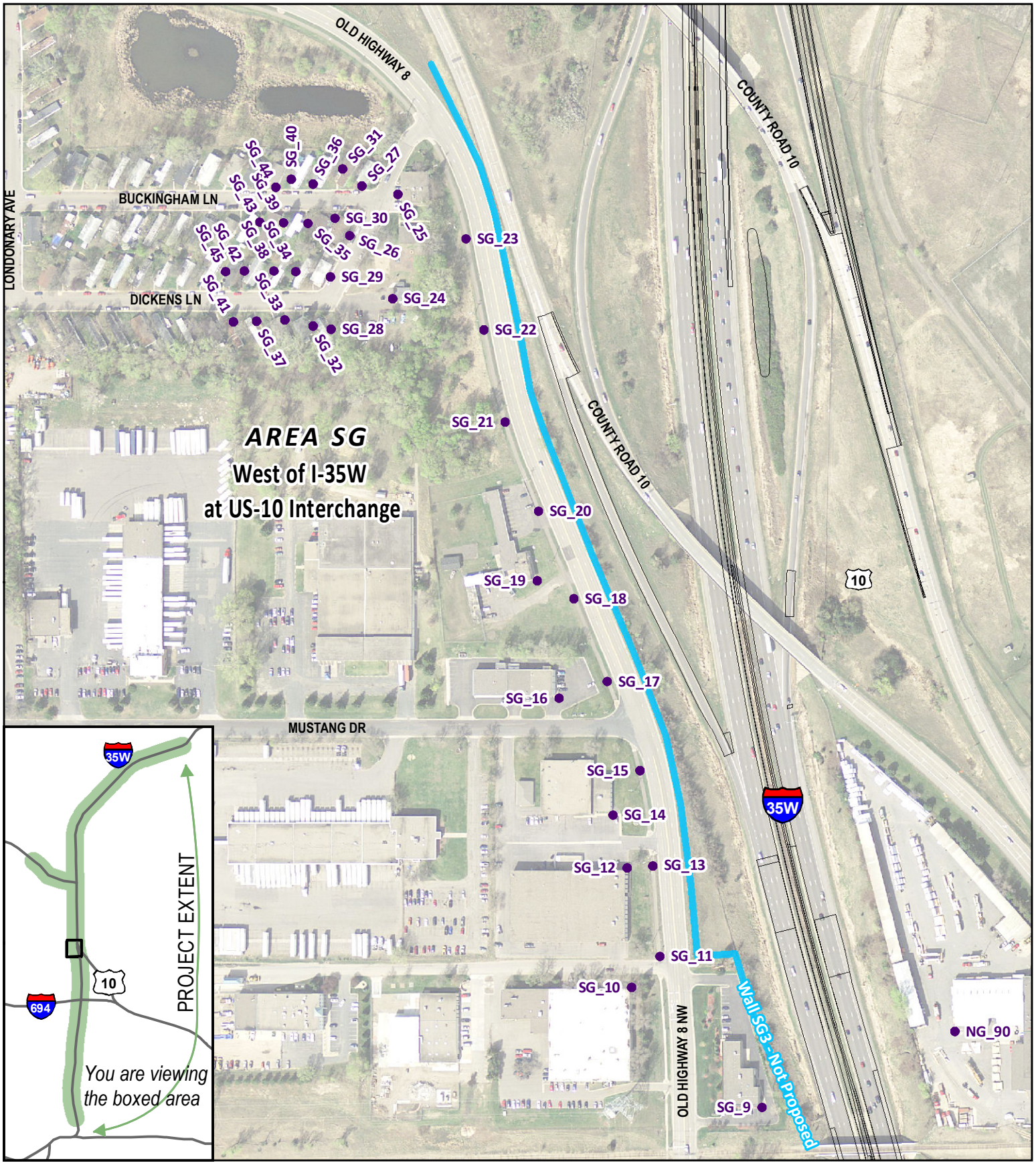
0 30 60 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 9a



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

April 2016

Noise Receptor and Wall Locations: Map Area 10 of 18

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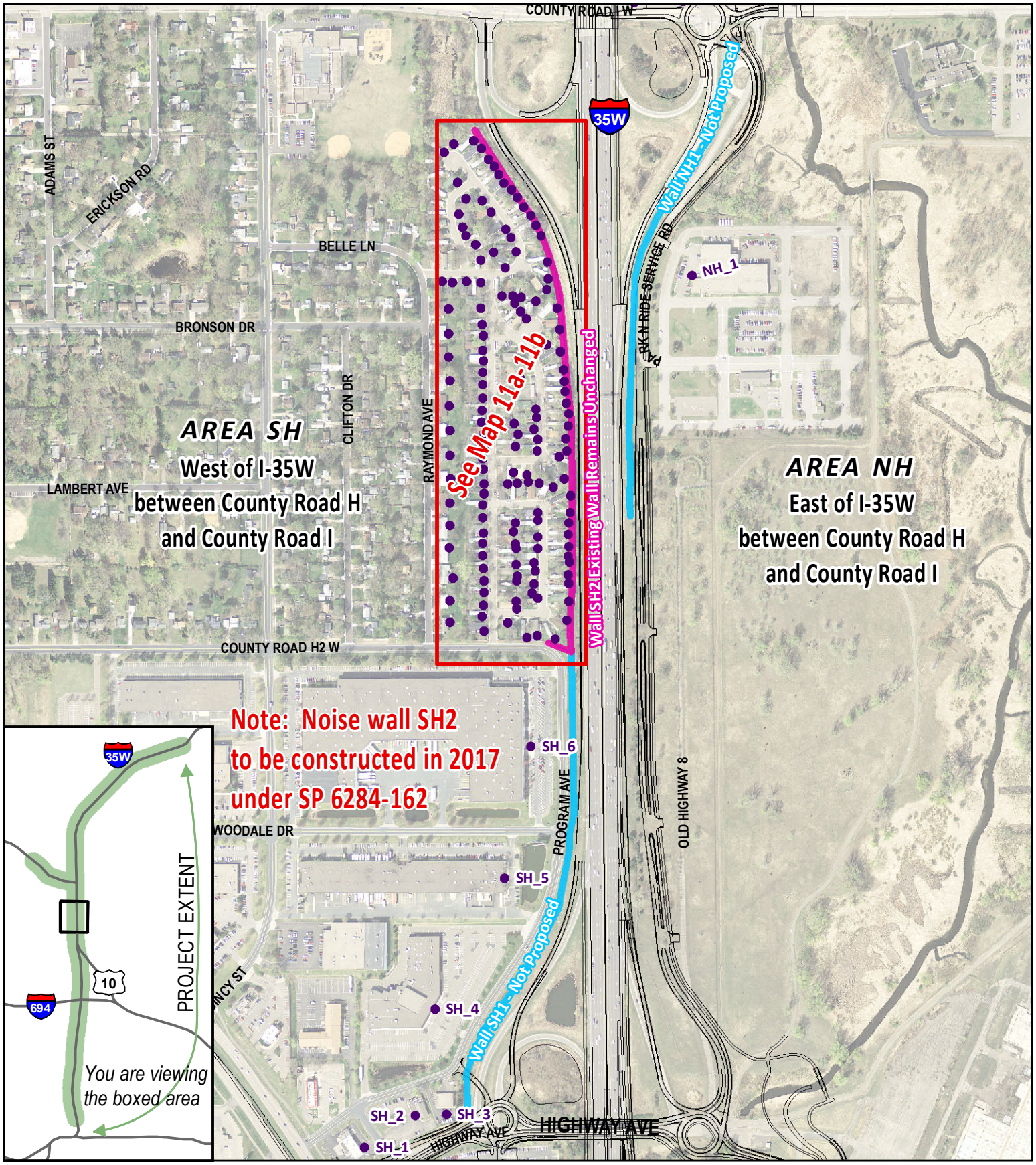
Minnesota Department of Transportation

0 140 280 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

April 2016

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map Area 11 of 18

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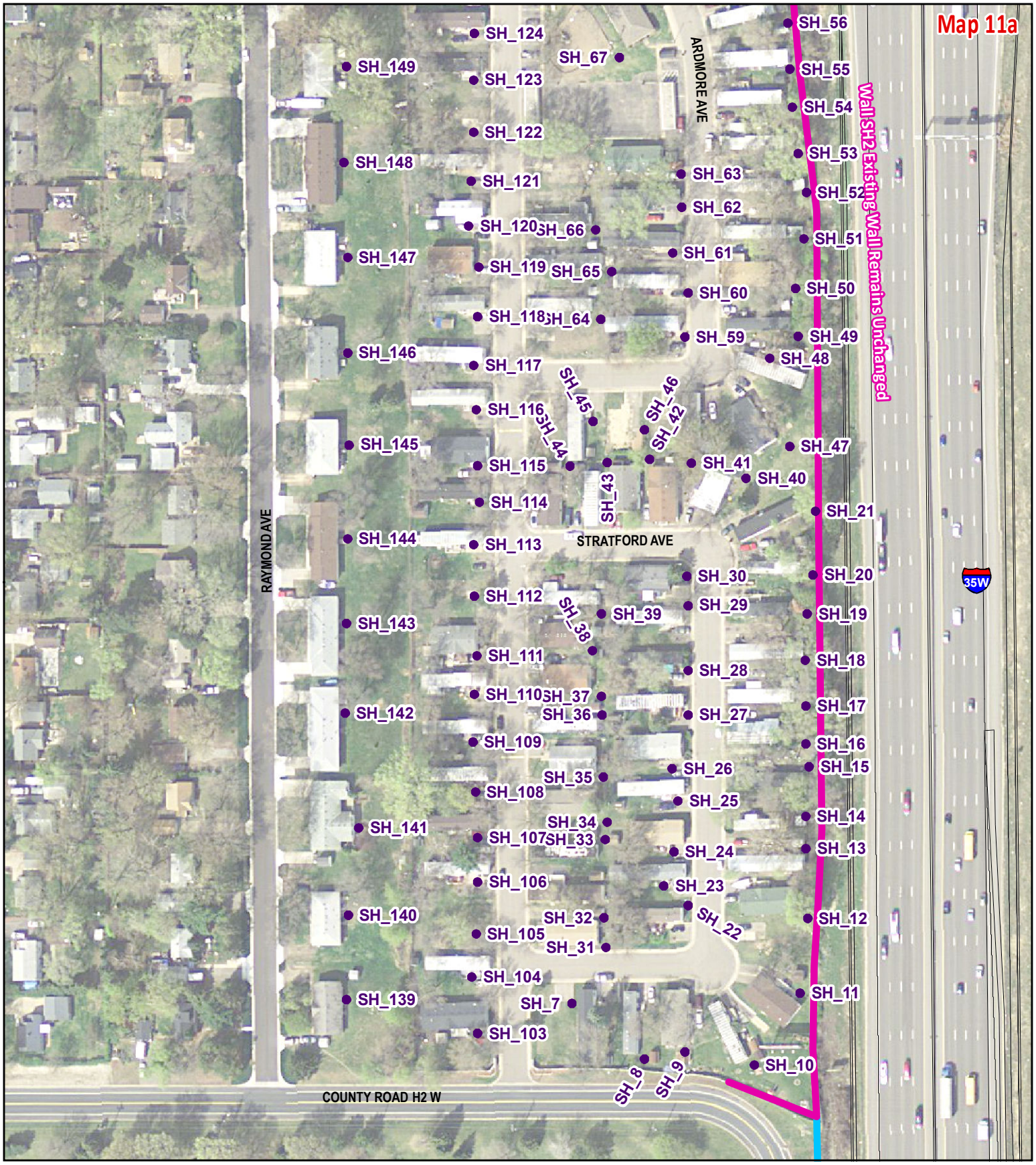
Minnesota Department of Transportation

0 265 530 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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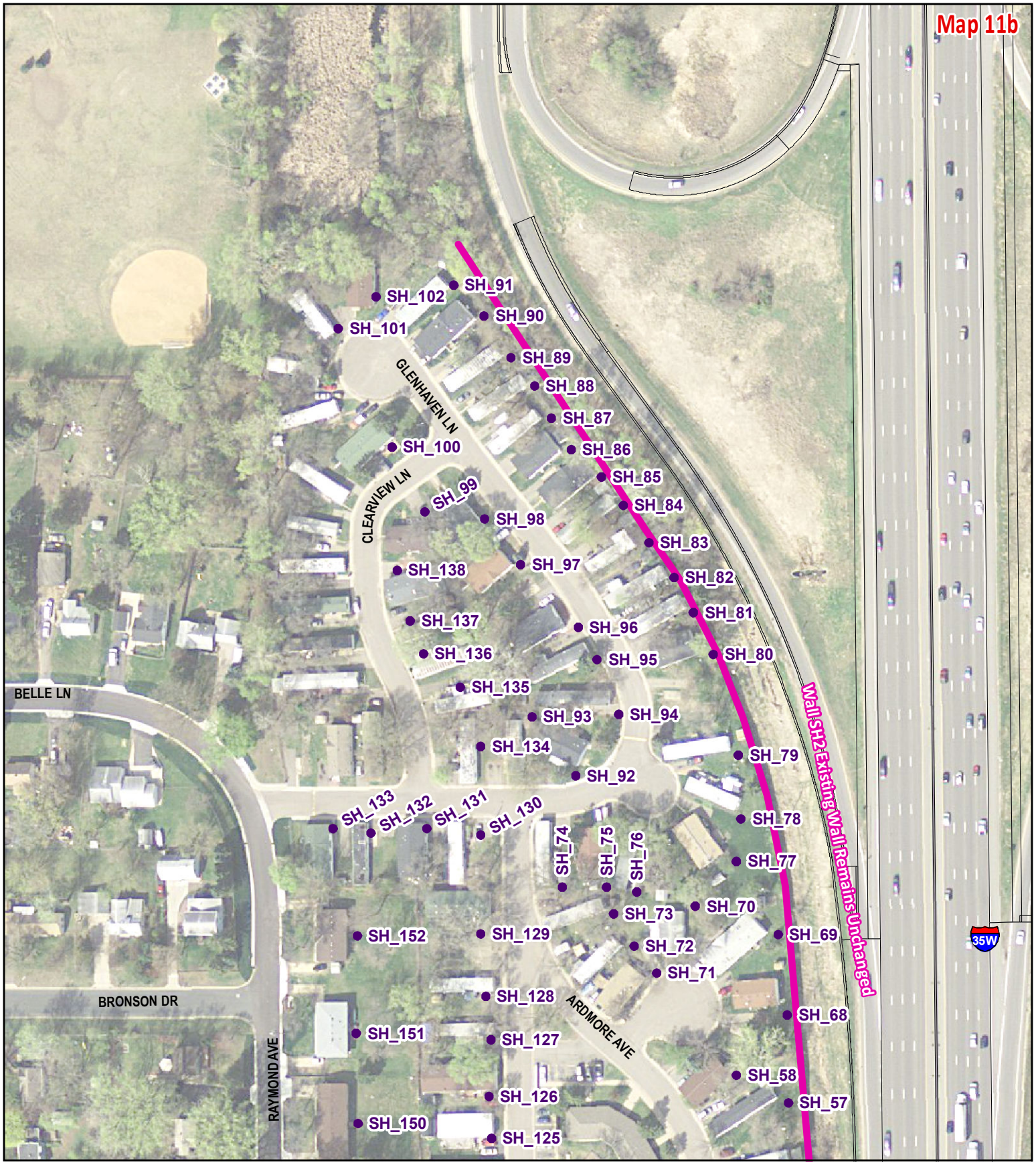
I-35W North Managed Lanes Project

Noise Receptor and Wall Locations: Map 11a

0 60 120 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

April 2016

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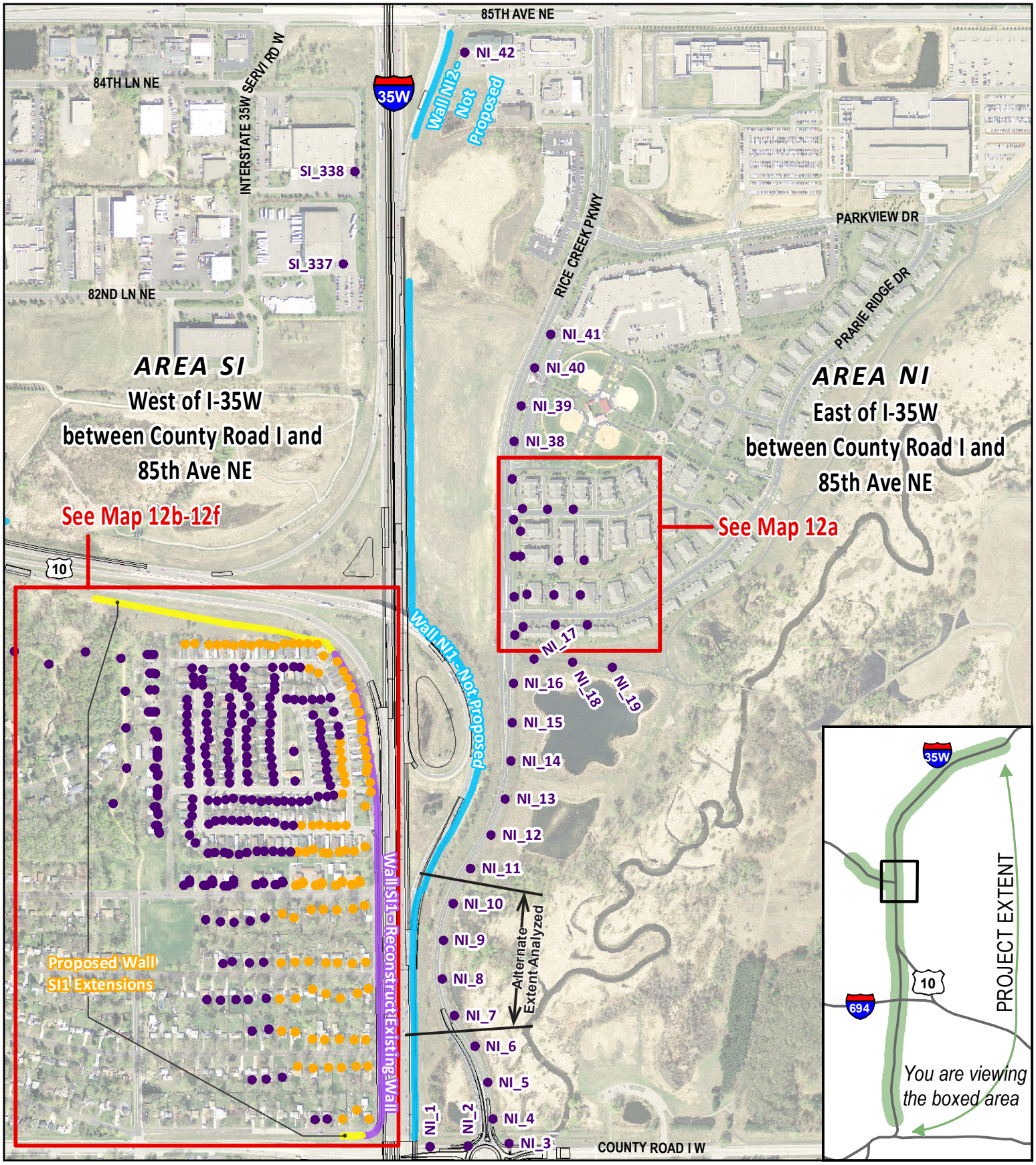
MINNESOTA DEPARTMENT OF TRANSPORTATION

I-35W North Managed Lanes Project

Noise Receptor and Wall Locations: Map 11b

0 60 120 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

April 2016

Noise Receptor and Wall Locations: Map Area 12 of 18

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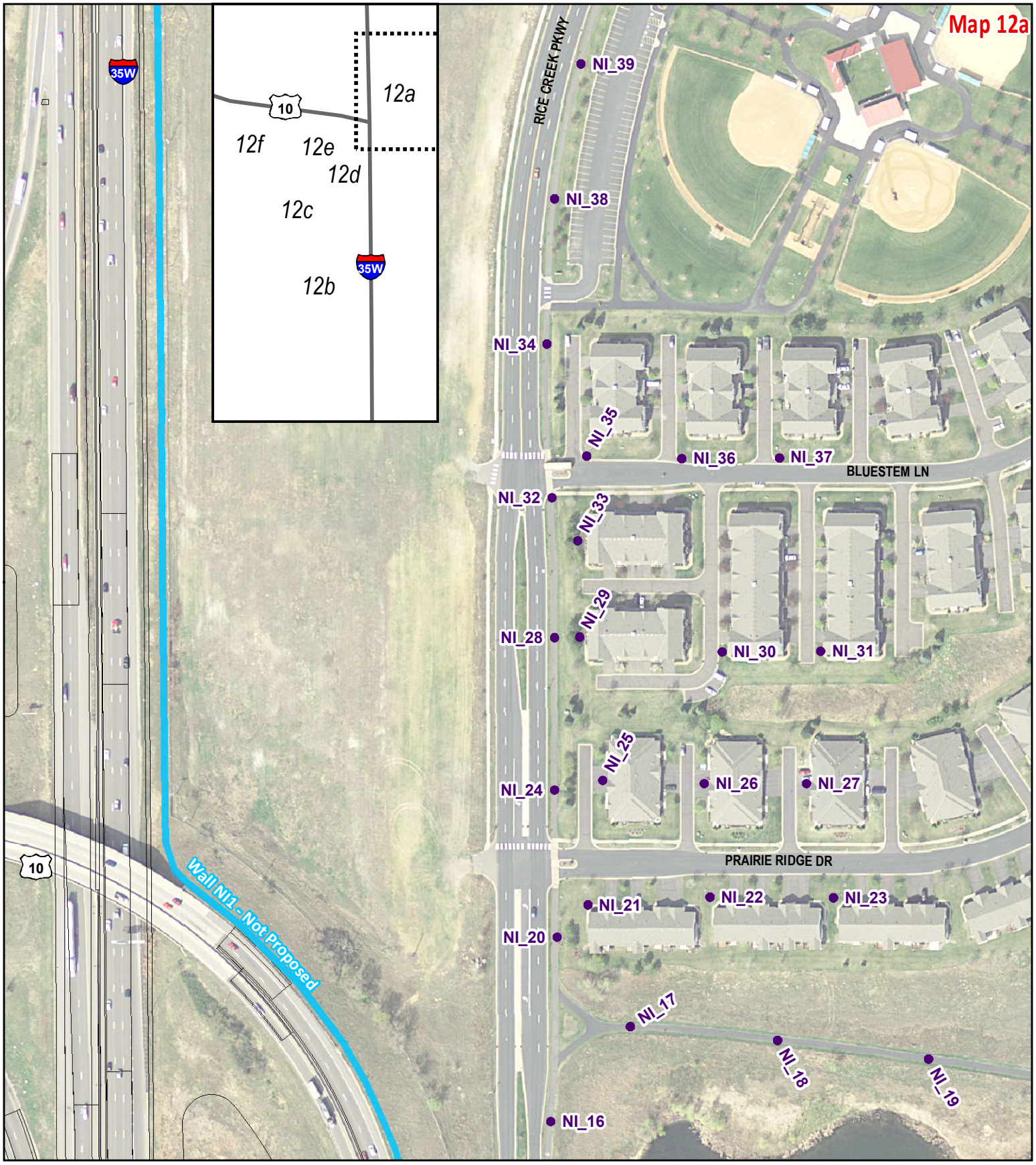
MINNESOTA DEPARTMENT OF TRANSPORTATION

0 340 680 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

April 2016

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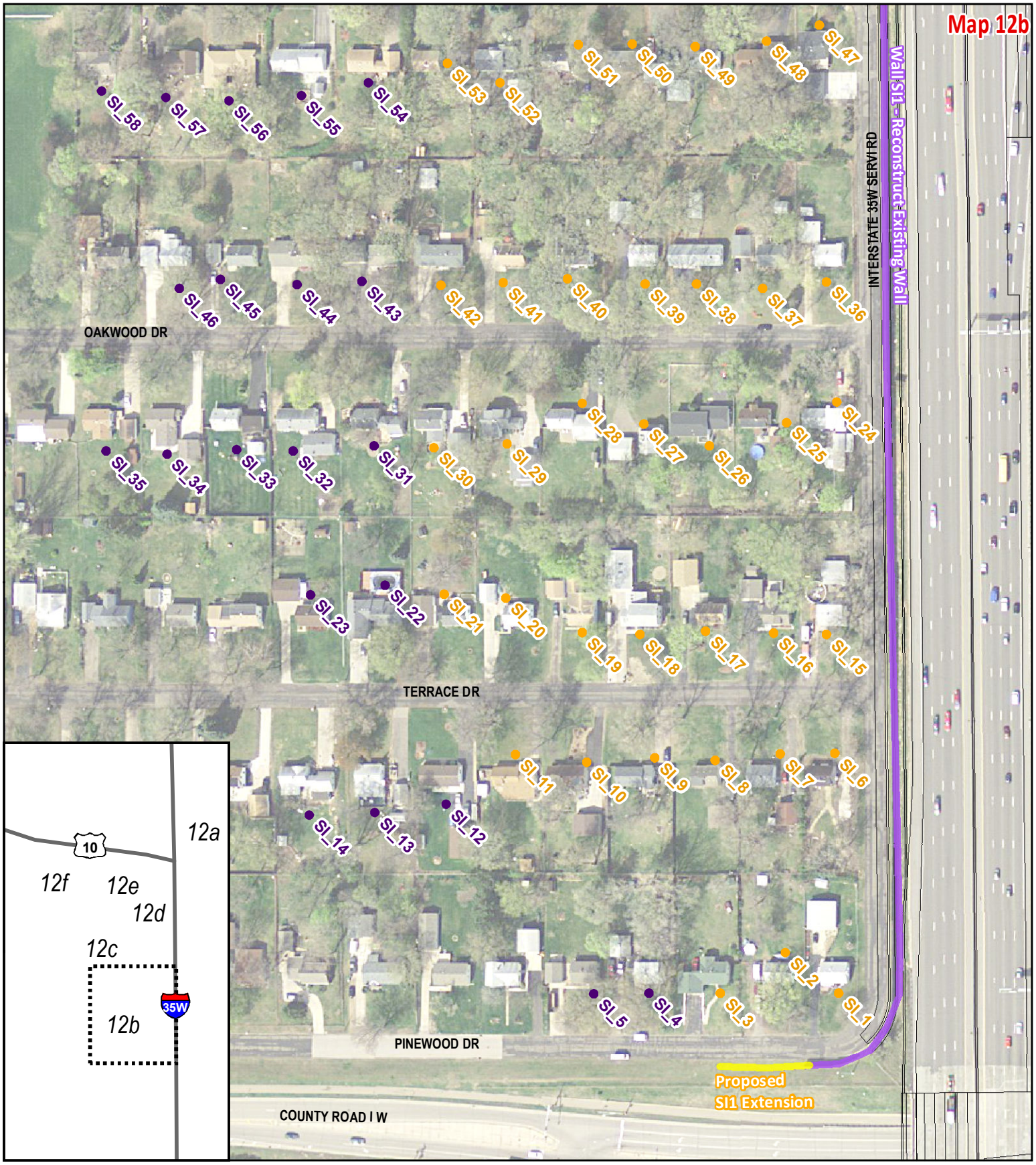
MINNESOTA DEPARTMENT OF TRANSPORTATION

0 80 160 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 12a



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

April 2016

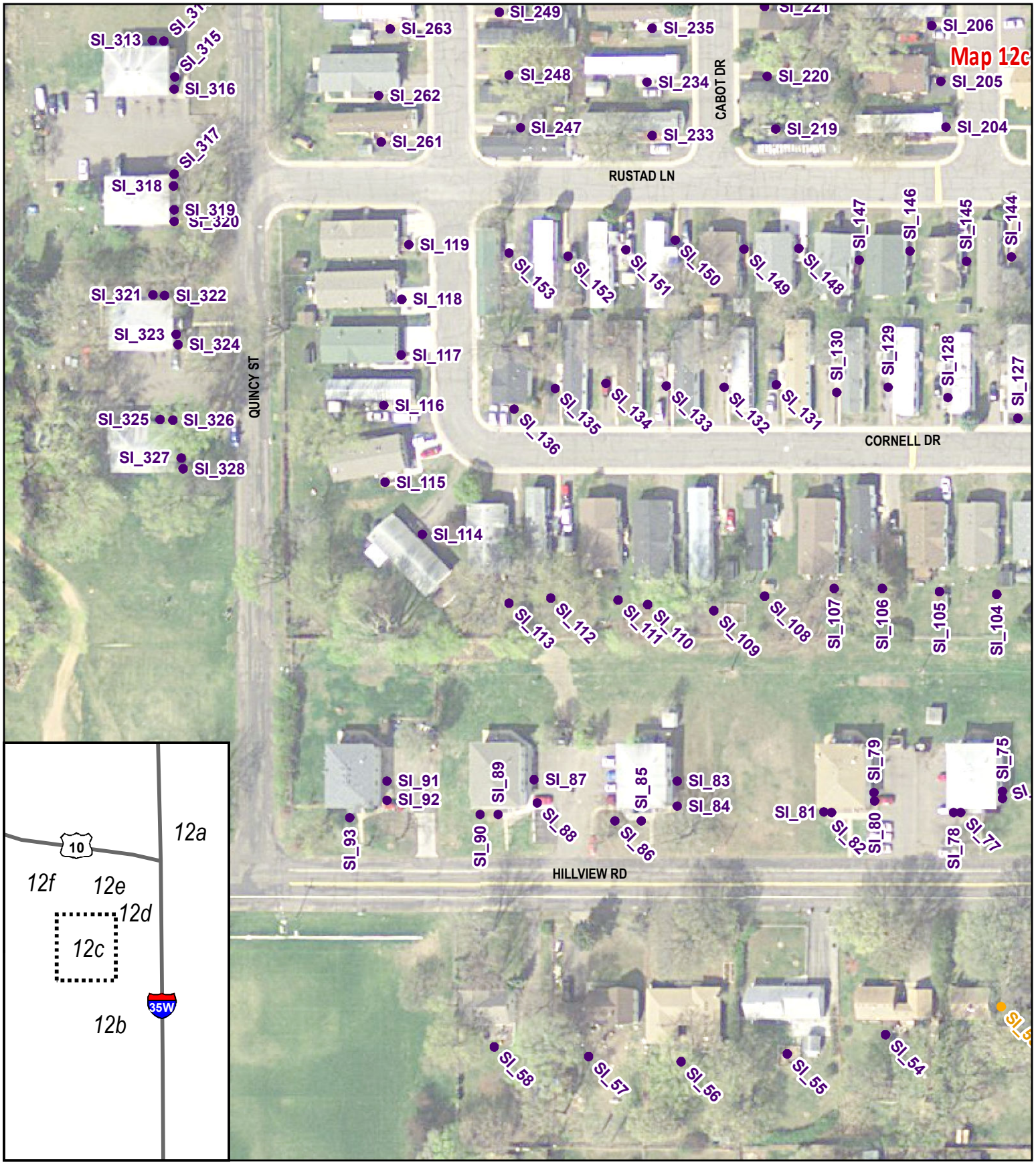
Kimley»Horn

MINNESOTA DEPARTMENT OF TRANSPORTATION

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 12b

0 70 140 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

April 2016

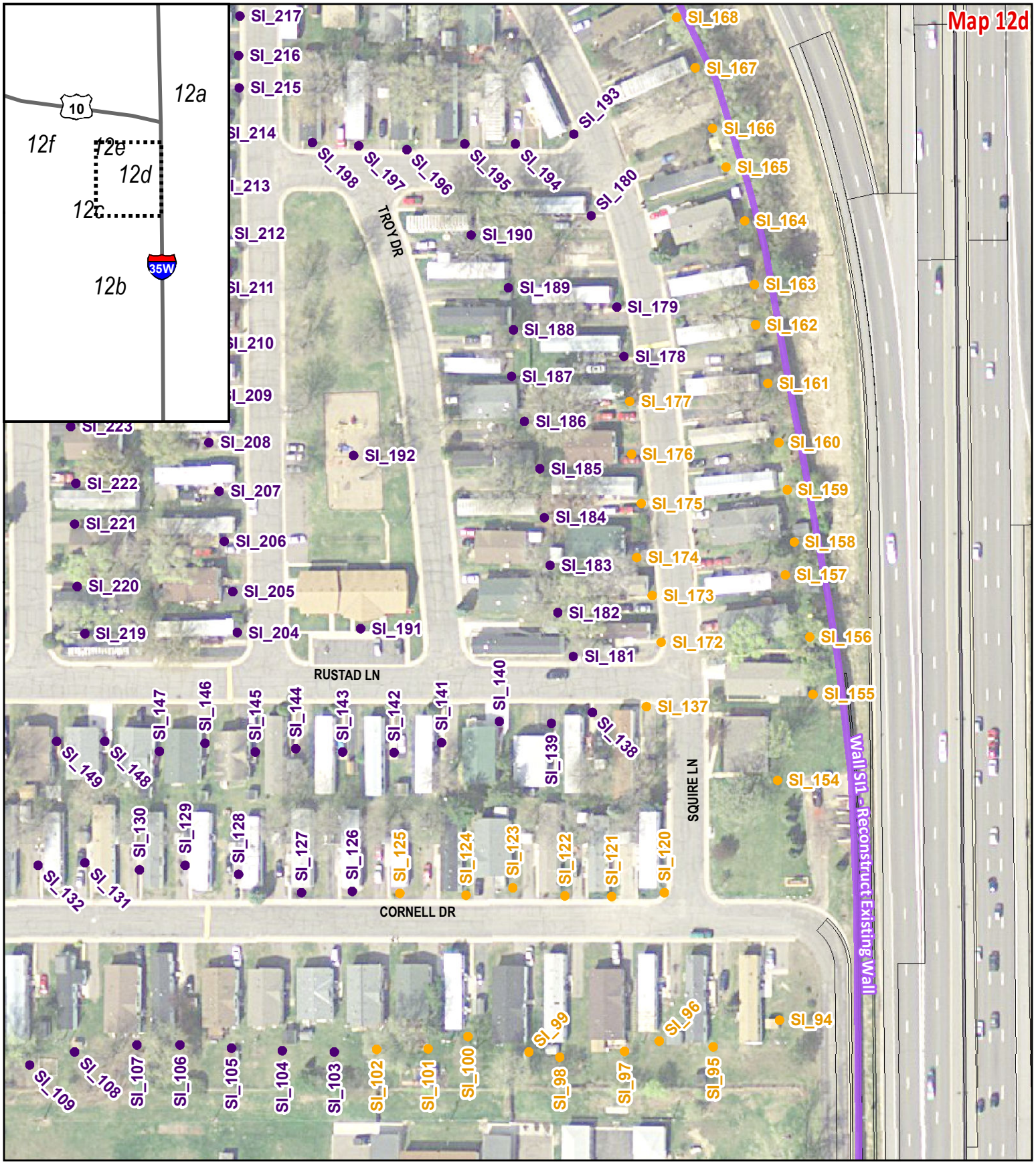
Kimley»Horn

MINNESOTA DEPARTMENT OF TRANSPORTATION

0 40 80 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 12c



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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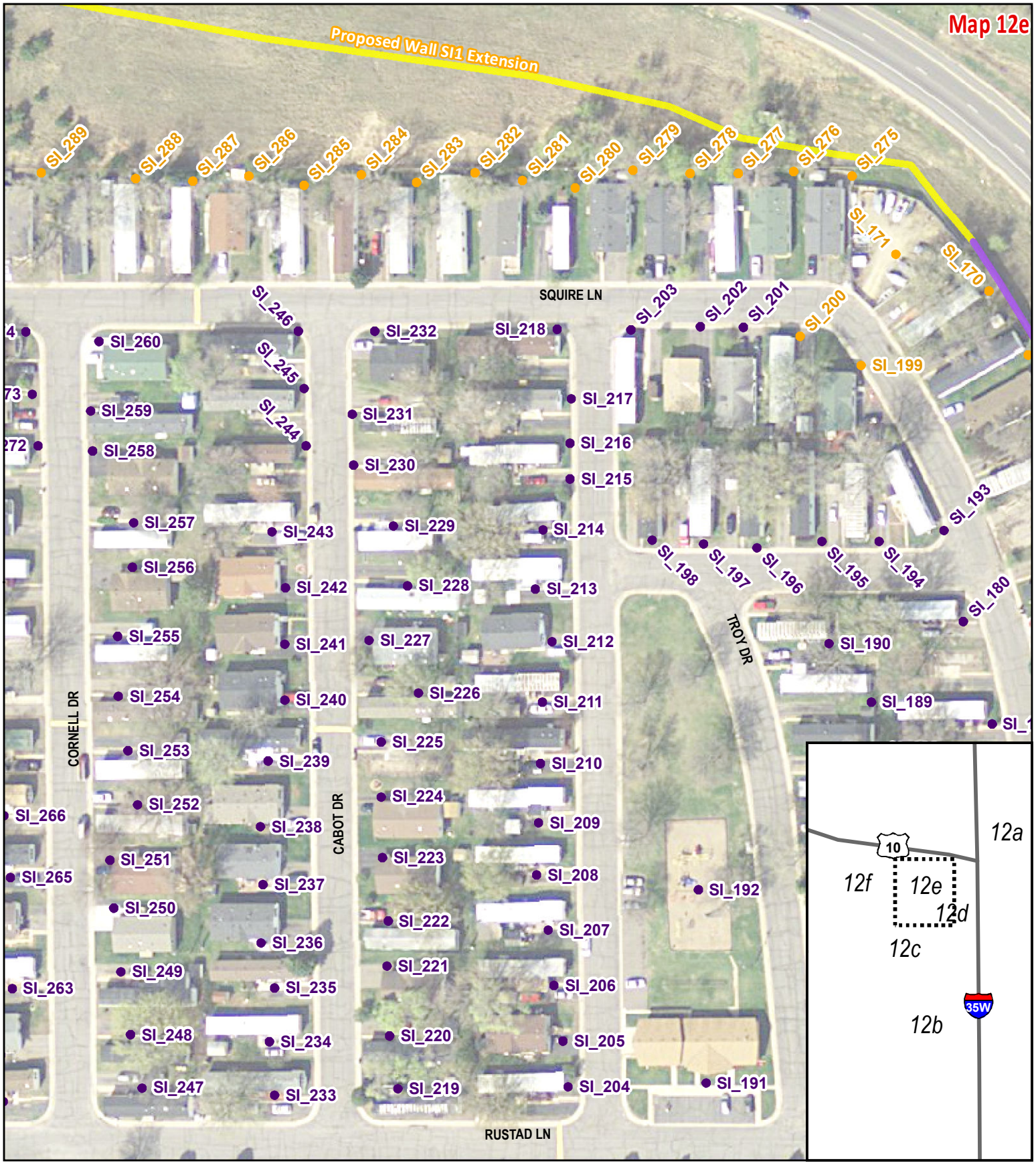
0 50 100 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 12d



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 12e

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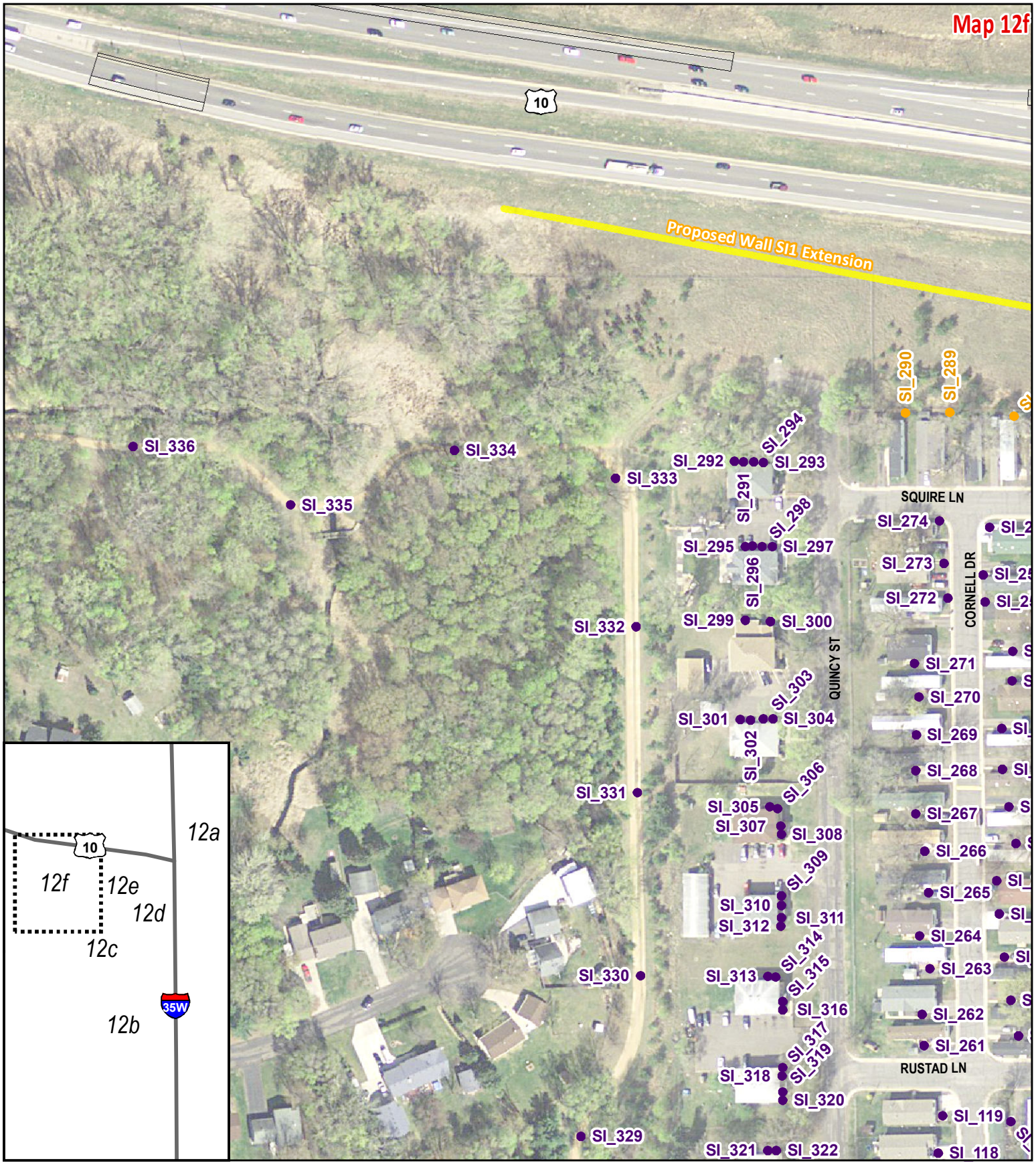
0 40 80 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 12f

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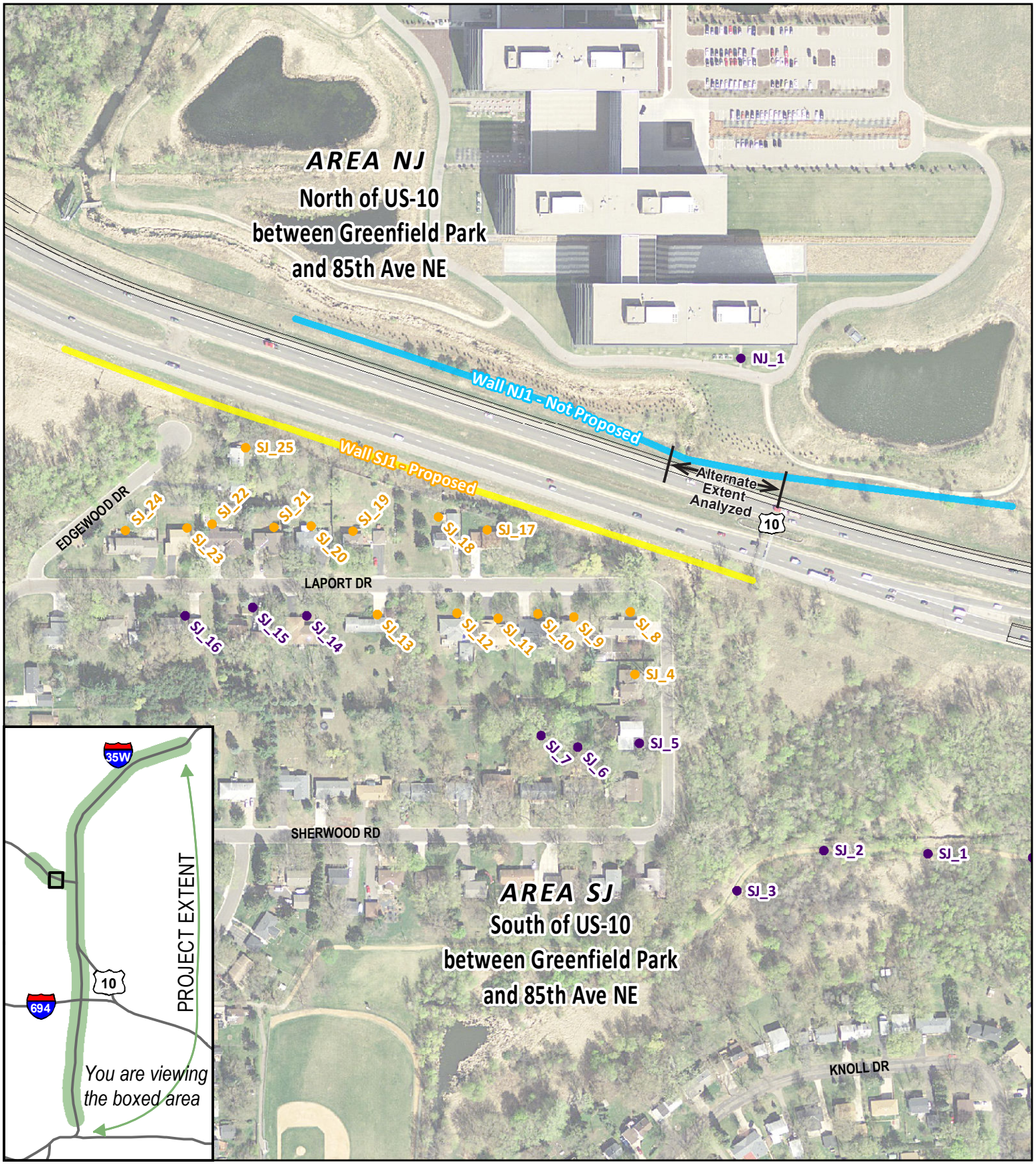
0 70 140 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

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I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map Area 13 of 18

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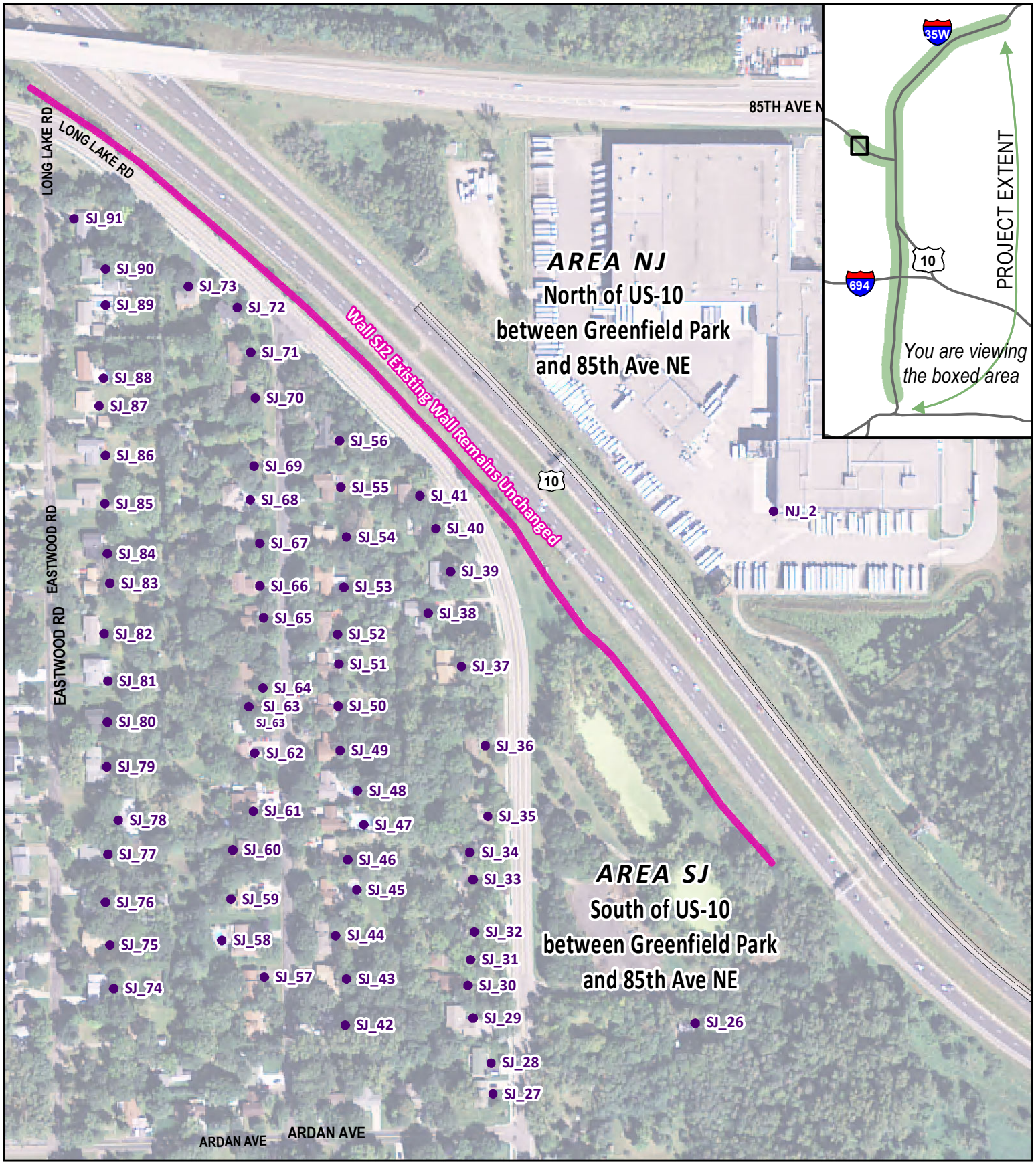
0 125 250 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

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Noise Receptor and Wall Locations: Map Area 14 of 18

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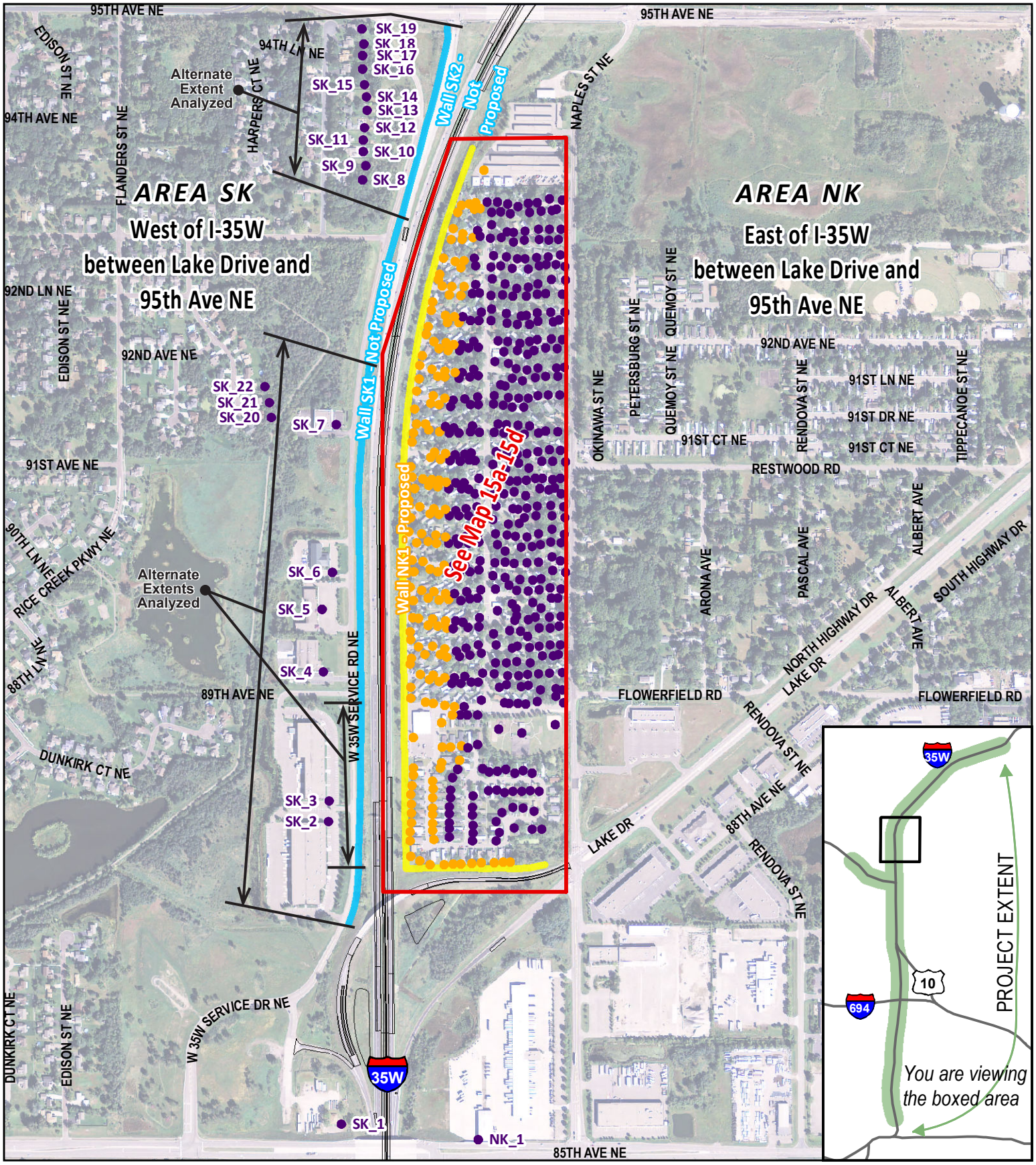
0 145 290 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

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Noise Receptor and Wall Locations: Map Area 15 of 18

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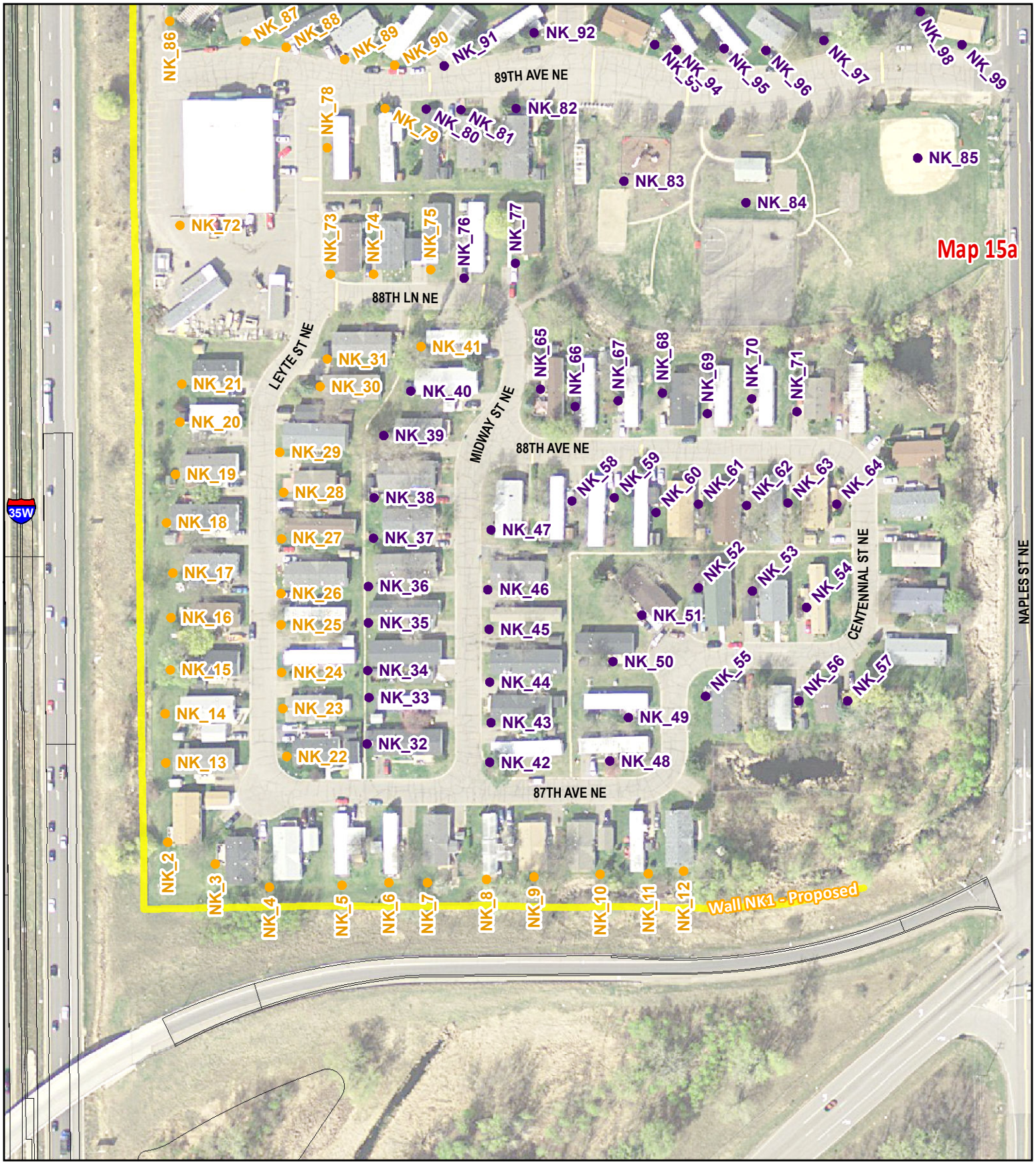
0 375 750 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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0 60 120 Feet

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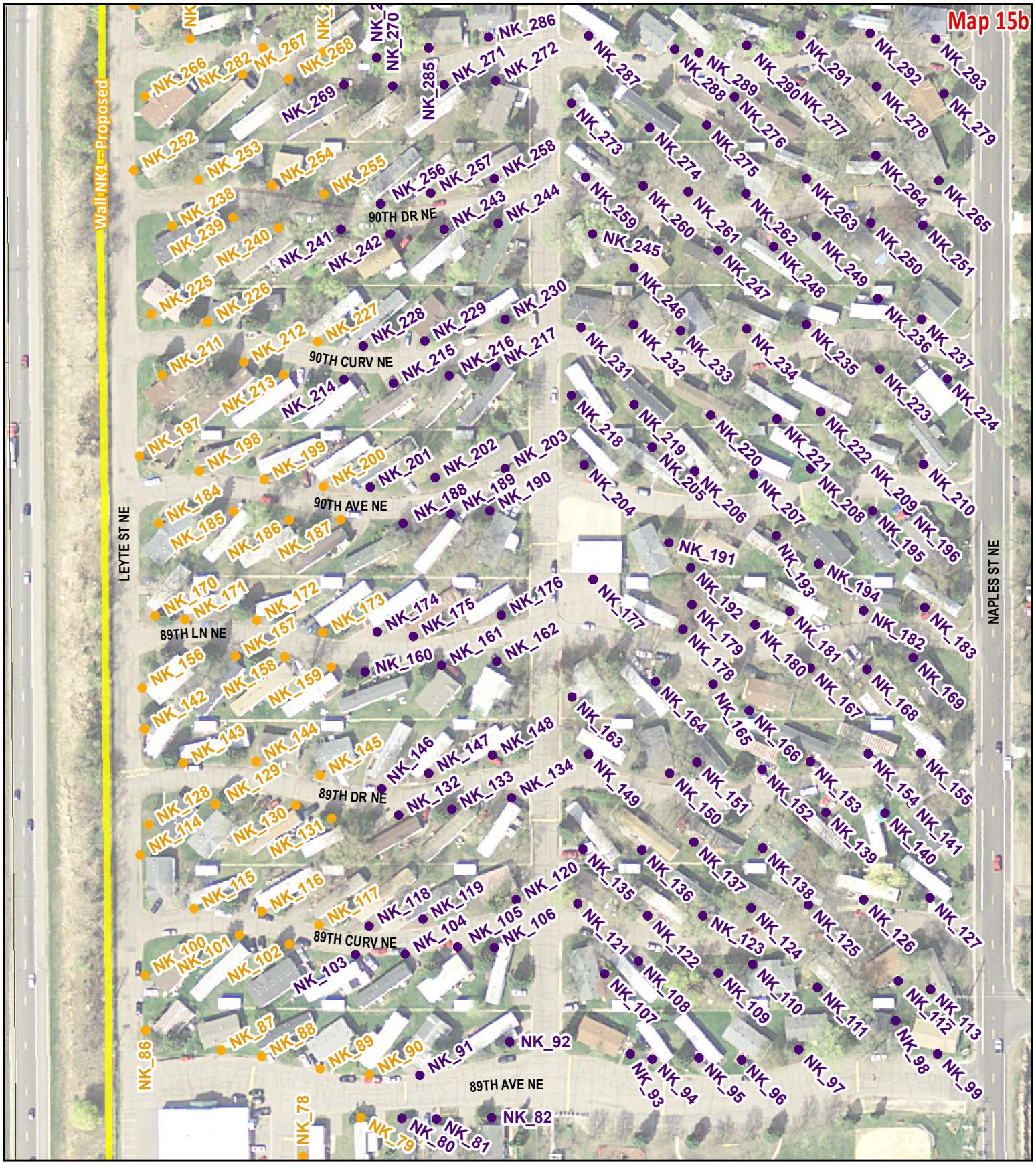
Noise Receptor and Wall Locations: Map 15a



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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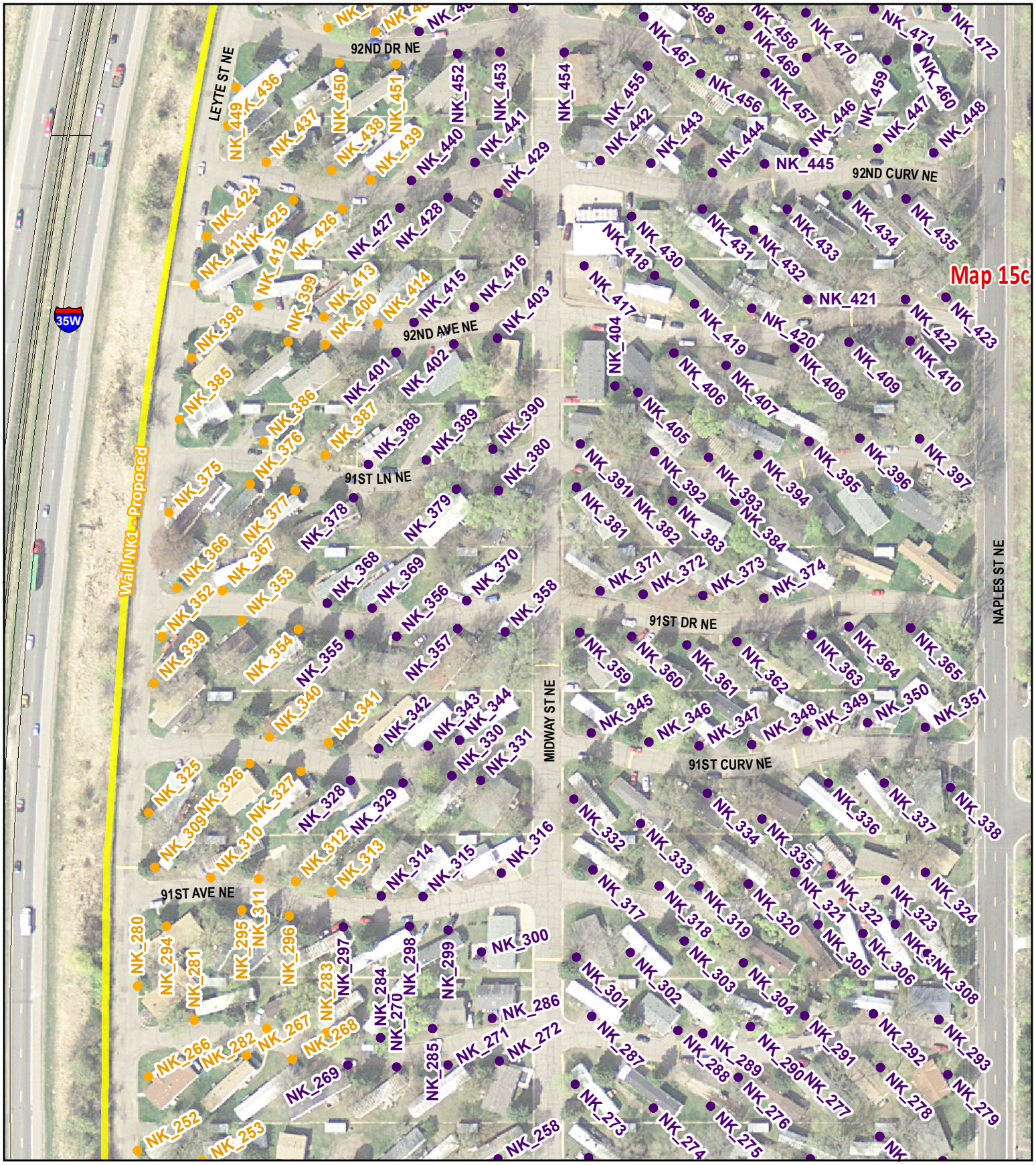
I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 15b

0 60 120 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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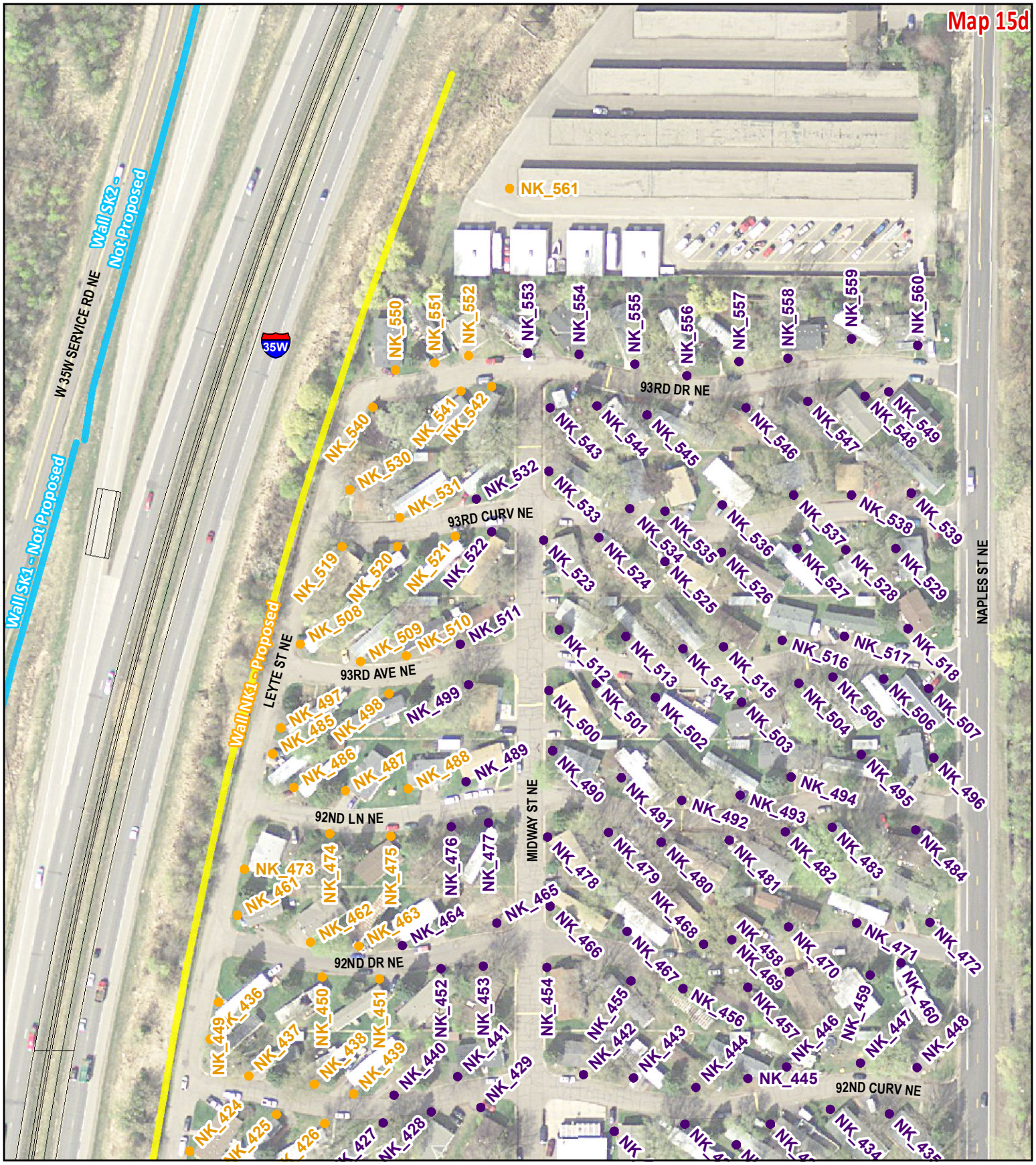
I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 15c

0 60 120 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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Noise Receptor and Wall Locations: Map 15d

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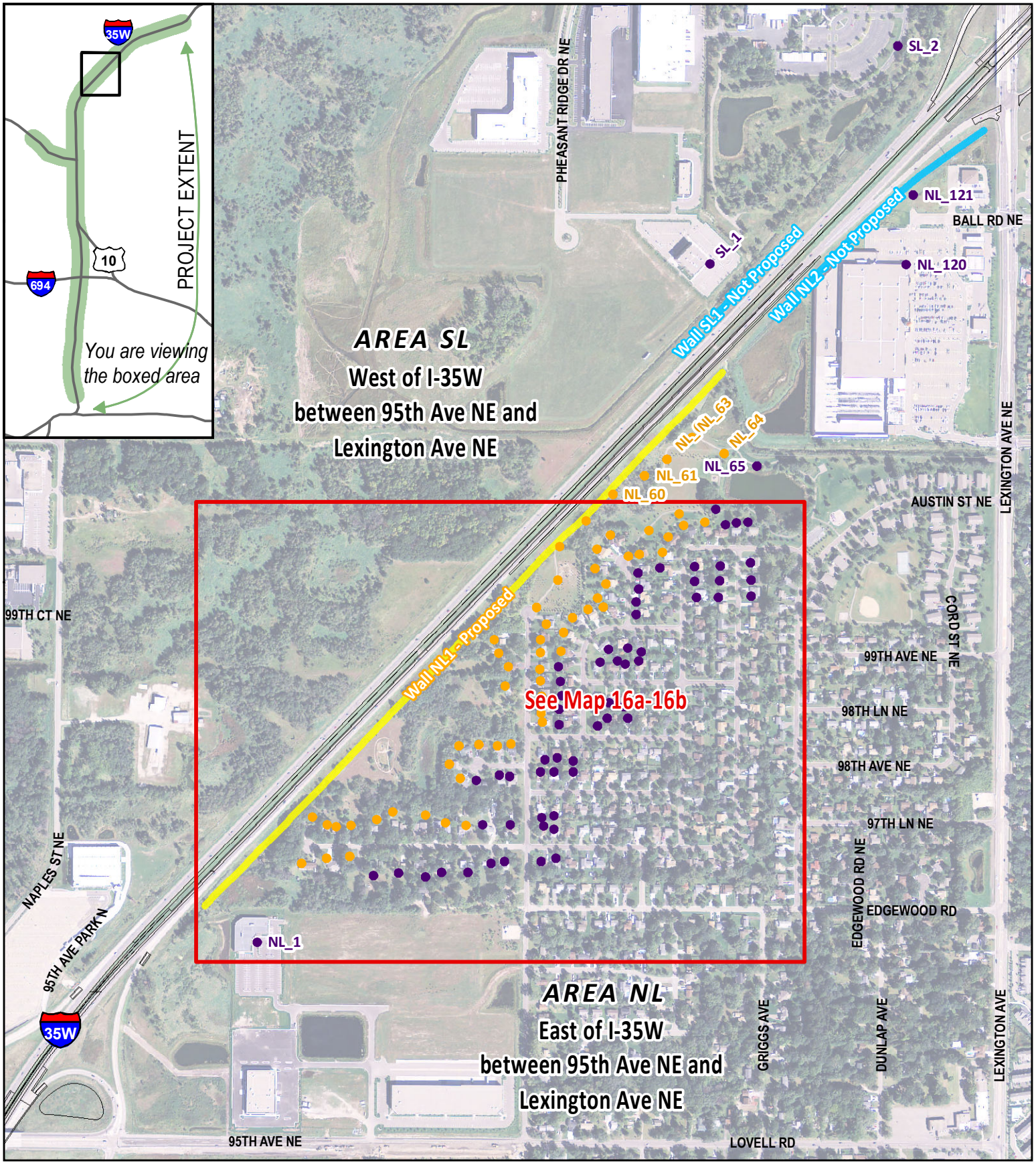
0 60 120 Feet



Noise Walls

Status

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- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

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Noise Receptor and Wall Locations: Map Area 16 of 18

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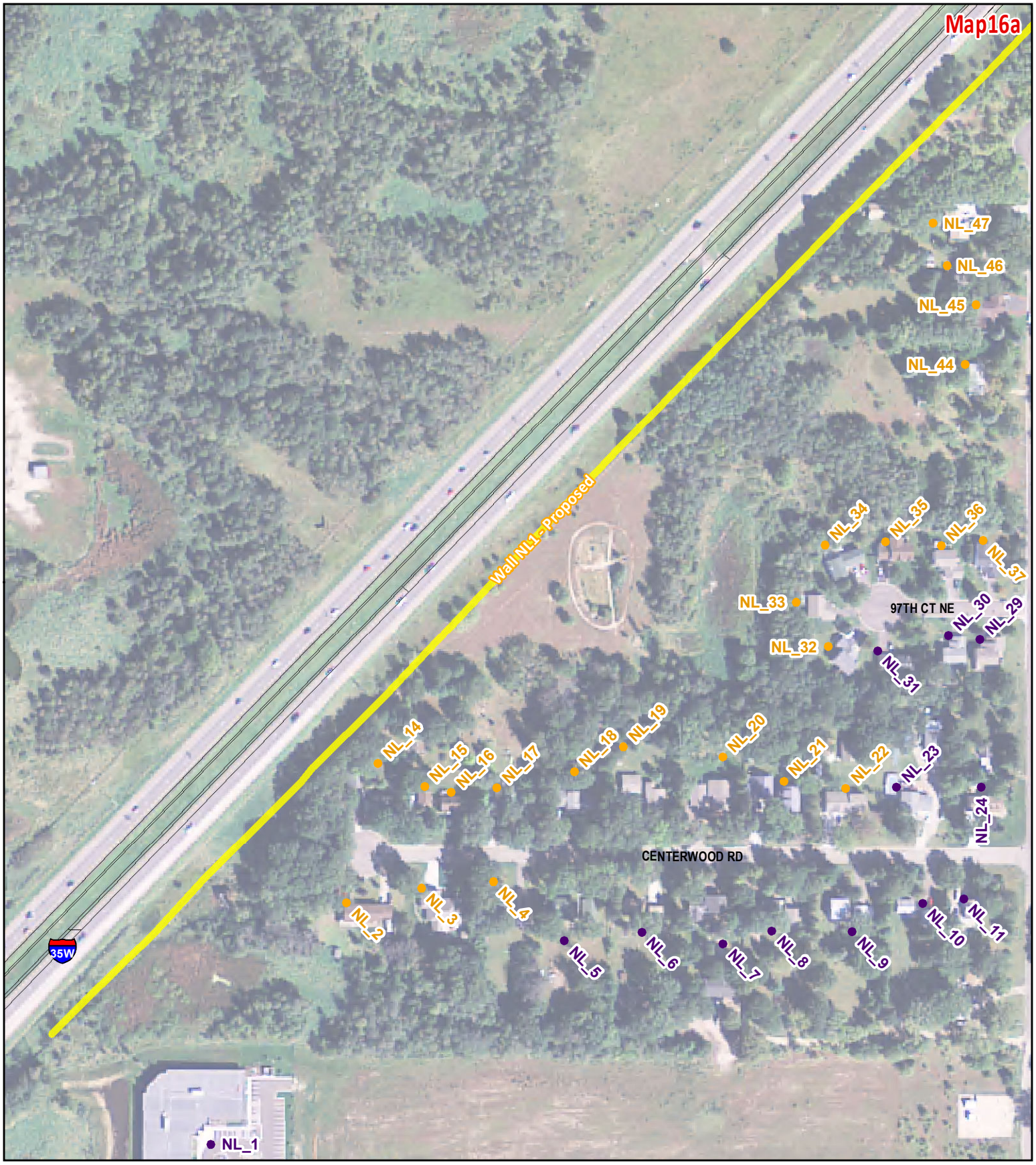
0 365 730 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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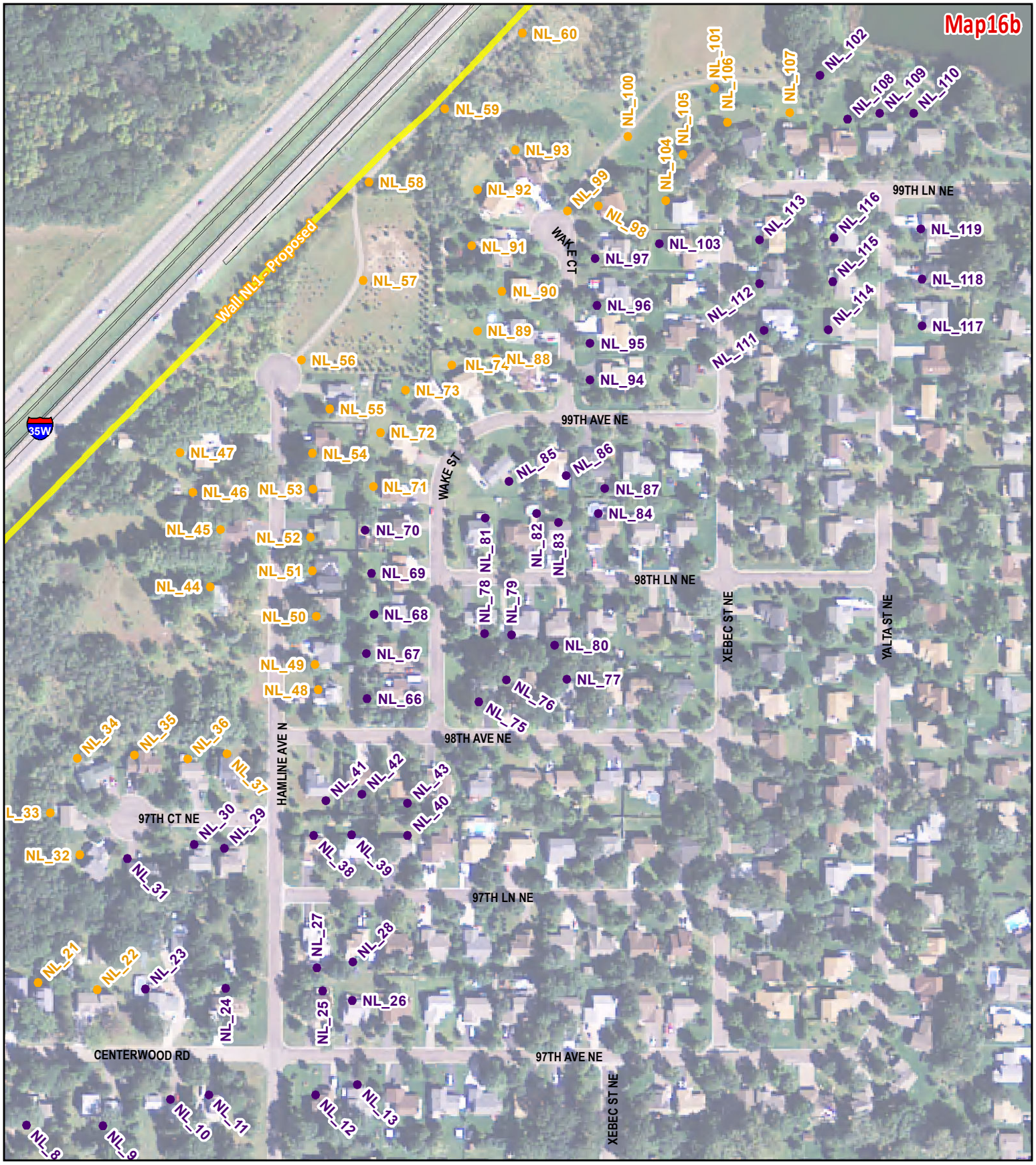
I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 16a

0 110 220 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
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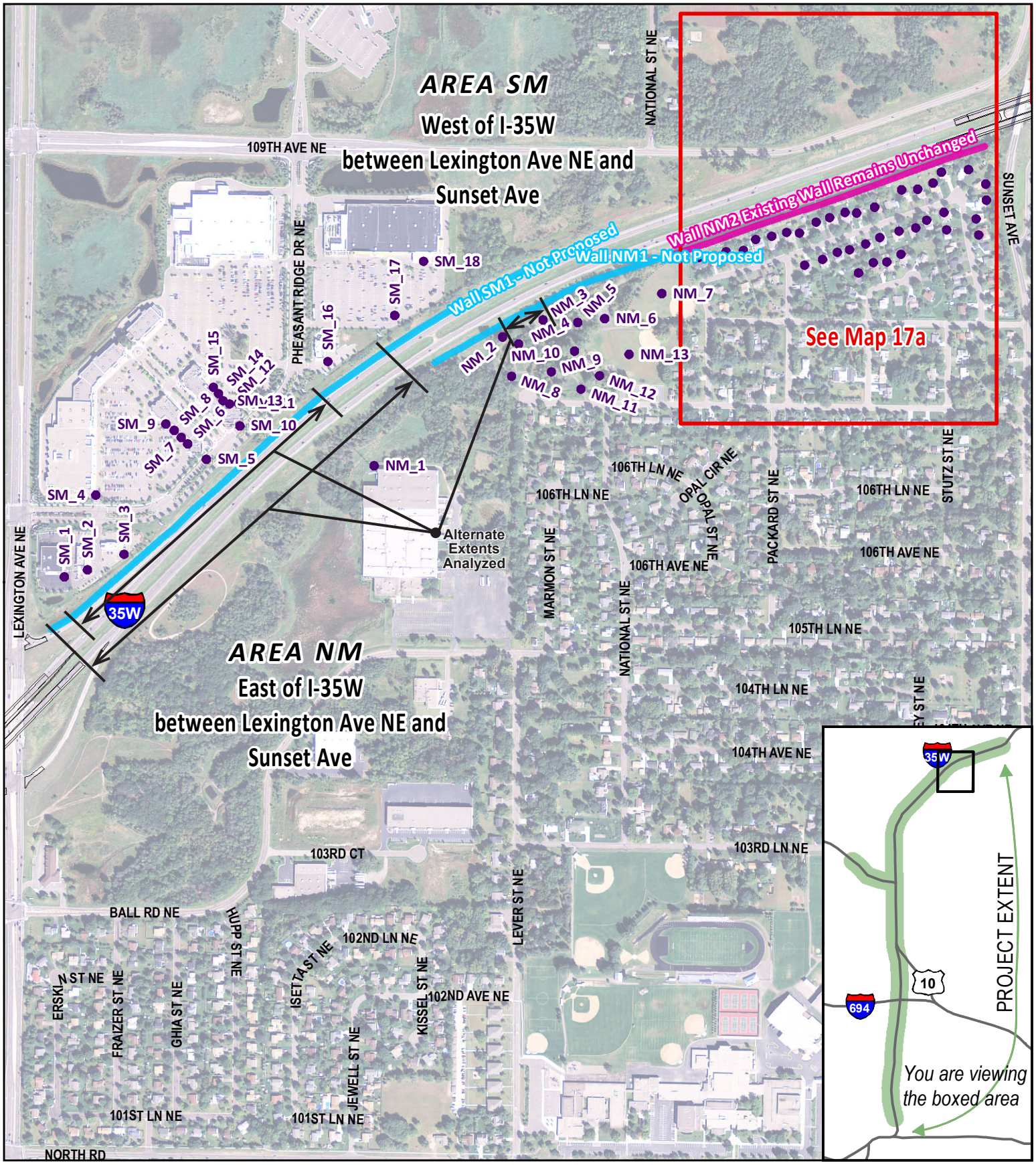
I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 16b

0 110 220 Feet



Noise Walls

Status

- Existing Wall - Reconstructed
- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

I-35W North Corridor Preliminary Design Project

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Noise Receptor and Wall Locations: Map Area 17 of 18

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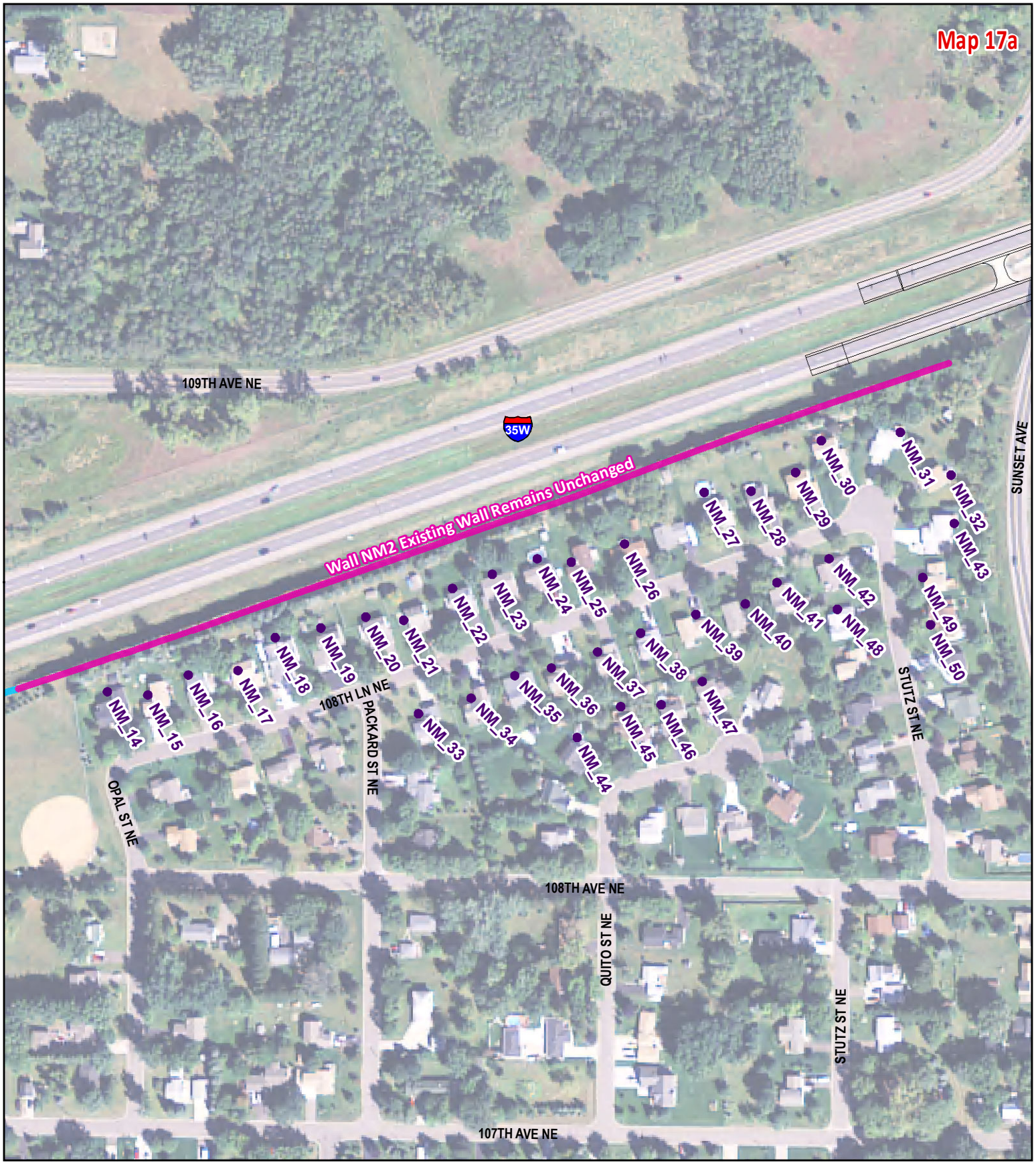
0 337.5 675 Feet



Noise Walls

Status

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- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
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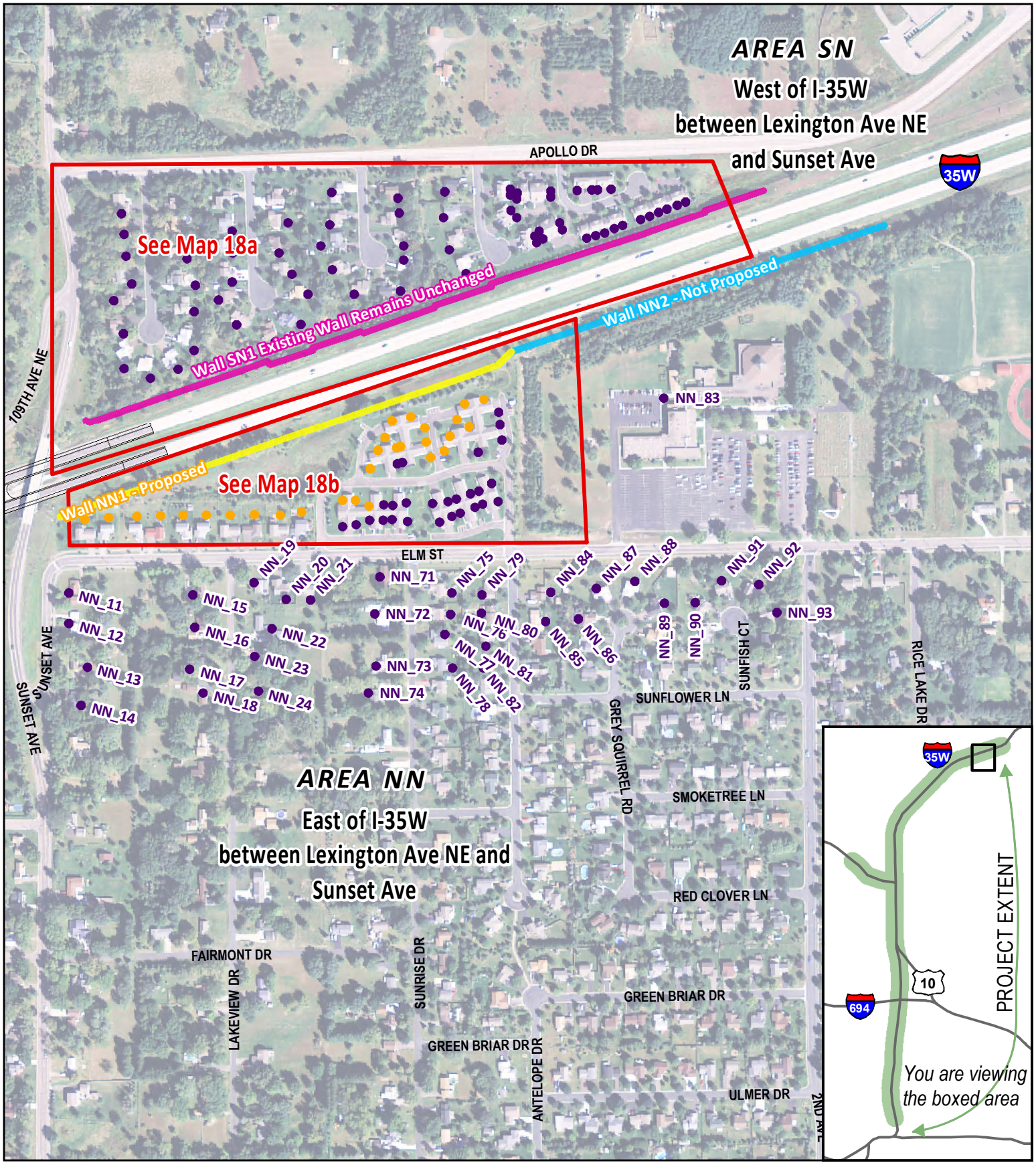
0 100 200 Feet

I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 17a



Noise Walls

Status

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- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- Benefited
- Not Benefited

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I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map Area 18 of 18

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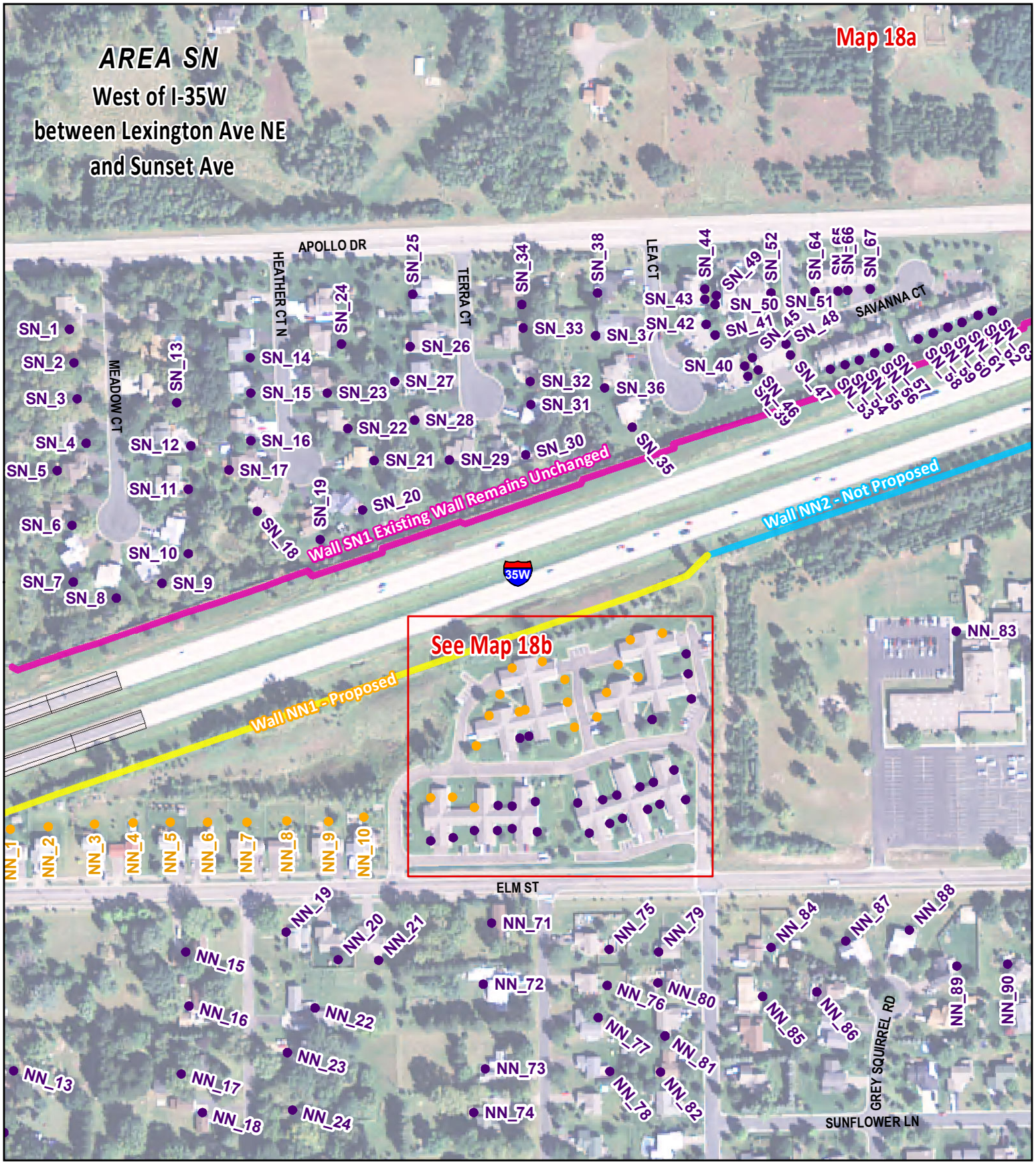
0 215 430 Feet



Noise Walls

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- Existing Wall - Remain Unchanged
- Not Proposed Wall
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- Road Reconstruction Projects

Noise Receptors

Status

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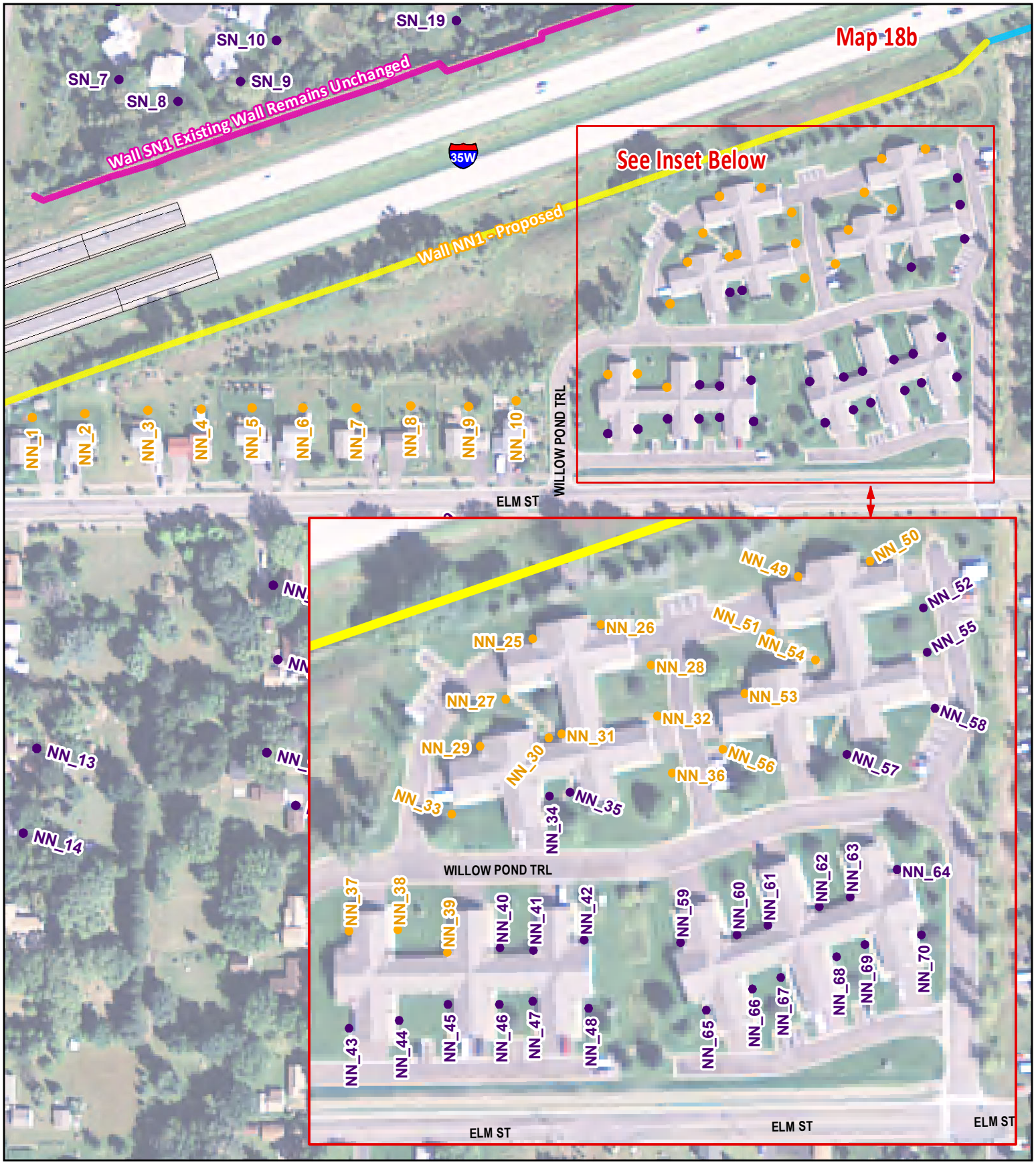
I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 18a

0 120 240 Feet



Noise Walls

Status

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- Existing Wall - Remain Unchanged
- Not Proposed Wall
- Proposed Wall
- Road Reconstruction Projects

Noise Receptors

Status

- **Benefited**
- **Not Benefited**

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I-35W North Corridor Preliminary Design Project

Noise Receptor and Wall Locations: Map 18b

0 90 180 Feet

Appendix B

Noise Analysis Results Tables

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SA	SA_1	Industrial	80	75	F	NA	70.9	68.2	71.6	69.1	0.7	0.9	70.7	68.1	-0.2	-0.1
	SA_2	Office	70	65	E	75	71.4	68.7	72.1	69.6	0.7	0.9	70.8	68.2	-0.6	-0.5
	SA_3	Industrial	80	75	F	NA	72.6	69.7	73.3	70.6	0.7	0.9	71.9	68.8	-0.7	-0.9
	SA_4	Office	70	65	E	75	69.9	67.4	70.5	68.3	0.6	0.9	69.4	66.8	-0.5	-0.6
	SA_5	Office	70	65	E	75	69.9	67.4	70.5	68.3	0.6	0.9	69.5	66.8	-0.4	-0.6
	SA_6	Office	70	65	E	75	71.0	67.7	71.6	68.7	0.6	1.0	70.7	67.3	-0.3	-0.4
NA	NA_1	Retail	70	65	F	NA	70.7	66.6	71.4	67.6	0.7	1.0	70.9	66.8	0.2	0.2
	NA_2	Retail	70	65	F	NA	71.3	68.1	71.9	69.0	0.6	0.9	71.4	68.2	0.1	0.1
	NA_3	Hotel	65	60	E	75	70.4	66.4	71.1	67.4	0.7	1.0	70.4	65.9	0.0	-0.5
	NA_4	Medical	70	65	C	70	71.8	68.3	72.5	69.2	0.7	0.9	71.8	68.1	0.0	-0.2
	NA_5	Restaurant	70	65	E	75	69.9	65.2	70.6	66.3	0.7	1.1	69.9	64.9	0.0	-0.3
	NA_6	Retail	70	65	F	NA	72.2	68.6	72.9	69.6	0.7	1.0	71.8	68.0	-0.4	-0.6
	NA_7	Retail	70	65	F	NA	70.4	64.4	71.2	65.5	0.8	1.1	70.5	64.3	0.1	-0.1
	NA_8	Restaurant	70	65	E	75	72.5	69.1	73.1	70.0	0.6	0.9	71.9	68.3	-0.6	-0.8

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SB	SB_1	Retail	70	65	F	NA	73.2	70.1	73.8	70.9	0.6	0.8	72.9	69.8	-0.3	-0.3
	SB_2	Retail	70	65	F	NA	72.3	69.4	72.9	70.2	0.6	0.8	72.5	69.5	0.2	0.1
	SB_3	Retail	70	65	F	NA	71.9	69.1	72.5	69.9	0.6	0.8	72.1	69.2	0.2	0.1
	SB_4	Industrial	80	75	F	NA	75.1	71.6	75.7	72.5	0.6	0.9	75.3	71.7	0.2	0.1
	SB_5	Industrial	80	75	F	NA	68.2	65.7	68.9	66.5	0.7	0.8	68.2	65.8	0.0	0.1
NB	NB_1	Trail	70	65	C	70	74.6	71.3	75.2	72.2	0.6	0.9	74.0	70.7	-0.6	-0.6
	NB_2	Trail	70	65	C	70	69.0	66.9	69.7	67.7	0.7	0.8	68.8	66.5	-0.2	-0.4
	NB_3	Trail	70	65	C	70	66.6	64.7	67.2	65.5	0.6	0.8	66.5	64.5	-0.1	-0.2
	NB_4	Trail	70	65	C	70	78.2	73.9	78.9	74.9	0.7	1.0	77.3	73.0	-0.9	-0.9
	NB_5	Trail	70	65	C	70	74.3	71.1	75.0	72.0	0.7	0.9	73.6	70.4	-0.7	-0.7
	NB_6	Office	70	65	E	75	78.2	73.9	78.9	74.9	0.7	1.0	77.5	73.2	-0.7	-0.7
	NB_7	Trail	70	65	C	70	78.0	73.8	78.7	74.7	0.7	0.9	77.6	73.3	-0.4	-0.5
	NB_8	Trail	70	65	C	70	77.8	73.7	78.4	74.6	0.6	0.9	77.4	73.2	-0.4	-0.5
	NB_9	Trail	70	65	C	70	77.3	73.3	77.9	74.2	0.6	0.9	76.9	72.8	-0.4	-0.5
	NB_10	Trail	70	65	C	70	69.1	66.4	69.7	67.2	0.6	0.8	68.9	66.1	-0.2	-0.3
	NB_11	Trail	70	65	C	70	77.6	73.5	78.2	74.4	0.6	0.9	77.1	73.0	-0.5	-0.5
	NB_12	Hotel	65	60	E	75	75.5	71.6	76.1	72.5	0.6	0.9	75.0	71.2	-0.5	-0.4
	NB_13	Trail	70	65	C	70	78.0	73.7	78.6	74.6	0.6	0.9	77.4	73.2	-0.6	-0.5
	NB_14	Medical	70	65	C	70	64.6	62.1	65.2	62.9	0.6	0.8	64.4	61.9	-0.2	-0.2
	NB_15	Trail	70	65	C	70	78.0	73.7	78.7	74.7	0.7	1.0	77.3	73.2	-0.7	-0.5
	NB_16	Trail	70	65	C	70	78.5	74.0	79.1	75.0	0.6	1.0	77.6	73.4	-0.9	-0.6
	NB_17	Office	70	65	E	75	75.1	71.6	75.7	72.5	0.6	0.9	74.5	71.1	-0.6	-0.5
	NB_18	Trail	70	65	C	70	77.6	73.4	78.2	74.3	0.6	0.9	76.7	72.8	-0.9	-0.6
	NB_19	Hotel	65	60	E	75	77.6	73.4	78.2	74.3	0.6	0.9	76.6	72.8	-1.0	-0.6
	NB_20	Trail	70	65	C	70	78.4	74.0	79.1	74.9	0.7	0.9	77.3	73.3	-1.1	-0.7
	NB_21	Trail	70	65	C	70	79.5	74.7	80.2	75.6	0.7	0.9	78.3	74.0	-1.2	-0.7
	NB_22	Trail	70	65	C	70	79.0	74.4	79.7	75.3	0.7	0.9	78.3	74.0	-0.7	-0.4
	NB_23	Medical	70	65	C	70	66.2	63.9	66.8	64.7	0.6	0.8	66.0	63.7	-0.2	-0.2
	NB_24	Trail	70	65	C	70	78.4	74.0	79.0	74.9	0.6	0.9	78.2	73.9	-0.2	-0.1
	NB_25	Hotel	65	60	E	75	77.1	73.2	77.8	74.1	0.7	0.9	77.0	73.0	-0.1	-0.2
	NB_26	Trail	70	65	C	70	77.7	73.6	78.3	74.5	0.6	0.9	77.6	73.4	-0.1	-0.2
	NB_27	Retail	70	65	F	NA	71.4	68.2	72.0	69.1	0.6	0.9	71.3	68.0	-0.1	-0.2
	NB_28	Trail	70	65	C	70	74.9	71.5	75.5	72.3	0.6	0.8	74.8	71.4	-0.1	-0.1
	NB_29	Trail	70	65	C	70	72.3	68.9	73.0	69.8	0.7	0.9	72.4	68.8	0.1	-0.1
	NB_30	Office	70	65	E	75	70.5	67.5	71.2	68.4	0.7	0.9	70.5	67.4	0.0	-0.1
	NB_31	Trail	70	65	C	70	69.9	66.3	70.5	67.2	0.6	0.9	70.0	66.3	0.1	0.0
	NB_32	Trail	70	65	C	70	70.1	65.6	70.7	66.5	0.6	0.9	70.5	65.5	0.4	-0.1
	NB_33	Trail	70	65	C	70	72.0	65.4	72.7	66.5	0.7	1.1	72.0	65.3	0.0	-0.1
	NB_34	Trail	70	65	C	70	68.0	64.8	68.7	65.7	0.7	0.9	67.6	64.5	-0.4	-0.3

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SC	SC_1	Office	70	65	E	75	75.8	72.0	76.4	72.8	0.6	0.8	75.6	71.7	-0.2	-0.3
	SC_2	Office	70	65	E	75	76.1	72.2	76.7	73.1	0.6	0.9	75.8	71.7	-0.3	-0.5
	SC_3	Office	70	65	E	75	75.7	71.9	76.3	72.8	0.6	0.9	75.1	71.1	-0.6	-0.8
	SC_4	Industrial	80	75	F	NA	73.6	70.5	74.2	71.4	0.6	0.9	73.5	70.3	-0.1	-0.2
	SC_5	Industrial	80	75	F	NA	71.6	68.8	72.3	69.6	0.7	0.8	71.6	68.7	0.0	-0.1
	SC_6	Industrial	80	75	F	NA	70.0	67.5	70.6	68.3	0.6	0.8	70.0	67.5	0.0	0.0
	SC_7	Industrial	80	75	F	NA	72.3	69.5	72.9	70.3	0.6	0.8	72.3	69.4	0.0	-0.1
	SC_8	Industrial	80	75	F	NA	70.9	68.3	71.6	69.2	0.7	0.9	71.0	68.4	0.1	0.1
	SC_9	Industrial	80	75	F	NA	71.2	68.6	71.9	69.5	0.7	0.9	71.5	68.8	0.3	0.2
	SC_10	Industrial	80	75	F	NA	69.2	66.8	69.9	67.7	0.7	0.9	69.4	66.9	0.2	0.1
NC	NC_1	Office	70	65	E	75	68.2	65.8	68.8	66.6	0.6	0.8	68.2	65.7	0.0	-0.1
	NC_2	Residential	65	60	B	70	67.5	65.1	68.1	65.9	0.6	0.8	67.4	64.9	-0.1	-0.2
	NC_3	Residential	65	60	B	70	67.6	65.1	68.2	65.9	0.6	0.8	67.5	65.0	-0.1	-0.1
	NC_4	Residential	65	60	B	70	68.1	65.7	68.7	66.5	0.6	0.8	67.9	65.5	-0.2	-0.2
	NC_5	Residential	65	60	B	70	67.7	65.0	68.3	65.8	0.6	0.8	67.6	64.7	-0.1	-0.3
	NC_6	Residential	65	60	B	70	67.9	65.3	68.5	66.1	0.6	0.8	67.7	65.0	-0.2	-0.3
	NC_7	Residential	65	60	B	70	67.6	64.8	68.2	65.6	0.6	0.8	67.3	64.4	-0.3	-0.4
	NC_8_1	Residential	65	60	B	70	66.0	63.1	66.6	64.0	0.6	0.9	65.8	62.8	-0.2	-0.3
	NC_8_2	Residential	65	60	B	70	66.4	63.7	67.1	64.5	0.7	0.8	66.3	63.5	-0.1	-0.2
	NC_8_3	Residential	65	60	B	70	66.6	64.0	67.2	64.8	0.6	0.8	66.5	63.9	-0.1	-0.1
	NC_9_1	Residential	65	60	B	70	65.9	62.9	66.6	63.7	0.7	0.8	65.8	62.6	-0.1	-0.3
	NC_9_2	Residential	65	60	B	70	66.6	63.8	67.3	64.6	0.7	0.8	66.5	63.6	-0.1	-0.2
	NC_9_3	Residential	65	60	B	70	66.8	64.1	67.5	65.0	0.7	0.9	66.8	64.1	0.0	0.0
	NC_10_1	Residential	65	60	B	70	65.9	62.6	66.5	63.5	0.6	0.9	65.6	62.3	-0.3	-0.3
	NC_10_2	Residential	65	60	B	70	66.4	63.4	67.0	64.3	0.6	0.9	66.3	63.2	-0.1	-0.2
	NC_10_3	Residential	65	60	B	70	66.6	63.7	67.2	64.5	0.6	0.8	66.6	63.7	0.0	0.0
	NC_11_1	Residential	65	60	B	70	66.7	63.3	67.3	64.2	0.6	0.9	66.4	63.0	-0.3	-0.3
	NC_11_2	Residential	65	60	B	70	66.9	63.7	67.5	64.5	0.6	0.8	66.7	63.5	-0.2	-0.2
	NC_11_3	Residential	65	60	B	70	66.9	63.8	67.6	64.6	0.7	0.8	66.9	63.8	0.0	0.0
	NC_12_1	Residential	65	60	B	70	68.2	64.7	68.8	65.6	0.6	0.9	67.9	64.3	-0.3	-0.4
	NC_12_2	Residential	65	60	B	70	68.5	65.1	69.1	66.0	0.6	0.9	68.3	64.8	-0.2	-0.3
	NC_12_3	Residential	65	60	B	70	68.6	65.3	69.2	66.1	0.6	0.8	68.5	65.2	-0.1	-0.1
	NC_13_1	Residential	65	60	B	70	68.8	65.2	69.4	66.1	0.6	0.9	68.5	64.7	-0.3	-0.5
	NC_13_2	Residential	65	60	B	70	69.0	65.6	69.6	66.4	0.6	0.8	68.8	65.3	-0.2	-0.3
	NC_13_3	Residential	65	60	B	70	69.1	65.7	69.7	66.5	0.6	0.8	69.0	65.6	-0.1	-0.1
	NC_14_1	Residential	65	60	B	70	70.0	66.2	70.6	67.1	0.6	0.9	69.7	65.7	-0.3	-0.5
	NC_14_2	Residential	65	60	B	70	70.1	66.4	70.7	67.3	0.6	0.9	69.9	66.1	-0.2	-0.3
	NC_14_3	Residential	65	60	B	70	70.1	66.4	70.7	67.3	0.6	0.9	70.1	66.4	0.0	0.0
	NC_15_1	Residential	65	60	B	70	69.7	65.4	70.3	66.4	0.6	1.0	69.5	65.0	-0.2	-0.4
	NC_15_2	Residential	65	60	B	70	70.5	66.8	71.1	67.7	0.6	0.9	70.5	66.6	0.0	-0.2
	NC_15_3	Residential	65	60	B	70	70.5	66.9	71.2	67.7	0.7	0.8	70.7	66.9	0.2	0.0
	NC_16_1	Residential	65	60	B	70	68.5	64.7	69.1	65.5	0.6	0.8	68.3	64.4	-0.2	-0.3
	NC_16_2	Residential	65	60	B	70	69.3	65.8	70.0	66.7	0.7	0.9	69.2	65.6	-0.1	-0.2
	NC_16_3	Residential	65	60	B	70	69.5	66.0	70.1	66.9	0.6	0.9	69.5	66.1	0.0	0.1
	NC_17_1	Residential	65	60	B	70	68.0	64.4	68.7	65.2	0.7	0.8	67.8	64.0	-0.2	-0.4
	NC_17_2	Residential	65	60	B	70	68.7	65.2	69.4	66.1	0.7	0.9	68.6	65.0	-0.1	-0.2
	NC_17_3	Residential	65	60	B	70	68.9	65.5	69.5	66.4	0.6	0.9	69.0	65.6	0.1	0.1
	NC_18_1	Residential	65	60	B	70	67.0	63.3	67.6	64.2	0.6	0.9	66.7	62.9	-0.3	-0.4
	NC_18_2	Residential	65	60	B	70	67.4	63.9	68.0	64.8	0.6	0.9	67.3	63.7	-0.1	-0.2
	NC_18_3	Residential	65	60	B	70	67.6	64.2	68.2	65.1	0.6	0.9	67.7	64.3	0.1	0.1
	NC_19_1	Residential	65	60	B	70	66.3	62.8	66.9	63.7	0.6	0.9	66.0	62.3	-0.3	-0.5
	NC_19_2	Residential	65	60	B	70	66.7	63.3	67.3	64.2	0.6	0.9	66.6	63.1	-0.1	-0.2
	NC_19_3	Residential	65	60	B	70	67.0	63.9	67.6	64.7	0.6	0.8	67.1	63.9	0.1	0.0
	NC_20_1	Residential	65	60	B	70	66.4	62.9	67.0	63.8	0.6	0.9	66.0	62.4	-0.4	-0.5
	NC_20_2	Residential	65	60	B	70	66.8	63.5	67.4	64.4	0.6	0.9	66.7	63.2	-0.1	-0.3
	NC_20_3	Residential	65	60	B	70	67.2	64.2	67.8	65.0	0.6	0.8	67.2	64.2	0.0	0.0
	NC_21_1	Residential	65	60	B	70	66.0	62.6	66.7	63.5	0.7	0.9	65.7	62.0	-0.3	-0.6
	NC_21_2	Residential	65	60	B	70	66.4	63.2	67.1	64.0	0.7	0.8	66.3	62.9	-0.1	-0.3
	NC_21_3	Residential	65	60	B	70	66.8	63.8	67.4	64.7	0.6	0.9	66.9	63.8	0.1	0.0
	NC_22_1	Residential	65	60	B	70	62.5	52.9	63.3	54.1	0.8	1.2	63.3	53.9	0.8	1.0

Table B1

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Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
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XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NC cont...	NC_22_2	Residential	65	60	B	70	62.8	53.4	63.6	54.6	0.8	1.2	63.5	54.4	0.7	1.0
	NC_22_3	Residential	65	60	B	70	64.3	56.0	65.1	57.1	0.8	1.1	64.9	56.8	0.6	0.8
	NC_23_1	Residential	65	60	B	70	61.2	52.0	62.0	53.2	0.8	1.2	62.0	53.1	0.8	1.1
	NC_23_2	Residential	65	60	B	70	61.7	52.8	62.5	54.0	0.8	1.2	62.4	53.8	0.7	1.0
	NC_23_3	Residential	65	60	B	70	63.8	56.6	64.6	57.7	0.8	1.1	64.3	57.3	0.5	0.7
	NC_24_1	Residential	65	60	B	70	60.3	51.6	61.1	52.7	0.8	1.1	61.0	52.5	0.7	0.9
	NC_24_2	Residential	65	60	B	70	60.8	52.4	61.6	53.5	0.8	1.1	61.4	53.3	0.6	0.9
	NC_24_3	Residential	65	60	B	70	63.2	56.7	63.9	57.8	0.7	1.1	63.6	57.3	0.4	0.6
	NC_25_1	Residential	65	60	B	70	60.2	51.5	61.0	52.6	0.8	1.1	60.9	52.5	0.7	1.0
	NC_25_2	Residential	65	60	B	70	60.8	52.5	61.6	53.6	0.8	1.1	61.4	53.4	0.6	0.9
	NC_25_3	Residential	65	60	B	70	63.2	56.8	63.9	57.8	0.7	1.0	63.6	57.4	0.4	0.6
	NC_26_1	Residential	65	60	B	70	61.7	52.4	62.6	53.6	0.9	1.2	62.5	53.5	0.8	1.1
	NC_26_2	Residential	65	60	B	70	62.3	53.3	63.1	54.4	0.8	1.1	63.0	54.3	0.7	1.0
	NC_26_3	Residential	65	60	B	70	64.2	56.7	65.0	57.8	0.8	1.1	64.7	57.4	0.5	0.7
	NC_27_1	Residential	65	60	B	70	62.5	52.9	63.4	54.1	0.9	1.2	63.3	54.0	0.8	1.1
	NC_27_2	Residential	65	60	B	70	62.9	53.5	63.7	54.7	0.8	1.2	63.6	54.6	0.7	1.1
	NC_27_3	Residential	65	60	B	70	64.4	56.3	65.2	57.4	0.8	1.1	65.0	57.1	0.6	0.8
	NC_28_1	Residential	65	60	B	70	66.3	62.8	66.9	63.7	0.6	0.9	66.0	62.3	-0.3	-0.5
	NC_28_2	Residential	65	60	B	70	66.6	63.3	67.2	64.2	0.6	0.9	66.5	63.1	-0.1	-0.2
	NC_28_3	Residential	65	60	B	70	67.0	64.0	67.6	64.8	0.6	0.8	67.1	64.0	0.1	0.0
	NC_29_1	Residential	65	60	B	70	66.6	63.2	67.2	64.1	0.6	0.9	66.3	62.7	-0.3	-0.5
	NC_29_2	Residential	65	60	B	70	67.0	63.7	67.6	64.6	0.6	0.9	67.0	63.5	0.0	-0.2
	NC_29_3	Residential	65	60	B	70	67.4	64.4	68.0	65.2	0.6	0.8	67.5	64.4	0.1	0.0
	NC_30_1	Residential	65	60	B	70	66.6	63.2	67.3	64.0	0.7	0.8	66.4	62.7	-0.2	-0.5
	NC_30_2	Residential	65	60	B	70	67.0	63.6	67.6	64.5	0.6	0.9	67.0	63.5	0.0	-0.1
	NC_30_3	Residential	65	60	B	70	67.3	64.2	67.9	65.0	0.6	0.8	67.4	64.2	0.1	0.0
	NC_31_1	Residential	65	60	B	70	67.4	63.8	68.0	64.6	0.6	0.8	67.2	63.4	-0.2	-0.4
	NC_31_2	Residential	65	60	B	70	67.8	64.3	68.4	65.2	0.6	0.9	67.8	64.2	0.0	-0.1
	NC_31_3	Residential	65	60	B	70	67.9	64.6	68.5	65.4	0.6	0.8	68.2	64.8	0.3	0.2
	NC_32_1	Residential	65	60	B	70	68.7	64.8	69.3	65.7	0.6	0.9	68.7	64.6	0.0	-0.2
	NC_32_2	Residential	65	60	B	70	69.4	65.8	70.0	66.7	0.6	0.9	69.5	65.7	0.1	-0.1
	NC_32_3	Residential	65	60	B	70	69.5	66.0	70.1	66.9	0.6	0.9	69.8	66.2	0.3	0.2
	NC_33_1	Residential	65	60	B	70	69.4	65.2	70.0	66.1	0.6	0.9	69.4	65.0	0.0	-0.2
	NC_33_2	Residential	65	60	B	70	70.3	66.6	70.9	67.5	0.6	0.9	70.4	66.5	0.1	-0.1
	NC_33_3	Residential	65	60	B	70	70.3	66.7	71.0	67.6	0.7	0.9	70.7	67.0	0.4	0.3
	NC_34_1	Residential	65	60	B	70	70.7	66.3	71.4	67.2	0.7	0.9	70.8	66.0	0.1	-0.3
	NC_34_2	Residential	65	60	B	70	71.3	67.4	72.0	68.3	0.7	0.9	71.6	67.4	0.3	0.0
	NC_34_3	Residential	65	60	B	70	71.4	67.4	72.0	68.3	0.6	0.9	71.8	67.8	0.4	0.4
	NC_35_1	Residential	65	60	B	70	71.8	67.8	72.4	68.7	0.6	0.9	72.3	68.1	0.5	0.3
	NC_35_2	Residential	65	60	B	70	72.0	68.1	72.6	69.0	0.6	0.9	72.6	68.7	0.6	0.6
	NC_35_3	Residential	65	60	B	70	72.0	68.2	72.6	69.1	0.6	0.9	72.8	68.9	0.8	0.7
	NC_36_1	Residential	65	60	B	70	70.6	66.8	71.2	67.7	0.6	0.9	71.0	67.1	0.4	0.3
	NC_36_2	Residential	65	60	B	70	70.8	67.2	71.4	68.0	0.6	0.8	71.4	67.7	0.6	0.5
	NC_36_3	Residential	65	60	B	70	70.9	67.4	71.6	68.3	0.7	0.9	71.6	68.1	0.7	0.7
	NC_37_1	Residential	65	60	B	70	69.8	66.0	70.4	66.9	0.6	0.9	70.2	66.3	0.4	0.3
	NC_37_2	Residential	65	60	B	70	70.0	66.4	70.6	67.3	0.6	0.9	70.5	66.9	0.5	0.5
	NC_37_3	Residential	65	60	B	70	70.2	66.8	70.8	67.6	0.6	0.8	70.8	67.4	0.6	0.6
	NC_38_1	Residential	65	60	B	70	68.3	64.6	69.0	65.4	0.7	0.8	68.7	65.0	0.4	0.4
	NC_38_2	Residential	65	60	B	70	68.6	65.0	69.2	65.9	0.6	0.9	69.1	65.6	0.5	0.6
	NC_38_3	Residential	65	60	B	70	68.8	65.4	69.4	66.3	0.6	0.9	69.4	66.1	0.6	0.7
	NC_39_1	Residential	65	60	B	70	67.6	64.0	68.2	64.8	0.6	0.8	67.9	64.4	0.3	0.4
	NC_39_2	Residential	65	60	B	70	67.9	64.5	68.5	65.4	0.6	0.9	68.3	65.0	0.4	0.5
	NC_39_3	Residential	65	60	B	70	68.2	65.1	68.8	66.0	0.6	0.9	68.7	65.7	0.5	0.6
	NC_40_1	Residential	65	60	B	70	67.5	64.1	68.1	64.9	0.6	0.8	67.9	64.4	0.4	0.3
	NC_40_2	Residential	65	60	B	70	67.9	64.7	68.5	65.5	0.6	0.8	68.3	65.1	0.4	0.4
	NC_40_3	Residential	65	60	B	70	68.3	65.3	68.9	66.2	0.6	0.9	68.8	65.9	0.5	0.6
	NC_41_1	Residential	65	60	B	70	67.1	63.7	67.7	64.5	0.6	0.8	67.5	64.1	0.4	0.4
	NC_41_2	Residential	65	60	B	70	67.6	64.4	68.2	65.3	0.6	0.9	68.0	64.9	0.4	0.5
	NC_41_3	Residential	65	60	B	70	68.0	65.1	68.6	66.0	0.6	0.9	68.5	65.7	0.5	0.6
	NC_42_1	Residential	65	60	B	70	62.3	52.9	63.2	54.1	0.9	1.2	63.1	54.0	0.8	1.1

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XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NC cont...	NC_42_2	Residential	65	60	B	70	62.7	53.5	63.5	54.6	0.8	1.1	63.4	54.4	0.7	0.9
	NC_42_3	Residential	65	60	B	70	64.3	56.2	65.1	57.3	0.8	1.1	64.9	57.0	0.6	0.8
	NC_43_1	Residential	65	60	B	70	61.5	52.4	62.4	53.5	0.9	1.1	62.3	53.5	0.8	1.1
	NC_43_2	Residential	65	60	B	70	62.0	53.2	62.8	54.3	0.8	1.1	62.7	54.2	0.7	1.0
	NC_43_3	Residential	65	60	B	70	64.1	56.8	64.8	57.9	0.7	1.1	64.6	57.6	0.5	0.8
	NC_44_1	Residential	65	60	B	70	60.3	51.8	61.1	52.9	0.8	1.1	61.0	52.8	0.7	1.0
	NC_44_2	Residential	65	60	B	70	60.8	52.6	61.6	53.8	0.8	1.2	61.5	53.5	0.7	0.9
	NC_44_3	Residential	65	60	B	70	63.2	57.0	63.9	58.0	0.7	1.0	63.7	57.6	0.5	0.6
	NC_45_1	Residential	65	60	B	70	60.3	51.7	61.1	52.9	0.8	1.2	61.0	52.8	0.7	1.1
	NC_45_2	Residential	65	60	B	70	60.8	52.7	61.6	53.8	0.8	1.1	61.5	53.6	0.7	0.9
	NC_45_3	Residential	65	60	B	70	63.2	56.9	63.9	58.0	0.7	1.1	63.7	57.6	0.5	0.7
	NC_46_1	Residential	65	60	B	70	61.4	52.2	62.2	53.4	0.8	1.2	62.2	53.3	0.8	1.1
	NC_46_2	Residential	65	60	B	70	61.9	53.2	62.8	54.3	0.9	1.1	62.7	54.1	0.8	0.9
	NC_46_3	Residential	65	60	B	70	64.0	56.9	64.8	58.0	0.8	1.1	64.6	57.6	0.6	0.7
	NC_47_1	Residential	65	60	B	70	62.0	52.5	62.9	53.6	0.9	1.1	62.9	53.6	0.9	1.1
	NC_47_2	Residential	65	60	B	70	62.4	53.2	63.3	54.3	0.9	1.1	63.2	54.2	0.8	1.0
	NC_47_3	Residential	65	60	B	70	64.2	56.3	65.0	57.4	0.8	1.1	64.9	57.1	0.7	0.8
	NC_48	Residential	65	60	B	70	67.8	64.0	68.5	64.9	0.7	0.9	68.5	64.7	0.7	0.7
	NC_49	Residential	65	60	B	70	66.8	63.3	67.5	64.2	0.7	0.9	67.3	63.9	0.5	0.6
	NC_50	Residential	65	60	B	70	66.5	62.4	67.2	63.3	0.7	0.9	67.0	63.2	0.5	0.8
	NC_51	Residential	65	60	B	70	65.3	60.3	66.0	61.3	0.7	1.0	65.8	61.3	0.5	1.0
	NC_52	Residential	65	60	B	70	67.7	62.7	68.4	63.7	0.7	1.0	68.2	63.7	0.5	1.0
	NC_53	Retail	70	65	F	NA	67.2	62.7	67.9	63.6	0.7	0.9	67.8	63.4	0.6	0.7
	NC_54	Residential	65	60	B	70	67.3	59.6	68.1	60.7	0.8	1.1	67.9	60.3	0.6	0.7
	NC_55	Residential	65	60	B	70	67.0	59.8	67.7	60.9	0.7	1.1	67.5	60.6	0.5	0.8
	NC_56	Residential	65	60	B	70	67.6	60.9	68.3	61.9	0.7	1.0	68.1	61.4	0.5	0.5
	NC_57	Office	70	65	E	75	74.3	70.8	74.9	71.7	0.6	0.9	74.8	71.2	0.5	0.4
	NC_58	Residential	65	60	B	70	75.1	71.3	75.8	72.2	0.7	0.9	75.3	71.4	0.2	0.1
	NC_59_1	Residential	65	60	B	70	74.2	70.6	74.9	71.5	0.7	0.9	74.2	70.5	0.0	-0.1
	NC_59_2	Residential	65	60	B	70	74.4	71.0	75.0	71.9	0.6	0.9	74.5	71.1	0.1	0.1
	NC_59_3	Residential	65	60	B	70	74.6	71.3	75.2	72.2	0.6	0.9	74.8	71.7	0.2	0.4
	NC_60_1	Residential	65	60	B	70	68.5	63.4	69.2	64.4	0.7	1.0	68.5	63.3	0.0	-0.1
	NC_60_2	Residential	65	60	B	70	69.6	65.4	70.2	66.3	0.6	0.9	69.7	65.6	0.1	0.2
	NC_60_3	Residential	65	60	B	70	71.2	68.2	71.9	69.0	0.7	0.8	71.5	68.6	0.3	0.4
	NC_61_1	Residential	65	60	B	70	67.4	62.0	68.1	63.0	0.7	1.0	67.4	62.0	0.0	0.0
	NC_61_2	Residential	65	60	B	70	68.6	64.4	69.3	65.4	0.7	1.0	68.8	64.7	0.2	0.3
	NC_61_3	Residential	65	60	B	70	70.4	67.3	71.0	68.2	0.6	0.9	70.6	67.7	0.2	0.4
	NC_62_1	Residential	65	60	B	70	62.2	52.4	63.1	53.6	0.9	1.2	63.0	53.4	0.8	1.0
	NC_62_2	Residential	65	60	B	70	63.8	55.1	64.7	56.2	0.9	1.1	64.5	55.9	0.7	0.8
	NC_62_3	Residential	65	60	B	70	69.4	65.1	70.0	66.1	0.6	1.0	69.8	65.6	0.4	0.5
	NC_63_1	Residential	65	60	B	70	74.4	70.9	75.1	71.8	0.7	0.9	74.4	70.8	0.0	-0.1
	NC_63_2	Residential	65	60	B	70	74.5	71.1	75.2	72.0	0.7	0.9	74.6	71.3	0.1	0.2
	NC_63_3	Residential	65	60	B	70	74.6	71.4	75.3	72.3	0.7	0.9	74.9	71.7	0.3	0.3
	NC_64_1	Residential	65	60	B	70	69.9	65.2	70.6	66.1	0.7	0.9	69.8	64.9	-0.1	-0.3
	NC_64_2	Residential	65	60	B	70	70.1	65.4	70.8	66.4	0.7	1.0	70.1	65.5	0.0	0.1
	NC_64_3	Residential	65	60	B	70	71.5	68.3	72.2	69.1	0.7	0.8	71.8	68.6	0.3	0.3
	NC_65_1	Residential	65	60	B	70	68.6	63.6	69.3	64.6	0.7	1.0	68.5	63.5	-0.1	-0.1
	NC_65_2	Residential	65	60	B	70	68.9	64.2	69.6	65.2	0.7	1.0	69.0	64.3	0.1	0.1
	NC_65_3	Residential	65	60	B	70	70.5	67.2	71.1	68.1	0.6	0.9	70.7	67.6	0.2	0.4
	NC_66_1	Residential	65	60	B	70	67.2	61.0	67.9	62.0	0.7	1.0	67.2	60.9	0.0	-0.1
	NC_66_2	Residential	65	60	B	70	67.5	61.7	68.3	62.8	0.8	1.1	67.7	61.9	0.2	0.2
	NC_66_3	Residential	65	60	B	70	69.5	65.6	70.1	66.6	0.6	1.0	69.8	66.0	0.3	0.4
	NC_67_1	Residential	65	60	B	70	76.5	72.8	77.1	73.7	0.6	0.9	76.4	72.6	-0.1	-0.2
	NC_67_2	Residential	65	60	B	70	76.5	72.8	77.1	73.7	0.6	0.9	76.6	73.0	0.1	0.2
	NC_67_3	Residential	65	60	B	70	76.4	72.7	77.0	73.7	0.6	1.0	76.6	73.1	0.2	0.4
	NC_68_1	Residential	65	60	B	70	76.5	72.8	77.1	73.7	0.6	0.9	76.4	72.6	-0.1	-0.2
	NC_68_2	Residential	65	60	B	70	76.4	72.8	77.1	73.7	0.7	0.9	76.6	72.9	0.2	0.1
	NC_68_3	Residential	65	60	B	70	76.3	72.7	77.0	73.6	0.7	0.9	76.6	73.1	0.3	0.4
	NC_69_1	Residential	65	60	B	70	76.5	72.8	77.1	73.7	0.6	0.9	76.4	72.6	-0.1	-0.2
	NC_69_2	Residential	65	60	B	70	76.5	72.8	77.1	73.7	0.6	0.9	76.6	73.0	0.1	0.2

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NC cont...	NC_69_3	Residential	65	60	B	70	76.4	72.7	77.0	73.7	0.6	1.0	76.6	73.1	0.2	0.4
	NC_70_1	Residential	65	60	B	70	76.5	72.8	77.1	73.7	0.6	0.9	76.4	72.7	-0.1	-0.1
	NC_70_2	Residential	65	60	B	70	76.5	72.8	77.1	73.7	0.6	0.9	76.6	73.0	0.1	0.2
	NC_70_3	Residential	65	60	B	70	76.4	72.7	77.0	73.7	0.6	1.0	76.6	73.1	0.2	0.4
	NC_71_1	Residential	65	60	B	70	61.4	54.5	62.2	55.6	0.8	1.1	62.0	55.3	0.6	0.8
	NC_71_2	Residential	65	60	B	70	63.3	58.0	64.0	59.1	0.7	1.1	63.8	58.6	0.5	0.6
	NC_71_3	Residential	65	60	B	70	68.9	66.3	69.6	67.2	0.7	0.9	69.2	66.8	0.3	0.5
	NC_72_1	Residential	65	60	B	70	61.5	54.5	62.3	55.6	0.8	1.1	62.1	55.2	0.6	0.7
	NC_72_2	Residential	65	60	B	70	63.9	58.9	64.6	59.9	0.7	1.0	64.4	59.5	0.5	0.6
	NC_72_3	Residential	65	60	B	70	68.5	66.0	69.2	66.8	0.7	0.8	68.9	66.4	0.4	0.4
	NC_73_1	Residential	65	60	B	70	61.7	54.7	62.4	55.8	0.7	1.1	62.2	55.4	0.5	0.7
	NC_73_2	Residential	65	60	B	70	64.0	59.1	64.7	60.1	0.7	1.0	64.5	59.7	0.5	0.6
	NC_73_3	Residential	65	60	B	70	68.6	66.0	69.2	66.8	0.6	0.8	68.9	66.4	0.3	0.4
	NC_74_1	Residential	65	60	B	70	61.6	54.8	62.3	55.9	0.7	1.1	62.1	55.5	0.5	0.7
	NC_74_2	Residential	65	60	B	70	63.7	58.9	64.4	59.9	0.7	1.0	64.2	59.5	0.5	0.6
	NC_74_3	Residential	65	60	B	70	68.9	66.3	69.5	67.1	0.6	0.8	69.2	66.8	0.3	0.5
	NC_75	Residential	65	60	B	70	65.6	58.9	66.3	60.0	0.7	1.1	66.0	59.4	0.4	0.5
	NC_76_1	Residential	65	60	B	70	76.2	72.6	76.9	73.5	0.7	0.9	76.1	72.4	-0.1	-0.2
	NC_76_2	Residential	65	60	B	70	76.2	72.6	76.9	73.5	0.7	0.9	76.3	72.8	0.1	0.2
	NC_76_3	Residential	65	60	B	70	76.1	72.6	76.8	73.5	0.7	0.9	76.4	72.9	0.3	0.3
	NC_77_1	Residential	65	60	B	70	71.0	66.4	71.7	67.4	0.7	1.0	70.9	66.2	-0.1	-0.2
	NC_77_2	Residential	65	60	B	70	71.1	66.6	71.8	67.6	0.7	1.0	71.1	66.7	0.0	0.1
	NC_77_3	Residential	65	60	B	70	72.2	68.8	72.8	69.7	0.6	0.9	72.4	69.1	0.2	0.3
	NC_78_1	Residential	65	60	B	70	69.4	64.6	70.0	65.5	0.6	0.9	69.3	64.4	-0.1	-0.2
	NC_78_2	Residential	65	60	B	70	69.5	65.0	70.2	65.9	0.7	0.9	69.6	65.1	0.1	0.1
	NC_78_3	Residential	65	60	B	70	70.9	67.6	71.6	68.5	0.7	0.9	71.1	68.0	0.2	0.4
	NC_79_1	Residential	65	60	B	70	67.7	62.2	68.4	63.2	0.7	1.0	67.7	62.1	0.0	-0.1
	NC_79_2	Residential	65	60	B	70	68.0	62.9	68.7	63.9	0.7	1.0	68.2	63.1	0.2	0.2
	NC_79_3	Residential	65	60	B	70	69.7	66.2	70.3	67.1	0.6	0.9	70.0	66.6	0.3	0.4
	NC_80_1	Residential	65	60	B	70	76.4	72.7	77.0	73.6	0.6	0.9	76.2	72.5	-0.2	-0.2
	NC_80_2	Residential	65	60	B	70	76.4	72.7	77.0	73.7	0.6	1.0	76.5	72.9	0.1	0.2
	NC_80_3	Residential	65	60	B	70	76.3	72.7	77.0	73.6	0.7	0.9	76.5	73.0	0.2	0.3
	NC_81_1	Residential	65	60	B	70	70.4	65.6	71.1	66.6	0.7	1.0	70.3	65.4	-0.1	-0.2
	NC_81_2	Residential	65	60	B	70	71.0	66.8	71.7	67.7	0.7	0.9	71.0	66.9	0.0	0.1
	NC_81_3	Residential	65	60	B	70	72.1	68.9	72.8	69.8	0.7	0.9	72.3	69.2	0.2	0.3
	NC_82_1	Residential	65	60	B	70	69.4	64.6	70.1	65.5	0.7	0.9	69.3	64.4	-0.1	-0.2
	NC_82_2	Residential	65	60	B	70	70.1	65.9	70.8	66.9	0.7	1.0	70.2	66.1	0.1	0.2
	NC_82_3	Residential	65	60	B	70	71.4	68.2	72.0	69.1	0.6	0.9	71.6	68.6	0.2	0.4
	NC_83_1	Residential	65	60	B	70	61.1	51.9	62.0	53.1	0.9	1.2	61.8	52.8	0.7	0.9
	NC_83_2	Residential	65	60	B	70	62.9	54.9	63.7	56.0	0.8	1.1	63.5	55.6	0.6	0.7
	NC_83_3	Residential	65	60	B	70	68.4	64.8	69.1	65.7	0.7	0.9	68.8	65.3	0.4	0.5
	NC_84	Residential	65	60	B	70	75.5	70.6	76.2	71.6	0.7	1.0	75.3	70.4	-0.2	-0.2
	NC_85	Residential	65	60	B	70	68.1	61.6	68.8	62.6	0.7	1.0	68.5	62.0	0.4	0.4
	NC_86	Residential	65	60	B	70	68.0	61.2	68.8	62.3	0.8	1.1	68.4	61.7	0.4	0.5
	NC_87	Residential	65	60	B	70	67.6	60.6	68.4	61.7	0.8	1.1	68.0	61.1	0.4	0.5
	NC_88	Residential	65	60	B	70	67.3	60.0	68.1	61.1	0.8	1.1	67.8	60.5	0.5	0.5
	NC_89	Residential	65	60	B	70	67.3	59.7	68.1	60.8	0.8	1.1	67.7	60.2	0.4	0.5
	NC_90	Residential	65	60	B	70	66.8	59.1	67.6	60.2	0.8	1.1	67.2	59.6	0.4	0.5
	NC_91	Residential	65	60	B	70	67.2	59.8	68.0	60.9	0.8	1.1	67.6	60.2	0.4	0.4
	NC_92	Residential	65	60	B	70	67.4	60.0	68.1	61.1	0.7	1.1	67.7	60.4	0.3	0.4
	NC_93	Residential	65	60	B	70	67.4	60.0	68.2	61.1	0.8	1.1	67.8	60.4	0.4	0.4
	NC_94	Residential	65	60	B	70	67.6	60.4	68.4	61.5	0.8	1.1	68.0	60.8	0.4	0.4
	NC_95	Residential	65	60	B	70	68.2	61.4	69.0	62.5	0.8	1.1	68.5	61.7	0.3	0.3
	NC_96	Residential	65	60	B	70	68.6	62.1	69.4	63.1	0.8	1.0	68.9	62.3	0.3	0.2
	NC_97	Residential	65	60	B	70	69.0	62.6	69.8	63.7	0.8	1.1	69.3	62.7	0.3	0.1
	NC_98	Residential	65	60	B	70	69.1	63.3	69.8	64.3	0.7	1.0	69.3	63.4	0.2	0.1
	NC_99	Residential	65	60	B	70	69.3	63.5	70.0	64.6	0.7	1.1	69.5	63.6	0.2	0.1
	NC_100	Residential	65	60	B	70	74.0	70.2	74.7	71.1	0.7	0.9	74.0	70.2	0.0	0.0
	NC_101	Residential	65	60	B	70	74.9	71.6	75.6	72.5	0.7	0.9	74.9	71.6	0.0	0.0
	NC_102	Residential	65	60	B	70	75.0	71.7	75.6	72.6	0.6	0.9	74.8	71.6	-0.2	-0.1

Table B1

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Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NC cont...	NC_103	Residential	65	60	B	70	75.7	72.3	76.4	73.2	0.7	0.9	75.3	72.0	-0.4	-0.3
	NC_104	Residential	65	60	B	70	75.6	72.2	76.2	73.1	0.6	0.9	75.2	71.9	-0.4	-0.3
	NC_105	Residential	65	60	B	70	70.1	64.1	70.8	65.2	0.7	1.1	70.3	64.2	0.2	0.1
	NC_106	Residential	65	60	B	70	70.5	64.7	71.2	65.7	0.7	1.0	70.6	64.7	0.1	0.0
	NC_107	Recreation	70	65	C	70	70.8	64.8	71.5	65.8	0.7	1.0	70.9	64.7	0.1	-0.1
	NC_108	Recreation	70	65	C	70	71.1	64.9	71.8	66.0	0.7	1.1	71.2	64.9	0.1	0.0
	NC_109	Recreation	70	65	C	70	71.2	65.3	71.9	66.3	0.7	1.0	71.4	65.3	0.2	0.0
	NC_110	Recreation	70	65	C	70	71.7	65.6	72.4	66.7	0.7	1.1	71.8	65.5	0.1	-0.1
	NC_111	Retail	70	65	F	NA	71.6	66.5	72.3	67.5	0.7	1.0	71.7	66.4	0.1	-0.1
	NC_112	Residential	65	60	B	70	71.2	66.6	71.9	67.6	0.7	1.0	71.3	66.5	0.1	-0.1
	NC_113	Office	70	65	E	75	63.1	61.0	63.8	61.9	0.7	0.9	63.1	61.1	0.0	0.1
	NC_114	Retail	70	65	F	NA	70.2	66.2	70.9	67.1	0.7	0.9	70.3	66.1	0.1	-0.1
	NC_115	Industrial	80	75	F	NA	68.2	62.5	68.9	63.6	0.7	1.1	68.5	62.7	0.3	0.2
	NC_116	Retail	70	65	F	NA	61.5	59.5	62.1	60.4	0.6	0.9	61.6	59.8	0.1	0.3

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SD	SD_1	Industrial	80	75	F	NA	69.5	66.9	70.2	67.7	0.7	0.8	69.2	66.8	-0.3	-0.1
	SD_2	Industrial	80	75	F	NA	72.9	69.9	73.6	70.8	0.7	0.9	73.5	70.6	0.6	0.7
	SD_3	Industrial	80	75	F	NA	73.7	70.6	74.4	71.5	0.7	0.9	74.5	71.5	0.8	0.9
	SD_4	Office	70	65	E	75	67.9	65.7	68.6	66.5	0.7	0.8	68.4	66.4	0.5	0.7
	SD_5	Industrial	80	75	F	NA	70.5	68.0	71.2	68.9	0.7	0.9	71.0	68.6	0.5	0.6
	SD_6	Retail	70	65	F	NA	70.7	68.1	71.3	69.0	0.6	0.9	70.6	68.1	-0.1	0.0
ND	ND_1	Residential	65	60	B	70	66.2	61.7	66.9	62.7	0.7	1.0	66.2	61.4	0.0	-0.3
	ND_2	Residential	65	60	B	70	62.1	60.1	62.8	60.9	0.7	0.8	61.9	60.1	-0.2	0.0
	ND_3	Residential	65	60	B	70	68.8	62.6	69.6	63.7	0.8	1.1	68.8	62.4	0.0	-0.2
	ND_4	Residential	65	60	B	70	60.8	58.8	61.5	59.6	0.7	0.8	60.8	58.8	0.0	0.0
	ND_5	Residential	65	60	B	70	61.2	59.1	61.8	60.0	0.6	0.9	61.1	59.2	-0.1	0.1
	ND_6	Residential	65	60	B	70	63.2	60.2	63.8	61.1	0.6	0.9	63.0	60.3	-0.2	0.1
	ND_7	Residential	65	60	B	70	69.9	67.0	70.5	67.9	0.6	0.9	69.7	66.9	-0.2	-0.1
	ND_8	Residential	65	60	B	70	66.9	64.3	67.6	65.2	0.7	0.9	67.0	64.6	0.1	0.3
	ND_9	Residential	65	60	B	70	68.8	66.3	69.4	67.1	0.6	0.8	68.9	66.6	0.1	0.3
	ND_10	Residential	65	60	B	70	64.0	61.3	64.6	62.1	0.6	0.8	64.1	61.6	0.1	0.3
	ND_11	Residential	65	60	B	70	67.7	65.5	68.3	66.4	0.6	0.9	67.5	65.3	-0.2	-0.2
	ND_12	Office	70	65	E	75	67.4	64.6	68.0	65.4	0.6	0.8	67.6	64.8	0.2	0.2

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XX	Exceeds MN State Standards
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XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SE	SE_1	Residential	65	60	B	70	70.0	67.4	70.7	68.3	0.7	0.9	69.9	67.4	-0.1	0.0
	SE_2	Residential	65	60	B	70	69.7	67.0	70.4	67.9	0.7	0.9	69.6	67.0	-0.1	0.0
	SE_3	Residential	65	60	B	70	68.1	64.1	68.8	65.1	0.7	1.0	68.1	64.2	0.0	0.1
	SE_4	Residential	65	60	B	70	68.0	65.0	68.7	65.9	0.7	0.9	68.1	65.2	0.1	0.2
	SE_5	Residential	65	60	B	70	68.8	65.8	69.5	66.7	0.7	0.9	69.0	66.2	0.2	0.4
	SE_6	Residential	65	60	B	70	65.9	63.4	66.6	64.3	0.7	0.9	66.1	63.8	0.2	0.4
	SE_7	Residential	65	60	B	70	63.0	60.5	63.7	61.4	0.7	0.9	63.3	61.0	0.3	0.5
	SE_8	Residential	65	60	B	70	65.9	63.6	66.6	64.5	0.7	0.9	65.9	63.7	0.0	0.1
	SE_9	Residential	65	60	B	70	65.6	63.3	66.2	64.2	0.6	0.9	65.6	63.4	0.0	0.1
	SE_10	Residential	65	60	B	70	65.1	62.8	65.8	63.7	0.7	0.9	65.2	63.0	0.1	0.2
	SE_11	Residential	65	60	B	70	64.4	62.1	65.0	62.9	0.6	0.8	64.5	62.3	0.1	0.2
	SE_12	Residential	65	60	B	70	63.6	61.4	64.3	62.2	0.7	0.8	63.8	61.7	0.2	0.3
	SE_13	Residential	65	60	B	70	63.1	60.9	63.8	61.8	0.7	0.9	63.3	61.3	0.2	0.4
	SE_14	Residential	65	60	B	70	62.6	60.5	63.2	61.4	0.6	0.9	62.8	60.9	0.2	0.4
	SE_15	Residential	65	60	B	70	62.1	60.3	62.8	61.1	0.7	0.8	62.4	60.7	0.3	0.4
	SE_16	Residential	65	60	B	70	68.8	66.5	69.5	67.4	0.7	0.9	69.0	67.0	0.2	0.5
	SE_17	Residential	65	60	B	70	69.4	66.9	70.0	67.8	0.6	0.9	69.5	67.2	0.1	0.3
	SE_18	Residential	65	60	B	70	70.4	67.5	71.1	68.5	0.7	1.0	70.5	67.9	0.1	0.4
	SE_19	Residential	65	60	B	70	71.1	68.3	71.8	69.2	0.7	0.9	71.2	68.6	0.1	0.3
	SE_20	Residential	65	60	B	70	71.1	68.4	71.8	69.3	0.7	0.9	71.2	68.7	0.1	0.3
	SE_21	Residential	65	60	B	70	70.8	68.2	71.5	69.1	0.7	0.9	70.9	68.5	0.1	0.3
	SE_22	Residential	65	60	B	70	70.6	68.1	71.3	69.0	0.7	0.9	70.7	68.3	0.1	0.2
	SE_23	Residential	65	60	B	70	70.4	67.9	71.1	68.8	0.7	0.9	70.5	68.1	0.1	0.2
	SE_24	Residential	65	60	B	70	61.7	59.4	62.4	60.3	0.7	0.9	62.0	59.9	0.3	0.5
	SE_25	Residential	65	60	B	70	60.5	58.3	61.2	59.1	0.7	0.8	60.8	58.8	0.3	0.5
	SE_26	Residential	65	60	B	70	60.2	58.1	60.9	58.9	0.7	0.8	60.4	58.6	0.2	0.5
	SE_27	Residential	65	60	B	70	62.7	58.9	63.4	59.9	0.7	1.0	62.9	59.4	0.2	0.5
	SE_28	Residential	65	60	B	70	63.3	60.6	64.0	61.5	0.7	0.9	63.5	61.1	0.2	0.5
	SE_29	Residential	65	60	B	70	65.8	63.1	66.4	64.0	0.6	0.9	65.9	63.4	0.1	0.3
	SE_30	Residential	65	60	B	70	61.0	59.5	61.7	60.4	0.7	0.9	61.3	59.9	0.3	0.4
	SE_31	Residential	65	60	B	70	61.2	59.5	61.9	60.4	0.7	0.9	61.5	60.0	0.3	0.5
	SE_32	Residential	65	60	B	70	61.2	59.5	61.9	60.4	0.7	0.9	61.4	59.9	0.2	0.4
	SE_33	Residential	65	60	B	70	61.2	59.5	61.9	60.3	0.7	0.8	61.5	59.9	0.3	0.4
	SE_34	Residential	65	60	B	70	61.8	59.9	62.5	60.8	0.7	0.9	62.1	60.3	0.3	0.4
	SE_35	Residential	65	60	B	70	62.5	60.3	63.2	61.2	0.7	0.9	62.7	60.7	0.2	0.4
	SE_36	Residential	65	60	B	70	62.7	60.6	63.4	61.4	0.7	0.8	62.9	60.9	0.2	0.3
	SE_37	Residential	65	60	B	70	63.0	60.7	63.6	61.6	0.6	0.9	63.1	61.0	0.1	0.3
	SE_38	Residential	65	60	B	70	62.5	60.4	63.2	61.2	0.7	0.8	62.7	60.7	0.2	0.3
	SE_39	Residential	65	60	B	70	62.7	60.4	63.4	61.3	0.7	0.9	62.8	60.7	0.1	0.3
	SE_40_1	Residential	65	60	B	70	71.3	67.2	72.0	68.2	0.7	1.0	71.1	67.1	-0.2	-0.1
	SE_40_2	Residential	65	60	B	70	71.3	67.2	72.0	68.1	0.7	0.9	71.2	67.2	-0.1	0.0
	SE_40_3	Residential	65	60	B	70	72.5	69.2	73.1	70.2	0.6	1.0	72.5	69.5	0.0	0.3
	SE_41_1	Residential	65	60	B	70	74.5	70.6	75.2	71.6	0.7	1.0	74.2	70.4	-0.3	-0.2
	SE_41_2	Residential	65	60	B	70	74.5	70.6	75.1	71.6	0.6	1.0	74.3	70.6	-0.2	0.0
	SE_41_3	Residential	65	60	B	70	74.8	71.3	75.5	72.3	0.7	1.0	74.8	71.5	0.0	0.2
	SE_42_1	Residential	65	60	B	70	74.3	70.5	75.0	71.4	0.7	0.9	74.0	70.3	-0.3	-0.2
	SE_42_2	Residential	65	60	B	70	74.3	70.5	74.9	71.5	0.6	1.0	74.1	70.5	-0.2	0.0
	SE_42_3	Residential	65	60	B	70	74.6	71.2	75.2	72.1	0.6	0.9	74.5	71.4	-0.1	0.2
	SE_43_1	Residential	65	60	B	70	73.9	70.2	74.6	71.1	0.7	0.9	73.6	69.9	-0.3	-0.3
	SE_43_2	Residential	65	60	B	70	73.9	70.2	74.6	71.2	0.7	1.0	73.8	70.2	-0.1	0.0
	SE_43_3	Residential	65	60	B	70	74.2	71.0	74.9	71.9	0.7	0.9	74.2	71.2	0.0	0.2
	SE_44_1	Residential	65	60	B	70	74.2	70.5	74.9	71.4	0.7	0.9	73.9	70.2	-0.3	-0.3
	SE_44_2	Residential	65	60	B	70	74.2	70.5	74.9	71.4	0.7	0.9	74.1	70.5	-0.1	0.0
	SE_44_3	Residential	65	60	B	70	74.5	71.2	75.2	72.1	0.7	0.9	74.5	71.4	0.0	0.2
	SE_45_1	Residential	65	60	B	70	69.3	64.9	70.0	65.9	0.7	1.0	69.2	64.9	-0.1	0.0
	SE_45_2	Residential	65	60	B	70	69.4	65.1	70.1	66.1	0.7	1.0	69.4	65.3	0.0	0.2
	SE_45_3	Residential	65	60	B	70	71.1	68.1	71.7	69.0	0.6	0.9	71.2	68.5	0.1	0.4
	SE_46_1	Residential	65	60	B	70	68.7	64.2	69.3	65.2	0.6	1.0	68.5	64.1	-0.2	-0.1
	SE_46_2	Residential	65	60	B	70	68.8	64.4	69.4	65.4	0.6	1.0	68.8	64.6	0.0	0.2
	SE_46_3	Residential	65	60	B	70	70.5	67.6	71.2	68.5	0.7	0.9	70.6	67.9	0.1	0.3

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XX	Exceeds MN State Standards
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XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SE cont...	SE_47_1	Residential	65	60	B	70	59.0	57.4	59.7	58.2	0.7	0.8	59.3	57.9	0.3	0.5
	SE_47_2	Residential	65	60	B	70	61.7	60.0	62.4	60.8	0.7	0.8	62.0	60.4	0.3	0.4
	SE_47_3	Residential	65	60	B	70	67.4	65.3	68.1	66.2	0.7	0.9	67.6	65.7	0.2	0.4
	SE_48_1	Residential	65	60	B	70	58.5	56.8	59.2	57.6	0.7	0.8	58.8	57.2	0.3	0.4
	SE_48_2	Residential	65	60	B	70	61.5	59.7	62.2	60.6	0.7	0.9	61.8	60.2	0.3	0.5
	SE_48_3	Residential	65	60	B	70	67.8	65.6	68.5	66.5	0.7	0.9	68.0	66.0	0.2	0.4
	SE_49_1	Residential	65	60	B	70	58.8	57.2	59.5	58.0	0.7	0.8	59.1	57.6	0.3	0.4
	SE_49_2	Residential	65	60	B	70	61.8	60.0	62.5	60.9	0.7	0.9	62.0	60.5	0.2	0.5
	SE_49_3	Residential	65	60	B	70	67.9	65.7	68.6	66.6	0.7	0.9	68.1	66.2	0.2	0.5
	SE_50_1	Residential	65	60	B	70	60.2	58.5	60.9	59.3	0.7	0.8	60.4	58.9	0.2	0.4
	SE_50_2	Residential	65	60	B	70	62.4	60.7	63.1	61.5	0.7	0.8	62.6	61.1	0.2	0.4
	SE_50_3	Residential	65	60	B	70	67.8	65.7	68.5	66.5	0.7	0.8	68.0	66.1	0.2	0.4
	SE_51_1	Residential	65	60	B	70	71.1	67.2	71.8	68.1	0.7	0.9	70.9	67.0	-0.2	-0.2
	SE_51_2	Residential	65	60	B	70	71.1	67.2	71.8	68.2	0.7	1.0	71.0	67.3	-0.1	0.1
	SE_51_3	Residential	65	60	B	70	72.0	68.8	72.7	69.7	0.7	0.9	72.0	69.1	0.0	0.3
	SE_52_1	Residential	65	60	B	70	69.7	65.0	70.4	66.0	0.7	1.0	69.5	64.9	-0.2	-0.1
	SE_52_2	Residential	65	60	B	70	69.8	65.2	70.5	66.2	0.7	1.0	69.7	65.3	-0.1	0.1
	SE_52_3	Residential	65	60	B	70	71.4	68.3	72.1	69.2	0.7	0.9	71.5	68.6	0.1	0.3
	SE_53_1	Residential	65	60	B	70	73.0	69.4	73.7	70.4	0.7	1.0	72.9	69.4	-0.1	0.0
	SE_53_2	Residential	65	60	B	70	73.0	69.4	73.7	70.4	0.7	1.0	73.0	69.6	0.0	0.2
	SE_53_3	Residential	65	60	B	70	73.4	70.3	74.1	71.2	0.7	0.9	73.5	70.6	0.1	0.3
	SE_54_1	Residential	65	60	B	70	72.8	69.2	73.4	70.2	0.6	1.0	72.7	69.2	-0.1	0.0
	SE_54_2	Residential	65	60	B	70	72.8	69.3	73.5	70.2	0.7	0.9	72.8	69.4	0.0	0.1
	SE_54_3	Residential	65	60	B	70	73.2	70.1	73.9	71.0	0.7	0.9	73.3	70.4	0.1	0.3
	SE_55_1	Residential	65	60	B	70	72.8	69.4	73.5	70.3	0.7	0.9	72.7	69.3	-0.1	-0.1
	SE_55_2	Residential	65	60	B	70	72.8	69.4	73.5	70.4	0.7	1.0	72.8	69.6	0.0	0.2
	SE_55_3	Residential	65	60	B	70	73.2	70.2	73.8	71.1	0.6	0.9	73.3	70.5	0.1	0.3
	SE_56_1	Residential	65	60	B	70	73.1	69.7	73.8	70.7	0.7	1.0	73.0	69.6	-0.1	-0.1
	SE_56_2	Residential	65	60	B	70	73.1	69.7	73.8	70.7	0.7	1.0	73.1	69.9	0.0	0.2
	SE_56_3	Residential	65	60	B	70	73.4	70.4	74.1	71.4	0.7	1.0	73.5	70.7	0.1	0.3
	SE_57_1	Residential	65	60	B	70	67.8	63.5	68.5	64.5	0.7	1.0	67.9	63.7	0.1	0.2
	SE_57_2	Residential	65	60	B	70	68.9	65.4	69.5	66.3	0.6	0.9	69.0	65.8	0.1	0.4
	SE_57_3	Residential	65	60	B	70	70.3	67.7	71.0	68.6	0.7	0.9	70.6	68.2	0.3	0.5
	SE_58_1	Residential	65	60	B	70	67.2	62.9	67.9	63.9	0.7	1.0	67.3	63.0	0.1	0.1
	SE_58_2	Residential	65	60	B	70	68.6	65.2	69.3	66.2	0.7	1.0	68.8	65.6	0.2	0.4
	SE_58_3	Residential	65	60	B	70	69.9	67.3	70.6	68.2	0.7	0.9	70.1	67.7	0.2	0.4
	SE_59_1	Residential	65	60	B	70	58.4	56.9	59.1	57.7	0.7	0.8	58.8	57.4	0.4	0.5
	SE_59_2	Residential	65	60	B	70	61.3	59.7	62.0	60.5	0.7	0.8	61.6	60.2	0.3	0.5
	SE_59_3	Residential	65	60	B	70	67.1	65.0	67.8	65.9	0.7	0.9	67.3	65.5	0.2	0.5
	SE_60_1	Residential	65	60	B	70	58.2	56.6	58.9	57.5	0.7	0.9	58.6	57.1	0.4	0.5
	SE_60_2	Residential	65	60	B	70	61.3	59.6	62.0	60.4	0.7	0.8	61.6	60.1	0.3	0.5
	SE_60_3	Residential	65	60	B	70	67.3	65.2	68.0	66.1	0.7	0.9	67.5	65.7	0.2	0.5
	SE_61_1	Residential	65	60	B	70	58.3	56.8	59.1	57.7	0.8	0.9	58.7	57.3	0.4	0.5
	SE_61_2	Residential	65	60	B	70	61.4	59.8	62.1	60.6	0.7	0.8	61.7	60.2	0.3	0.4
	SE_61_3	Residential	65	60	B	70	67.2	65.1	67.9	66.0	0.7	0.9	67.4	65.6	0.2	0.5
	SE_62_1	Residential	65	60	B	70	58.6	57.1	59.3	57.9	0.7	0.8	58.9	57.6	0.3	0.5
	SE_62_2	Residential	65	60	B	70	61.5	59.9	62.2	60.8	0.7	0.9	61.8	60.4	0.3	0.5
	SE_62_3	Residential	65	60	B	70	67.0	65.0	67.7	65.9	0.7	0.9	67.3	65.4	0.3	0.4
	SE_63_1	Residential	65	60	B	70	68.9	64.0	69.6	65.0	0.7	1.0	68.7	63.8	-0.2	-0.2
	SE_63_2	Residential	65	60	B	70	69.0	64.3	69.7	65.3	0.7	1.0	69.0	64.4	0.0	0.1
	SE_63_3	Residential	65	60	B	70	70.7	67.6	71.4	68.5	0.7	0.9	70.8	67.9	0.1	0.3
	SE_64	Residential	65	60	B	70	69.7	67.1	70.4	68.0	0.7	0.9	69.7	67.2	0.0	0.1
	SE_65	Residential	65	60	B	70	69.0	66.2	69.7	67.1	0.7	0.9	68.9	66.3	-0.1	0.1
	SE_66	Residential	65	60	B	70	68.2	65.3	68.8	66.2	0.6	0.9	68.1	65.4	-0.1	0.1
	SE_67	Residential	65	60	B	70	66.8	64.0	67.4	64.9	0.6	0.9	66.8	64.1	0.0	0.1
	SE_68	Residential	65	60	B	70	64.7	62.3	65.4	63.2	0.7	0.9	64.9	62.6	0.2	0.3
	SE_69	Residential	65	60	B	70	64.8	62.1	65.5	63.0	0.7	0.9	64.9	62.4	0.1	0.3
	SE_70	Residential	65	60	B	70	63.8	61.4	64.5	62.3	0.7	0.9	63.9	61.8	0.1	0.4
	SE_71	Residential	65	60	B	70	62.7	61.0	63.4	61.9	0.7	0.9	63.0	61.4	0.3	0.4
	SE_72	Residential	65	60	B	70	63.1	61.3	63.8	62.2	0.7	0.9	63.3	61.7	0.2	0.4

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	SE_73	Residential	65	60	B	70	65.9	63.4	66.6	64.3	0.7	0.9	66.0	63.6	0.1	0.2
	SE_74	Residential	65	60	B	70	65.6	63.1	66.2	64.0	0.6	0.9	65.6	63.2	0.0	0.1
	SE_75	Residential	65	60	B	70	65.4	62.9	66.1	63.8	0.7	0.9	65.4	63.0	0.0	0.1
	SE_76	Residential	65	60	B	70	64.3	62.0	65.0	62.9	0.7	0.9	64.4	62.1	0.1	0.1
	SE_77	Residential	65	60	B	70	63.6	61.4	64.3	62.3	0.7	0.9	63.7	61.6	0.1	0.2
	SE_78	Residential	65	60	B	70	63.2	61.1	63.9	62.0	0.7	0.9	63.4	61.3	0.2	0.2
	SE_79	Residential	65	60	B	70	62.7	60.7	63.4	61.6	0.7	0.9	62.8	61.0	0.1	0.3
	SE_80	Residential	65	60	B	70	62.6	60.8	63.3	61.7	0.7	0.9	62.8	61.1	0.2	0.3
	SE_81	Residential	65	60	B	70	63.2	60.9	63.9	61.8	0.7	0.9	63.3	61.1	0.1	0.2
SE cont...	SE_82	Residential	65	60	B	70	63.1	60.9	63.8	61.8	0.7	0.9	63.2	61.0	0.1	0.1
	SE_83	Residential	65	60	B	70	63.3	61.1	64.0	62.0	0.7	0.9	63.3	61.2	0.0	0.1
	SE_84	Residential	65	60	B	70	62.2	60.2	62.9	61.1	0.7	0.9	62.3	60.5	0.1	0.3
	SE_85	Residential	65	60	B	70	62.1	60.2	62.8	61.0	0.7	0.8	62.2	60.4	0.1	0.2
	SE_86	Residential	65	60	B	70	62.2	60.3	62.9	61.2	0.7	0.9	62.3	60.6	0.1	0.3
	SE_87	Residential	65	60	B	70	62.0	60.3	62.7	61.2	0.7	0.9	62.2	60.7	0.2	0.4
	SE_88	Medical	70	65	C	70	76.3	72.7	76.9	73.6	0.6	0.9	76.3	72.8	0.0	0.1
	SE_89	Medical	70	65	C	70	75.6	72.2	76.3	73.1	0.7	0.9	75.6	72.3	0.0	0.1
	SE_90	Residential	65	60	B	70	65.6	63.1	66.3	64.0	0.7	0.9	65.7	63.4	0.1	0.3
	SE_91	Education	65	60	C	70	65.1	63.0	65.8	63.9	0.7	0.9	65.3	63.3	0.2	0.3

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Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SF	SF_1	Office	70	65	E	75	69.2	67.1	69.9	67.9	0.7	0.8	69.2	67.0	0.0	-0.1
	SF_2	Office	70	65	E	75	71.9	69.3	72.5	70.1	0.6	0.8	71.7	69.1	-0.2	-0.2
	SF_3	Office	70	65	E	75	72.1	69.4	72.8	70.2	0.7	0.8	71.9	69.2	-0.2	-0.2
	SF_4	Retail	70	65	F	NA	75.2	72.0	75.9	72.9	0.7	0.9	74.8	71.7	-0.4	-0.3
	SF_5	Industrial	80	75	F	NA	75.9	72.5	76.5	73.3	0.6	0.8	75.6	72.2	-0.3	-0.3
	SF_6	Industrial	80	75	F	NA	75.1	71.9	75.7	72.7	0.6	0.8	75.0	71.7	-0.1	-0.2
	SF_7	Medical	70	65	C	70	72.8	70.0	73.3	70.7	0.5	0.7	72.6	69.8	-0.2	-0.2
	SF_8	Hotel	65	60	E	75	70.8	68.2	71.4	69.0	0.6	0.8	70.9	68.2	0.1	0.0
NF	NF_1	Office	70	65	E	75	69.4	67.3	70.0	68.1	0.6	0.8	69.4	67.3	0.0	0.0
	NF_2	Office	70	65	E	75	70.6	68.3	71.3	69.1	0.7	0.8	71.3	69.0	0.7	0.7
	NF_3	Office	70	65	E	75	70.5	68.2	71.1	69.0	0.6	0.8	71.1	68.8	0.6	0.6
	NF_4	Office	70	65	E	75	70.8	68.4	71.4	69.2	0.6	0.8	71.3	69.0	0.5	0.6
	NF_5	Industrial	80	75	F	NA	69.3	67.1	69.9	67.8	0.6	0.7	69.6	67.4	0.3	0.3
	NF_6	Industrial	80	75	F	NA	68.6	66.5	69.2	67.2	0.6	0.7	68.7	66.6	0.1	0.1

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SG	SG_1	Retail	70	65	F	NA	69.2	66.9	69.8	67.7	0.6	0.8	69.3	67.1	0.1	0.2
	SG_2	Retail	70	65	F	NA	68.7	66.1	69.3	66.9	0.6	0.8	68.7	66.1	0.0	0.0
	SG_3	Office	70	65	E	75	66.6	63.6	67.4	64.5	0.8	0.9	67.1	64.0	0.5	0.4
	SG_4	Industrial	80	75	F	NA	60.6	58.3	61.4	59.2	0.8	0.9	61.2	59.0	0.6	0.7
	SG_5	Industrial	80	75	F	NA	67.0	64.2	67.7	65.0	0.7	0.8	67.1	64.4	0.1	0.2
	SG_6	Retail	70	65	F	NA	69.5	66.2	70.2	67.0	0.7	0.8	69.7	66.3	0.2	0.1
	SG_7	Industrial	80	75	F	NA	74.3	71.0	74.8	71.8	0.5	0.8	74.0	70.9	-0.3	-0.1
	SG_8	Retail	70	65	F	NA	73.2	70.1	73.8	70.9	0.6	0.8	73.0	70.0	-0.2	-0.1
	SG_9	Office	70	65	E	75	73.5	70.3	74.0	71.1	0.5	0.8	73.6	70.6	0.1	0.3
	SG_10	Industrial	80	75	F	NA	68.1	65.2	68.9	66.0	0.8	0.8	68.5	65.5	0.4	0.3
	SG_11	Trail	70	65	C	70	72.0	65.6	73.0	66.8	1.0	1.2	72.7	66.2	0.7	0.6
	SG_12	Retail	70	65	F	NA	69.5	66.5	70.2	67.3	0.7	0.8	69.8	66.8	0.3	0.3
	SG_13	Trail	70	65	C	70	72.9	66.6	73.9	67.8	1.0	1.2	73.6	67.2	0.7	0.6
	SG_14	Office	70	65	E	75	69.4	66.7	70.1	67.5	0.7	0.8	69.7	67.0	0.3	0.3
	SG_15	Trail	70	65	C	70	73.3	67.2	74.3	68.3	1.0	1.1	74.1	67.9	0.8	0.7
	SG_16	Industrial	80	75	F	NA	68.0	65.7	68.7	66.5	0.7	0.8	68.4	66.1	0.4	0.4
	SG_17	Trail	70	65	C	70	72.9	66.9	73.9	68.1	1.0	1.2	73.8	67.8	0.9	0.9
	SG_18	Trail	70	65	C	70	72.5	66.3	73.5	67.5	1.0	1.2	73.4	67.3	0.9	1.0
	SG_19	Hotel	65	60	E	75	69.2	66.5	70.0	67.4	0.8	0.9	69.9	67.1	0.7	0.6
	SG_20	Trail	70	65	C	70	72.2	65.7	73.3	67.0	1.1	1.3	73.2	66.9	1.0	1.2
	SG_21	Trail	70	65	C	70	71.6	64.5	72.8	66.0	1.2	1.5	72.7	66.0	1.1	1.5
	SG_22	Trail	70	65	C	70	71.7	64.6	72.9	66.2	1.2	1.6	72.9	66.2	1.2	1.6
	SG_23	Trail	70	65	C	70	72.3	65.7	73.6	67.4	1.3	1.7	73.5	67.2	1.2	1.5
	SG_24	Residential	65	60	B	70	65.4	63.4	66.3	64.5	0.9	1.1	66.1	64.3	0.7	0.9
	SG_25	Residential	65	60	B	70	67.0	64.7	68.0	65.8	1.0	1.1	67.9	65.6	0.9	0.9
	SG_26	Residential	65	60	B	70	64.8	63.1	65.7	64.1	0.9	1.0	65.5	63.8	0.7	0.7
	SG_27	Residential	65	60	B	70	65.7	63.8	66.6	64.9	0.9	1.1	66.5	64.6	0.8	0.8
	SG_28	Residential	65	60	B	70	63.7	62.0	64.5	63.0	0.8	1.0	64.2	62.7	0.5	0.7
	SG_29	Residential	65	60	B	70	64.1	62.4	64.9	63.4	0.8	1.0	64.7	63.1	0.6	0.7
	SG_30	Residential	65	60	B	70	64.6	62.9	65.5	64.0	0.9	1.1	65.3	63.7	0.7	0.8
	SG_31	Residential	65	60	B	70	65.3	63.5	66.2	64.5	0.9	1.0	66.1	64.3	0.8	0.8
	SG_32	Residential	65	60	B	70	63.3	61.8	64.1	62.7	0.8	0.9	63.9	62.4	0.6	0.6
	SG_33	Residential	65	60	B	70	62.9	61.3	63.7	62.3	0.8	1.0	63.4	62.0	0.5	0.7
	SG_34	Residential	65	60	B	70	63.4	61.8	64.2	62.8	0.8	1.0	64.0	62.5	0.6	0.7
	SG_35	Residential	65	60	B	70	64.0	62.4	64.8	63.4	0.8	1.0	64.6	63.0	0.6	0.6
	SG_36	Residential	65	60	B	70	64.4	62.7	65.2	63.7	0.8	1.0	65.0	63.4	0.6	0.7
	SG_37	Residential	65	60	B	70	62.4	60.9	63.1	61.8	0.7	0.9	62.8	61.5	0.4	0.6
	SG_38	Residential	65	60	B	70	63.0	61.5	63.8	62.4	0.8	0.9	63.5	62.1	0.5	0.6
	SG_39	Residential	65	60	B	70	63.4	61.9	64.3	62.9	0.9	1.0	64.0	62.6	0.6	0.7
	SG_40	Residential	65	60	B	70	63.9	62.3	64.8	63.3	0.9	1.0	64.5	63.0	0.6	0.7
	SG_41	Residential	65	60	B	70	62.0	60.6	62.8	61.5	0.8	0.9	62.5	61.1	0.5	0.5
	SG_42	Residential	65	60	B	70	62.4	61.0	63.2	61.9	0.8	0.9	63.0	61.6	0.6	0.6
	SG_43	Residential	65	60	B	70	63.0	61.5	63.8	62.5	0.8	1.0	63.5	62.1	0.5	0.6
	SG_44	Residential	65	60	B	70	63.5	62.0	64.4	63.0	0.9	1.0	64.1	62.7	0.6	0.7
	SG_45	Residential	65	60	B	70	62.1	60.7	62.9	61.7	0.8	1.0	62.6	61.3	0.5	0.6
NG	NG_1	Residential	65	60	B	70	58.5	56.6	59.1	57.4	0.6	0.8	59.1	57.3	0.6	0.7
	NG_2	Residential	65	60	B	70	59.0	57.2	59.6	57.9	0.6	0.7	59.6	57.8	0.6	0.6
	NG_3	Residential	65	60	B	70	59.1	57.5	59.7	58.2	0.6	0.7	59.7	58.1	0.6	0.6
	NG_4	Residential	65	60	B	70	58.8	57.2	59.4	57.9	0.6	0.7	59.3	57.8	0.5	0.6
	NG_5	Residential	65	60	B	70	59.0	57.3	59.6	58.0	0.6	0.7	59.6	58.0	0.6	0.7
	NG_6	Residential	65	60	B	70	59.2	57.6	59.8	58.3	0.6	0.7	59.7	58.2	0.5	0.6
	NG_7	Residential	65	60	B	70	59.2	57.6	59.8	58.3	0.6	0.7	59.7	58.2	0.5	0.6
	NG_8	Residential	65	60	B	70	59.4	57.7	59.9	58.4	0.5	0.7	59.9	58.3	0.5	0.6
	NG_9	Residential	65	60	B	70	59.5	57.8	60.1	58.5	0.6	0.7	60.0	58.4	0.5	0.6
	NG_10	Residential	65	60	B	70	59.6	57.9	60.2	58.7	0.6	0.8	60.1	58.5	0.5	0.6
	NG_11	Residential	65	60	B	70	59.7	58.0	60.3	58.8	0.6	0.8	60.2	58.6	0.5	0.6
	NG_12	Residential	65	60	B	70	59.9	58.2	60.5	58.9	0.6	0.7	60.4	58.8	0.5	0.6
	NG_13	Residential	65	60	B	70	60.1	58.2	60.6	59.0	0.5	0.8	60.5	58.8	0.4	0.6
	NG_14	Residential	65	60	B	70	60.1	58.3	60.7	59.0	0.6	0.7	60.5	58.9	0.4	0.6
	NG_15	Residential	65	60	B	70	60.1	58.4	60.7	59.1	0.6	0.7	60.5	58.9	0.4	0.5

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XX	Exceeds MN State Standards
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XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	NG_16	Residential	65	60	B	70	59.9	58.3	60.5	59.0	0.6	0.7	60.4	58.9	0.5	0.6
	NG_17	Residential	65	60	B	70	60.9	59.0	61.5	59.7	0.6	0.7	61.3	59.5	0.4	0.5
	NG_18	Residential	65	60	B	70	61.0	59.1	61.5	59.9	0.5	0.8	61.3	59.6	0.3	0.5
	NG_19	Residential	65	60	B	70	60.7	59.0	61.3	59.7	0.6	0.7	61.1	59.5	0.4	0.5
	NG_20	Residential	65	60	B	70	60.4	58.8	61.0	59.5	0.6	0.7	60.8	59.3	0.4	0.5
	NG_21	Residential	65	60	B	70	60.2	58.6	60.8	59.3	0.6	0.7	60.6	59.1	0.4	0.5
	NG_22	Residential	65	60	B	70	59.9	58.3	60.5	59.0	0.6	0.7	60.3	58.9	0.4	0.6
	NG_23	Residential	65	60	B	70	61.3	59.4	61.9	60.1	0.6	0.7	61.6	59.9	0.3	0.5
	NG_24	Residential	65	60	B	70	61.0	59.2	61.6	59.9	0.6	0.7	61.3	59.7	0.3	0.5
	NG_25	Residential	65	60	B	70	60.8	59.1	61.4	59.8	0.6	0.7	61.1	59.5	0.3	0.4
	NG_26	Residential	65	60	B	70	60.4	58.8	61.0	59.5	0.6	0.7	60.8	59.3	0.4	0.5
	NG_27	Residential	65	60	B	70	60.2	58.6	60.8	59.3	0.6	0.7	60.6	59.1	0.4	0.5
	NG_28	Residential	65	60	B	70	59.9	58.3	60.5	59.0	0.6	0.7	60.3	58.9	0.4	0.6
	NG_29	Residential	65	60	B	70	61.4	59.3	61.9	60.0	0.5	0.7	61.6	59.7	0.2	0.4
	NG_30	Residential	65	60	B	70	61.1	58.8	61.7	59.5	0.6	0.7	61.4	59.3	0.3	0.5
	NG_31	Residential	65	60	B	70	61.4	59.2	62.0	59.9	0.6	0.7	61.7	59.6	0.3	0.4
	NG_32	Residential	65	60	B	70	62.1	59.9	62.6	60.6	0.5	0.7	62.3	60.4	0.2	0.5
	NG_33	Residential	65	60	B	70	61.3	59.4	61.8	60.1	0.5	0.7	61.5	59.8	0.2	0.4
	NG_34	Residential	65	60	B	70	61.0	59.2	61.6	60.0	0.6	0.8	61.2	59.7	0.2	0.5
	NG_35	Residential	65	60	B	70	60.7	59.1	61.3	59.8	0.6	0.7	61.0	59.5	0.3	0.4
	NG_36	Residential	65	60	B	70	60.4	58.8	61.0	59.5	0.6	0.7	60.7	59.2	0.3	0.4
	NG_37	Residential	65	60	B	70	60.2	58.6	60.7	59.3	0.5	0.7	60.5	59.1	0.3	0.5
	NG_38	Residential	65	60	B	70	61.6	59.1	62.2	59.8	0.6	0.7	62.0	59.6	0.4	0.5
	NG_39	Residential	65	60	B	70	61.6	58.8	62.2	59.6	0.6	0.8	61.9	59.4	0.3	0.6
	NG_40	Residential	65	60	B	70	61.7	59.1	62.2	59.8	0.5	0.7	62.0	59.6	0.3	0.5
	NG_41	Residential	65	60	B	70	61.7	58.9	62.2	59.7	0.5	0.8	62.0	59.5	0.3	0.6
	NG_42	Residential	65	60	B	70	61.6	58.8	62.2	59.5	0.6	0.7	61.9	59.4	0.3	0.6
	NG_43	Residential	65	60	B	70	62.0	59.8	62.6	60.5	0.6	0.7	62.3	60.3	0.3	0.5
	NG_44	Residential	65	60	B	70	61.7	59.0	62.3	59.7	0.6	0.7	62.0	59.5	0.3	0.5
	NG_45	Residential	65	60	B	70	61.9	59.7	62.4	60.4	0.5	0.7	62.1	60.1	0.2	0.4
NG cont...	NG_46	Residential	65	60	B	70	61.6	59.3	62.2	60.0	0.6	0.7	61.9	59.8	0.3	0.5
	NG_47	Residential	65	60	B	70	61.6	59.0	62.1	59.7	0.5	0.7	61.9	59.5	0.3	0.5
	NG_48	Residential	65	60	B	70	61.8	59.8	62.4	60.5	0.6	0.7	62.1	60.3	0.3	0.5
	NG_49	Residential	65	60	B	70	62.3	60.6	62.9	61.3	0.6	0.7	62.5	60.9	0.2	0.3
	NG_50	Residential	65	60	B	70	62.8	61.0	63.4	61.7	0.6	0.7	62.9	61.4	0.1	0.4
	NG_51	Residential	65	60	B	70	63.2	61.3	63.8	62.0	0.6	0.7	63.3	61.7	0.1	0.4
	NG_52	Residential	65	60	B	70	63.6	61.5	64.2	62.2	0.6	0.7	63.8	61.9	0.2	0.4
	NG_53	Residential	65	60	B	70	60.8	59.1	61.4	59.8	0.6	0.7	61.1	59.6	0.3	0.5
	NG_54	Residential	65	60	B	70	60.9	59.2	61.5	59.9	0.6	0.7	61.1	59.6	0.2	0.4
	NG_55	Residential	65	60	B	70	60.9	59.2	61.5	59.9	0.6	0.7	61.1	59.6	0.2	0.4
	NG_56	Residential	65	60	B	70	60.9	59.2	61.5	59.9	0.6	0.7	61.1	59.7	0.2	0.5
	NG_57	Residential	65	60	B	70	60.9	59.3	61.5	60.0	0.6	0.7	61.1	59.7	0.2	0.4
	NG_58	Residential	65	60	B	70	61.0	59.4	61.6	60.1	0.6	0.7	61.2	59.8	0.2	0.4
	NG_59	Residential	65	60	B	70	60.7	59.1	61.3	59.9	0.6	0.8	61.0	59.6	0.3	0.5
	NG_60	Residential	65	60	B	70	60.7	59.1	61.2	59.8	0.5	0.7	61.0	59.5	0.3	0.4
	NG_61	Residential	65	60	B	70	60.6	59.0	61.2	59.7	0.6	0.7	60.9	59.5	0.3	0.5
	NG_62	Residential	65	60	B	70	61.7	60.0	62.3	60.7	0.6	0.7	61.9	60.4	0.2	0.4
	NG_63	Residential	65	60	B	70	61.4	59.7	62.0	60.5	0.6	0.8	61.6	60.2	0.2	0.5
	NG_64	Residential	65	60	B	70	61.5	59.8	62.1	60.6	0.6	0.8	61.7	60.3	0.2	0.5
	NG_65	Residential	65	60	B	70	61.4	59.8	62.0	60.5	0.6	0.7	61.7	60.2	0.3	0.4
	NG_66	Residential	65	60	B	70	61.4	59.7	62.0	60.4	0.6	0.7	61.7	60.2	0.3	0.5
	NG_67	Residential	65	60	B	70	61.4	59.6	62.0	60.3	0.6	0.7	61.7	60.1	0.3	0.5
	NG_68	Residential	65	60	B	70	61.8	60.1	62.4	60.8	0.6	0.7	62.0	60.4	0.2	0.3
	NG_69	Residential	65	60	B	70	61.8	60.1	62.3	60.8	0.5	0.7	62.0	60.5	0.2	0.4
	NG_70	Residential	65	60	B	70	61.7	60.1	62.3	60.8	0.6	0.7	62.0	60.5	0.3	0.4
	NG_71	Residential	65	60	B	70	61.7	60.0	62.2	60.7	0.5	0.7	61.9	60.4	0.2	0.4
	NG_72	Residential	65	60	B	70	61.7	60.0	62.3	60.7	0.6	0.7	62.0	60.5	0.3	0.5
	NG_73	Residential	65	60	B	70	61.7	59.9	62.3	60.6	0.6	0.7	61.9	60.4	0.2	0.5
	NG_74	Residential	65	60	B	70	61.7	59.8	62.3	60.5	0.6	0.7	61.9	60.2	0.2	0.4
	NG_75	Residential	65	60	B	70	63.7	61.6	64.3	62.3	0.6	0.7	63.7	62.0	0.0	0.4

Table B1

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Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NG cont...	NG_76	Residential	65	60	B	70	64.2	62.0	64.8	62.7	0.6	0.7	64.4	62.4	0.2	0.4
	NG_77	Residential	65	60	B	70	63.8	61.5	64.3	62.3	0.5	0.8	64.0	62.0	0.2	0.5
	NG_78	Residential	65	60	B	70	63.6	61.4	64.2	62.1	0.6	0.7	63.9	61.8	0.3	0.4
	NG_79	Residential	65	60	B	70	63.9	61.5	64.5	62.2	0.6	0.7	64.1	61.8	0.2	0.3
	NG_80	Residential	65	60	B	70	62.8	60.6	63.3	61.3	0.5	0.7	63.0	61.0	0.2	0.4
	NG_81	Residential	65	60	B	70	62.9	60.6	63.4	61.3	0.5	0.7	63.1	60.9	0.2	0.3
	NG_82	Residential	65	60	B	70	62.7	60.4	63.2	61.1	0.5	0.7	62.9	60.8	0.2	0.4
	NG_83	Residential	65	60	B	70	70.3	66.3	70.9	67.1	0.6	0.8	70.5	66.7	0.2	0.4
	NG_84	Residential	65	60	B	70	68.9	65.3	69.4	66.0	0.5	0.7	69.0	65.6	0.1	0.3
	NG_85	Residential	65	60	B	70	68.0	64.6	68.5	65.3	0.5	0.7	68.1	64.9	0.1	0.3
	NG_86	Residential	65	60	B	70	66.4	63.3	66.9	64.1	0.5	0.8	66.6	63.6	0.2	0.3
	NG_87	Residential	65	60	B	70	65.5	62.5	66.0	63.3	0.5	0.8	65.6	62.8	0.1	0.3
	NG_88	Residential	65	60	B	70	64.6	61.9	65.2	62.6	0.6	0.7	64.8	62.2	0.2	0.3
	NG_89	Residential	65	60	B	70	63.9	61.3	64.5	62.0	0.6	0.7	64.1	61.6	0.2	0.3
	NG_90	Industrial	80	75	F	NA	71.8	68.0	72.3	68.7	0.5	0.7	71.8	68.1	0.0	0.1

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Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SH	SH_1	Retail	70	65	F	NA	66.8	64.3	67.9	65.5	1.1	1.2	67.7	65.2	0.9	0.9
	SH_3	Retail	70	65	F	NA	67.8	65.5	69.1	66.9	1.3	1.4	68.7	66.4	0.9	0.9
	SH_2	Restaurant	70	65	E	75	65.8	64.0	67.2	65.2	1.4	1.2	67.3	65.0	1.5	1.0
	SH_4	Religious	65	60	C	70	65.4	63.9	66.1	64.7	0.7	0.8	65.8	64.0	0.4	0.1
	SH_5	Industrial	80	75	F	NA	69.8	67.8	70.3	68.5	0.5	0.7	70.2	68.4	0.4	0.6
	SH_6	Industrial	80	75	F	NA	71.7	69.4	72.3	70.2	0.6	0.8	72.3	70.1	0.6	0.7
	SH_7	Residential	65	60	B	70	67.7	65.6	68.7	66.7	1.0	1.1	68.2	66.2	0.5	0.6
	SH_8	Residential	65	60	B	70	67.2	64.5	68.1	65.7	0.9	1.2	67.6	65.1	0.4	0.6
	SH_9	Residential	65	60	B	70	67.9	65.3	68.8	66.5	0.9	1.2	68.3	65.9	0.4	0.6
	SH_10	Residential	65	60	B	70	68.3	65.8	69.2	67.0	0.9	1.2	68.8	66.5	0.5	0.7
	SH_11	Residential	65	60	B	70	66.6	64.4	67.5	65.5	0.9	1.1	67.0	65.1	0.4	0.7
	SH_12	Residential	65	60	B	70	66.2	63.9	67.1	65.0	0.9	1.1	66.6	64.5	0.4	0.6
	SH_13	Residential	65	60	B	70	67.0	64.6	67.9	65.7	0.9	1.1	67.4	65.2	0.4	0.6
	SH_14	Residential	65	60	B	70	67.4	64.9	68.3	66.1	0.9	1.2	67.9	65.6	0.5	0.7
	SH_15	Residential	65	60	B	70	67.0	64.6	67.9	65.8	0.9	1.2	67.4	65.2	0.4	0.6
	SH_16	Residential	65	60	B	70	67.7	65.2	68.6	66.4	0.9	1.2	68.1	65.9	0.4	0.7
	SH_17	Residential	65	60	B	70	67.5	65.1	68.4	66.3	0.9	1.2	68.0	65.8	0.5	0.7
	SH_18	Residential	65	60	B	70	67.8	65.4	68.7	66.5	0.9	1.1	68.3	66.0	0.5	0.6
	SH_19	Residential	65	60	B	70	67.6	65.2	68.5	66.4	0.9	1.2	68.1	65.9	0.5	0.7
	SH_20	Residential	65	60	B	70	66.3	64.0	67.2	65.2	0.9	1.2	66.8	64.6	0.5	0.6
	SH_21	Residential	65	60	B	70	65.2	62.9	66.1	64.1	0.9	1.2	65.5	63.5	0.3	0.6
	SH_22	Residential	65	60	B	70	68.7	66.3	69.6	67.4	0.9	1.1	69.2	66.9	0.5	0.6
	SH_23	Residential	65	60	B	70	68.7	66.2	69.6	67.4	0.9	1.2	69.1	66.9	0.4	0.7
	SH_24	Residential	65	60	B	70	68.9	66.4	69.8	67.6	0.9	1.2	69.4	67.0	0.5	0.6
	SH_25	Residential	65	60	B	70	69.1	66.6	70.0	67.8	0.9	1.2	69.6	67.2	0.5	0.6
	SH_26	Residential	65	60	B	70	69.2	66.7	70.1	67.8	0.9	1.1	69.7	67.3	0.5	0.6
	SH_27	Residential	65	60	B	70	69.5	66.9	70.4	68.1	0.9	1.2	70.0	67.6	0.5	0.7
	SH_28	Residential	65	60	B	70	69.7	67.1	70.6	68.3	0.9	1.2	70.2	67.7	0.5	0.6
	SH_29	Residential	65	60	B	70	69.9	67.3	70.8	68.5	0.9	1.2	70.4	67.9	0.5	0.6
	SH_30	Residential	65	60	B	70	70.0	67.4	70.9	68.6	0.9	1.2	70.5	68.0	0.5	0.6
	SH_31	Residential	65	60	B	70	68.1	65.8	69.0	67.0	0.9	1.2	68.6	66.4	0.5	0.6
	SH_32	Residential	65	60	B	70	68.2	65.9	69.1	67.1	0.9	1.2	68.7	66.5	0.5	0.6
	SH_33	Residential	65	60	B	70	68.4	66.0	69.3	67.2	0.9	1.2	68.8	66.6	0.4	0.6
	SH_34	Residential	65	60	B	70	68.4	66.1	69.3	67.2	0.9	1.1	68.9	66.7	0.5	0.6
	SH_35	Residential	65	60	B	70	68.4	66.0	69.3	67.2	0.9	1.2	68.9	66.7	0.5	0.7
	SH_36	Residential	65	60	B	70	68.5	66.1	69.4	67.3	0.9	1.2	69.0	66.7	0.5	0.6
	SH_37	Residential	65	60	B	70	68.5	66.1	69.4	67.3	0.9	1.2	69.0	66.7	0.5	0.6
	SH_38	Residential	65	60	B	70	68.5	66.1	69.4	67.3	0.9	1.2	69.0	66.8	0.5	0.7
	SH_39	Residential	65	60	B	70	68.7	66.3	69.6	67.5	0.9	1.2	69.3	67.0	0.6	0.7
	SH_40	Residential	65	60	B	70	70.6	67.9	71.5	69.1	0.9	1.2	71.2	68.6	0.6	0.7
	SH_41	Residential	65	60	B	70	70.3	67.7	71.2	68.9	0.9	1.2	70.9	68.4	0.6	0.7
	SH_42	Residential	65	60	B	70	69.8	67.3	70.7	68.5	0.9	1.2	70.4	68.0	0.6	0.7
	SH_43	Residential	65	60	B	70	69.1	66.8	70.1	67.9	1.0	1.1	69.8	67.5	0.7	0.7
	SH_44	Residential	65	60	B	70	68.6	66.3	69.5	67.5	0.9	1.2	69.2	67.0	0.6	0.7
	SH_45	Residential	65	60	B	70	69.0	66.7	69.9	67.8	0.9	1.1	69.6	67.3	0.6	0.6
	SH_46	Residential	65	60	B	70	69.7	67.3	70.7	68.4	1.0	1.1	70.4	68.0	0.7	0.7
	SH_47	Residential	65	60	B	70	69.6	67.0	70.5	68.2	0.9	1.2	70.1	67.7	0.5	0.7
	SH_48	Residential	65	60	B	70	70.4	67.8	71.3	68.9	0.9	1.1	71.0	68.5	0.6	0.7
	SH_49	Residential	65	60	B	70	68.5	66.0	69.4	67.2	0.9	1.2	69.0	66.7	0.5	0.7
	SH_50	Residential	65	60	B	70	68.7	66.2	69.6	67.4	0.9	1.2	69.2	66.9	0.5	0.7
	SH_51	Residential	65	60	B	70	67.1	64.7	68.0	65.8	0.9	1.1	67.6	65.3	0.5	0.6
	SH_52	Residential	65	60	B	70	65.6	63.2	66.5	64.4	0.9	1.2	66.0	63.8	0.4	0.6
	SH_53	Residential	65	60	B	70	66.5	64.2	67.4	65.4	0.9	1.2	67.0	64.9	0.5	0.7
	SH_54	Residential	65	60	B	70	66.2	64.0	67.1	65.2	0.9	1.2	66.7	64.7	0.5	0.7
	SH_55	Residential	65	60	B	70	65.4	63.4	66.3	64.5	0.9	1.1	65.9	64.0	0.5	0.6
	SH_56	Residential	65	60	B	70	64.5	62.6	65.5	63.7	1.0	1.1	65.0	63.2	0.5	0.6
	SH_57	Residential	65	60	B	70	66.1	64.1	67.0	65.2	0.9	1.1	66.6	64.7	0.5	0.6
	SH_58	Residential	65	60	B	70	70.4	67.9	71.3	69.1	0.9	1.2	71.0	68.5	0.6	0.6
	SH_59	Residential	65	60	B	70	70.5	67.9	71.4	69.0	0.9	1.1	71.1	68.6	0.6	0.7
	SH_60	Residential	65	60	B	70	70.6	67.9	71.5	69.1	0.9	1.2	71.2	68.6	0.6	0.7

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XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SH cont...	SH_61	Residential	65	60	B	70	70.5	67.9	71.4	69.1	0.9	1.2	71.1	68.6	0.6	0.7
	SH_62	Residential	65	60	B	70	70.6	68.0	71.5	69.2	0.9	1.2	71.3	68.7	0.7	0.7
	SH_63	Residential	65	60	B	70	70.7	68.1	71.6	69.3	0.9	1.2	71.3	68.8	0.6	0.7
	SH_64	Residential	65	60	B	70	69.4	67.0	70.3	68.2	0.9	1.2	70.0	67.7	0.6	0.7
	SH_65	Residential	65	60	B	70	69.6	67.2	70.5	68.4	0.9	1.2	70.3	67.9	0.7	0.7
	SH_66	Residential	65	60	B	70	69.5	67.1	70.4	68.3	0.9	1.2	70.1	67.9	0.6	0.8
	SH_67	Residential	65	60	B	70	70.2	67.8	71.1	68.9	0.9	1.1	70.8	68.5	0.6	0.7
	SH_68	Residential	65	60	B	70	64.7	62.8	65.6	64.0	0.9	1.2	65.2	63.4	0.5	0.6
	SH_69	Residential	65	60	B	70	65.4	63.5	66.4	64.6	1.0	1.1	65.9	64.1	0.5	0.6
	SH_70	Residential	65	60	B	70	71.1	68.5	72.0	69.7	0.9	1.2	71.7	69.2	0.6	0.7
	SH_71	Residential	65	60	B	70	70.9	68.4	71.8	69.6	0.9	1.2	71.4	69.1	0.5	0.7
	SH_72	Residential	65	60	B	70	70.6	68.2	71.5	69.4	0.9	1.2	71.2	68.9	0.6	0.7
	SH_73	Residential	65	60	B	70	70.4	68.0	71.3	69.2	0.9	1.2	70.9	68.7	0.5	0.7
	SH_74	Residential	65	60	B	70	69.6	67.4	70.5	68.5	0.9	1.1	70.1	68.0	0.5	0.6
	SH_75	Residential	65	60	B	70	70.3	67.9	71.2	69.1	0.9	1.2	70.8	68.6	0.5	0.7
	SH_76	Residential	65	60	B	70	70.6	68.2	71.5	69.4	0.9	1.2	71.2	68.9	0.6	0.7
	SH_77	Residential	65	60	B	70	69.5	67.1	70.4	68.3	0.9	1.2	70.0	67.7	0.5	0.6
	SH_78	Residential	65	60	B	70	68.2	65.9	69.1	67.1	0.9	1.2	68.7	66.5	0.5	0.6
	SH_79	Residential	65	60	B	70	65.4	63.4	66.3	64.6	0.9	1.2	65.9	64.1	0.5	0.7
	SH_80	Residential	65	60	B	70	63.7	61.8	64.6	63.0	0.9	1.2	64.2	62.5	0.5	0.7
	SH_81	Residential	65	60	B	70	63.7	61.7	64.6	62.9	0.9	1.2	64.2	62.4	0.5	0.7
	SH_82	Residential	65	60	B	70	63.9	62.0	64.8	63.1	0.9	1.1	64.4	62.6	0.5	0.6
	SH_83	Residential	65	60	B	70	64.3	62.3	65.2	63.5	0.9	1.2	64.8	63.0	0.5	0.7
	SH_84	Residential	65	60	B	70	64.0	61.9	64.9	63.1	0.9	1.2	64.5	62.6	0.5	0.7
	SH_85	Residential	65	60	B	70	63.8	61.7	64.7	62.8	0.9	1.1	64.3	62.3	0.5	0.6
	SH_86	Residential	65	60	B	70	64.6	62.6	65.5	63.7	0.9	1.1	65.0	63.2	0.4	0.6
	SH_87	Residential	65	60	B	70	63.8	61.8	64.7	62.9	0.9	1.1	64.2	62.4	0.4	0.6
	SH_88	Residential	65	60	B	70	62.5	60.5	63.4	61.7	0.9	1.2	63.0	61.2	0.5	0.7
	SH_89	Residential	65	60	B	70	63.2	61.4	64.2	62.6	1.0	1.2	63.7	62.0	0.5	0.6
	SH_90	Residential	65	60	B	70	64.6	62.6	65.5	63.8	0.9	1.2	65.0	63.2	0.4	0.6
	SH_91	Residential	65	60	B	70	67.2	64.7	68.1	65.9	0.9	1.2	67.6	65.2	0.4	0.5
	SH_92	Residential	65	60	B	70	69.8	67.6	70.8	68.8	1.0	1.2	70.3	68.2	0.5	0.6
	SH_93	Residential	65	60	B	70	69.2	67.1	70.2	68.3	1.0	1.2	69.7	67.7	0.5	0.6
	SH_94	Residential	65	60	B	70	70.2	67.9	71.1	69.0	0.9	1.1	70.7	68.5	0.5	0.6
	SH_95	Residential	65	60	B	70	70.0	67.7	70.9	68.9	0.9	1.2	70.4	68.3	0.4	0.6
	SH_96	Residential	65	60	B	70	69.8	67.6	70.7	68.7	0.9	1.1	70.2	68.1	0.4	0.5
	SH_97	Residential	65	60	B	70	69.0	66.9	69.9	68.0	0.9	1.1	69.4	67.4	0.4	0.5
	SH_98	Residential	65	60	B	70	68.6	66.5	69.5	67.7	0.9	1.2	69.0	67.1	0.4	0.6
	SH_99	Residential	65	60	B	70	67.8	65.8	68.7	67.0	0.9	1.2	68.2	66.4	0.4	0.6
	SH_100	Residential	65	60	B	70	67.3	65.4	68.3	66.6	1.0	1.2	67.7	65.9	0.4	0.5
	SH_101	Residential	65	60	B	70	66.8	64.9	67.7	66.0	0.9	1.1	67.2	65.4	0.4	0.5
	SH_102	Residential	65	60	B	70	67.4	65.4	68.4	66.6	1.0	1.2	67.8	65.9	0.4	0.5
	SH_103	Residential	65	60	B	70	67.5	65.6	68.5	66.7	1.0	1.1	68.0	66.2	0.5	0.6
	SH_104	Residential	65	60	B	70	67.0	65.1	68.0	66.3	1.0	1.2	67.5	65.8	0.5	0.7
	SH_105	Residential	65	60	B	70	66.9	64.9	67.9	66.1	1.0	1.2	67.4	65.6	0.5	0.7
	SH_106	Residential	65	60	B	70	66.8	64.8	67.8	66.0	1.0	1.2	67.3	65.5	0.5	0.7
	SH_107	Residential	65	60	B	70	66.8	64.8	67.7	65.9	0.9	1.1	67.3	65.4	0.5	0.6
	SH_108	Residential	65	60	B	70	66.8	64.7	67.7	65.9	0.9	1.2	67.3	65.4	0.5	0.7
	SH_109	Residential	65	60	B	70	66.8	64.7	67.7	65.9	0.9	1.2	67.3	65.4	0.5	0.7
	SH_110	Residential	65	60	B	70	66.8	64.7	67.8	65.9	1.0	1.2	67.4	65.4	0.6	0.7
	SH_111	Residential	65	60	B	70	66.9	64.8	67.9	66.0	1.0	1.2	67.5	65.4	0.6	0.6
	SH_112	Residential	65	60	B	70	67.0	64.9	67.9	66.1	0.9	1.2	67.6	65.5	0.6	0.6
	SH_113	Residential	65	60	B	70	67.1	65.0	68.0	66.2	0.9	1.2	67.7	65.6	0.6	0.6
	SH_114	Residential	65	60	B	70	67.3	65.1	68.2	66.3	0.9	1.2	67.8	65.8	0.5	0.7
	SH_115	Residential	65	60	B	70	67.3	65.2	68.3	66.4	1.0	1.2	67.9	65.9	0.6	0.7
	SH_116	Residential	65	60	B	70	67.4	65.3	68.3	66.5	0.9	1.2	68.0	66.0	0.6	0.7
	SH_117	Residential	65	60	B	70	67.5	65.4	68.4	66.5	0.9	1.1	68.1	66.1	0.6	0.7
	SH_118	Residential	65	60	B	70	67.6	65.5	68.6	66.7	1.0	1.2	68.3	66.3	0.7	0.8
	SH_119	Residential	65	60	B	70	67.7	65.6	68.7	66.8	1.0	1.2	68.4	66.4	0.7	0.8
	SH_120	Residential	65	60	B	70	67.7	65.6	68.6	66.8	0.9	1.2	68.3	66.3	0.6	0.7

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SH cont...	SH_121	Residential	65	60	B	70	67.8	65.7	68.7	66.9	0.9	1.2	68.4	66.5	0.6	0.8
	SH_122	Residential	65	60	B	70	67.9	65.8	68.8	67.0	0.9	1.2	68.6	66.6	0.7	0.8
	SH_123	Residential	65	60	B	70	68.0	65.9	68.9	67.1	0.9	1.2	68.6	66.6	0.6	0.7
	SH_124	Residential	65	60	B	70	68.1	66.0	69.0	67.2	0.9	1.2	68.7	66.7	0.6	0.7
	SH_125	Residential	65	60	B	70	68.2	66.1	69.1	67.3	0.9	1.2	68.8	66.8	0.6	0.7
	SH_126	Residential	65	60	B	70	68.2	66.1	69.1	67.3	0.9	1.2	68.8	66.8	0.6	0.7
	SH_127	Residential	65	60	B	70	68.3	66.2	69.2	67.4	0.9	1.2	68.9	66.9	0.6	0.7
	SH_128	Residential	65	60	B	70	68.3	66.2	69.2	67.4	0.9	1.2	68.9	66.9	0.6	0.7
	SH_129	Residential	65	60	B	70	68.3	66.2	69.2	67.4	0.9	1.2	68.8	66.9	0.5	0.7
	SH_130	Residential	65	60	B	70	68.4	66.3	69.3	67.5	0.9	1.2	68.9	67.0	0.5	0.7
	SH_131	Residential	65	60	B	70	67.6	65.7	68.6	66.8	1.0	1.1	68.1	66.3	0.5	0.6
	SH_132	Residential	65	60	B	70	66.9	65.0	67.8	66.1	0.9	1.1	67.4	65.6	0.5	0.6
	SH_133	Residential	65	60	B	70	66.4	64.6	67.3	65.7	0.9	1.1	66.9	65.2	0.5	0.6
	SH_134	Residential	65	60	B	70	68.5	66.4	69.4	67.6	0.9	1.2	69.0	67.1	0.5	0.7
	SH_135	Residential	65	60	B	70	68.2	66.2	69.2	67.4	1.0	1.2	68.7	66.8	0.5	0.6
	SH_136	Residential	65	60	B	70	67.7	65.8	68.7	66.9	1.0	1.1	68.2	66.4	0.5	0.6
	SH_137	Residential	65	60	B	70	67.6	65.6	68.5	66.8	0.9	1.2	68.0	66.2	0.4	0.6
	SH_138	Residential	65	60	B	70	67.4	65.5	68.3	66.6	0.9	1.1	67.8	66.1	0.4	0.6
	SH_139	Residential	65	60	B	70	66.0	64.3	67.0	65.4	1.0	1.1	66.6	65.0	0.6	0.7
	SH_140	Residential	65	60	B	70	65.8	64.1	66.8	65.3	1.0	1.2	66.4	64.8	0.6	0.7
	SH_141	Residential	65	60	B	70	65.8	64.1	66.8	65.2	1.0	1.1	66.4	64.7	0.6	0.6
	SH_142	Residential	65	60	B	70	65.9	64.1	66.8	65.2	0.9	1.1	66.5	64.8	0.6	0.7
	SH_143	Residential	65	60	B	70	65.9	64.1	66.9	65.3	1.0	1.2	66.6	64.8	0.7	0.7
	SH_144	Residential	65	60	B	70	66.0	64.1	66.9	65.3	0.9	1.2	66.6	64.8	0.6	0.7
	SH_145	Residential	65	60	B	70	66.0	64.2	67.0	65.3	1.0	1.1	66.6	64.9	0.6	0.7
	SH_146	Residential	65	60	B	70	66.1	64.2	67.1	65.4	1.0	1.2	66.7	64.9	0.6	0.7
	SH_147	Residential	65	60	B	70	66.2	64.4	67.2	65.5	1.0	1.1	66.8	65.1	0.6	0.7
	SH_148	Residential	65	60	B	70	66.4	64.5	67.3	65.6	0.9	1.1	66.9	65.1	0.5	0.6
	SH_149	Residential	65	60	B	70	66.5	64.6	67.4	65.7	0.9	1.1	67.0	65.2	0.5	0.6
	SH_150	Residential	65	60	B	70	66.5	64.7	67.5	65.8	1.0	1.1	67.0	65.3	0.5	0.6
	SH_151	Residential	65	60	B	70	66.6	64.7	67.5	65.9	0.9	1.2	67.1	65.4	0.5	0.7
	SH_152	Residential	65	60	B	70	66.6	64.8	67.6	65.9	1.0	1.1	67.1	65.4	0.5	0.6
NH	NH_1	Office	70	65	E	75	70.4	68.1	71.4	69.4	1.0	1.3	70.8	68.8	0.4	0.7

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SI	SI_1	Residential	65	60	B	70	65.4	62.4	66.3	63.6	0.9	1.2	65.6	62.8	0.2	0.4
	SI_2	Residential	65	60	B	70	66.0	63.8	66.9	65.0	0.9	1.2	66.2	64.2	0.2	0.4
	SI_3	Residential	65	60	B	70	67.9	65.4	68.8	66.6	0.9	1.2	68.1	65.9	0.2	0.5
	SI_4	Residential	65	60	B	70	67.4	65.0	68.3	66.2	0.9	1.2	67.6	65.5	0.2	0.5
	SI_5	Residential	65	60	B	70	66.6	64.3	67.5	65.5	0.9	1.2	66.9	64.8	0.3	0.5
	SI_6	Residential	65	60	B	70	66.9	64.4	67.8	65.6	0.9	1.2	67.1	64.8	0.2	0.4
	SI_7	Residential	65	60	B	70	65.9	63.4	66.8	64.6	0.9	1.2	66.0	63.8	0.1	0.4
	SI_8	Residential	65	60	B	70	65.7	63.6	66.7	64.8	1.0	1.2	65.9	64.0	0.2	0.4
	SI_9	Residential	65	60	B	70	65.4	63.3	66.3	64.5	0.9	1.2	65.5	63.7	0.1	0.4
	SI_10	Residential	65	60	B	70	64.7	62.8	65.6	63.9	0.9	1.1	64.9	63.2	0.2	0.4
	SI_11	Residential	65	60	B	70	64.0	62.2	65.0	63.3	1.0	1.1	64.2	62.6	0.2	0.4
	SI_12	Residential	65	60	B	70	63.7	61.9	64.7	63.1	1.0	1.2	64.0	62.4	0.3	0.5
	SI_13	Residential	65	60	B	70	63.3	61.6	64.3	62.7	1.0	1.1	63.6	62.0	0.3	0.4
	SI_14	Residential	65	60	B	70	62.9	61.2	63.8	62.3	0.9	1.1	63.2	61.6	0.3	0.4
	SI_15	Residential	65	60	B	70	65.7	62.8	66.6	64.0	0.9	1.2	65.8	63.2	0.1	0.4
	SI_16	Residential	65	60	B	70	65.9	63.4	66.8	64.6	0.9	1.2	66.0	63.8	0.1	0.4
	SI_17	Residential	65	60	B	70	65.5	63.3	66.4	64.4	0.9	1.1	65.6	63.6	0.1	0.3
	SI_18	Residential	65	60	B	70	64.9	62.9	65.8	64.0	0.9	1.1	65.1	63.2	0.2	0.3
	SI_19	Residential	65	60	B	70	64.2	62.3	65.2	63.4	1.0	1.1	64.4	62.7	0.2	0.4
	SI_20	Residential	65	60	B	70	63.5	61.7	64.5	62.8	1.0	1.1	63.7	62.1	0.2	0.4
	SI_21	Residential	65	60	B	70	63.1	61.2	64.0	62.4	0.9	1.2	63.3	61.6	0.2	0.4
	SI_22	Residential	65	60	B	70	62.6	60.9	63.6	62.0	1.0	1.1	62.9	61.3	0.3	0.4
	SI_23	Residential	65	60	B	70	62.2	60.5	63.1	61.6	0.9	1.1	62.4	60.9	0.2	0.4
	SI_24	Residential	65	60	B	70	67.1	63.9	68.0	65.2	0.9	1.3	67.3	64.4	0.2	0.5
	SI_25	Residential	65	60	B	70	65.7	63.4	66.6	64.6	0.9	1.2	65.9	63.8	0.2	0.4
	SI_26	Residential	65	60	B	70	65.7	63.4	66.6	64.6	0.9	1.2	65.9	63.8	0.2	0.4
	SI_27	Residential	65	60	B	70	65.1	62.9	66.0	64.1	0.9	1.2	65.3	63.3	0.2	0.4
	SI_28	Residential	65	60	B	70	64.3	62.2	65.3	63.4	1.0	1.2	64.5	62.6	0.2	0.4
	SI_29	Residential	65	60	B	70	63.6	61.6	64.5	62.8	0.9	1.2	63.8	62.0	0.2	0.4
	SI_30	Residential	65	60	B	70	62.9	61.0	63.9	62.2	1.0	1.2	63.1	61.4	0.2	0.4
	SI_31	Residential	65	60	B	70	62.4	60.6	63.4	61.8	1.0	1.2	62.7	61.0	0.3	0.4
	SI_32	Residential	65	60	B	70	61.9	60.2	62.8	61.3	0.9	1.1	62.1	60.6	0.2	0.4
	SI_33	Residential	65	60	B	70	61.5	59.9	62.5	61.0	1.0	1.1	61.8	60.3	0.3	0.4
	SI_34	Residential	65	60	B	70	61.1	59.5	62.0	60.6	0.9	1.1	61.4	60.0	0.3	0.5
	SI_35	Residential	65	60	B	70	60.7	59.2	61.6	60.3	0.9	1.1	61.0	59.6	0.3	0.4
	SI_36	Residential	65	60	B	70	66.6	63.5	67.5	64.8	0.9	1.3	66.8	63.9	0.2	0.4
	SI_37	Residential	65	60	B	70	66.3	63.7	67.2	64.9	0.9	1.2	66.5	64.1	0.2	0.4
	SI_38	Residential	65	60	B	70	65.5	63.1	66.4	64.3	0.9	1.2	65.6	63.5	0.1	0.4
	SI_39	Residential	65	60	B	70	64.7	62.4	65.6	63.6	0.9	1.2	64.8	62.8	0.1	0.4
	SI_40	Residential	65	60	B	70	63.9	61.7	64.8	62.9	0.9	1.2	64.0	62.0	0.1	0.3
	SI_41	Residential	65	60	B	70	63.1	61.0	64.1	62.2	1.0	1.2	63.3	61.4	0.2	0.4
	SI_42	Residential	65	60	B	70	62.5	60.5	63.5	61.7	1.0	1.2	62.7	60.9	0.2	0.4
	SI_43	Residential	65	60	B	70	62.0	60.2	63.0	61.3	1.0	1.1	62.2	60.6	0.2	0.4
	SI_44	Residential	65	60	B	70	61.7	59.9	62.6	61.1	0.9	1.2	61.9	60.3	0.2	0.4
	SI_45	Residential	65	60	B	70	61.3	59.6	62.2	60.8	0.9	1.2	61.6	60.1	0.3	0.5
	SI_46	Residential	65	60	B	70	61.1	59.5	62.0	60.6	0.9	1.1	61.4	59.9	0.3	0.4
	SI_47	Residential	65	60	B	70	69.2	65.1	70.1	66.4	0.9	1.3	69.1	65.5	-0.1	0.4
	SI_48	Residential	65	60	B	70	67.5	64.2	68.4	65.4	0.9	1.2	67.4	64.5	-0.1	0.3
	SI_49	Residential	65	60	B	70	66.5	63.5	67.4	64.7	0.9	1.2	66.5	63.8	0.0	0.3
	SI_50	Residential	65	60	B	70	65.4	62.5	66.3	63.7	0.9	1.2	65.4	62.8	0.0	0.3
	SI_51	Residential	65	60	B	70	64.3	61.5	65.2	62.7	0.9	1.2	64.3	61.9	0.0	0.4
	SI_52	Residential	65	60	B	70	63.2	60.8	64.1	62.0	0.9	1.2	63.3	61.2	0.1	0.4
	SI_53	Residential	65	60	B	70	62.9	60.7	63.8	61.9	0.9	1.2	63.0	61.1	0.1	0.4
	SI_54	Residential	65	60	B	70	62.4	60.5	63.4	61.7	1.0	1.2	62.6	60.9	0.2	0.4
	SI_55	Residential	65	60	B	70	62.0	60.2	62.9	61.3	0.9	1.1	62.2	60.6	0.2	0.4
	SI_56	Residential	65	60	B	70	61.2	59.6	62.2	60.7	1.0	1.1	61.5	60.0	0.3	0.4
	SI_57	Residential	65	60	B	70	60.8	59.2	61.7	60.3	0.9	1.1	61.0	59.6	0.2	0.4
	SI_58	Residential	65	60	B	70	60.4	58.9	61.3	60.0	0.9	1.1	60.7	59.3	0.3	0.4
	SI_59	Residential	65	60	B	70	69.2	65.7	70.1	66.9	0.9	1.2	69.1	65.9	-0.1	0.2
	SI_60	Residential	65	60	B	70	69.3	65.7	70.2	67.0	0.9	1.3	69.1	66.0	-0.2	0.3

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	SI_61	Residential	65	60	B	70	66.4	62.0	67.3	63.4	0.9	1.4	66.3	62.5	-0.1	0.5
	SI_62	Residential	65	60	B	70	66.3	62.0	67.2	63.3	0.9	1.3	66.2	62.5	-0.1	0.5
	SI_63	Residential	65	60	B	70	66.2	63.0	67.1	64.2	0.9	1.2	66.2	63.4	0.0	0.4
	SI_64	Residential	65	60	B	70	66.3	63.1	67.2	64.3	0.9	1.2	66.2	63.4	-0.1	0.3
	SI_65	Residential	65	60	B	70	64.7	60.8	65.6	62.1	0.9	1.3	64.6	61.2	-0.1	0.4
	SI_66	Residential	65	60	B	70	64.6	60.8	65.5	62.1	0.9	1.3	64.5	61.2	-0.1	0.4
	SI_67	Residential	65	60	B	70	63.6	60.6	64.5	61.8	0.9	1.2	63.5	61.0	-0.1	0.4
	SI_68	Residential	65	60	B	70	63.8	60.7	64.7	61.9	0.9	1.2	63.8	61.1	0.0	0.4
	SI_69	Residential	65	60	B	70	63.1	59.8	64.0	61.0	0.9	1.2	63.1	60.1	0.0	0.3
	SI_70	Residential	65	60	B	70	63.0	59.7	63.9	60.9	0.9	1.2	63.0	60.1	0.0	0.4
	SI_71	Residential	65	60	B	70	61.4	58.6	62.3	59.8	0.9	1.2	61.5	59.0	0.1	0.4
	SI_72	Residential	65	60	B	70	61.9	58.9	62.8	60.1	0.9	1.2	61.9	59.3	0.0	0.4
	SI_73	Residential	65	60	B	70	61.9	58.9	62.8	60.2	0.9	1.3	61.9	59.3	0.0	0.4
	SI_74	Residential	65	60	B	70	61.9	59.0	62.8	60.2	0.9	1.2	62.0	59.4	0.1	0.4
	SI_75	Residential	65	60	B	70	62.7	60.7	63.6	61.8	0.9	1.1	62.9	61.1	0.2	0.4
	SI_76	Residential	65	60	B	70	62.8	60.8	63.7	61.9	0.9	1.1	63.0	61.2	0.2	0.4
	SI_77	Residential	65	60	B	70	62.9	60.9	63.8	62.0	0.9	1.1	63.1	61.3	0.2	0.4
	SI_78	Residential	65	60	B	70	62.9	60.9	63.8	62.0	0.9	1.1	63.1	61.3	0.2	0.4
	SI_79	Residential	65	60	B	70	62.7	60.8	63.7	61.9	1.0	1.1	63.0	61.2	0.3	0.4
	SI_80	Residential	65	60	B	70	62.7	60.8	63.7	61.9	1.0	1.1	63.0	61.2	0.3	0.4
	SI_81	Residential	65	60	B	70	62.5	60.6	63.5	61.8	1.0	1.2	62.8	61.0	0.3	0.4
	SI_82	Residential	65	60	B	70	62.5	60.6	63.4	61.8	0.9	1.2	62.7	61.0	0.2	0.4
	SI_83	Residential	65	60	B	70	61.6	59.9	62.6	61.0	1.0	1.1	61.9	60.3	0.3	0.4
	SI_84	Residential	65	60	B	70	61.6	59.9	62.6	61.0	1.0	1.1	61.9	60.3	0.3	0.4
	SI_85	Residential	65	60	B	70	61.4	59.7	62.4	60.8	1.0	1.1	61.7	60.1	0.3	0.4
	SI_86	Residential	65	60	B	70	61.3	59.6	62.2	60.7	0.9	1.1	61.5	60.0	0.2	0.4
	SI_87	Residential	65	60	B	70	60.9	59.2	61.8	60.4	0.9	1.2	61.2	59.7	0.3	0.5
	SI_88	Residential	65	60	B	70	60.9	59.2	61.8	60.4	0.9	1.2	61.2	59.7	0.3	0.5
	SI_89	Residential	65	60	B	70	60.7	59.1	61.6	60.2	0.9	1.1	61.0	59.6	0.3	0.5
	SI_90	Residential	65	60	B	70	60.6	59.0	61.6	60.2	1.0	1.2	60.9	59.5	0.3	0.5
SI cont...	SI_91	Residential	65	60	B	70	60.2	58.7	61.2	59.9	1.0	1.2	60.6	59.3	0.4	0.6
	SI_92	Residential	65	60	B	70	60.2	58.7	61.2	59.9	1.0	1.2	60.6	59.3	0.4	0.6
	SI_93	Residential	65	60	B	70	60.1	58.6	61.1	59.8	1.0	1.2	60.5	59.1	0.4	0.5
	SI_94	Residential	65	60	B	70	70.6	67.0	71.5	68.2	0.9	1.2	70.4	67.2	-0.2	0.2
	SI_95	Residential	65	60	B	70	67.0	62.8	68.0	64.1	1.0	1.3	66.9	63.2	-0.1	0.4
	SI_96	Residential	65	60	B	70	65.9	61.7	66.8	63.0	0.9	1.3	65.8	62.1	-0.1	0.4
	SI_97	Residential	65	60	B	70	65.7	61.6	66.6	62.9	0.9	1.3	65.7	62.0	0.0	0.4
	SI_98	Residential	65	60	B	70	64.6	60.4	65.6	61.7	1.0	1.3	64.6	60.8	0.0	0.4
	SI_99	Residential	65	60	B	70	64.4	60.5	65.3	61.8	0.9	1.3	64.4	60.9	0.0	0.4
	SI_100	Residential	65	60	B	70	63.1	59.1	64.0	60.4	0.9	1.3	63.0	59.5	-0.1	0.4
	SI_101	Residential	65	60	B	70	63.4	59.9	64.3	61.2	0.9	1.3	63.4	60.4	0.0	0.5
	SI_102	Residential	65	60	B	70	63.8	60.7	64.7	62.0	0.9	1.3	63.8	61.1	0.0	0.4
	SI_103	Residential	65	60	B	70	63.6	60.6	64.5	61.8	0.9	1.2	63.6	61.0	0.0	0.4
	SI_104	Residential	65	60	B	70	63.3	60.7	64.2	61.9	0.9	1.2	63.3	61.1	0.0	0.4
	SI_105	Residential	65	60	B	70	63.1	60.6	64.0	61.8	0.9	1.2	63.1	61.0	0.0	0.4
	SI_106	Residential	65	60	B	70	62.8	60.5	63.7	61.7	0.9	1.2	62.8	60.9	0.0	0.4
	SI_107	Residential	65	60	B	70	62.5	60.4	63.4	61.5	0.9	1.1	62.7	60.8	0.2	0.4
	SI_108	Residential	65	60	B	70	62.1	60.1	63.0	61.3	0.9	1.2	62.3	60.6	0.2	0.5
	SI_109	Residential	65	60	B	70	61.8	59.9	62.7	61.1	0.9	1.2	62.1	60.4	0.3	0.5
	SI_110	Residential	65	60	B	70	61.4	59.7	62.4	60.8	1.0	1.1	61.8	60.1	0.4	0.4
	SI_111	Residential	65	60	B	70	61.3	59.6	62.3	60.7	1.0	1.1	61.6	60.1	0.3	0.5
	SI_112	Residential	65	60	B	70	61.0	59.3	61.9	60.5	0.9	1.2	61.3	59.8	0.3	0.5
	SI_113	Residential	65	60	B	70	60.8	59.2	61.7	60.3	0.9	1.1	61.2	59.7	0.4	0.5
	SI_114	Residential	65	60	B	70	60.5	59.0	61.5	60.1	1.0	1.1	60.9	59.5	0.4	0.5
	SI_115	Residential	65	60	B	70	60.4	58.9	61.4	60.0	1.0	1.1	60.8	59.5	0.4	0.6
	SI_116	Residential	65	60	B	70	60.5	59.0	61.4	60.1	0.9	1.1	60.9	59.5	0.4	0.5
	SI_117	Residential	65	60	B	70	60.6	59.0	61.5	60.2	0.9	1.2	61.0	59.6	0.4	0.6
	SI_118	Residential	65	60	B	70	60.6	59.1	61.6	60.3	1.0	1.2	61.1	59.7	0.5	0.6
	SI_119	Residential	65	60	B	70	60.7	59.2	61.7	60.3	1.0	1.1	61.2	59.8	0.5	0.6
	SI_120	Residential	65	60	B	70	68.2	64.5	69.1	65.7	0.9	1.2	68.0	64.7	-0.2	0.2

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	SI_121	Residential	65	60	B	70	65.7	61.2	66.6	62.5	0.9	1.3	65.6	61.6	-0.1	0.4
	SI_122	Residential	65	60	B	70	64.6	60.3	65.5	61.6	0.9	1.3	64.5	60.7	-0.1	0.4
	SI_123	Residential	65	60	B	70	65.8	62.6	66.7	63.8	0.9	1.2	65.8	63.0	0.0	0.4
	SI_124	Residential	65	60	B	70	65.5	62.4	66.4	63.6	0.9	1.2	65.3	62.6	-0.2	0.2
	SI_125	Residential	65	60	B	70	64.7	61.8	65.7	63.1	1.0	1.3	64.6	62.1	-0.1	0.3
	SI_126	Residential	65	60	B	70	64.3	61.5	65.2	62.7	0.9	1.2	64.1	61.7	-0.2	0.2
	SI_127	Residential	65	60	B	70	63.8	61.1	64.7	62.3	0.9	1.2	63.8	61.5	0.0	0.4
	SI_128	Residential	65	60	B	70	63.5	61.1	64.4	62.2	0.9	1.1	63.5	61.4	0.0	0.3
	SI_129	Residential	65	60	B	70	63.2	60.8	64.1	62.0	0.9	1.2	63.2	61.2	0.0	0.4
	SI_130	Residential	65	60	B	70	62.8	60.6	63.7	61.8	0.9	1.2	62.9	61.0	0.1	0.4
	SI_131	Residential	65	60	B	70	62.4	60.3	63.3	61.5	0.9	1.2	62.6	60.8	0.2	0.5
	SI_132	Residential	65	60	B	70	62.1	60.1	63.0	61.3	0.9	1.2	62.3	60.6	0.2	0.5
	SI_133	Residential	65	60	B	70	61.8	59.9	62.7	61.1	0.9	1.2	62.1	60.4	0.3	0.5
	SI_134	Residential	65	60	B	70	61.4	59.7	62.4	60.8	1.0	1.1	61.8	60.2	0.4	0.5
	SI_135	Residential	65	60	B	70	61.2	59.5	62.1	60.6	0.9	1.1	61.6	60.0	0.4	0.5
	SI_136	Residential	65	60	B	70	61.0	59.3	61.9	60.5	0.9	1.2	61.4	59.9	0.4	0.6
	SI_137	Residential	65	60	B	70	67.5	64.8	68.4	66.0	0.9	1.2	67.5	65.1	0.0	0.3
	SI_138	Residential	65	60	B	70	64.9	61.0	65.9	62.3	1.0	1.3	65.0	61.6	0.1	0.6
	SI_139	Residential	65	60	B	70	65.6	62.9	66.5	64.1	0.9	1.2	66.1	63.5	0.5	0.6
	SI_140	Residential	65	60	B	70	65.9	63.1	66.8	64.3	0.9	1.2	65.9	63.4	0.0	0.3
	SI_141	Residential	65	60	B	70	65.5	62.8	66.4	64.0	0.9	1.2	65.4	63.1	-0.1	0.3
	SI_142	Residential	65	60	B	70	65.0	62.3	65.9	63.5	0.9	1.2	65.0	62.7	0.0	0.4
	SI_143	Residential	65	60	B	70	64.6	62.0	65.5	63.2	0.9	1.2	64.6	62.3	0.0	0.3
	SI_144	Residential	65	60	B	70	64.2	61.6	65.1	62.8	0.9	1.2	64.2	62.0	0.0	0.4
	SI_145	Residential	65	60	B	70	63.8	61.4	64.8	62.6	1.0	1.2	63.9	61.7	0.1	0.3
	SI_146	Residential	65	60	B	70	63.5	61.1	64.4	62.3	0.9	1.2	63.5	61.5	0.0	0.4
	SI_147	Residential	65	60	B	70	63.1	60.9	64.0	62.0	0.9	1.1	63.2	61.3	0.1	0.4
	SI_148	Residential	65	60	B	70	62.7	60.6	63.6	61.8	0.9	1.2	62.9	61.0	0.2	0.4
	SI_149	Residential	65	60	B	70	62.4	60.4	63.3	61.5	0.9	1.1	62.6	60.8	0.2	0.4
SI cont...	SI_150	Residential	65	60	B	70	62.0	60.1	62.9	61.2	0.9	1.1	62.3	60.6	0.3	0.5
	SI_151	Residential	65	60	B	70	61.7	59.9	62.6	61.0	0.9	1.1	62.1	60.4	0.4	0.5
	SI_152	Residential	65	60	B	70	61.4	59.7	62.3	60.8	0.9	1.1	61.8	60.2	0.4	0.5
	SI_153	Residential	65	60	B	70	61.1	59.5	62.1	60.6	1.0	1.1	61.5	60.0	0.4	0.5
	SI_154	Residential	65	60	B	70	71.4	67.5	72.3	68.8	0.9	1.3	71.2	67.8	-0.2	0.3
	SI_155	Residential	65	60	B	70	69.3	66.0	70.2	67.3	0.9	1.3	69.3	66.4	0.0	0.4
	SI_156	Residential	65	60	B	70	68.5	65.4	69.4	66.6	0.9	1.2	68.4	65.8	-0.1	0.4
	SI_157	Residential	65	60	B	70	68.6	65.4	69.5	66.6	0.9	1.2	68.6	65.7	0.0	0.3
	SI_158	Residential	65	60	B	70	67.7	64.9	68.6	66.1	0.9	1.2	67.7	65.3	0.0	0.4
	SI_159	Residential	65	60	B	70	67.0	64.4	68.0	65.6	1.0	1.2	67.1	64.8	0.1	0.4
	SI_160	Residential	65	60	B	70	66.6	64.0	67.5	65.2	0.9	1.2	66.7	64.4	0.1	0.4
	SI_161	Residential	65	60	B	70	66.1	63.7	67.0	64.8	0.9	1.1	66.2	64.1	0.1	0.4
	SI_162	Residential	65	60	B	70	65.9	63.5	66.8	64.7	0.9	1.2	66.0	64.0	0.1	0.5
	SI_163	Residential	65	60	B	70	65.1	62.9	66.0	64.1	0.9	1.2	65.3	63.4	0.2	0.5
	SI_164	Residential	65	60	B	70	64.3	62.2	65.2	63.4	0.9	1.2	64.5	62.7	0.2	0.5
	SI_165	Residential	65	60	B	70	64.4	62.3	65.4	63.5	1.0	1.2	64.7	62.9	0.3	0.6
	SI_166	Residential	65	60	B	70	64.2	62.0	65.1	63.1	0.9	1.1	64.5	62.5	0.3	0.5
	SI_167	Residential	65	60	B	70	63.8	61.5	64.7	62.7	0.9	1.2	64.1	62.1	0.3	0.6
	SI_168	Residential	65	60	B	70	63.4	61.2	64.3	62.3	0.9	1.1	63.7	61.8	0.3	0.6
	SI_169	Residential	65	60	B	70	63.8	61.3	64.7	62.5	0.9	1.2	64.1	61.9	0.3	0.6
	SI_170	Residential	65	60	B	70	64.7	61.8	65.6	63.1	0.9	1.3	65.1	62.7	0.4	0.9
	SI_171	Residential	65	60	B	70	69.0	65.0	70.0	66.4	1.0	1.4	69.6	66.1	0.6	1.1
	SI_172	Residential	65	60	B	70	67.6	64.8	68.5	66.0	0.9	1.2	67.7	65.1	0.1	0.3
	SI_173	Residential	65	60	B	70	67.6	64.8	68.5	66.0	0.9	1.2	67.8	65.2	0.2	0.4
	SI_174	Residential	65	60	B	70	67.6	64.7	68.5	65.9	0.9	1.2	67.8	65.1	0.2	0.4
	SI_175	Residential	65	60	B	70	67.6	64.8	68.5	66.0	0.9	1.2	67.7	65.2	0.1	0.4
	SI_176	Residential	65	60	B	70	67.6	64.8	68.5	66.0	0.9	1.2	67.8	65.1	0.2	0.3
	SI_177	Residential	65	60	B	70	67.5	64.8	68.4	66.0	0.9	1.2	67.7	65.1	0.2	0.3
	SI_178	Residential	65	60	B	70	67.3	64.6	68.2	65.8	0.9	1.2	67.4	65.0	0.1	0.4
	SI_179	Residential	65	60	B	70	67.1	64.4	68.0	65.6	0.9	1.2	67.1	64.8	0.0	0.4
	SI_180	Residential	65	60	B	70	66.6	64.1	67.5	65.2	0.9	1.1	66.7	64.5	0.1	0.4

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XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	SI_181	Residential	65	60	B	70	65.6	62.4	66.5	63.6	0.9	1.2	65.6	62.9	0.0	0.5
	SI_182	Residential	65	60	B	70	64.7	62.4	65.6	63.6	0.9	1.2	65.1	63.0	0.4	0.6
	SI_183	Residential	65	60	B	70	64.6	62.5	65.5	63.7	0.9	1.2	65.2	63.1	0.6	0.6
	SI_184	Residential	65	60	B	70	64.4	62.5	65.4	63.6	1.0	1.1	65.1	63.2	0.7	0.7
	SI_185	Residential	65	60	B	70	64.5	62.6	65.4	63.7	0.9	1.1	64.9	63.1	0.4	0.5
	SI_186	Residential	65	60	B	70	64.5	62.6	65.4	63.7	0.9	1.1	65.1	63.2	0.6	0.6
	SI_187	Residential	65	60	B	70	64.5	62.5	65.4	63.7	0.9	1.2	65.0	63.2	0.5	0.7
	SI_188	Residential	65	60	B	70	64.3	62.4	65.2	63.6	0.9	1.2	64.9	63.1	0.6	0.7
	SI_189	Residential	65	60	B	70	65.1	62.9	66.0	64.1	0.9	1.2	65.6	63.6	0.5	0.7
	SI_190	Residential	65	60	B	70	65.1	62.8	66.0	64.0	0.9	1.2	65.3	63.3	0.2	0.5
	SI_191	Recreation	70	65	C	70	64.7	62.1	65.6	63.3	0.9	1.2	64.7	62.5	0.0	0.4
	SI_192	Residential	65	60	B	70	64.7	62.3	65.6	63.5	0.9	1.2	64.8	62.8	0.1	0.5
	SI_193	Residential	65	60	B	70	65.2	62.3	66.1	63.6	0.9	1.3	65.4	63.0	0.2	0.7
	SI_194	Residential	65	60	B	70	63.4	60.1	64.3	61.3	0.9	1.2	63.5	60.7	0.1	0.6
	SI_195	Residential	65	60	B	70	63.3	60.6	64.2	61.8	0.9	1.2	63.6	61.2	0.3	0.6
	SI_196	Residential	65	60	B	70	63.9	61.5	64.9	62.7	1.0	1.2	64.1	62.0	0.2	0.5
	SI_197	Residential	65	60	B	70	64.6	62.5	65.5	63.7	0.9	1.2	64.9	63.1	0.3	0.6
	SI_198	Residential	65	60	B	70	64.5	62.5	65.5	63.7	1.0	1.2	64.9	63.1	0.4	0.6
	SI_199	Residential	65	60	B	70	66.1	63.7	67.1	64.9	1.0	1.2	66.6	64.5	0.5	0.8
	SI_200	Residential	65	60	B	70	65.5	62.9	66.4	64.1	0.9	1.2	66.0	63.8	0.5	0.9
	SI_201	Residential	65	60	B	70	64.3	61.6	65.2	62.9	0.9	1.3	64.9	62.7	0.6	1.1
	SI_202	Residential	65	60	B	70	63.7	61.2	64.6	62.4	0.9	1.2	64.4	62.2	0.7	1.0
	SI_203	Residential	65	60	B	70	63.2	60.8	64.2	62.0	1.0	1.2	63.9	61.8	0.7	1.0
	SI_204	Residential	65	60	B	70	63.7	61.3	64.6	62.5	0.9	1.2	63.8	61.7	0.1	0.4
	SI_205	Residential	65	60	B	70	63.7	61.4	64.6	62.5	0.9	1.1	63.8	61.8	0.1	0.4
	SI_206	Residential	65	60	B	70	63.7	61.4	64.6	62.6	0.9	1.2	63.8	61.9	0.1	0.5
	SI_207	Residential	65	60	B	70	63.7	61.5	64.6	62.7	0.9	1.2	63.9	62.0	0.2	0.5
	SI_208	Residential	65	60	B	70	63.7	61.6	64.6	62.7	0.9	1.1	63.9	62.0	0.2	0.4
	SI_209	Residential	65	60	B	70	63.8	61.6	64.7	62.8	0.9	1.2	64.0	62.1	0.2	0.5
	SI_210	Residential	65	60	B	70	63.8	61.8	64.8	62.9	1.0	1.1	64.1	62.3	0.3	0.5
SI cont...	SI_211	Residential	65	60	B	70	63.9	61.9	64.9	63.1	1.0	1.2	64.2	62.4	0.3	0.5
	SI_212	Residential	65	60	B	70	64.0	62.0	64.9	63.2	0.9	1.2	64.3	62.6	0.3	0.6
	SI_213	Residential	65	60	B	70	64.0	62.0	64.9	63.2	0.9	1.2	64.3	62.6	0.3	0.6
	SI_214	Residential	65	60	B	70	64.0	62.0	64.9	63.2	0.9	1.2	64.3	62.7	0.3	0.7
	SI_215	Residential	65	60	B	70	63.9	62.0	64.9	63.2	1.0	1.2	64.4	62.7	0.5	0.7
	SI_216	Residential	65	60	B	70	63.5	61.4	64.4	62.6	0.9	1.2	63.8	61.9	0.3	0.5
	SI_217	Residential	65	60	B	70	63.4	61.3	64.3	62.5	0.9	1.2	63.8	61.9	0.4	0.6
	SI_218	Residential	65	60	B	70	63.4	61.2	64.4	62.4	1.0	1.2	64.1	62.2	0.7	1.0
	SI_219	Residential	65	60	B	70	62.7	60.6	63.6	61.8	0.9	1.2	62.9	61.1	0.2	0.5
	SI_220	Residential	65	60	B	70	62.6	60.6	63.6	61.8	1.0	1.2	62.9	61.1	0.3	0.5
	SI_221	Residential	65	60	B	70	62.7	60.7	63.6	61.9	0.9	1.2	63.0	61.2	0.3	0.5
	SI_222	Residential	65	60	B	70	62.7	60.8	63.7	61.9	1.0	1.1	63.0	61.3	0.3	0.5
	SI_223	Residential	65	60	B	70	62.8	60.8	63.7	62.0	0.9	1.2	63.1	61.4	0.3	0.6
	SI_224	Residential	65	60	B	70	62.8	60.9	63.8	62.1	1.0	1.2	63.2	61.5	0.4	0.6
	SI_225	Residential	65	60	B	70	62.9	61.1	63.9	62.2	1.0	1.1	63.3	61.6	0.4	0.5
	SI_226	Residential	65	60	B	70	63.2	61.4	64.2	62.5	1.0	1.1	63.6	62.0	0.4	0.6
	SI_227	Residential	65	60	B	70	63.0	61.3	64.0	62.4	1.0	1.1	63.5	61.9	0.5	0.6
	SI_228	Residential	65	60	B	70	63.2	61.4	64.2	62.6	1.0	1.2	63.7	62.1	0.5	0.7
	SI_229	Residential	65	60	B	70	63.0	61.2	63.9	62.4	0.9	1.2	63.4	61.9	0.4	0.7
	SI_230	Residential	65	60	B	70	57.9	55.4	58.8	56.7	0.9	1.3	58.8	56.6	0.9	1.2
	SI_231	Residential	65	60	B	70	58.3	55.6	59.3	56.9	1.0	1.3	59.3	56.8	1.0	1.2
	SI_232	Residential	65	60	B	70	62.4	60.2	63.4	61.5	1.0	1.3	63.2	61.3	0.8	1.1
	SI_233	Residential	65	60	B	70	61.9	60.1	62.9	61.2	1.0	1.1	62.3	60.6	0.4	0.5
	SI_234	Residential	65	60	B	70	62.0	60.1	62.9	61.3	0.9	1.2	62.3	60.7	0.3	0.6
	SI_235	Residential	65	60	B	70	62.1	60.3	63.0	61.4	0.9	1.1	62.4	60.8	0.3	0.5
	SI_236	Residential	65	60	B	70	62.0	60.2	63.0	61.4	1.0	1.2	62.4	60.8	0.4	0.6
	SI_237	Residential	65	60	B	70	62.1	60.3	63.0	61.4	0.9	1.1	62.5	60.9	0.4	0.6
	SI_238	Residential	65	60	B	70	62.1	60.3	63.1	61.5	1.0	1.2	62.5	60.9	0.4	0.6
	SI_239	Residential	65	60	B	70	62.3	60.6	63.3	61.7	1.0	1.1	62.7	61.2	0.4	0.6
	SI_240	Residential	65	60	B	70	62.5	60.7	63.4	61.9	0.9	1.2	62.9	61.3	0.4	0.6

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	SI_241	Residential	65	60	B	70	62.5	60.8	63.5	62.0	1.0	1.2	63.0	61.5	0.5	0.7
	SI_242	Residential	65	60	B	70	62.6	60.9	63.6	62.1	1.0	1.2	63.1	61.6	0.5	0.7
	SI_243	Residential	65	60	B	70	62.4	60.7	63.4	61.8	1.0	1.1	62.9	61.4	0.5	0.7
	SI_244	Residential	65	60	B	70	60.2	58.5	61.2	59.7	1.0	1.2	60.8	59.2	0.6	0.7
	SI_245	Residential	65	60	B	70	60.3	58.5	61.3	59.7	1.0	1.2	61.1	59.4	0.8	0.9
	SI_246	Residential	65	60	B	70	62.6	60.8	63.6	62.0	1.0	1.2	63.5	61.8	0.9	1.0
	SI_247	Residential	65	60	B	70	61.3	59.6	62.2	60.8	0.9	1.2	61.7	60.2	0.4	0.6
	SI_248	Residential	65	60	B	70	61.3	59.7	62.2	60.8	0.9	1.1	61.7	60.3	0.4	0.6
	SI_249	Residential	65	60	B	70	61.3	59.7	62.3	60.8	1.0	1.1	61.8	60.3	0.5	0.6
	SI_250	Residential	65	60	B	70	61.3	59.7	62.3	60.9	1.0	1.2	61.8	60.3	0.5	0.6
	SI_251	Residential	65	60	B	70	61.4	59.7	62.3	60.9	0.9	1.2	61.8	60.4	0.4	0.7
	SI_252	Residential	65	60	B	70	61.5	59.8	62.5	61.0	1.0	1.2	62.0	60.5	0.5	0.7
	SI_253	Residential	65	60	B	70	61.5	59.8	62.5	61.0	1.0	1.2	62.0	60.5	0.5	0.7
	SI_254	Residential	65	60	B	70	61.6	60.0	62.6	61.1	1.0	1.1	62.2	60.7	0.6	0.7
	SI_255	Residential	65	60	B	70	61.8	60.1	62.8	61.3	1.0	1.2	62.3	60.8	0.5	0.7
	SI_256	Residential	65	60	B	70	61.8	60.2	62.8	61.3	1.0	1.1	62.4	60.9	0.6	0.7
	SI_257	Residential	65	60	B	70	61.6	60.0	62.5	61.1	0.9	1.1	62.1	60.7	0.5	0.7
	SI_258	Residential	65	60	B	70	58.8	55.7	59.8	57.0	1.0	1.3	59.8	56.9	1.0	1.2
	SI_259	Residential	65	60	B	70	59.5	56.5	60.5	57.8	1.0	1.3	60.5	57.7	1.0	1.2
	SI_260	Residential	65	60	B	70	61.7	59.5	62.7	60.7	1.0	1.2	62.6	60.6	0.9	1.1
	SI_261	Residential	65	60	B	70	60.7	59.2	61.7	60.4	1.0	1.2	61.2	59.8	0.5	0.6
	SI_262	Residential	65	60	B	70	60.8	59.3	61.7	60.4	0.9	1.1	61.2	59.9	0.4	0.6
	SI_263	Residential	65	60	B	70	60.9	59.4	61.9	60.5	1.0	1.1	61.4	60.0	0.5	0.6
	SI_264	Residential	65	60	B	70	60.9	59.4	61.9	60.6	1.0	1.2	61.4	60.1	0.5	0.7
	SI_265	Residential	65	60	B	70	61.0	59.5	62.0	60.6	1.0	1.1	61.5	60.2	0.5	0.7
	SI_266	Residential	65	60	B	70	61.0	59.5	62.0	60.7	1.0	1.2	61.6	60.2	0.6	0.7
	SI_267	Residential	65	60	B	70	61.1	59.5	62.0	60.7	0.9	1.2	61.6	60.2	0.5	0.7
	SI_268	Residential	65	60	B	70	61.0	59.4	62.0	60.6	1.0	1.2	61.6	60.1	0.6	0.7
	SI_269	Residential	65	60	B	70	61.2	59.5	62.2	60.7	1.0	1.2	61.8	60.2	0.6	0.7
	SI_270	Residential	65	60	B	70	61.3	59.7	62.3	60.9	1.0	1.2	62.0	60.4	0.7	0.7
SI cont...	SI_271	Residential	65	60	B	70	61.1	59.4	62.1	60.5	1.0	1.1	61.7	60.1	0.6	0.7
	SI_272	Residential	65	60	B	70	60.1	58.3	61.1	59.4	1.0	1.1	60.8	59.1	0.7	0.8
	SI_273	Residential	65	60	B	70	60.9	58.7	61.8	59.9	0.9	1.2	61.7	59.7	0.8	1.0
	SI_274	Residential	65	60	B	70	62.4	60.5	63.4	61.7	1.0	1.2	63.3	61.5	0.9	1.0
	SI_275	Residential	65	60	B	70	71.2	66.9	72.2	68.3	1.0	1.4	71.7	68.0	0.5	1.1
	SI_276	Residential	65	60	B	70	69.7	65.5	70.7	66.9	1.0	1.4	70.2	66.7	0.5	1.2
	SI_277	Residential	65	60	B	70	68.5	64.6	69.5	66.0	1.0	1.4	69.1	65.8	0.6	1.2
	SI_278	Residential	65	60	B	70	67.7	64.1	68.7	65.5	1.0	1.4	68.4	65.3	0.7	1.2
	SI_279	Residential	65	60	B	70	67.2	63.8	68.2	65.1	1.0	1.3	68.0	65.0	0.8	1.2
	SI_280	Residential	65	60	B	70	65.9	62.6	66.9	63.9	1.0	1.3	66.8	63.9	0.9	1.3
	SI_281	Residential	65	60	B	70	66.1	63.1	67.1	64.4	1.0	1.3	67.1	64.4	1.0	1.3
	SI_282	Residential	65	60	B	70	66.0	63.1	67.0	64.4	1.0	1.3	67.0	64.4	1.0	1.3
	SI_283	Residential	65	60	B	70	65.5	62.6	66.5	63.9	1.0	1.3	66.5	63.9	1.0	1.3
	SI_284	Residential	65	60	B	70	65.6	62.8	66.5	64.1	0.9	1.3	66.6	64.1	1.0	1.3
	SI_285	Residential	65	60	B	70	65.1	62.4	66.1	63.6	1.0	1.2	66.2	63.7	1.1	1.3
	SI_286	Residential	65	60	B	70	65.3	62.6	66.2	63.8	0.9	1.2	66.3	63.9	1.0	1.3
	SI_287	Residential	65	60	B	70	65.0	62.3	66.0	63.6	1.0	1.3	66.1	63.6	1.1	1.3
	SI_288	Residential	65	60	B	70	65.0	62.3	66.0	63.6	1.0	1.3	66.1	63.6	1.1	1.3
	SI_289	Residential	65	60	B	70	65.1	62.4	66.1	63.7	1.0	1.3	66.2	63.7	1.1	1.3
	SI_290	Residential	65	60	B	70	65.1	62.3	66.1	63.6	1.0	1.3	66.1	63.6	1.0	1.3
	SI_291	Residential	65	60	B	70	64.3	61.5	65.3	62.8	1.0	1.3	65.4	62.8	1.1	1.3
	SI_292	Residential	65	60	B	70	64.4	61.5	65.3	62.8	0.9	1.3	65.4	62.8	1.0	1.3
	SI_293	Residential	65	60	B	70	64.5	61.8	65.4	63.1	0.9	1.3	65.4	63.0	0.9	1.2
	SI_294	Residential	65	60	B	70	64.4	61.6	65.3	62.9	0.9	1.3	65.4	62.9	1.0	1.3
	SI_295	Residential	65	60	B	70	61.1	59.0	62.1	60.3	1.0	1.3	62.1	60.2	1.0	1.2
	SI_296	Residential	65	60	B	70	61.0	59.0	62.0	60.3	1.0	1.3	61.9	60.2	0.9	1.2
	SI_297	Residential	65	60	B	70	61.4	59.4	62.4	60.6	1.0	1.2	62.3	60.4	0.9	1.0
	SI_298	Residential	65	60	B	70	60.9	59.1	61.9	60.3	1.0	1.2	61.9	60.2	1.0	1.1
	SI_299	Residential	65	60	B	70	60.1	58.1	61.1	59.3	1.0	1.2	61.0	59.2	0.9	1.1
	SI_300	Residential	65	60	B	70	60.6	59.2	61.6	60.4	1.0	1.2	61.2	60.0	0.6	0.8

Table B1

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Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SI cont...	SI_301	Residential	65	60	B	70	60.9	59.3	61.9	60.5	1.0	1.2	61.6	60.1	0.7	0.8
	SI_302	Residential	65	60	B	70	60.7	59.2	61.7	60.4	1.0	1.2	61.4	60.1	0.7	0.9
	SI_303	Residential	65	60	B	70	60.6	59.2	61.6	60.4	1.0	1.2	61.2	60.0	0.6	0.8
	SI_304	Residential	65	60	B	70	60.5	59.2	61.5	60.3	1.0	1.1	61.2	59.9	0.7	0.7
	SI_305	Residential	65	60	B	70	60.8	59.5	61.8	60.6	1.0	1.1	61.5	60.2	0.7	0.7
	SI_306	Residential	65	60	B	70	60.8	59.4	61.8	60.6	1.0	1.2	61.5	60.2	0.7	0.8
	SI_307	Residential	65	60	B	70	60.8	59.4	61.8	60.6	1.0	1.2	61.4	60.2	0.6	0.8
	SI_308	Residential	65	60	B	70	60.8	59.4	61.8	60.5	1.0	1.1	61.4	60.2	0.6	0.8
	SI_309	Residential	65	60	B	70	60.6	59.3	61.6	60.4	1.0	1.1	61.2	60.0	0.6	0.7
	SI_310	Residential	65	60	B	70	60.6	59.2	61.6	60.4	1.0	1.2	61.2	60.0	0.6	0.8
	SI_311	Residential	65	60	B	70	60.6	59.2	61.6	60.4	1.0	1.2	61.2	59.9	0.6	0.7
	SI_312	Residential	65	60	B	70	60.5	59.2	61.5	60.3	1.0	1.1	61.2	59.9	0.7	0.7
	SI_313	Residential	65	60	B	70	60.4	59.0	61.4	60.2	1.0	1.2	61.0	59.8	0.6	0.8
	SI_314	Residential	65	60	B	70	60.4	59.1	61.4	60.2	1.0	1.1	61.0	59.8	0.6	0.7
	SI_315	Residential	65	60	B	70	60.3	59.0	61.3	60.2	1.0	1.2	60.9	59.7	0.6	0.7
	SI_316	Residential	65	60	B	70	60.3	59.0	61.3	60.1	1.0	1.1	60.9	59.7	0.6	0.7
	SI_317	Residential	65	60	B	70	60.2	58.8	61.2	60.0	1.0	1.2	60.7	59.5	0.5	0.7
	SI_318	Residential	65	60	B	70	60.1	58.8	61.1	60.0	1.0	1.2	60.7	59.5	0.6	0.7
	SI_319	Residential	65	60	B	70	60.1	58.8	61.1	59.9	1.0	1.1	60.7	59.5	0.6	0.7
	SI_320	Residential	65	60	B	70	60.1	58.8	61.1	59.9	1.0	1.1	60.6	59.4	0.5	0.6
	SI_321	Residential	65	60	B	70	59.9	58.6	60.9	59.7	1.0	1.1	60.4	59.2	0.5	0.6
	SI_322	Residential	65	60	B	70	59.9	58.6	60.9	59.8	1.0	1.2	60.5	59.3	0.6	0.7
	SI_323	Residential	65	60	B	70	59.9	58.6	60.9	59.7	1.0	1.1	60.4	59.2	0.5	0.6
	SI_324	Residential	65	60	B	70	59.9	58.5	60.9	59.7	1.0	1.2	60.4	59.2	0.5	0.7
	SI_325	Residential	65	60	B	70	59.7	58.4	60.7	59.5	1.0	1.1	60.2	59.0	0.5	0.6
	SI_326	Residential	65	60	B	70	59.8	58.4	60.7	59.5	0.9	1.1	60.3	59.0	0.5	0.6
	SI_327	Residential	65	60	B	70	59.7	58.4	60.7	59.5	1.0	1.1	60.2	59.0	0.5	0.6
	SI_328	Residential	65	60	B	70	59.7	58.3	60.7	59.5	1.0	1.2	60.2	59.0	0.5	0.7
	SI_329	Trail	70	65	C	70	59.3	58.0	60.3	59.2	1.0	1.2	59.9	58.8	0.6	0.8
	SI_330	Residential	65	60	B	70	60.0	58.7	61.0	59.8	1.0	1.1	60.7	59.5	0.7	0.8
	SI_331	Residential	65	60	B	70	60.7	59.0	61.7	60.2	1.0	1.2	61.4	59.9	0.7	0.9
	SI_332	Trail	70	65	C	70	61.8	59.5	62.8	60.8	1.0	1.3	62.7	60.6	0.9	1.1
	SI_333	Trail	70	65	C	70	64.2	61.6	65.2	62.8	1.0	1.2	65.2	62.8	1.0	1.2
	SI_334	Trail	70	65	C	70	64.8	62.2	65.8	63.5	1.0	1.3	65.8	63.4	1.0	1.2
	SI_335	Trail	70	65	C	70	63.7	61.4	64.7	62.7	1.0	1.3	64.7	62.6	1.0	1.2
	SI_336	Trail	70	65	C	70	64.4	62.0	65.4	63.2	1.0	1.2	65.4	63.2	1.0	1.2
	SI_337	Industrial	80	75	F	NA	71.5	68.3	72.4	69.5	0.9	1.2	71.5	68.1	0.0	-0.2
	SI_338	Industrial	80	75	F	NA	73.9	70.2	74.8	71.4	0.9	1.2	73.9	69.9	0.0	-0.3
NI	NI_1	Trail	70	65	C	70	76.0	71.8	77.0	73.1	1.0	1.3	76.7	72.9	0.7	1.1
	NI_2	Trail	70	65	C	70	69.9	67.3	70.9	68.6	1.0	1.3	70.7	68.3	0.8	1.0
	NI_3	Trail	70	65	C	70	66.7	64.6	67.9	65.9	1.2	1.3	67.6	65.6	0.9	1.0
	NI_4	Trail	70	65	C	70	69.0	65.4	70.0	66.7	1.0	1.3	70.0	66.6	1.0	1.2
	NI_5	Trail	70	65	C	70	69.3	65.7	70.3	67.0	1.0	1.3	70.2	66.9	0.9	1.2
	NI_6	Trail	70	65	C	70	69.7	66.7	70.7	68.0	1.0	1.3	70.6	67.9	0.9	1.2
	NI_7	Trail	70	65	C	70	72.0	68.7	72.9	70.0	0.9	1.3	72.8	69.8	0.8	1.1
	NI_8	Trail	70	65	C	70	73.9	70.3	74.8	71.6	0.9	1.3	74.5	71.3	0.6	1.0
	NI_9	Trail	70	65	C	70	73.6	69.9	74.5	71.2	0.9	1.3	74.1	70.8	0.5	0.9
	NI_10	Trail	70	65	C	70	72.0	68.6	72.9	69.9	0.9	1.3	72.6	69.5	0.6	0.9
	NI_11	Trail	70	65	C	70	70.8	67.0	71.7	68.3	0.9	1.3	71.5	67.8	0.7	0.8
	NI_12	Trail	70	65	C	70	69.7	65.6	70.7	67.0	1.0	1.4	70.5	66.6	0.8	1.0
	NI_13	Trail	70	65	C	70	69.5	64.8	70.5	66.2	1.0	1.4	70.2	65.7	0.7	0.9
	NI_14	Trail	70	65	C	70	69.2	64.1	70.2	65.6	1.0	1.5	70.0	65.1	0.8	1.0
	NI_15	Trail	70	65	C	70	67.7	62.9	68.8	64.3	1.1	1.4	68.6	64.1	0.9	1.2
	NI_16	Trail	70	65	C	70	66.8	61.7	67.8	63.2	1.0	1.5	67.7	62.8	0.9	1.1
	NI_17	Trail	70	65	C	70	62.9	61.1	63.8	62.2	0.9	1.1	63.5	61.8	0.6	0.7
	NI_18	Trail	70	65	C	70	61.2	59.8	62.2	60.9	1.0	1.1	61.7	60.5	0.5	0.7
	NI_19	Trail	70	65	C	70	60.0	58.7	60.9	59.8	0.9	1.1	60.5	59.3	0.5	0.6
	NI_20	Trail	70	65	C	70	65.8	61.8	66.8	63.2	1.0	1.4	66.5	62.7	0.7	0.9
	NI_21	Residential	65	60	B	70	64.0	61.8	65.0	63.0	1.0	1.2	64.6	62.5	0.6	0.7
	NI_22	Residential	65	60	B	70	61.4	59.9	62.3	61.0	0.9	1.1	61.9	60.6	0.5	0.7

Table B1

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Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NI cont...	NI_23	Residential	65	60	B	70	60.3	59.0	61.3	60.1	1.0	1.1	60.8	59.6	0.5	0.6
	NI_24	Trail	70	65	C	70	66.2	61.9	67.2	63.3	1.0	1.4	66.8	62.6	0.6	0.7
	NI_25	Residential	65	60	B	70	63.2	61.4	64.1	62.5	0.9	1.1	63.6	61.9	0.4	0.5
	NI_26	Residential	65	60	B	70	61.8	60.2	62.8	61.4	1.0	1.2	62.2	60.8	0.4	0.6
	NI_27	Residential	65	60	B	70	60.8	59.4	61.8	60.5	1.0	1.1	61.2	59.9	0.4	0.5
	NI_28	Trail	70	65	C	70	66.5	62.1	67.4	63.4	0.9	1.3	67.0	62.6	0.5	0.5
	NI_29	Residential	65	60	B	70	63.2	61.3	64.1	62.5	0.9	1.2	63.5	61.8	0.3	0.5
	NI_30	Residential	65	60	B	70	61.6	60.0	62.6	61.2	1.0	1.2	62.0	60.5	0.4	0.5
	NI_31	Residential	65	60	B	70	60.6	59.1	61.6	60.3	1.0	1.2	61.0	59.6	0.4	0.5
	NI_32	Trail	70	65	C	70	66.9	62.1	67.9	63.4	1.0	1.3	67.4	62.5	0.5	0.4
	NI_33	Residential	65	60	B	70	63.3	61.4	64.2	62.5	0.9	1.1	63.5	61.8	0.2	0.4
	NI_34	Trail	70	65	C	70	67.3	62.2	68.3	63.6	1.0	1.4	67.8	62.6	0.5	0.4
	NI_35	Residential	65	60	B	70	63.7	61.7	64.6	62.9	0.9	1.2	63.9	62.0	0.2	0.3
	NI_36	Residential	65	60	B	70	62.2	60.5	63.1	61.6	0.9	1.1	62.4	60.8	0.2	0.3
	NI_37	Residential	65	60	B	70	61.1	59.5	62.0	60.6	0.9	1.1	61.3	59.9	0.2	0.4
	NI_38	Trail	70	65	C	70	67.2	62.1	68.2	63.5	1.0	1.4	67.7	62.4	0.5	0.3
	NI_39	Trail	70	65	C	70	67.1	61.5	68.2	63.0	1.1	1.5	67.6	61.9	0.5	0.4
	NI_40	Trail	70	65	C	70	66.7	61.0	67.7	62.4	1.0	1.4	67.2	61.4	0.5	0.4
	NI_41	Trail	70	65	C	70	65.7	60.3	66.7	61.7	1.0	1.4	66.2	60.7	0.5	0.4
	NI_42	Hotel	65	60	E	75	69.1	65.8	70.0	67.0	0.9	1.2	69.4	66.1	0.3	0.3

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Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SJ	SJ_1	Trail	70	65	C	70	64.0	61.6	65.0	62.9	1.0	1.3	65.0	62.9	1.0	1.3
	SJ_2	Trail	70	65	C	70	63.7	61.1	64.7	62.4	1.0	1.3	64.7	62.4	1.0	1.3
	SJ_3	Trail	70	65	C	70	62.1	59.6	63.1	60.9	1.0	1.3	63.1	60.8	1.0	1.2
	SJ_4	Residential	65	60	B	70	66.7	62.3	67.7	63.8	1.0	1.5	67.9	64.0	1.2	1.7
	SJ_5	Residential	65	60	B	70	62.3	58.2	63.3	59.6	1.0	1.4	63.5	60.1	1.2	1.9
	SJ_6	Residential	65	60	B	70	60.6	56.3	61.6	57.7	1.0	1.4	61.6	57.7	1.0	1.4
	SJ_7	Residential	65	60	B	70	60.6	56.5	61.6	57.9	1.0	1.4	61.8	58.3	1.2	1.8
	SJ_8	Residential	65	60	B	70	66.7	62.3	67.7	63.8	1.0	1.5	67.9	64.0	1.2	1.7
	SJ_9	Residential	65	60	B	70	70.4	66.4	71.4	67.9	1.0	1.5	71.5	68.0	1.1	1.6
	SJ_10	Residential	65	60	B	70	68.2	64.2	69.2	65.6	1.0	1.4	69.3	65.7	1.1	1.5
	SJ_11	Residential	65	60	B	70	68.1	64.1	69.1	65.5	1.0	1.4	69.2	65.6	1.1	1.5
	SJ_12	Residential	65	60	B	70	66.9	63.1	67.9	64.5	1.0	1.4	68.0	64.7	1.1	1.6
	SJ_13	Residential	65	60	B	70	64.9	60.7	65.9	62.2	1.0	1.5	66.0	62.3	1.1	1.6
	SJ_14	Residential	65	60	B	70	62.5	58.6	63.5	60.0	1.0	1.4	63.6	60.2	1.1	1.6
	SJ_15	Residential	65	60	B	70	59.9	56.4	60.9	57.8	1.0	1.4	61.1	58.0	1.2	1.6
	SJ_16	Residential	65	60	B	70	60.2	56.6	61.2	58.0	1.0	1.4	61.3	58.1	1.1	1.5
	SJ_17	Residential	65	60	B	70	75.0	70.2	76.0	71.7	1.0	1.5	76.1	71.8	1.1	1.6
	SJ_18	Residential	65	60	B	70	74.3	69.3	75.3	70.9	1.0	1.6	75.4	71.0	1.1	1.7
	SJ_19	Residential	65	60	B	70	71.2	67.2	72.2	68.6	1.0	1.4	72.2	68.7	1.0	1.5
	SJ_20	Residential	65	60	B	70	70.5	66.5	71.5	67.9	1.0	1.4	71.6	68.0	1.1	1.5
	SJ_21	Residential	65	60	B	70	69.3	65.1	70.3	66.6	1.0	1.5	70.3	66.6	1.0	1.5
	SJ_22	Residential	65	60	B	70	67.9	64.4	68.9	65.8	1.0	1.4	69.0	65.9	1.1	1.5
	SJ_23	Residential	65	60	B	70	67.7	64.2	68.7	65.6	1.0	1.4	68.8	65.6	1.1	1.4
	SJ_24	Residential	65	60	B	70	67.3	63.9	68.3	65.3	1.0	1.4	68.3	65.4	1.0	1.5
	SJ_25	Residential	65	60	B	70	75.4	70.5	76.4	72.1	1.0	1.6	76.5	72.1	1.1	1.6
	SJ_26	Residential	65	60	B	70	65.3	62.4	66.3	63.7	1.0	1.3	66.3	63.8	1.0	1.4
	SJ_27	Residential	65	60	B	70	61.7	56.6	62.6	58.3	0.9	1.7	62.7	58.3	1.0	1.7
	SJ_28	Residential	65	60	B	70	61.8	57.2	62.7	58.8	0.9	1.6	62.8	58.8	1.0	1.6
	SJ_29	Residential	65	60	B	70	61.1	58.1	62.0	59.5	0.9	1.4	62.1	59.5	1.0	1.4
	SJ_30	Residential	65	60	B	70	61.2	58.4	62.1	59.7	0.9	1.3	62.2	59.8	1.0	1.4
	SJ_31	Residential	65	60	B	70	61.6	58.6	62.5	60.0	0.9	1.4	62.6	60.0	1.0	1.4
	SJ_32	Residential	65	60	B	70	62.0	58.9	62.9	60.3	0.9	1.4	63.0	60.3	1.0	1.4
	SJ_33	Residential	65	60	B	70	62.5	59.4	63.4	60.8	0.9	1.4	63.5	60.8	1.0	1.4
	SJ_34	Residential	65	60	B	70	62.7	59.6	63.7	61.0	1.0	1.4	63.7	61.1	1.0	1.5
	SJ_35	Residential	65	60	B	70	63.9	60.2	64.8	61.6	0.9	1.4	64.9	61.7	1.0	1.5
	SJ_36	Residential	65	60	B	70	64.6	60.9	65.5	62.3	0.9	1.4	65.6	62.4	1.0	1.5
	SJ_37	Residential	65	60	B	70	64.3	60.8	65.3	62.2	1.0	1.4	65.4	62.2	1.1	1.4
	SJ_38	Residential	65	60	B	70	63.6	60.3	64.6	61.6	1.0	1.3	64.6	61.7	1.0	1.4
	SJ_39	Residential	65	60	B	70	64.5	61.1	65.5	62.5	1.0	1.4	65.5	62.5	1.0	1.4
	SJ_40	Residential	65	60	B	70	63.9	60.4	64.8	61.8	0.9	1.4	64.9	61.9	1.0	1.5
	SJ_41	Residential	65	60	B	70	64.1	60.2	65.0	61.6	0.9	1.4	65.1	61.7	1.0	1.5
	SJ_42	Residential	65	60	B	70	58.5	56.3	59.5	57.6	1.0	1.3	59.5	57.6	1.0	1.3
	SJ_43	Residential	65	60	B	70	58.9	56.6	59.9	57.9	1.0	1.3	60.0	57.9	1.1	1.3
	SJ_44	Residential	65	60	B	70	59.1	56.8	60.1	58.0	1.0	1.2	60.2	58.1	1.1	1.3
	SJ_45	Residential	65	60	B	70	59.8	57.3	60.9	58.6	1.1	1.3	60.9	58.7	1.1	1.4
	SJ_46	Residential	65	60	B	70	60.0	57.4	61.0	58.7	1.0	1.3	61.0	58.7	1.0	1.3
	SJ_47	Residential	65	60	B	70	60.6	57.9	61.6	59.2	1.0	1.3	61.6	59.3	1.0	1.4
	SJ_48	Residential	65	60	B	70	60.8	58.0	61.8	59.3	1.0	1.3	61.8	59.4	1.0	1.4
	SJ_49	Residential	65	60	B	70	60.7	57.9	61.8	59.3	1.1	1.4	61.8	59.3	1.1	1.4
	SJ_50	Residential	65	60	B	70	61.0	58.2	62.1	59.5	1.1	1.3	62.1	59.6	1.1	1.4
	SJ_51	Residential	65	60	B	70	61.3	58.4	62.3	59.7	1.0	1.3	62.3	59.8	1.0	1.4
	SJ_52	Residential	65	60	B	70	61.3	58.4	62.3	59.8	1.0	1.4	62.4	59.8	1.1	1.4
	SJ_53	Residential	65	60	B	70	61.7	58.9	62.7	60.2	1.0	1.3	62.8	60.3	1.1	1.4
	SJ_54	Residential	65	60	B	70	61.8	59.1	62.8	60.4	1.0	1.3	62.9	60.5	1.1	1.4
	SJ_55	Residential	65	60	B	70	61.7	59.0	62.7	60.3	1.0	1.3	62.8	60.4	1.1	1.4
	SJ_56	Residential	65	60	B	70	62.7	59.6	63.7	60.9	1.0	1.3	63.7	61.0	1.0	1.4
	SJ_57	Residential	65	60	B	70	57.8	55.6	58.8	56.8	1.0	1.2	58.8	56.9	1.0	1.3
	SJ_58	Residential	65	60	B	70	57.4	55.2	58.5	56.5	1.1	1.3	58.5	56.5	1.1	1.3
	SJ_59	Residential	65	60	B	70	57.8	55.6	58.8	56.8	1.0	1.2	58.9	56.9	1.1	1.3
	SJ_60	Residential	65	60	B	70	58.2	55.8	59.2	57.1	1.0	1.3	59.2	57.1	1.0	1.3

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XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SJ cont...	SJ_61	Residential	65	60	B	70	58.7	56.3	59.7	57.6	1.0	1.3	59.8	57.6	1.1	1.3
	SJ_62	Residential	65	60	B	70	59.1	56.6	60.1	57.9	1.0	1.3	60.1	57.9	1.0	1.3
	SJ_63	Residential	65	60	B	70	59.3	56.7	60.3	58.0	1.0	1.3	60.3	58.1	1.0	1.4
	SJ_64	Residential	65	60	B	70	59.6	57.0	60.6	58.3	1.0	1.3	60.6	58.4	1.0	1.4
	SJ_65	Residential	65	60	B	70	59.9	57.3	60.9	58.6	1.0	1.3	61.0	58.7	1.1	1.4
	SJ_66	Residential	65	60	B	70	60.0	57.4	61.0	58.7	1.0	1.3	61.0	58.7	1.0	1.3
	SJ_67	Residential	65	60	B	70	60.2	57.6	61.2	59.0	1.0	1.4	61.3	59.0	1.1	1.4
	SJ_68	Residential	65	60	B	70	60.5	57.9	61.5	59.2	1.0	1.3	61.6	59.3	1.1	1.4
	SJ_69	Residential	65	60	B	70	60.7	58.1	61.7	59.4	1.0	1.3	61.8	59.4	1.1	1.3
	SJ_70	Residential	65	60	B	70	61.4	58.5	62.4	59.8	1.0	1.3	62.4	59.9	1.0	1.4
	SJ_71	Residential	65	60	B	70	62.2	58.8	63.1	60.2	0.9	1.4	63.2	60.3	1.0	1.5
	SJ_72	Residential	65	60	B	70	63.6	57.6	64.5	59.4	0.9	1.8	64.7	59.4	1.1	1.8
	SJ_73	Residential	65	60	B	70	62.3	58.3	63.1	59.7	0.8	1.4	63.3	59.8	1.0	1.5
	SJ_74	Residential	65	60	B	70	55.8	53.8	56.8	55.1	1.0	1.3	56.8	55.1	1.0	1.3
	SJ_75	Residential	65	60	B	70	56.0	53.9	57.0	55.2	1.0	1.3	57.0	55.2	1.0	1.3
	SJ_76	Residential	65	60	B	70	56.2	54.1	57.2	55.3	1.0	1.2	57.2	55.4	1.0	1.3
	SJ_77	Residential	65	60	B	70	56.4	54.3	57.5	55.6	1.1	1.3	57.5	55.6	1.1	1.3
	SJ_78	Residential	65	60	B	70	56.7	54.5	57.8	55.8	1.1	1.3	57.8	55.8	1.1	1.3
	SJ_79	Residential	65	60	B	70	56.8	54.6	57.8	55.9	1.0	1.3	57.9	55.9	1.1	1.3
	SJ_80	Residential	65	60	B	70	57.1	54.8	58.1	56.1	1.0	1.3	58.1	56.1	1.0	1.3
	SJ_81	Residential	65	60	B	70	57.2	55.0	58.3	56.3	1.1	1.3	58.3	56.3	1.1	1.3
	SJ_82	Residential	65	60	B	70	57.4	55.1	58.4	56.4	1.0	1.3	58.4	56.4	1.0	1.3
	SJ_83	Residential	65	60	B	70	57.8	55.4	58.8	56.7	1.0	1.3	58.8	56.7	1.0	1.3
	SJ_84	Residential	65	60	B	70	57.9	55.5	58.9	56.8	1.0	1.3	58.9	56.8	1.0	1.3
	SJ_85	Residential	65	60	B	70	58.1	55.7	59.1	57.0	1.0	1.3	59.1	57.0	1.0	1.3
	SJ_86	Residential	65	60	B	70	58.4	55.9	59.4	57.2	1.0	1.3	59.5	57.3	1.1	1.4
	SJ_87	Residential	65	60	B	70	58.9	56.3	59.9	57.6	1.0	1.3	60.0	57.7	1.1	1.4
	SJ_88	Residential	65	60	B	70	59.3	56.6	60.3	57.9	1.0	1.3	60.4	58.0	1.1	1.4
	SJ_89	Residential	65	60	B	70	60.2	57.3	61.2	58.6	1.0	1.3	61.3	58.7	1.1	1.4
	SJ_90	Residential	65	60	B	70	60.9	57.8	61.9	59.1	1.0	1.3	62.0	59.2	1.1	1.4
	SJ_91	Residential	65	60	B	70	61.4	57.8	62.4	59.2	1.0	1.4	62.5	59.3	1.1	1.5
NJ	NJ_1	Office	70	65	E	75	69.7	66.2	70.7	67.6	1.0	1.4	70.8	67.8	1.1	1.6
	NJ_2	Trail	70	65	C	70	73.1	69.0	74.1	70.4	1.0	1.4	74.4	70.7	1.3	1.7

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SK	SK_1	Industrial	80	75	F	NA	71.5	68.1	72.4	69.4	0.9	1.3	71.6	68.4	0.1	0.3
	SK_2	Retail	70	65	F	NA	68.9	65.7	69.8	66.9	0.9	1.2	69.1	65.7	0.2	0.0
	SK_3	Retail	70	65	F	NA	69.0	65.7	69.9	67.0	0.9	1.3	69.2	65.8	0.2	0.1
	SK_4	Retail	70	65	F	NA	68.3	65.1	69.2	66.4	0.9	1.3	68.5	65.2	0.2	0.1
	SK_5	Office	70	65	E	75	68.0	64.9	68.9	66.2	0.9	1.3	68.3	65.0	0.3	0.1
	SK_6	Office	70	65	E	75	69.4	66.0	70.3	67.3	0.9	1.3	69.8	66.2	0.4	0.2
	SK_7	Retail	70	65	F	NA	69.9	66.3	70.8	67.6	0.9	1.3	69.9	66.2	0.0	-0.1
	SK_8	Residential	65	60	B	70	66.5	63.5	67.4	64.7	0.9	1.2	67.1	64.4	0.6	0.9
	SK_9	Residential	65	60	B	70	66.3	63.3	67.2	64.6	0.9	1.3	66.9	64.2	0.6	0.9
	SK_10	Residential	65	60	B	70	65.6	62.7	66.5	64.0	0.9	1.3	66.2	63.6	0.6	0.9
	SK_11	Residential	65	60	B	70	65.2	62.4	66.1	63.6	0.9	1.2	65.8	63.2	0.6	0.8
	SK_12	Residential	65	60	B	70	64.8	62.0	65.8	63.2	1.0	1.2	65.4	62.8	0.6	0.8
	SK_13	Residential	65	60	B	70	64.4	61.6	65.3	62.8	0.9	1.2	64.9	62.4	0.5	0.8
	SK_14	Residential	65	60	B	70	63.8	61.0	64.7	62.3	0.9	1.3	64.4	61.9	0.6	0.9
	SK_15	Residential	65	60	B	70	63.2	60.5	64.1	61.7	0.9	1.2	63.7	61.3	0.5	0.8
	SK_16	Residential	65	60	B	70	62.4	59.8	63.4	61.0	1.0	1.2	62.9	60.6	0.5	0.8
	SK_17	Residential	65	60	B	70	61.9	59.3	62.8	60.5	0.9	1.2	62.4	60.1	0.5	0.8
	SK_18	Residential	65	60	B	70	61.5	59.0	62.5	60.2	1.0	1.2	62.0	59.8	0.5	0.8
	SK_19	Residential	65	60	B	70	60.9	58.5	61.8	59.7	0.9	1.2	61.4	59.2	0.5	0.7
	SK_20	Residential	65	60	B	70	62.7	60.3	63.6	61.4	0.9	1.1	63.2	61.1	0.5	0.8
	SK_21	Residential	65	60	B	70	62.5	60.1	63.4	61.3	0.9	1.2	63.0	60.9	0.5	0.8
	SK_22	Residential	65	60	B	70	62.1	59.7	63.0	60.9	0.9	1.2	62.6	60.5	0.5	0.8
NK	NK_1	Industrial	80	75	F	NA	69.5	63.9	70.5	65.4	1.0	1.5	70.1	64.7	0.6	0.8
	NK_2	Residential	65	60	B	70	75.3	70.7	76.3	72.0	1.0	1.3	75.5	71.3	0.2	0.6
	NK_3	Residential	65	60	B	70	71.9	67.4	72.9	68.8	1.0	1.4	72.2	68.2	0.3	0.8
	NK_4	Residential	65	60	B	70	69.7	65.5	70.6	66.8	0.9	1.3	70.0	66.4	0.3	0.9
	NK_5	Residential	65	60	B	70	68.5	64.4	69.4	65.7	0.9	1.3	69.1	65.2	0.6	0.8
	NK_6	Residential	65	60	B	70	68.0	63.7	68.9	65.0	0.9	1.3	68.7	64.4	0.7	0.7
	NK_7	Residential	65	60	B	70	67.7	63.1	68.6	64.5	0.9	1.4	68.5	63.9	0.8	0.8
	NK_8	Residential	65	60	B	70	67.1	62.2	68.0	63.5	0.9	1.3	67.9	63.0	0.8	0.8
	NK_9	Residential	65	60	B	70	66.5	61.5	67.5	62.8	1.0	1.3	67.4	62.2	0.9	0.7
	NK_10	Residential	65	60	B	70	65.5	60.4	66.4	61.8	0.9	1.4	66.4	61.1	0.9	0.7
	NK_11	Residential	65	60	B	70	64.4	59.9	65.3	61.3	0.9	1.4	65.2	60.6	0.8	0.7
	NK_12	Residential	65	60	B	70	63.4	59.7	64.3	60.9	0.9	1.2	64.1	60.4	0.7	0.7
	NK_13	Residential	65	60	B	70	75.4	70.6	76.3	72.0	0.9	1.4	75.5	71.3	0.1	0.7
	NK_14	Residential	65	60	B	70	75.4	70.6	76.4	72.0	1.0	1.4	75.5	71.2	0.1	0.6
	NK_15	Residential	65	60	B	70	75.1	70.4	76.0	71.7	0.9	1.3	75.1	71.0	0.0	0.6
	NK_16	Residential	65	60	B	70	75.0	70.4	76.0	71.7	1.0	1.3	75.1	70.9	0.1	0.5
	NK_17	Residential	65	60	B	70	74.9	70.3	75.8	71.6	0.9	1.3	74.9	70.8	0.0	0.5
	NK_18	Residential	65	60	B	70	75.3	70.5	76.2	71.9	0.9	1.4	75.3	71.1	0.0	0.6
	NK_19	Residential	65	60	B	70	74.7	70.2	75.7	71.5	1.0	1.3	74.7	70.7	0.0	0.5
	NK_20	Residential	65	60	B	70	74.5	70.0	75.4	71.3	0.9	1.3	74.5	70.5	0.0	0.5
	NK_21	Residential	65	60	B	70	74.4	69.9	75.3	71.2	0.9	1.3	74.3	70.4	-0.1	0.5
	NK_22	Residential	65	60	B	70	66.3	62.9	67.3	64.1	1.0	1.2	66.2	63.2	-0.1	0.3
	NK_23	Residential	65	60	B	70	66.3	63.1	67.2	64.4	0.9	1.3	66.1	63.4	-0.2	0.3
	NK_24	Residential	65	60	B	70	66.2	63.1	67.1	64.3	0.9	1.2	66.0	63.4	-0.2	0.3
	NK_25	Residential	65	60	B	70	66.0	63.0	67.0	64.2	1.0	1.2	65.8	63.2	-0.2	0.2
	NK_26	Residential	65	60	B	70	66.0	62.9	66.9	64.1	0.9	1.2	65.7	63.2	-0.3	0.3
	NK_27	Residential	65	60	B	70	66.0	62.9	66.9	64.1	0.9	1.2	65.7	63.2	-0.3	0.3
	NK_28	Residential	65	60	B	70	66.1	63.1	67.0	64.3	0.9	1.2	65.8	63.3	-0.3	0.2
	NK_29	Residential	65	60	B	70	66.4	63.3	67.3	64.6	0.9	1.3	66.2	63.6	-0.2	0.3
	NK_30	Residential	65	60	B	70	66.5	62.7	67.4	64.0	0.9	1.3	66.6	63.1	0.1	0.4
	NK_31	Residential	65	60	B	70	67.0	63.2	67.9	64.5	0.9	1.3	67.0	63.6	0.0	0.4
	NK_32	Residential	65	60	B	70	64.3	61.4	65.2	62.6	0.9	1.2	64.3	61.8	0.0	0.4
	NK_33	Residential	65	60	B	70	63.9	61.3	64.8	62.5	0.9	1.2	63.9	61.7	0.0	0.4
	NK_34	Residential	65	60	B	70	63.8	61.3	64.7	62.5	0.9	1.2	63.8	61.7	0.0	0.4
	NK_35	Residential	65	60	B	70	63.7	61.2	64.6	62.3	0.9	1.1	63.7	61.5	0.0	0.3
	NK_36	Residential	65	60	B	70	63.5	61.0	64.4	62.2	0.9	1.2	63.5	61.4	0.0	0.4
	NK_37	Residential	65	60	B	70	63.4	60.9	64.3	62.1	0.9	1.2	63.5	61.3	0.1	0.4
	NK_38	Residential	65	60	B	70	63.3	60.8	64.2	62.0	0.9	1.2	63.4	61.2	0.1	0.4
	NK_39	Residential	65	60	B	70	63.1	60.6	64.0	61.8	0.9	1.2	63.3	61.0	0.2	0.4

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	NK_40	Residential	65	60	B	70	62.9	59.9	63.8	61.2	0.9	1.3	62.8	60.2	-0.1	0.3
	NK_41	Residential	65	60	B	70	64.0	60.7	64.9	62.0	0.9	1.3	64.1	61.1	0.1	0.4
	NK_42	Residential	65	60	B	70	62.9	60.1	63.8	61.3	0.9	1.2	63.2	60.6	0.3	0.5
	NK_43	Residential	65	60	B	70	63.4	60.8	64.3	62.0	0.9	1.2	63.6	61.2	0.2	0.4
	NK_44	Residential	65	60	B	70	63.2	60.8	64.1	62.0	0.9	1.2	63.5	61.3	0.3	0.5
	NK_45	Residential	65	60	B	70	62.8	60.5	63.7	61.7	0.9	1.2	63.3	61.0	0.5	0.5
	NK_46	Residential	65	60	B	70	62.6	60.3	63.5	61.5	0.9	1.2	62.9	60.8	0.3	0.5
	NK_47	Residential	65	60	B	70	62.4	60.1	63.3	61.3	0.9	1.2	62.6	60.6	0.2	0.5
	NK_48	Residential	65	60	B	70	61.6	59.1	62.5	60.2	0.9	1.1	62.0	59.6	0.4	0.5
	NK_49	Residential	65	60	B	70	61.9	59.6	62.8	60.7	0.9	1.1	62.3	60.2	0.4	0.6
	NK_50	Residential	65	60	B	70	61.7	59.6	62.6	60.7	0.9	1.1	62.2	60.1	0.5	0.5
	NK_51	Residential	65	60	B	70	61.6	59.5	62.5	60.7	0.9	1.2	62.0	60.0	0.4	0.5
	NK_52	Residential	65	60	B	70	61.6	59.4	62.6	60.6	1.0	1.2	61.9	59.8	0.3	0.4
	NK_53	Residential	65	60	B	70	61.4	59.2	62.3	60.4	0.9	1.2	61.5	59.5	0.1	0.3
	NK_54	Residential	65	60	B	70	61.0	58.9	61.9	60.0	0.9	1.1	61.1	59.2	0.1	0.3
	NK_55	Residential	65	60	B	70	61.7	59.4	62.6	60.5	0.9	1.1	62.0	59.9	0.3	0.5
	NK_56	Residential	65	60	B	70	61.0	58.8	61.9	60.0	0.9	1.2	61.2	59.2	0.2	0.4
	NK_57	Residential	65	60	B	70	60.7	58.6	61.6	59.7	0.9	1.1	60.9	59.0	0.2	0.4
	NK_58	Residential	65	60	B	70	61.6	59.4	62.5	60.6	0.9	1.2	61.8	59.9	0.2	0.5
	NK_59	Residential	65	60	B	70	61.9	59.6	62.8	60.8	0.9	1.2	62.1	60.1	0.2	0.5
	NK_60	Residential	65	60	B	70	61.8	59.5	62.8	60.7	1.0	1.2	61.9	59.9	0.1	0.4
	NK_61	Residential	65	60	B	70	61.6	59.3	62.5	60.5	0.9	1.2	61.8	59.7	0.2	0.4
	NK_62	Residential	65	60	B	70	61.4	59.1	62.3	60.3	0.9	1.2	61.5	59.5	0.1	0.4
	NK_63	Residential	65	60	B	70	61.0	58.9	62.0	60.0	1.0	1.1	61.2	59.2	0.2	0.3
	NK_64	Residential	65	60	B	70	60.7	58.6	61.6	59.7	0.9	1.1	60.8	58.9	0.1	0.3
	NK_65	Residential	65	60	B	70	62.0	59.6	62.9	60.8	0.9	1.2	62.3	60.0	0.3	0.4
	NK_66	Residential	65	60	B	70	62.2	59.7	63.2	60.9	1.0	1.2	62.3	60.1	0.1	0.4
	NK_67	Residential	65	60	B	70	62.2	59.7	63.1	60.9	0.9	1.2	62.2	60.0	0.0	0.3
	NK_68	Residential	65	60	B	70	61.9	59.5	62.9	60.7	1.0	1.2	62.0	59.9	0.1	0.4
	NK_69	Residential	65	60	B	70	61.6	59.3	62.5	60.5	0.9	1.2	61.7	59.7	0.1	0.4
NK cont...	NK_70	Residential	65	60	B	70	61.3	59.1	62.2	60.2	0.9	1.1	61.4	59.4	0.1	0.3
	NK_71	Residential	65	60	B	70	60.9	58.8	61.9	59.9	1.0	1.1	61.1	59.1	0.2	0.3
	NK_72	Residential	65	60	B	70	74.4	69.9	75.4	71.3	1.0	1.4	74.3	70.4	-0.1	0.5
	NK_73	Residential	65	60	B	70	67.6	64.0	68.5	65.2	0.9	1.2	67.7	64.4	0.1	0.4
	NK_74	Residential	65	60	B	70	64.6	60.4	65.5	61.7	0.9	1.3	64.8	61.0	0.2	0.6
	NK_75	Residential	65	60	B	70	63.0	59.2	63.9	60.5	0.9	1.3	63.2	59.8	0.2	0.6
	NK_76	Residential	65	60	B	70	62.7	59.1	63.6	60.4	0.9	1.3	62.9	59.7	0.2	0.6
	NK_77	Residential	65	60	B	70	61.6	58.2	62.5	59.5	0.9	1.3	61.8	58.8	0.2	0.6
	NK_78	Residential	65	60	B	70	65.7	62.3	66.6	63.5	0.9	1.2	65.4	62.5	-0.3	0.2
	NK_79	Residential	65	60	B	70	63.6	59.0	64.6	60.4	1.0	1.4	63.6	59.5	0.0	0.5
	NK_80	Residential	65	60	B	70	62.6	58.1	63.5	59.5	0.9	1.4	62.7	58.7	0.1	0.6
	NK_81	Residential	65	60	B	70	61.8	57.5	62.7	58.8	0.9	1.3	61.9	58.0	0.1	0.5
	NK_82	Residential	65	60	B	70	60.8	56.7	61.7	58.0	0.9	1.3	60.9	57.3	0.1	0.6
	NK_83	Residential	65	60	B	70	62.0	59.6	62.9	60.7	0.9	1.1	62.1	59.9	0.1	0.3
	NK_84	Residential	65	60	B	70	61.3	59.0	62.2	60.2	0.9	1.2	61.4	59.3	0.1	0.3
	NK_85	Residential	65	60	B	70	59.9	57.9	60.8	59.0	0.9	1.1	60.0	58.2	0.1	0.3
	NK_86	Residential	65	60	B	70	75.1	70.4	76.0	71.7	0.9	1.3	74.8	70.7	-0.3	0.3
	NK_87	Residential	65	60	B	70	69.2	64.1	70.2	65.5	1.0	1.4	69.3	64.7	0.1	0.6
	NK_88	Residential	65	60	B	70	67.2	62.3	68.2	63.6	1.0	1.3	67.3	62.9	0.1	0.6
	NK_89	Residential	65	60	B	70	65.7	61.5	66.6	62.8	0.9	1.3	65.7	61.9	0.0	0.4
	NK_90	Residential	65	60	B	70	64.0	59.6	64.9	61.0	0.9	1.4	64.0	60.1	0.0	0.5
	NK_91	Residential	65	60	B	70	62.6	58.5	63.6	59.8	1.0	1.3	62.8	59.0	0.2	0.5
	NK_92	Residential	65	60	B	70	59.2	56.2	60.1	57.5	0.9	1.3	59.4	56.7	0.2	0.5
	NK_93	Residential	65	60	B	70	61.8	59.5	62.8	60.6	1.0	1.1	62.0	59.8	0.2	0.3
	NK_94	Residential	65	60	B	70	61.7	59.4	62.7	60.6	1.0	1.2	61.9	59.8	0.2	0.4
	NK_95	Residential	65	60	B	70	61.4	59.1	62.4	60.3	1.0	1.2	61.6	59.5	0.2	0.4
	NK_96	Residential	65	60	B	70	61.1	58.9	62.0	60.0	0.9	1.1	61.2	59.2	0.1	0.3
	NK_97	Residential	65	60	B	70	60.6	58.5	61.5	59.6	0.9	1.1	60.7	58.8	0.1	0.3
	NK_98	Residential	65	60	B	70	59.8	57.8	60.8	59.0	1.0	1.2	60.0	58.1	0.2	0.3
	NK_99	Residential	65	60	B	70	59.5	57.6	60.5	58.7	1.0	1.1	59.7	57.9	0.2	0.3
	NK_100	Residential	65	60	B	70	75.1	70.4	76.0	71.7	0.9	1.3	74.8	70.7	-0.3	0.3

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	NK_101	Residential	65	60	B	70	66.9	61.2	67.8	62.6	0.9	1.4	67.0	61.8	0.1	0.6
	NK_102	Residential	65	60	B	70	64.7	59.5	65.6	60.8	0.9	1.3	64.7	60.1	0.0	0.6
	NK_103	Residential	65	60	B	70	62.7	57.9	63.6	59.3	0.9	1.4	62.8	58.5	0.1	0.6
	NK_104	Residential	65	60	B	70	61.9	57.5	62.8	58.9	0.9	1.4	61.9	58.1	0.0	0.6
	NK_105	Residential	65	60	B	70	61.2	57.3	62.1	58.6	0.9	1.3	61.3	57.8	0.1	0.5
	NK_106	Residential	65	60	B	70	60.6	56.7	61.5	58.0	0.9	1.3	60.7	57.2	0.1	0.5
	NK_107	Residential	65	60	B	70	61.9	59.5	62.8	60.7	0.9	1.2	62.0	59.8	0.1	0.3
	NK_108	Residential	65	60	B	70	61.8	59.4	62.7	60.6	0.9	1.2	61.9	59.7	0.1	0.3
	NK_109	Residential	65	60	B	70	61.3	59.0	62.2	60.2	0.9	1.2	61.4	59.3	0.1	0.3
	NK_110	Residential	65	60	B	70	61.0	58.8	61.9	59.9	0.9	1.1	61.1	59.1	0.1	0.3
	NK_111	Residential	65	60	B	70	60.4	58.3	61.4	59.5	1.0	1.2	60.5	58.6	0.1	0.3
	NK_112	Residential	65	60	B	70	59.8	57.8	60.8	59.0	1.0	1.2	59.9	58.1	0.1	0.3
	NK_113	Residential	65	60	B	70	59.6	57.6	60.5	58.7	0.9	1.1	59.7	57.9	0.1	0.3
	NK_114	Residential	65	60	B	70	75.3	70.6	76.3	71.9	1.0	1.3	75.0	70.9	-0.3	0.3
	NK_115	Residential	65	60	B	70	70.7	65.5	71.6	66.9	0.9	1.4	70.7	66.1	0.0	0.6
	NK_116	Residential	65	60	B	70	66.2	60.8	67.1	62.2	0.9	1.4	66.3	61.4	0.1	0.6
	NK_117	Residential	65	60	B	70	64.1	59.2	65.0	60.5	0.9	1.3	64.2	59.7	0.1	0.5
	NK_118	Residential	65	60	B	70	62.7	58.0	63.6	59.3	0.9	1.3	62.8	58.6	0.1	0.6
	NK_119	Residential	65	60	B	70	61.1	57.0	62.0	58.3	0.9	1.3	61.1	57.6	0.0	0.6
	NK_120	Residential	65	60	B	70	59.8	56.2	60.7	57.5	0.9	1.3	59.8	56.7	0.0	0.5
	NK_121	Residential	65	60	B	70	61.9	59.3	62.8	60.5	0.9	1.2	61.9	59.7	0.0	0.4
	NK_122	Residential	65	60	B	70	61.8	59.4	62.7	60.6	0.9	1.2	61.9	59.7	0.1	0.3
	NK_123	Residential	65	60	B	70	61.4	59.1	62.3	60.3	0.9	1.2	61.5	59.4	0.1	0.3
	NK_124	Residential	65	60	B	70	61.0	58.8	61.9	59.9	0.9	1.1	61.1	59.1	0.1	0.3
	NK_125	Residential	65	60	B	70	60.6	58.4	61.5	59.6	0.9	1.2	60.7	58.7	0.1	0.3
	NK_126	Residential	65	60	B	70	60.1	58.0	61.0	59.2	0.9	1.2	60.2	58.3	0.1	0.3
	NK_127	Residential	65	60	B	70	59.6	57.6	60.5	58.8	0.9	1.2	59.7	57.9	0.1	0.3
	NK_128	Residential	65	60	B	70	74.8	70.2	75.8	71.5	1.0	1.3	74.5	70.5	-0.3	0.3
	NK_129	Residential	65	60	B	70	66.5	60.5	67.6	61.9	1.1	1.4	66.6	61.1	0.1	0.6
	NK_130	Residential	65	60	B	70	64.5	59.6	65.4	60.9	0.9	1.3	64.5	60.1	0.0	0.5
NK cont...	NK_131	Residential	65	60	B	70	63.1	58.3	64.1	59.6	1.0	1.3	63.1	58.7	0.0	0.4
	NK_132	Residential	65	60	B	70	61.7	57.1	62.7	58.5	1.0	1.4	61.7	57.6	0.0	0.5
	NK_133	Residential	65	60	B	70	60.9	56.6	61.8	57.9	0.9	1.3	60.9	57.1	0.0	0.5
	NK_134	Residential	65	60	B	70	60.6	56.8	61.5	58.1	0.9	1.3	60.7	57.3	0.1	0.5
	NK_135	Residential	65	60	B	70	61.7	59.1	62.6	60.3	0.9	1.2	61.7	59.5	0.0	0.4
	NK_136	Residential	65	60	B	70	61.6	59.2	62.5	60.4	0.9	1.2	61.7	59.6	0.1	0.4
	NK_137	Residential	65	60	B	70	61.3	59.0	62.3	60.2	1.0	1.2	61.4	59.3	0.1	0.3
	NK_138	Residential	65	60	B	70	60.9	58.7	61.8	59.8	0.9	1.1	61.0	58.9	0.1	0.2
	NK_139	Residential	65	60	B	70	60.4	58.3	61.3	59.4	0.9	1.1	60.5	58.6	0.1	0.3
	NK_140	Residential	65	60	B	70	59.9	57.9	60.9	59.0	1.0	1.1	60.1	58.2	0.2	0.3
	NK_141	Residential	65	60	B	70	59.7	57.7	60.7	58.9	1.0	1.2	59.9	58.0	0.2	0.3
	NK_142	Residential	65	60	B	70	75.0	70.3	76.0	71.7	1.0	1.4	74.7	70.6	-0.3	0.3
	NK_143	Residential	65	60	B	70	71.3	66.2	72.3	67.6	1.0	1.4	71.2	66.7	-0.1	0.5
	NK_144	Residential	65	60	B	70	66.2	60.7	67.2	62.2	1.0	1.5	66.3	61.3	0.1	0.6
	NK_145	Residential	65	60	B	70	64.1	59.3	65.0	60.7	0.9	1.4	64.1	59.8	0.0	0.5
	NK_146	Residential	65	60	B	70	62.5	58.0	63.4	59.3	0.9	1.3	62.5	58.5	0.0	0.5
	NK_147	Residential	65	60	B	70	61.3	57.3	62.2	58.6	0.9	1.3	61.3	57.8	0.0	0.5
	NK_148	Residential	65	60	B	70	60.5	56.9	61.4	58.2	0.9	1.3	60.4	57.4	-0.1	0.5
	NK_149	Residential	65	60	B	70	61.8	59.3	62.7	60.5	0.9	1.2	61.9	59.7	0.1	0.4
	NK_150	Residential	65	60	B	70	61.6	59.2	62.5	60.4	0.9	1.2	61.7	59.5	0.1	0.3
	NK_151	Residential	65	60	B	70	61.4	59.1	62.3	60.3	0.9	1.2	61.5	59.4	0.1	0.3
	NK_152	Residential	65	60	B	70	60.9	58.7	61.8	59.8	0.9	1.1	61.0	59.0	0.1	0.3
	NK_153	Residential	65	60	B	70	60.5	58.3	61.4	59.5	0.9	1.2	60.6	58.6	0.1	0.3
	NK_154	Residential	65	60	B	70	60.0	58.0	60.9	59.1	0.9	1.1	60.1	58.3	0.1	0.3
	NK_155	Residential	65	60	B	70	59.6	57.6	60.6	58.8	1.0	1.2	59.8	57.9	0.2	0.3
	NK_156	Residential	65	60	B	70	75.2	70.5	76.2	71.8	1.0	1.3	74.8	70.7	-0.4	0.2
	NK_157	Residential	65	60	B	70	66.6	61.0	67.6	62.5	1.0	1.5	66.7	61.6	0.1	0.6
	NK_158	Residential	65	60	B	70	64.8	59.6	65.8	61.0	1.0	1.4	64.9	60.2	0.1	0.6
	NK_159	Residential	65	60	B	70	63.3	58.4	64.3	59.8	1.0	1.4	63.4	58.9	0.1	0.5
	NK_160	Residential	65	60	B	70	62.5	57.7	63.5	59.1	1.0	1.4	62.5	58.3	0.0	0.6
	NK_161	Residential	65	60	B	70	61.5	57.3	62.4	58.6	0.9	1.3	61.5	57.8	0.0	0.5

Table B1

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Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_162	Residential	65	60	B	70	61.8	58.7	62.7	59.9	0.9	1.2	61.9	59.2	0.1	0.5
	NK_163	Residential	65	60	B	70	62.1	59.5	63.0	60.7	0.9	1.2	62.1	59.9	0.0	0.4
	NK_164	Residential	65	60	B	70	61.8	59.4	62.7	60.6	0.9	1.2	61.9	59.7	0.1	0.3
	NK_165	Residential	65	60	B	70	61.3	59.0	62.2	60.2	0.9	1.2	61.4	59.3	0.1	0.3
	NK_166	Residential	65	60	B	70	61.0	58.8	62.0	60.0	1.0	1.2	61.1	59.1	0.1	0.3
	NK_167	Residential	65	60	B	70	60.5	58.4	61.4	59.5	0.9	1.1	60.6	58.7	0.1	0.3
	NK_168	Residential	65	60	B	70	60.1	58.0	61.0	59.1	0.9	1.1	60.2	58.3	0.1	0.3
	NK_169	Residential	65	60	B	70	59.7	57.7	60.6	58.8	0.9	1.1	59.8	58.0	0.1	0.3
	NK_170	Residential	65	60	B	70	74.0	69.1	74.9	70.5	0.9	1.4	73.7	69.4	-0.3	0.3
	NK_171	Residential	65	60	B	70	71.5	66.5	72.4	67.9	0.9	1.4	71.4	67.0	-0.1	0.5
	NK_172	Residential	65	60	B	70	66.4	61.0	67.4	62.4	1.0	1.4	66.5	61.5	0.1	0.5
	NK_173	Residential	65	60	B	70	64.0	59.0	64.9	60.4	0.9	1.4	64.0	59.6	0.0	0.6
	NK_174	Residential	65	60	B	70	62.6	58.0	63.5	59.4	0.9	1.4	62.7	58.6	0.1	0.6
	NK_175	Residential	65	60	B	70	62.0	57.7	62.9	59.0	0.9	1.3	62.1	58.3	0.1	0.6
	NK_176	Residential	65	60	B	70	60.6	57.1	61.5	58.4	0.9	1.3	60.6	57.6	0.0	0.5
	NK_177	Residential	65	60	B	70	62.1	59.5	63.0	60.7	0.9	1.2	62.1	59.9	0.0	0.4
	NK_178	Residential	65	60	B	70	61.5	59.2	62.4	60.4	0.9	1.2	61.6	59.5	0.1	0.3
	NK_179	Residential	65	60	B	70	61.5	59.2	62.4	60.4	0.9	1.2	61.6	59.5	0.1	0.3
	NK_180	Residential	65	60	B	70	61.0	58.7	61.9	59.9	0.9	1.2	61.1	59.1	0.1	0.4
	NK_181	Residential	65	60	B	70	60.7	58.5	61.6	59.7	0.9	1.2	60.8	58.8	0.1	0.3
	NK_182	Residential	65	60	B	70	60.0	58.0	61.0	59.1	1.0	1.1	60.2	58.3	0.2	0.3
	NK_183	Residential	65	60	B	70	59.6	57.6	60.5	58.7	0.9	1.1	59.7	57.9	0.1	0.3
	NK_184	Residential	65	60	B	70	74.2	69.6	75.1	71.0	0.9	1.4	73.8	69.9	-0.4	0.3
	NK_185	Residential	65	60	B	70	66.8	61.2	67.8	62.6	1.0	1.4	66.9	61.8	0.1	0.6
	NK_186	Residential	65	60	B	70	64.4	59.2	65.4	60.6	1.0	1.4	64.5	59.8	0.1	0.6
	NK_187	Residential	65	60	B	70	63.2	58.3	64.1	59.7	0.9	1.4	63.2	58.8	0.0	0.5
	NK_188	Residential	65	60	B	70	62.1	57.7	63.0	59.0	0.9	1.3	62.1	58.2	0.0	0.5
	NK_189	Residential	65	60	B	70	61.4	57.3	62.3	58.6	0.9	1.3	61.4	57.8	0.0	0.5
	NK_190	Residential	65	60	B	70	60.7	56.7	61.6	58.0	0.9	1.3	60.8	57.2	0.1	0.5
	NK_191	Residential	65	60	B	70	61.6	59.3	62.5	60.4	0.9	1.1	61.7	59.6	0.1	0.3
	NK_192	Residential	65	60	B	70	61.5	59.2	62.4	60.3	0.9	1.1	61.6	59.5	0.1	0.3
	NK_193	Residential	65	60	B	70	60.8	58.6	61.7	59.8	0.9	1.2	60.9	58.9	0.1	0.3
	NK_194	Office	70	65	E	75	60.5	58.3	61.4	59.5	0.9	1.2	60.5	58.6	0.0	0.3
	NK_195	Residential	65	60	B	70	60.0	57.9	60.9	59.1	0.9	1.2	60.1	58.3	0.1	0.4
	NK_196	Residential	65	60	B	70	59.7	57.7	60.6	58.9	0.9	1.2	59.8	58.0	0.1	0.3
	NK_197	Residential	65	60	B	70	75.4	70.6	76.3	71.9	0.9	1.3	74.8	70.7	-0.6	0.1
	NK_198	Residential	65	60	B	70	70.4	65.3	71.4	66.7	1.0	1.4	70.3	65.8	-0.1	0.5
	NK_199	Residential	65	60	B	70	66.2	60.8	67.1	62.2	0.9	1.4	66.2	61.4	0.0	0.6
	NK_200	Residential	65	60	B	70	64.0	59.1	65.0	60.5	1.0	1.4	64.1	59.6	0.1	0.5
	NK_201	Residential	65	60	B	70	62.9	58.3	63.8	59.6	0.9	1.3	63.0	58.9	0.1	0.6
	NK_202	Residential	65	60	B	70	61.3	57.2	62.2	58.5	0.9	1.3	61.3	57.7	0.0	0.5
	NK_203	Residential	65	60	B	70	60.1	56.4	61.0	57.7	0.9	1.3	60.2	56.9	0.1	0.5
	NK_204	Residential	65	60	B	70	62.0	59.4	62.9	60.6	0.9	1.2	62.0	59.8	0.0	0.4
	NK_205	Residential	65	60	B	70	61.7	59.3	62.6	60.5	0.9	1.2	61.8	59.7	0.1	0.4
	NK_206	Residential	65	60	B	70	61.5	59.2	62.4	60.3	0.9	1.1	61.6	59.5	0.1	0.3
	NK_207	Residential	65	60	B	70	61.0	58.7	61.9	59.9	0.9	1.2	61.1	59.1	0.1	0.4
	NK_208	Residential	65	60	B	70	60.5	58.4	61.4	59.5	0.9	1.1	60.6	58.7	0.1	0.3
	NK_209	Residential	65	60	B	70	60.0	58.0	61.0	59.1	1.0	1.1	60.1	58.3	0.1	0.3
	NK_210	Residential	65	60	B	70	59.6	57.6	60.5	58.7	0.9	1.1	59.7	57.9	0.1	0.3
	NK_211	Residential	65	60	B	70	73.9	69.4	74.9	70.8	1.0	1.4	73.5	69.7	-0.4	0.3
	NK_212	Residential	65	60	B	70	66.2	60.5	67.2	62.0	1.0	1.5	66.2	61.1	0.0	0.6
	NK_213	Residential	65	60	B	70	64.4	59.2	65.4	60.6	1.0	1.4	64.4	59.7	0.0	0.5
	NK_214	Residential	65	60	B	70	63.0	58.2	63.9	59.6	0.9	1.4	63.0	58.7	0.0	0.5
	NK_215	Residential	65	60	B	70	61.9	57.4	62.8	58.7	0.9	1.3	62.0	57.9	0.1	0.5
	NK_216	Residential	65	60	B	70	61.2	57.2	62.2	58.5	1.0	1.3	61.3	57.7	0.1	0.5
	NK_217	Residential	65	60	B	70	60.7	57.0	61.6	58.3	0.9	1.3	60.8	57.5	0.1	0.5
	NK_218	Residential	65	60	B	70	61.6	59.0	62.5	60.2	0.9	1.2	61.6	59.4	0.0	0.4
	NK_219	Residential	65	60	B	70	61.7	59.3	62.6	60.4	0.9	1.1	61.7	59.6	0.0	0.3
	NK_220	Residential	65	60	B	70	61.3	59.0	62.2	60.2	0.9	1.2	61.4	59.3	0.1	0.3
	NK_221	Residential	65	60	B	70	60.8	58.6	61.7	59.8	0.9	1.2	60.9	58.9	0.1	0.3

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_222	Residential	65	60	B	70	60.5	58.3	61.4	59.5	0.9	1.2	60.5	58.6	0.0	0.3
	NK_223	Residential	65	60	B	70	60.0	57.9	60.9	59.1	0.9	1.2	60.1	58.2	0.1	0.3
	NK_224	Residential	65	60	B	70	59.4	57.4	60.4	58.6	1.0	1.2	59.6	57.8	0.2	0.4
	NK_225	Residential	65	60	B	70	74.3	69.4	75.3	70.8	1.0	1.4	73.9	69.7	-0.4	0.3
	NK_226	Residential	65	60	B	70	70.2	65.2	71.1	66.6	0.9	1.4	70.1	65.7	-0.1	0.5
	NK_227	Residential	65	60	B	70	64.1	59.1	65.1	60.5	1.0	1.4	64.2	59.7	0.1	0.6
	NK_228	Residential	65	60	B	70	62.9	58.3	63.9	59.6	1.0	1.3	63.0	58.8	0.1	0.5
	NK_229	Residential	65	60	B	70	61.3	57.2	62.2	58.5	0.9	1.3	61.3	57.7	0.0	0.5
	NK_230	Residential	65	60	B	70	59.9	56.4	60.8	57.7	0.9	1.3	59.9	56.9	0.0	0.5
	NK_231	Residential	65	60	B	70	61.6	59.2	62.5	60.3	0.9	1.1	61.7	59.5	0.1	0.3
	NK_232	Residential	65	60	B	70	61.7	59.3	62.6	60.5	0.9	1.2	61.8	59.7	0.1	0.4
	NK_233	Residential	65	60	B	70	61.5	59.1	62.4	60.3	0.9	1.2	61.6	59.5	0.1	0.4
	NK_234	Residential	65	60	B	70	61.0	58.8	61.9	59.9	0.9	1.1	61.1	59.1	0.1	0.3
	NK_235	Residential	65	60	B	70	60.5	58.4	61.5	59.6	1.0	1.2	60.7	58.7	0.2	0.3
	NK_236	Residential	65	60	B	70	60.0	57.9	60.9	59.1	0.9	1.2	60.1	58.2	0.1	0.3
	NK_237	Residential	65	60	B	70	59.6	57.6	60.5	58.8	0.9	1.2	59.7	57.9	0.1	0.3
	NK_238	Residential	65	60	B	70	73.1	68.4	74.0	69.8	0.9	1.4	72.7	68.7	-0.4	0.3
	NK_239	Residential	65	60	B	70	67.1	61.4	68.1	62.8	1.0	1.4	67.1	61.9	0.0	0.5
	NK_240	Residential	65	60	B	70	64.8	59.4	65.7	60.8	0.9	1.4	64.7	59.9	-0.1	0.5
	NK_241	Residential	65	60	B	70	63.0	58.2	64.0	59.5	1.0	1.3	63.0	58.7	0.0	0.5
	NK_242	Residential	65	60	B	70	61.9	57.3	62.9	58.7	1.0	1.4	61.9	57.9	0.0	0.6
	NK_243	Residential	65	60	B	70	61.1	56.9	62.0	58.2	0.9	1.3	61.1	57.4	0.0	0.5
	NK_244	Residential	65	60	B	70	60.4	56.6	61.3	57.9	0.9	1.3	60.5	57.1	0.1	0.5
	NK_245	Residential	65	60	B	70	61.8	59.3	62.7	60.5	0.9	1.2	61.9	59.6	0.1	0.3
	NK_246	Residential	65	60	B	70	61.7	59.2	62.6	60.4	0.9	1.2	61.7	59.6	0.0	0.4
	NK_247	Residential	65	60	B	70	61.2	58.9	62.2	60.1	1.0	1.2	61.3	59.3	0.1	0.4
	NK_248	Residential	65	60	B	70	60.8	58.6	61.7	59.8	0.9	1.2	60.9	58.9	0.1	0.3
	NK_249	Residential	65	60	B	70	60.5	58.3	61.4	59.5	0.9	1.2	60.6	58.7	0.1	0.4
	NK_250	Residential	65	60	B	70	60.0	58.0	61.0	59.1	1.0	1.1	60.2	58.3	0.2	0.3
	NK_251	Residential	65	60	B	70	59.6	57.6	60.6	58.8	1.0	1.2	59.8	58.0	0.2	0.4
	NK_252	Residential	65	60	B	70	75.7	70.8	76.7	72.2	1.0	1.4	75.0	70.9	-0.7	0.1
	NK_253	Residential	65	60	B	70	69.9	64.8	70.9	66.2	1.0	1.4	69.8	65.2	-0.1	0.4
	NK_254	Residential	65	60	B	70	65.7	60.2	66.6	61.7	0.9	1.5	65.7	60.8	0.0	0.6
	NK_255	Residential	65	60	B	70	63.7	58.5	64.6	59.9	0.9	1.4	63.7	59.1	0.0	0.6
	NK_256	Residential	65	60	B	70	62.2	57.4	63.1	58.8	0.9	1.4	62.2	58.0	0.0	0.6
	NK_257	Residential	65	60	B	70	60.4	56.4	61.3	57.7	0.9	1.3	60.3	56.9	-0.1	0.5
	NK_258	Residential	65	60	B	70	59.6	56.2	60.5	57.5	0.9	1.3	59.7	56.7	0.1	0.5
	NK_259	Residential	65	60	B	70	61.5	59.1	62.5	60.3	1.0	1.2	61.6	59.5	0.1	0.4
	NK_260	Residential	65	60	B	70	61.6	59.2	62.6	60.4	1.0	1.2	61.7	59.6	0.1	0.4
	NK_261	Residential	65	60	B	70	61.5	59.1	62.4	60.3	0.9	1.2	61.6	59.5	0.1	0.4
	NK_262	Residential	65	60	B	70	61.0	58.8	62.0	59.9	1.0	1.1	61.2	59.1	0.2	0.3
	NK_263	Residential	65	60	B	70	60.5	58.4	61.5	59.5	1.0	1.1	60.7	58.7	0.2	0.3
	NK_264	Residential	65	60	B	70	60.0	57.9	60.9	59.1	0.9	1.2	60.1	58.3	0.1	0.4
	NK_265	Residential	65	60	B	70	59.5	57.5	60.5	58.7	1.0	1.2	59.7	57.9	0.2	0.4
	NK_266	Residential	65	60	B	70	75.0	70.3	75.9	71.7	0.9	1.4	74.4	70.4	-0.6	0.1
	NK_267	Residential	65	60	B	70	66.6	60.9	67.6	62.3	1.0	1.4	66.5	61.4	-0.1	0.5
	NK_268	Residential	65	60	B	70	64.6	59.2	65.5	60.6	0.9	1.4	64.5	59.7	-0.1	0.5
	NK_269	Residential	65	60	B	70	62.9	58.0	63.9	59.3	1.0	1.3	62.9	58.5	0.0	0.5
	NK_270	Residential	65	60	B	70	61.9	57.4	62.9	58.7	1.0	1.3	62.0	57.9	0.1	0.5
	NK_271	Residential	65	60	B	70	61.1	56.8	62.0	58.2	0.9	1.4	61.1	57.4	0.0	0.6
	NK_272	Residential	65	60	B	70	60.5	56.7	61.4	58.0	0.9	1.3	60.6	57.2	0.1	0.5
	NK_273	Residential	65	60	B	70	61.9	59.3	62.9	60.5	1.0	1.2	62.0	59.6	0.1	0.3
	NK_274	Residential	65	60	B	70	61.6	59.2	62.6	60.4	1.0	1.2	61.8	59.6	0.2	0.4
	NK_275	Residential	65	60	B	70	61.3	59.0	62.2	60.1	0.9	1.1	61.4	59.3	0.1	0.3
	NK_276	Residential	65	60	B	70	61.1	58.9	62.1	60.0	1.0	1.1	61.3	59.2	0.2	0.3
	NK_277	Residential	65	60	B	70	60.6	58.5	61.6	59.6	1.0	1.1	60.8	58.8	0.2	0.3
	NK_278	Residential	65	60	B	70	60.0	58.0	60.9	59.1	0.9	1.1	60.2	58.3	0.2	0.3
	NK_279	Residential	65	60	B	70	59.5	57.5	60.4	58.7	0.9	1.2	59.7	57.9	0.2	0.4
	NK_280	Residential	65	60	B	70	75.7	70.8	76.7	72.2	1.0	1.4	75.1	70.9	-0.6	0.1
	NK_281	Residential	65	60	B	70	70.8	65.7	71.8	67.1	1.0	1.4	70.6	66.1	-0.2	0.4

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_282	Residential	65	60	B	70	66.0	60.4	66.9	61.9	0.9	1.5	66.0	61.0	0.0	0.6
	NK_283	Residential	65	60	B	70	63.7	58.5	64.6	59.9	0.9	1.4	63.7	59.1	0.0	0.6
	NK_284	Residential	65	60	B	70	62.5	58.0	63.5	59.3	1.0	1.3	62.6	58.5	0.1	0.5
	NK_285	Residential	65	60	B	70	61.2	57.0	62.1	58.3	0.9	1.3	61.2	57.5	0.0	0.5
	NK_286	Residential	65	60	B	70	60.2	56.3	61.1	57.6	0.9	1.3	60.3	56.8	0.1	0.5
	NK_287	Residential	65	60	B	70	62.0	59.5	62.9	60.7	0.9	1.2	62.2	59.9	0.2	0.4
	NK_288	Residential	65	60	B	70	61.6	59.2	62.5	60.4	0.9	1.2	61.7	59.6	0.1	0.4
	NK_289	Residential	65	60	B	70	61.4	59.1	62.3	60.2	0.9	1.1	61.5	59.4	0.1	0.3
	NK_290	Residential	65	60	B	70	61.0	58.8	61.9	59.9	0.9	1.1	61.2	59.1	0.2	0.3
	NK_291	Residential	65	60	B	70	60.6	58.4	61.5	59.6	0.9	1.2	60.7	58.8	0.1	0.4
	NK_292	Residential	65	60	B	70	60.1	58.0	61.0	59.2	0.9	1.2	60.2	58.3	0.1	0.3
	NK_293	Residential	65	60	B	70	59.6	57.6	60.5	58.7	0.9	1.1	59.7	58.0	0.1	0.4
	NK_294	Residential	65	60	B	70	73.4	68.5	74.3	69.9	0.9	1.4	73.1	68.9	-0.3	0.4
	NK_295	Residential	65	60	B	70	68.1	62.9	69.1	64.3	1.0	1.4	68.2	63.5	0.1	0.6
	NK_296	Residential	65	60	B	70	65.1	59.7	66.1	61.1	1.0	1.4	65.2	60.3	0.1	0.6
	NK_297	Residential	65	60	B	70	62.8	57.8	63.7	59.2	0.9	1.4	62.9	58.4	0.1	0.6
	NK_298	Residential	65	60	B	70	61.6	57.1	62.5	58.5	0.9	1.4	61.8	57.8	0.2	0.7
	NK_299	Residential	65	60	B	70	61.0	56.8	61.9	58.1	0.9	1.3	61.2	57.4	0.2	0.6
	NK_300	Residential	65	60	B	70	61.7	57.9	62.6	59.2	0.9	1.3	61.4	58.3	-0.3	0.4
	NK_301	Residential	65	60	B	70	61.8	59.2	62.7	60.4	0.9	1.2	61.9	59.7	0.1	0.5
	NK_302	Residential	65	60	B	70	61.7	59.3	62.6	60.5	0.9	1.2	61.8	59.7	0.1	0.4
	NK_303	Residential	65	60	B	70	61.5	59.2	62.4	60.4	0.9	1.2	61.7	59.6	0.2	0.4
	NK_304	Residential	65	60	B	70	61.1	58.8	62.0	60.0	0.9	1.2	61.2	59.2	0.1	0.4
	NK_305	Residential	65	60	B	70	60.5	58.4	61.4	59.5	0.9	1.1	60.7	58.7	0.2	0.3
	NK_306	Residential	65	60	B	70	60.2	58.1	61.1	59.2	0.9	1.1	60.3	58.5	0.1	0.4
	NK_307	Residential	65	60	B	70	59.9	57.9	60.8	59.0	0.9	1.1	60.1	58.3	0.2	0.4
	NK_308	Residential	65	60	B	70	59.7	57.7	60.6	58.8	0.9	1.1	59.9	58.1	0.2	0.4
	NK_309	Residential	65	60	B	70	74.6	70.0	75.5	71.4	0.9	1.4	74.4	70.4	-0.2	0.4
	NK_310	Residential	65	60	B	70	69.6	64.4	70.6	65.8	1.0	1.4	69.6	64.9	0.0	0.5
	NK_311	Residential	65	60	B	70	68.1	62.9	69.1	64.3	1.0	1.4	68.2	63.5	0.1	0.6
	NK_312	Residential	65	60	B	70	65.3	60.0	66.2	61.4	0.9	1.4	65.4	60.7	0.1	0.7
	NK_313	Residential	65	60	B	70	64.1	59.1	65.1	60.5	1.0	1.4	64.3	59.8	0.2	0.7
	NK_314	Residential	65	60	B	70	62.6	58.0	63.6	59.3	1.0	1.3	62.8	58.6	0.2	0.6
	NK_315	Residential	65	60	B	70	61.9	57.7	62.8	59.0	0.9	1.3	62.0	58.2	0.1	0.5
	NK_316	Residential	65	60	B	70	60.4	57.0	61.4	58.2	1.0	1.2	60.6	57.5	0.2	0.5
	NK_317	Residential	65	60	B	70	61.9	59.5	62.8	60.7	0.9	1.2	62.1	59.9	0.2	0.4
	NK_318	Residential	65	60	B	70	61.8	59.4	62.7	60.6	0.9	1.2	62.0	59.8	0.2	0.4
	NK_319	Residential	65	60	B	70	61.5	59.2	62.5	60.4	1.0	1.2	61.7	59.6	0.2	0.4
	NK_320	Residential	65	60	B	70	61.1	58.9	62.0	60.0	0.9	1.1	61.2	59.2	0.1	0.3
	NK_321	Residential	65	60	B	70	60.7	58.6	61.6	59.7	0.9	1.1	60.9	58.9	0.2	0.3
	NK_322	Residential	65	60	B	70	60.4	58.3	61.3	59.5	0.9	1.2	60.6	58.7	0.2	0.4
	NK_323	Residential	65	60	B	70	60.0	58.0	60.9	59.1	0.9	1.1	60.2	58.3	0.2	0.3
	NK_324	Residential	65	60	B	70	59.7	57.7	60.6	58.9	0.9	1.2	59.9	58.1	0.2	0.4
	NK_325	Residential	65	60	B	70	74.9	70.3	75.9	71.6	1.0	1.3	74.9	70.8	0.0	0.5
	NK_326	Residential	65	60	B	70	66.6	61.1	67.6	62.5	1.0	1.4	66.9	61.8	0.3	0.7
	NK_327	Residential	65	60	B	70	64.6	59.5	65.5	60.9	0.9	1.4	64.9	60.2	0.3	0.7
	NK_328	Residential	65	60	B	70	63.1	58.3	64.1	59.7	1.0	1.4	63.4	59.0	0.3	0.7
	NK_329	Residential	65	60	B	70	62.0	57.5	62.9	58.8	0.9	1.3	62.3	58.1	0.3	0.6
	NK_330	Residential	65	60	B	70	61.5	57.4	62.4	58.8	0.9	1.4	61.8	58.1	0.3	0.7
	NK_331	Residential	65	60	B	70	61.1	57.2	62.0	58.5	0.9	1.3	61.4	57.8	0.3	0.6
	NK_332	Residential	65	60	B	70	62.2	59.6	63.1	60.8	0.9	1.2	62.3	60.0	0.1	0.4
	NK_333	Residential	65	60	B	70	61.9	59.5	62.9	60.7	1.0	1.2	62.1	59.9	0.2	0.4
	NK_334	Residential	65	60	B	70	61.6	59.3	62.5	60.5	0.9	1.2	61.8	59.7	0.2	0.4
	NK_335	Residential	65	60	B	70	61.1	58.9	62.0	60.1	0.9	1.2	61.3	59.3	0.2	0.4
	NK_336	Residential	65	60	B	70	60.6	58.5	61.5	59.6	0.9	1.1	60.8	58.8	0.2	0.3
	NK_337	Residential	65	60	B	70	60.1	58.1	61.0	59.2	0.9	1.1	60.3	58.4	0.2	0.3
	NK_338	Residential	65	60	B	70	59.6	57.6	60.5	58.8	0.9	1.2	59.8	58.0	0.2	0.4
	NK_339	Residential	65	60	B	70	74.6	70.1	75.6	71.4	1.0	1.3	75.0	70.9	0.4	0.8
	NK_340	Residential	65	60	B	70	65.9	60.6	66.9	62.0	1.0	1.4	66.2	61.3	0.3	0.7
	NK_341	Residential	65	60	B	70	63.9	58.9	64.8	60.3	0.9	1.4	64.1	59.6	0.2	0.7

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XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_342	Residential	65	60	B	70	62.6	58.0	63.5	59.3	0.9	1.3	62.8	58.6	0.2	0.6
	NK_343	Residential	65	60	B	70	61.5	56.9	62.4	58.3	0.9	1.4	61.7	57.6	0.2	0.7
	NK_344	Residential	65	60	B	70	60.3	56.4	61.2	57.7	0.9	1.3	60.4	56.9	0.1	0.5
	NK_345	Residential	65	60	B	70	61.8	59.4	62.7	60.6	0.9	1.2	62.1	59.9	0.3	0.5
	NK_346	Residential	65	60	B	70	61.8	59.5	62.8	60.7	1.0	1.2	62.1	60.0	0.3	0.5
	NK_347	Residential	65	60	B	70	61.6	59.3	62.5	60.5	0.9	1.2	61.8	59.7	0.2	0.4
	NK_348	Residential	65	60	B	70	61.2	59.0	62.1	60.2	0.9	1.2	61.4	59.4	0.2	0.4
	NK_349	Residential	65	60	B	70	60.7	58.6	61.7	59.8	1.0	1.2	60.9	59.0	0.2	0.4
	NK_350	Residential	65	60	B	70	60.2	58.2	61.2	59.3	1.0	1.1	60.4	58.6	0.2	0.4
	NK_351	Residential	65	60	B	70	59.8	57.8	60.7	59.0	0.9	1.2	60.0	58.2	0.2	0.4
	NK_352	Residential	65	60	B	70	74.2	69.8	75.1	71.1	0.9	1.3	74.7	70.6	0.5	0.8
	NK_353	Residential	65	60	B	70	66.4	60.6	67.4	62.0	1.0	1.4	67.0	61.6	0.6	1.0
	NK_354	Residential	65	60	B	70	64.0	58.7	64.9	60.1	0.9	1.4	64.5	59.5	0.5	0.8
	NK_355	Residential	65	60	B	70	62.6	57.7	63.6	59.1	1.0	1.4	63.1	58.5	0.5	0.8
	NK_356	Residential	65	60	B	70	61.6	57.1	62.6	58.5	1.0	1.4	62.1	57.9	0.5	0.8
	NK_357	Residential	65	60	B	70	61.2	57.3	62.1	58.6	0.9	1.3	61.6	58.0	0.4	0.7
	NK_358	Residential	65	60	B	70	60.7	57.0	61.6	58.3	0.9	1.3	61.1	57.7	0.4	0.7
	NK_359	Residential	65	60	B	70	62.3	59.7	63.2	60.9	0.9	1.2	62.6	60.2	0.3	0.5
	NK_360	Residential	65	60	B	70	62.1	59.7	63.0	60.9	0.9	1.2	62.4	60.2	0.3	0.5
	NK_361	Residential	65	60	B	70	61.8	59.5	62.7	60.6	0.9	1.1	62.0	59.9	0.2	0.4
	NK_362	Residential	65	60	B	70	61.4	59.2	62.3	60.3	0.9	1.1	61.6	59.6	0.2	0.4
	NK_363	Residential	65	60	B	70	60.8	58.7	61.7	59.8	0.9	1.1	61.0	59.1	0.2	0.4
	NK_364	Residential	65	60	B	70	60.5	58.4	61.4	59.6	0.9	1.2	60.7	58.8	0.2	0.4
	NK_365	Residential	65	60	B	70	60.0	58.0	60.9	59.1	0.9	1.1	60.2	58.4	0.2	0.4
	NK_366	Residential	65	60	B	70	72.4	67.4	73.3	68.8	0.9	1.4	73.0	68.4	0.6	1.0
	NK_367	Residential	65	60	B	70	68.5	62.9	69.4	64.4	0.9	1.5	69.1	64.0	0.6	1.1
	NK_368	Residential	65	60	B	70	63.4	58.4	64.4	59.7	1.0	1.3	63.9	59.1	0.5	0.7
	NK_369	Residential	65	60	B	70	62.4	57.6	63.3	59.0	0.9	1.4	62.7	58.4	0.3	0.8
	NK_370	Residential	65	60	B	70	60.9	57.2	61.8	58.5	0.9	1.3	61.1	57.8	0.2	0.6
	NK_371	Residential	65	60	B	70	62.0	59.6	62.9	60.8	0.9	1.2	62.3	60.1	0.3	0.5
	NK_372	Residential	65	60	B	70	61.9	59.6	62.9	60.8	1.0	1.2	62.2	60.0	0.3	0.4
	NK_373	Residential	65	60	B	70	61.6	59.3	62.5	60.5	0.9	1.2	61.8	59.7	0.2	0.4
	NK_374	Residential	65	60	B	70	61.2	59.0	62.1	60.1	0.9	1.1	61.4	59.4	0.2	0.4
	NK_375	Residential	65	60	B	70	74.2	69.9	75.2	71.2	1.0	1.3	75.0	70.9	0.8	1.0
	NK_376	Residential	65	60	B	70	66.6	60.9	67.6	62.4	1.0	1.5	67.3	62.0	0.7	1.1
	NK_377	Residential	65	60	B	70	64.8	59.5	65.7	60.9	0.9	1.4	65.4	60.3	0.6	0.8
	NK_378	Residential	65	60	B	70	63.4	58.8	64.3	60.1	0.9	1.3	63.8	59.5	0.4	0.7
	NK_379	Residential	65	60	B	70	61.8	57.9	62.7	59.2	0.9	1.3	62.2	58.5	0.4	0.6
	NK_380	Residential	65	60	B	70	61.3	57.6	62.3	58.9	1.0	1.3	61.7	58.2	0.4	0.6
	NK_381	Residential	65	60	B	70	62.5	59.8	63.4	61.0	0.9	1.2	62.8	60.4	0.3	0.6
	NK_382	Residential	65	60	B	70	62.3	59.9	63.2	61.1	0.9	1.2	62.6	60.4	0.3	0.5
	NK_383	Residential	65	60	B	70	62.0	59.7	62.9	60.8	0.9	1.1	62.3	60.1	0.3	0.4
	NK_384	Residential	65	60	B	70	61.5	59.2	62.4	60.4	0.9	1.2	61.8	59.7	0.3	0.5
	NK_385	Residential	65	60	B	70	74.3	69.9	75.3	71.2	1.0	1.3	75.2	71.0	0.9	1.1
	NK_386	Residential	65	60	B	70	66.8	61.4	67.8	62.8	1.0	1.4	67.5	62.4	0.7	1.0
	NK_387	Residential	65	60	B	70	64.4	59.5	65.4	60.9	1.0	1.4	64.9	60.3	0.5	0.8
	NK_388	Residential	65	60	B	70	63.4	58.9	64.3	60.2	0.9	1.3	63.8	59.7	0.4	0.8
	NK_389	Residential	65	60	B	70	62.0	57.8	62.9	59.1	0.9	1.3	62.4	58.5	0.4	0.7
	NK_390	Residential	65	60	B	70	60.8	57.3	61.7	58.5	0.9	1.2	61.1	57.9	0.3	0.6
	NK_391	Residential	65	60	B	70	62.2	59.7	63.1	60.9	0.9	1.2	62.5	60.2	0.3	0.5
	NK_392	Residential	65	60	B	70	62.0	59.7	63.0	60.9	1.0	1.2	62.3	60.2	0.3	0.5
	NK_393	Residential	65	60	B	70	61.7	59.4	62.7	60.6	1.0	1.2	62.0	59.9	0.3	0.5
	NK_394	Residential	65	60	B	70	61.3	59.1	62.3	60.3	1.0	1.2	61.6	59.5	0.3	0.4
	NK_395	Residential	65	60	B	70	60.9	58.8	61.9	59.9	1.0	1.1	61.2	59.2	0.3	0.4
	NK_396	Residential	65	60	B	70	60.5	58.4	61.5	59.6	1.0	1.2	60.8	58.8	0.3	0.4
	NK_397	Residential	65	60	B	70	60.1	58.0	61.0	59.2	0.9	1.2	60.3	58.4	0.2	0.4
	NK_398	Residential	65	60	B	70	74.1	69.7	75.0	71.1	0.9	1.4	74.9	70.8	0.8	1.1
	NK_399	Residential	65	60	B	70	66.8	61.4	67.8	62.8	1.0	1.4	67.5	62.4	0.7	1.0
	NK_400	Residential	65	60	B	70	65.1	59.9	66.1	61.3	1.0	1.4	65.7	60.8	0.6	0.9
	NK_401	Residential	65	60	B	70	62.9	58.1	63.9	59.5	1.0	1.4	63.4	59.0	0.5	0.9

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_402	Residential	65	60	B	70	61.8	57.4	62.7	58.8	0.9	1.4	62.2	58.2	0.4	0.8
	NK_403	Residential	65	60	B	70	61.2	57.1	62.1	58.4	0.9	1.3	61.5	57.8	0.3	0.7
	NK_404	Residential	65	60	B	70	62.4	59.9	63.3	61.1	0.9	1.2	62.6	60.4	0.2	0.5
	NK_405	Residential	65	60	B	70	62.2	59.8	63.2	61.0	1.0	1.2	62.5	60.3	0.3	0.5
	NK_406	Residential	65	60	B	70	62.0	59.6	62.9	60.8	0.9	1.2	62.4	60.1	0.4	0.5
	NK_407	Residential	65	60	B	70	61.7	59.3	62.6	60.5	0.9	1.2	61.9	59.8	0.2	0.5
	NK_408	Residential	65	60	B	70	61.2	58.9	62.1	60.1	0.9	1.2	61.4	59.4	0.2	0.5
	NK_409	Residential	65	60	B	70	60.7	58.6	61.7	59.7	1.0	1.1	61.0	59.0	0.3	0.4
	NK_410	Residential	65	60	B	70	60.3	58.2	61.2	59.3	0.9	1.1	60.5	58.6	0.2	0.4
	NK_411	Residential	65	60	B	70	74.5	70.0	75.5	71.4	1.0	1.4	75.3	71.1	0.8	1.1
	NK_412	Residential	65	60	B	70	69.1	63.9	70.0	65.3	0.9	1.4	69.8	65.0	0.7	1.1
	NK_413	Residential	65	60	B	70	65.5	60.3	66.4	61.7	0.9	1.4	66.1	61.2	0.6	0.9
	NK_414	Residential	65	60	B	70	63.5	58.6	64.5	60.0	1.0	1.4	64.1	59.5	0.6	0.9
	NK_415	Residential	65	60	B	70	62.7	58.0	63.6	59.4	0.9	1.4	63.1	58.9	0.4	0.9
	NK_416	Residential	65	60	B	70	60.5	56.4	61.4	57.7	0.9	1.3	60.9	57.1	0.4	0.7
	NK_417	Residential	65	60	B	70	62.6	59.9	63.5	61.1	0.9	1.2	62.8	60.4	0.2	0.5
	NK_418	Residential	65	60	B	70	62.3	59.9	63.2	61.1	0.9	1.2	62.6	60.3	0.3	0.4
	NK_419	Residential	65	60	B	70	61.9	59.6	62.9	60.8	1.0	1.2	62.2	60.0	0.3	0.4
	NK_420	Residential	65	60	B	70	61.5	59.2	62.4	60.4	0.9	1.2	61.8	59.7	0.3	0.5
	NK_421	Residential	65	60	B	70	61.1	58.9	62.0	60.1	0.9	1.2	61.4	59.3	0.3	0.4
	NK_422	Residential	65	60	B	70	60.3	58.2	61.3	59.4	1.0	1.2	60.6	58.7	0.3	0.5
	NK_423	Residential	65	60	B	70	60.0	58.0	61.0	59.1	1.0	1.1	60.3	58.4	0.3	0.4
	NK_424	Residential	65	60	B	70	74.3	69.8	75.2	71.2	0.9	1.4	75.0	70.9	0.7	1.1
	NK_425	Residential	65	60	B	70	67.3	61.8	68.3	63.2	1.0	1.4	67.9	62.8	0.6	1.0
	NK_426	Residential	65	60	B	70	65.1	59.9	66.1	61.3	1.0	1.4	65.7	60.8	0.6	0.9
	NK_427	Residential	65	60	B	70	63.4	58.5	64.3	59.9	0.9	1.4	63.9	59.4	0.5	0.9
	NK_428	Residential	65	60	B	70	62.4	58.0	63.3	59.3	0.9	1.3	62.8	58.7	0.4	0.7
	NK_429	Residential	65	60	B	70	61.5	57.4	62.4	58.8	0.9	1.4	61.9	58.2	0.4	0.8
	NK_430	Residential	65	60	B	70	62.5	60.0	63.4	61.2	0.9	1.2	62.7	60.5	0.2	0.5
	NK_431	Residential	65	60	B	70	62.1	59.7	63.0	60.9	0.9	1.2	62.4	60.2	0.3	0.5
	NK_432	Residential	65	60	B	70	61.7	59.3	62.6	60.5	0.9	1.2	61.9	59.8	0.2	0.5
	NK_433	Residential	65	60	B	70	61.4	59.1	62.3	60.3	0.9	1.2	61.7	59.6	0.3	0.5
	NK_434	Residential	65	60	B	70	61.0	58.8	61.9	59.9	0.9	1.1	61.2	59.2	0.2	0.4
	NK_435	Residential	65	60	B	70	60.5	58.4	61.4	59.5	0.9	1.1	60.7	58.8	0.2	0.4
	NK_436	Residential	65	60	B	70	74.1	69.7	75.0	71.1	0.9	1.4	74.8	70.8	0.7	1.1
	NK_437	Residential	65	60	B	70	70.3	65.2	71.2	66.6	0.9	1.4	70.9	66.2	0.6	1.0
	NK_438	Residential	65	60	B	70	66.0	60.8	67.0	62.2	1.0	1.4	66.6	61.7	0.6	0.9
	NK_439	Residential	65	60	B	70	64.5	59.5	65.4	60.9	0.9	1.4	65.0	60.3	0.5	0.8
	NK_440	Residential	65	60	B	70	63.2	58.5	64.2	59.8	1.0	1.3	63.7	59.3	0.5	0.8
	NK_441	Residential	65	60	B	70	60.8	56.7	61.7	58.0	0.9	1.3	61.2	57.4	0.4	0.7
	NK_442	Residential	65	60	B	70	62.6	60.1	63.6	61.3	1.0	1.2	62.9	60.6	0.3	0.5
	NK_443	Residential	65	60	B	70	62.5	60.0	63.4	61.2	0.9	1.2	62.7	60.4	0.2	0.4
	NK_444	Residential	65	60	B	70	62.0	59.7	63.0	60.8	1.0	1.1	62.3	60.1	0.3	0.4
	NK_445	Residential	65	60	B	70	61.7	59.3	62.6	60.5	0.9	1.2	61.9	59.8	0.2	0.5
	NK_446	Residential	65	60	B	70	61.4	59.1	62.3	60.3	0.9	1.2	61.6	59.5	0.2	0.4
	NK_447	Residential	65	60	B	70	60.8	58.6	61.7	59.8	0.9	1.2	61.0	59.0	0.2	0.4
	NK_448	Residential	65	60	B	70	60.3	58.2	61.2	59.4	0.9	1.2	60.5	58.6	0.2	0.4
	NK_449	Residential	65	60	B	70	74.1	69.7	75.0	71.0	0.9	1.3	74.8	70.7	0.7	1.0
	NK_450	Residential	65	60	B	70	66.4	60.9	67.3	62.3	0.9	1.4	67.0	61.9	0.6	1.0
	NK_451	Residential	65	60	B	70	64.3	59.3	65.3	60.7	1.0	1.4	64.8	60.2	0.5	0.9
	NK_452	Residential	65	60	B	70	62.9	58.5	63.9	59.8	1.0	1.3	63.4	59.3	0.5	0.8
	NK_453	Residential	65	60	B	70	62.1	58.1	63.1	59.4	1.0	1.3	62.6	58.9	0.5	0.8
	NK_454	Residential	65	60	B	70	62.9	60.1	63.8	61.4	0.9	1.3	63.2	60.7	0.3	0.6
	NK_455	Residential	65	60	B	70	62.8	60.2	63.7	61.4	0.9	1.2	63.1	60.7	0.3	0.5
	NK_456	Residential	65	60	B	70	62.4	59.9	63.3	61.1	0.9	1.2	62.7	60.4	0.3	0.5
	NK_457	Residential	65	60	B	70	61.9	59.5	62.8	60.7	0.9	1.2	62.2	60.0	0.3	0.5
	NK_458	Residential	65	60	B	70	61.5	59.2	62.5	60.4	1.0	1.2	61.8	59.7	0.3	0.5
	NK_459	Residential	65	60	B	70	60.9	58.7	61.8	59.8	0.9	1.1	61.1	59.1	0.2	0.4
	NK_460	Residential	65	60	B	70	60.6	58.5	61.5	59.6	0.9	1.1	60.9	58.9	0.3	0.4
	NK_461	Residential	65	60	B	70	74.1	69.6	75.0	71.0	0.9	1.4	74.7	70.6	0.6	1.0

Table B1

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Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_462	Residential	65	60	B	70	67.6	62.4	68.6	63.8	1.0	1.4	68.2	63.4	0.6	1.0
	NK_463	Residential	65	60	B	70	65.2	60.1	66.2	61.5	1.0	1.4	65.8	61.0	0.6	0.9
	NK_464	Residential	65	60	B	70	63.7	58.9	64.7	60.3	1.0	1.4	64.2	59.8	0.5	0.9
	NK_465	Residential	65	60	B	70	60.6	56.8	61.6	58.1	1.0	1.3	61.0	57.5	0.4	0.7
	NK_466	Residential	65	60	B	70	63.3	60.4	64.2	61.6	0.9	1.2	63.5	60.9	0.2	0.5
	NK_467	Residential	65	60	B	70	62.8	60.2	63.7	61.4	0.9	1.2	63.1	60.8	0.3	0.6
	NK_468	Residential	65	60	B	70	62.3	59.8	63.2	61.0	0.9	1.2	62.6	60.3	0.3	0.5
	NK_469	Residential	65	60	B	70	62.1	59.7	63.0	60.9	0.9	1.2	62.4	60.2	0.3	0.5
	NK_470	Residential	65	60	B	70	61.6	59.3	62.5	60.5	0.9	1.2	61.9	59.8	0.3	0.5
	NK_471	Residential	65	60	B	70	61.0	58.8	61.9	60.0	0.9	1.2	61.3	59.2	0.3	0.4
	NK_472	Residential	65	60	B	70	60.4	58.3	61.3	59.4	0.9	1.1	60.7	58.7	0.3	0.4
	NK_473	Residential	65	60	B	70	74.3	69.8	75.3	71.1	1.0	1.3	74.9	70.8	0.6	1.0
	NK_474	Residential	65	60	B	70	67.6	61.9	68.6	63.3	1.0	1.4	68.2	62.9	0.6	1.0
	NK_475	Residential	65	60	B	70	65.0	59.8	66.0	61.2	1.0	1.4	65.6	60.8	0.6	1.0
	NK_476	Residential	65	60	B	70	63.5	58.9	64.4	60.3	0.9	1.4	63.9	59.7	0.4	0.8
	NK_477	Residential	65	60	B	70	62.8	58.6	63.7	59.9	0.9	1.3	63.2	59.4	0.4	0.8
	NK_478	Residential	65	60	B	70	63.4	60.5	64.3	61.7	0.9	1.2	63.6	61.0	0.2	0.5
	NK_479	Residential	65	60	B	70	63.3	60.6	64.2	61.8	0.9	1.2	63.6	61.1	0.3	0.5
	NK_480	Residential	65	60	B	70	62.9	60.3	63.8	61.5	0.9	1.2	63.2	60.8	0.3	0.5
	NK_481	Residential	65	60	B	70	62.3	59.8	63.2	61.0	0.9	1.2	62.6	60.3	0.3	0.5
	NK_482	Residential	65	60	B	70	61.8	59.4	62.7	60.6	0.9	1.2	62.1	59.9	0.3	0.5
	NK_483	Residential	65	60	B	70	61.4	59.1	62.3	60.3	0.9	1.2	61.7	59.6	0.3	0.5
	NK_484	Residential	65	60	B	70	60.7	58.5	61.6	59.7	0.9	1.2	61.0	59.0	0.3	0.5
	NK_485	Residential	65	60	B	70	74.3	69.7	75.3	71.1	1.0	1.4	74.9	70.7	0.6	1.0
	NK_486	Residential	65	60	B	70	71.2	65.9	72.1	67.3	0.9	1.4	71.7	66.9	0.5	1.0
	NK_487	Residential	65	60	B	70	66.5	60.9	67.5	62.4	1.0	1.5	67.1	61.9	0.6	1.0
	NK_488	Residential	65	60	B	70	64.1	59.1	65.0	60.5	0.9	1.4	64.6	60.0	0.5	0.9
	NK_489	Residential	65	60	B	70	62.7	58.3	63.6	59.6	0.9	1.3	63.2	59.1	0.5	0.8
	NK_490	Residential	65	60	B	70	63.7	60.7	64.6	62.0	0.9	1.3	63.9	61.3	0.2	0.6
	NK_491	Residential	65	60	B	70	63.4	60.7	64.3	61.9	0.9	1.2	63.7	61.2	0.3	0.5
	NK_492	Residential	65	60	B	70	62.9	60.3	63.8	61.5	0.9	1.2	63.1	60.8	0.2	0.5
	NK_493	Residential	65	60	B	70	62.3	59.8	63.3	61.0	1.0	1.2	62.6	60.3	0.3	0.5
	NK_494	Residential	65	60	B	70	61.9	59.4	62.8	60.6	0.9	1.2	62.1	59.9	0.2	0.5
	NK_495	Residential	65	60	B	70	61.3	59.0	62.2	60.2	0.9	1.2	61.6	59.5	0.3	0.5
	NK_496	Residential	65	60	B	70	60.7	58.5	61.6	59.7	0.9	1.2	61.0	59.0	0.3	0.5
	NK_497	Residential	65	60	B	70	74.2	69.6	75.2	71.0	1.0	1.4	74.8	70.6	0.6	1.0
	NK_498	Residential	65	60	B	70	66.5	61.0	67.5	62.5	1.0	1.5	67.1	62.0	0.6	1.0
	NK_499	Residential	65	60	B	70	64.1	59.5	65.1	60.9	1.0	1.4	64.6	60.4	0.5	0.9
	NK_500	Residential	65	60	B	70	64.2	61.0	65.1	62.3	0.9	1.3	64.4	61.6	0.2	0.6
	NK_501	Residential	65	60	B	70	63.9	61.0	64.8	62.2	0.9	1.2	64.1	61.5	0.2	0.5
	NK_502	Residential	65	60	B	70	63.4	60.6	64.3	61.8	0.9	1.2	63.7	61.1	0.3	0.5
	NK_503	Residential	65	60	B	70	62.4	59.9	63.3	61.1	0.9	1.2	62.7	60.4	0.3	0.5
	NK_504	Residential	65	60	B	70	61.9	59.5	62.8	60.7	0.9	1.2	62.2	60.0	0.3	0.5
	NK_505	Residential	65	60	B	70	61.6	59.3	62.6	60.4	1.0	1.1	61.9	59.8	0.3	0.5
	NK_506	Residential	65	60	B	70	61.2	58.9	62.1	60.1	0.9	1.2	61.5	59.4	0.3	0.5
	NK_507	Residential	65	60	B	70	60.9	58.6	61.8	59.8	0.9	1.2	61.2	59.1	0.3	0.5
	NK_508	Residential	65	60	B	70	74.3	69.7	75.3	71.1	1.0	1.4	74.9	70.7	0.6	1.0
	NK_509	Residential	65	60	B	70	68.4	63.1	69.3	64.5	0.9	1.4	68.9	64.1	0.5	1.0
	NK_510	Residential	65	60	B	70	65.9	60.9	66.9	62.3	1.0	1.4	66.4	61.9	0.5	1.0
	NK_511	Residential	65	60	B	70	64.1	59.7	65.0	61.0	0.9	1.3	64.5	60.5	0.4	0.8
	NK_512	Residential	65	60	B	70	64.2	61.1	65.1	62.3	0.9	1.2	64.4	61.7	0.2	0.6
	NK_513	Residential	65	60	B	70	63.8	60.9	64.7	62.1	0.9	1.2	64.1	61.5	0.3	0.6
	NK_514	Residential	65	60	B	70	63.2	60.5	64.2	61.7	1.0	1.2	63.5	61.0	0.3	0.5
	NK_515	Residential	65	60	B	70	62.7	60.1	63.6	61.3	0.9	1.2	63.0	60.6	0.3	0.5
	NK_516	Residential	65	60	B	70	62.2	59.7	63.1	60.9	0.9	1.2	62.5	60.2	0.3	0.5
	NK_517	Residential	65	60	B	70	61.7	59.3	62.6	60.5	0.9	1.2	61.9	59.8	0.2	0.5
	NK_518	Residential	65	60	B	70	61.1	58.9	62.1	60.0	1.0	1.1	61.5	59.4	0.4	0.5
	NK_519	Residential	65	60	B	70	73.5	69.1	74.4	70.4	0.9	1.3	74.1	70.0	0.6	0.9
	NK_520	Residential	65	60	B	70	68.2	62.4	69.2	63.9	1.0	1.5	68.8	63.4	0.6	1.0
	NK_521	Residential	65	60	B	70	65.2	60.0	66.1	61.4	0.9	1.4	65.7	60.9	0.5	0.9

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_522	Residential	65	60	B	70	64.1	59.3	65.0	60.7	0.9	1.4	64.5	60.1	0.4	0.8
	NK_523	Residential	65	60	B	70	64.5	61.1	65.4	62.3	0.9	1.2	64.8	61.7	0.3	0.6
	NK_524	Residential	65	60	B	70	64.1	60.9	65.0	62.2	0.9	1.3	64.3	61.5	0.2	0.6
	NK_525	Residential	65	60	B	70	63.4	60.5	64.3	61.7	0.9	1.2	63.6	61.0	0.2	0.5
	NK_526	Residential	65	60	B	70	62.9	60.1	63.8	61.4	0.9	1.3	63.2	60.7	0.3	0.6
	NK_527	Residential	65	60	B	70	62.3	59.8	63.2	61.0	0.9	1.2	62.6	60.3	0.3	0.5
	NK_528	Residential	65	60	B	70	61.9	59.5	62.8	60.7	0.9	1.2	62.2	60.0	0.3	0.5
	NK_529	Residential	65	60	B	70	61.5	59.2	62.4	60.4	0.9	1.2	61.8	59.7	0.3	0.5
	NK_530	Residential	65	60	B	70	73.9	69.4	74.8	70.8	0.9	1.4	74.5	70.4	0.6	1.0
	NK_531	Residential	65	60	B	70	67.3	61.6	68.3	63.0	1.0	1.4	67.9	62.6	0.6	1.0
	NK_532	Residential	65	60	B	70	63.6	58.7	64.6	60.0	1.0	1.3	64.1	59.5	0.5	0.8
	NK_533	Residential	65	60	B	70	64.2	60.8	65.1	62.0	0.9	1.2	64.5	61.4	0.3	0.6
	NK_534	Residential	65	60	B	70	63.9	60.8	64.8	62.0	0.9	1.2	64.1	61.3	0.2	0.5
	NK_535	Residential	65	60	B	70	63.5	60.5	64.4	61.7	0.9	1.2	63.7	61.0	0.2	0.5
	NK_536	Residential	65	60	B	70	63.0	60.2	63.9	61.4	0.9	1.2	63.2	60.7	0.2	0.5
	NK_537	Residential	65	60	B	70	62.4	59.9	63.3	61.1	0.9	1.2	62.7	60.4	0.3	0.5
	NK_538	Residential	65	60	B	70	62.0	59.6	62.9	60.7	0.9	1.1	62.3	60.1	0.3	0.5
	NK_539	Residential	65	60	B	70	61.5	59.2	62.4	60.4	0.9	1.2	61.9	59.8	0.4	0.6
	NK_540	Residential	65	60	B	70	73.9	69.2	74.8	70.5	0.9	1.3	74.5	70.1	0.6	0.9
	NK_541	Residential	65	60	B	70	66.6	61.1	67.6	62.6	1.0	1.5	67.1	62.0	0.5	0.9
	NK_542	Residential	65	60	B	70	65.4	60.2	66.3	61.6	0.9	1.4	65.8	61.1	0.4	0.9
	NK_543	Residential	65	60	B	70	64.4	60.8	65.3	62.0	0.9	1.2	64.7	61.3	0.3	0.5
	NK_544	Residential	65	60	B	70	64.1	60.7	65.1	62.0	1.0	1.3	64.4	61.3	0.3	0.6
	NK_545	Residential	65	60	B	70	63.6	60.3	64.5	61.6	0.9	1.3	63.8	60.9	0.2	0.6
	NK_546	Residential	65	60	B	70	63.0	60.3	63.9	61.5	0.9	1.2	63.3	60.9	0.3	0.6
	NK_547	Residential	65	60	B	70	62.6	60.1	63.5	61.3	0.9	1.2	62.9	60.7	0.3	0.6
	NK_548	Residential	65	60	B	70	62.3	59.9	63.2	61.1	0.9	1.2	62.7	60.5	0.4	0.6
	NK_549	Residential	65	60	B	70	62.1	59.8	63.1	61.0	1.0	1.2	62.5	60.4	0.4	0.6
	NK_550	Residential	65	60	B	70	70.5	65.1	71.5	66.5	1.0	1.4	71.2	66.1	0.7	1.0
	NK_551	Residential	65	60	B	70	67.4	62.0	68.4	63.4	1.0	1.4	68.0	62.9	0.6	0.9
	NK_552	Residential	65	60	B	70	65.6	60.4	66.6	61.8	1.0	1.4	66.2	61.3	0.6	0.9
	NK_553	Residential	65	60	B	70	64.0	59.3	64.9	60.7	0.9	1.4	64.4	60.1	0.4	0.8
	NK_554	Residential	65	60	B	70	63.5	59.6	64.4	60.9	0.9	1.3	63.8	60.2	0.3	0.6
	NK_555	Residential	65	60	B	70	62.9	59.4	63.8	60.6	0.9	1.2	63.3	60.0	0.4	0.6
	NK_556	Residential	65	60	B	70	62.4	59.0	63.3	60.3	0.9	1.3	62.7	59.6	0.3	0.6
	NK_557	Residential	65	60	B	70	63.0	60.5	64.0	61.7	1.0	1.2	63.4	61.1	0.4	0.6
	NK_558	Residential	65	60	B	70	62.9	60.4	63.8	61.6	0.9	1.2	63.3	61.0	0.4	0.6
	NK_559	Residential	65	60	B	70	62.6	60.2	63.6	61.4	1.0	1.2	63.1	60.9	0.5	0.7
	NK_560	Residential	65	60	B	70	62.1	59.8	63.1	61.0	1.0	1.2	62.5	60.4	0.4	0.6
	NK_561	Industrial	80	75	F	NA	71.4	67.1	72.3	68.4	0.9	1.3	71.8	68.0	0.4	0.9

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SL	SL_1	Education	65	60	C	70	67.8	64.4	68.8	65.7	1.0	1.3	68.1	64.7	0.3	0.3
	SL_2	Office	70	65	E	75	65.4	62.1	66.3	63.4	0.9	1.3	65.8	62.7	0.4	0.6
NL	NL_1	Education	65	60	C	70	59.4	57.0	60.3	58.2	0.9	1.2	59.6	57.5	0.2	0.5
	NL_2	Residential	65	60	B	70	68.0	64.2	69.0	65.6	1.0	1.4	68.5	65.1	0.5	0.9
	NL_3	Residential	65	60	B	70	65.3	61.3	66.2	62.7	0.9	1.4	65.8	62.2	0.5	0.9
	NL_4	Residential	65	60	B	70	63.0	59.4	63.9	60.8	0.9	1.4	63.4	60.2	0.4	0.8
	NL_5	Residential	65	60	B	70	60.6	57.6	61.5	58.8	0.9	1.2	61.0	58.3	0.4	0.7
	NL_6	Residential	65	60	B	70	59.6	56.7	60.5	58.0	0.9	1.3	60.0	57.5	0.4	0.8
	NL_7	Residential	65	60	B	70	58.7	56.2	59.6	57.4	0.9	1.2	59.1	56.8	0.4	0.6
	NL_8	Residential	65	60	B	70	58.3	56.0	59.3	57.2	1.0	1.2	58.8	56.6	0.5	0.6
	NL_9	Residential	65	60	B	70	57.8	55.5	58.8	56.7	1.0	1.2	58.2	56.2	0.4	0.7
	NL_10	Residential	65	60	B	70	57.5	55.2	58.5	56.4	1.0	1.2	57.9	55.8	0.4	0.6
	NL_11	Residential	65	60	B	70	57.1	54.8	58.1	56.1	1.0	1.3	57.5	55.5	0.4	0.7
	NL_12	Residential	65	60	B	70	56.2	54.2	57.1	55.4	0.9	1.2	56.6	54.8	0.4	0.6
	NL_13	Residential	65	60	B	70	55.8	53.9	56.8	55.1	1.0	1.2	56.2	54.5	0.4	0.6
	NL_14	Residential	65	60	B	70	72.6	68.1	73.5	69.5	0.9	1.4	73.1	68.9	0.5	0.8
	NL_15	Residential	65	60	B	70	69.1	65.1	70.1	66.4	1.0	1.3	69.6	65.9	0.5	0.8
	NL_16	Residential	65	60	B	70	67.8	63.8	68.8	65.2	1.0	1.4	68.3	64.7	0.5	0.9
	NL_17	Residential	65	60	B	70	66.7	63.0	67.7	64.3	1.0	1.3	67.2	63.8	0.5	0.8
	NL_18	Residential	65	60	B	70	65.4	62.1	66.3	63.4	0.9	1.3	65.8	62.9	0.4	0.8
	NL_19	Residential	65	60	B	70	64.9	61.7	65.8	63.0	0.9	1.3	65.4	62.5	0.5	0.8
	NL_20	Residential	65	60	B	70	62.7	59.7	63.6	61.0	0.9	1.3	63.2	60.5	0.5	0.8
	NL_21	Residential	65	60	B	70	61.2	58.3	62.2	59.6	1.0	1.3	61.7	59.1	0.5	0.8
	NL_22	Residential	65	60	B	70	60.0	57.1	60.9	58.4	0.9	1.3	60.4	57.9	0.4	0.8
	NL_23	Residential	65	60	B	70	58.9	56.0	59.8	57.3	0.9	1.3	59.4	56.8	0.5	0.8
	NL_24	Residential	65	60	B	70	57.3	54.9	58.3	56.1	1.0	1.2	57.7	55.5	0.4	0.6
	NL_25	Residential	65	60	B	70	56.5	54.5	57.5	55.7	1.0	1.2	56.9	55.1	0.4	0.6
	NL_26	Residential	65	60	B	70	56.3	54.3	57.2	55.5	0.9	1.2	56.7	54.9	0.4	0.6
	NL_27	Residential	65	60	B	70	56.6	54.6	57.6	55.8	1.0	1.2	57.1	55.2	0.5	0.6
	NL_28	Residential	65	60	B	70	56.2	54.2	57.2	55.4	1.0	1.2	56.6	54.8	0.4	0.6
	NL_29	Residential	65	60	B	70	56.3	52.8	57.3	54.1	1.0	1.3	56.8	53.5	0.5	0.7
	NL_30	Residential	65	60	B	70	57.2	53.6	58.2	54.9	1.0	1.3	57.7	54.4	0.5	0.8
	NL_31	Residential	65	60	B	70	57.1	52.8	58.0	54.2	0.9	1.4	57.5	53.6	0.4	0.8
	NL_32	Residential	65	60	B	70	61.4	57.9	62.3	59.2	0.9	1.3	61.9	58.8	0.5	0.9
	NL_33	Residential	65	60	B	70	64.3	61.3	65.3	62.6	1.0	1.3	64.8	62.1	0.5	0.8
	NL_34	Residential	65	60	B	70	64.9	61.8	65.8	63.1	0.9	1.3	65.3	62.6	0.4	0.8
	NL_35	Residential	65	60	B	70	63.4	60.3	64.4	61.6	1.0	1.3	63.9	61.1	0.5	0.8
	NL_36	Residential	65	60	B	70	61.6	58.2	62.6	59.5	1.0	1.3	62.1	59.0	0.5	0.8
	NL_37	Residential	65	60	B	70	61.2	58.0	62.2	59.3	1.0	1.3	61.7	58.8	0.5	0.8
	NL_38	Residential	65	60	B	70	57.5	54.8	58.5	56.0	1.0	1.2	57.9	55.4	0.4	0.6
	NL_39	Residential	65	60	B	70	57.6	55.0	58.5	56.2	0.9	1.2	57.9	55.6	0.3	0.6
	NL_40	Residential	65	60	B	70	57.0	54.6	58.0	55.9	1.0	1.3	57.4	55.2	0.4	0.6
	NL_41	Residential	65	60	B	70	58.4	55.5	59.4	56.8	1.0	1.3	58.9	56.2	0.5	0.7
	NL_42	Residential	65	60	B	70	58.1	55.3	59.0	56.6	0.9	1.3	58.5	56.0	0.4	0.7
	NL_43	Residential	65	60	B	70	57.3	54.8	58.3	56.1	1.0	1.3	57.7	55.5	0.4	0.7
	NL_44	Residential	65	60	B	70	65.0	61.5	65.9	62.8	0.9	1.3	65.4	62.3	0.4	0.8
	NL_45	Residential	65	60	B	70	65.8	62.4	66.7	63.7	0.9	1.3	66.2	63.1	0.4	0.7
	NL_46	Residential	65	60	B	70	67.5	63.2	68.5	64.6	1.0	1.4	67.9	64.0	0.4	0.8
	NL_47	Residential	65	60	B	70	70.5	66.2	71.4	67.6	0.9	1.4	70.9	67.0	0.4	0.8
	NL_48	Residential	65	60	B	70	59.8	56.6	60.7	57.9	0.9	1.3	60.2	57.4	0.4	0.8
	NL_49	Residential	65	60	B	70	60.1	56.9	61.0	58.2	0.9	1.3	60.5	57.7	0.4	0.8
	NL_50	Residential	65	60	B	70	60.7	57.4	61.7	58.7	1.0	1.3	61.2	58.2	0.5	0.8
	NL_51	Residential	65	60	B	70	61.5	57.8	62.4	59.1	0.9	1.3	61.9	58.6	0.4	0.8
	NL_52	Residential	65	60	B	70	62.3	58.4	63.2	59.8	0.9	1.4	62.7	59.2	0.4	0.8
	NL_53	Residential	65	60	B	70	64.3	60.5	65.2	61.8	0.9	1.3	64.7	61.3	0.4	0.8
	NL_54	Residential	65	60	B	70	65.6	61.8	66.5	63.2	0.9	1.4	66.0	62.7	0.4	0.9
	NL_55	Residential	65	60	B	70	66.1	62.0	67.1	63.4	1.0	1.4	66.6	62.9	0.5	0.9
	NL_56	Trail	70	65	C	70	69.5	65.6	70.4	67.0	0.9	1.4	69.9	66.4	0.4	0.8
	NL_57	Trail	70	65	C	70	70.2	66.2	71.1	67.6	0.9	1.4	70.5	67.0	0.3	0.8
	NL_58	Trail	70	65	C	70	75.3	70.0	76.3	71.4	1.0	1.4	75.6	70.8	0.3	0.8

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NL cont...	NL_59	Trail	70	65	C	70	74.9	69.7	75.9	71.1	1.0	1.4	75.3	70.5	0.4	0.8
	NL_60	Trail	70	65	C	70	74.5	69.4	75.5	70.9	1.0	1.5	75.0	70.3	0.5	0.9
	NL_61	Trail	70	65	C	70	72.0	67.7	73.0	69.1	1.0	1.4	72.5	68.5	0.5	0.8
	NL_62	Trail	70	65	C	70	71.1	67.0	72.1	68.4	1.0	1.4	71.6	67.8	0.5	0.8
	NL_63	Trail	70	65	C	70	70.7	66.7	71.6	68.0	0.9	1.3	71.2	67.5	0.5	0.8
	NL_64	Trail	70	65	C	70	66.2	63.1	67.1	64.3	0.9	1.2	66.6	63.8	0.4	0.7
	NL_65	Trail	70	65	C	70	63.4	60.7	64.4	62.0	1.0	1.3	63.9	61.4	0.5	0.7
	NL_66	Residential	65	60	B	70	56.4	53.3	57.3	54.6	0.9	1.3	56.7	54.0	0.3	0.7
	NL_67	Residential	65	60	B	70	56.7	53.3	57.6	54.6	0.9	1.3	57.0	54.0	0.3	0.7
	NL_68	Residential	65	60	B	70	56.0	53.2	56.9	54.5	0.9	1.3	56.3	53.8	0.3	0.6
	NL_69	Residential	65	60	B	70	56.3	53.0	57.3	54.3	1.0	1.3	56.6	53.7	0.3	0.7
	NL_70	Residential	65	60	B	70	57.6	54.0	58.6	55.3	1.0	1.3	57.9	54.7	0.3	0.7
	NL_71	Residential	65	60	B	70	60.5	56.7	61.5	58.0	1.0	1.3	60.9	57.5	0.4	0.8
	NL_72	Residential	65	60	B	70	62.8	59.1	63.8	60.5	1.0	1.4	63.2	59.9	0.4	0.8
	NL_73	Residential	65	60	B	70	64.9	61.3	65.9	62.7	1.0	1.4	65.3	62.2	0.4	0.9
	NL_74	Residential	65	60	B	70	64.5	61.1	65.5	62.4	1.0	1.3	65.0	61.9	0.5	0.8
	NL_75	Residential	65	60	B	70	56.3	54.1	57.3	55.3	1.0	1.2	56.7	54.7	0.4	0.6
	NL_76	Residential	65	60	B	70	56.2	54.0	57.2	55.3	1.0	1.3	56.5	54.6	0.3	0.6
	NL_77	Residential	65	60	B	70	56.3	54.2	57.3	55.4	1.0	1.2	56.7	54.8	0.4	0.6
	NL_78	Residential	65	60	B	70	56.5	54.2	57.5	55.4	1.0	1.2	56.8	54.7	0.3	0.5
	NL_79	Residential	65	60	B	70	56.7	54.4	57.6	55.6	0.9	1.2	57.0	54.9	0.3	0.5
	NL_80	Residential	65	60	B	70	56.8	54.5	57.8	55.7	1.0	1.2	57.1	55.0	0.3	0.5
	NL_81	Residential	65	60	B	70	58.3	55.0	59.2	56.3	0.9	1.3	58.6	55.7	0.3	0.7
	NL_82	Residential	65	60	B	70	58.4	55.6	59.3	56.9	0.9	1.3	58.7	56.3	0.3	0.7
	NL_83	Residential	65	60	B	70	58.0	55.5	59.0	56.7	1.0	1.2	58.5	56.1	0.5	0.6
	NL_84	Residential	65	60	B	70	57.7	55.2	58.7	56.5	1.0	1.3	58.0	55.8	0.3	0.6
	NL_85	Residential	65	60	B	70	57.7	54.5	58.7	55.8	1.0	1.3	58.1	55.2	0.4	0.7
	NL_86	Residential	65	60	B	70	58.2	55.4	59.1	56.7	0.9	1.3	58.5	56.0	0.3	0.6
	NL_87	Residential	65	60	B	70	57.7	55.2	58.6	56.4	0.9	1.2	58.0	55.7	0.3	0.5
	NL_88	Residential	65	60	B	70	63.3	59.7	64.2	61.0	0.9	1.3	63.8	60.5	0.5	0.8
	NL_89	Residential	65	60	B	70	64.7	61.2	65.6	62.6	0.9	1.4	65.1	62.1	0.4	0.9
	NL_90	Residential	65	60	B	70	64.4	60.7	65.3	62.0	0.9	1.3	64.8	61.5	0.4	0.8
	NL_91	Residential	65	60	B	70	67.3	63.6	68.2	65.0	0.9	1.4	67.7	64.5	0.4	0.9
	NL_92	Residential	65	60	B	70	69.1	65.4	70.1	66.8	1.0	1.4	69.5	66.2	0.4	0.8
	NL_93	Residential	65	60	B	70	69.1	65.5	70.1	66.8	1.0	1.3	69.6	66.2	0.5	0.7
	NL_94	Residential	65	60	B	70	58.9	56.0	59.8	57.2	0.9	1.2	59.2	56.6	0.3	0.6
	NL_95	Residential	65	60	B	70	59.6	56.6	60.5	57.9	0.9	1.3	60.0	57.3	0.4	0.7
	NL_96	Residential	65	60	B	70	60.3	57.4	61.2	58.6	0.9	1.2	60.7	58.0	0.4	0.6
	NL_97	Residential	65	60	B	70	61.8	58.6	62.7	59.9	0.9	1.3	62.2	59.3	0.4	0.7
	NL_98	Residential	65	60	B	70	63.4	60.0	64.4	61.3	1.0	1.3	63.9	60.7	0.5	0.7
	NL_99	Trail	70	65	C	70	62.6	59.0	63.6	60.3	1.0	1.3	63.0	59.7	0.4	0.7
	NL_100	Trail	70	65	C	70	65.9	62.6	66.9	63.9	1.0	1.3	66.4	63.4	0.5	0.8
	NL_101	Trail	70	65	C	70	65.1	62.1	66.1	63.4	1.0	1.3	65.6	62.9	0.5	0.8
	NL_102	Trail	70	65	C	70	63.3	60.5	64.3	61.8	1.0	1.3	63.8	61.3	0.5	0.8
	NL_103	Residential	65	60	B	70	62.1	59.1	63.0	60.3	0.9	1.2	62.5	59.8	0.4	0.7
	NL_104	Residential	65	60	B	70	63.2	60.0	64.1	61.3	0.9	1.3	63.6	60.8	0.4	0.8
	NL_105	Residential	65	60	B	70	64.2	61.1	65.1	62.4	0.9	1.3	64.6	61.8	0.4	0.7
	NL_106	Residential	65	60	B	70	64.1	61.1	65.0	62.4	0.9	1.3	64.5	61.9	0.4	0.8
	NL_107	Residential	65	60	B	70	63.1	60.3	64.1	61.6	1.0	1.3	63.6	61.1	0.5	0.8
	NL_108	Residential	65	60	B	70	62.1	59.4	63.0	60.7	0.9	1.3	62.5	60.2	0.4	0.8
	NL_109	Residential	65	60	B	70	61.7	59.1	62.6	60.3	0.9	1.2	62.1	59.8	0.4	0.7
	NL_110	Residential	65	60	B	70	61.2	58.7	62.2	59.9	1.0	1.2	61.7	59.4	0.5	0.7
	NL_111	Residential	65	60	B	70	59.6	57.1	60.5	58.3	0.9	1.2	60.0	57.7	0.4	0.6
	NL_112	Residential	65	60	B	70	60.4	57.8	61.3	59.0	0.9	1.2	60.8	58.4	0.4	0.6
	NL_113	Residential	65	60	B	70	61.2	58.5	62.1	59.7	0.9	1.2	61.6	59.2	0.4	0.7
	NL_114	Residential	65	60	B	70	59.0	56.6	60.0	57.9	1.0	1.3	59.4	57.3	0.4	0.7
	NL_115	Residential	65	60	B	70	59.7	57.3	60.7	58.5	1.0	1.2	60.1	57.9	0.4	0.6
	NL_116	Residential	65	60	B	70	60.4	57.8	61.3	59.1	0.9	1.3	60.8	58.5	0.4	0.7
	NL_117	Residential	65	60	B	70	58.3	56.0	59.2	57.2	0.9	1.2	58.7	56.6	0.4	0.6
	NL_118	Residential	65	60	B	70	58.9	56.5	59.8	57.8	0.9	1.3	59.3	57.2	0.4	0.7

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XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NL cont...	NL_119	Residential	65	60	B	70	59.5	57.1	60.5	58.4	1.0	1.3	60.0	57.8	0.5	0.7
	NL_120	Retail	70	65	F	NA	65.6	62.4	66.5	63.6	0.9	1.2	65.9	62.8	0.3	0.4
	NL_121	Restaurant	70	65	E	75	71.9	67.3	72.9	68.7	1.0	1.4	72.2	67.7	0.3	0.4
	NL_122	Retail	70	65	F	NA	66.8	62.3	67.7	63.7	0.9	1.4	67.0	62.8	0.2	0.5

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XX	Exceeds MN State Standards
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XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SM	SM_1	Retail	70	65	F	NA	67.2	62.9	68.1	64.2	0.9	1.3	67.5	63.4	0.3	0.5
	SM_2	Restaurant	70	65	E	75	69.4	64.8	70.3	66.2	0.9	1.4	69.7	65.3	0.3	0.5
	SM_3	Restaurant	70	65	E	75	71.6	66.5	72.5	67.9	0.9	1.4	72.1	67.3	0.5	0.8
	SM_4	Retail	70	65	F	NA	63.7	60.4	64.6	61.6	0.9	1.2	64.0	60.8	0.3	0.4
	SM_5	Restaurant	70	65	E	75	69.9	65.2	70.8	66.5	0.9	1.3	70.1	65.6	0.2	0.4
	SM_6	Restaurant	70	65	E	75	62.1	57.4	63.0	58.7	0.9	1.3	62.4	57.9	0.3	0.5
	SM_7	Education	65	60	C	70	62.2	57.7	63.1	59.0	0.9	1.3	62.5	58.1	0.3	0.4
	SM_8	Office	70	65	E	75	61.7	57.4	62.6	58.7	0.9	1.3	62.0	57.8	0.3	0.4
	SM_9	Office	70	65	E	75	61.2	57.1	62.1	58.4	0.9	1.3	61.5	57.5	0.3	0.4
	SM_10	Restaurant	70	65	E	75	69.5	65.0	70.5	66.3	1.0	1.3	69.8	65.3	0.3	0.3
	SM_11	Education	65	60	C	70	65.7	60.9	66.6	62.2	0.9	1.3	65.9	61.2	0.2	0.3
	SM_12	Restaurant	70	65	E	75	62.3	57.6	63.2	58.9	0.9	1.3	62.5	57.8	0.2	0.2
	SM_13	Retail	70	65	F	NA	61.7	57.2	62.7	58.5	1.0	1.3	62.0	57.5	0.3	0.3
	SM_14	Retail	70	65	F	NA	61.9	57.5	62.8	58.8	0.9	1.3	62.1	57.8	0.2	0.3
	SM_15	Restaurant	70	65	E	75	61.5	57.3	62.4	58.6	0.9	1.3	61.7	57.6	0.2	0.3
	SM_16	Restaurant	70	65	E	75	70.5	65.8	71.5	67.2	1.0	1.4	71.2	66.4	0.7	0.6
	SM_17	Retail	70	65	F	NA	70.9	66.0	71.8	67.4	0.9	1.4	71.2	66.4	0.3	0.4
	SM_18	Retail	70	65	F	NA	66.3	62.6	67.2	63.8	0.9	1.2	66.6	62.9	0.3	0.3
NM	NM_1	Industrial	80	75	F	NA	67.1	63.3	68.0	64.6	0.9	1.3	67.1	63.5	0.0	0.2
	NM_2	Recreation	70	65	C	70	73.9	68.2	74.9	69.7	1.0	1.5	73.4	68.1	-0.5	-0.1
	NM_3	Recreation	70	65	C	70	73.4	67.8	74.3	69.3	0.9	1.5	72.7	67.6	-0.7	-0.2
	NM_4	Recreation	70	65	C	70	70.8	66.1	71.7	67.4	0.9	1.3	70.5	66.0	-0.3	-0.1
	NM_5	Trail	70	65	C	70	69.6	65.2	70.6	66.5	1.0	1.3	69.4	65.2	-0.2	0.0
	NM_6	Trail	70	65	C	70	68.3	64.2	69.3	65.5	1.0	1.3	68.3	64.3	0.0	0.1
	NM_7	Trail	70	65	C	70	67.9	63.3	68.8	64.6	0.9	1.3	67.9	63.4	0.0	0.1
	NM_8	Trail	70	65	C	70	67.1	63.3	68.0	64.6	0.9	1.3	67.1	63.4	0.0	0.1
	NM_9	Trail	70	65	C	70	65.6	62.1	66.5	63.4	0.9	1.3	65.6	62.2	0.0	0.1
	NM_10	Trail	70	65	C	70	66.4	62.7	67.3	64.0	0.9	1.3	66.3	62.8	-0.1	0.1
	NM_11	Trail	70	65	C	70	63.2	60.1	64.1	61.3	0.9	1.2	63.2	60.2	0.0	0.1
	NM_12	Trail	70	65	C	70	63.4	60.2	64.3	61.4	0.9	1.2	63.5	60.3	0.1	0.1
	NM_13	Trail	70	65	C	70	63.8	60.4	64.7	61.7	0.9	1.3	63.9	60.5	0.1	0.1
	NM_14	Residential	65	60	B	70	62.8	58.8	63.7	60.1	0.9	1.3	62.3	58.7	-0.5	-0.1
	NM_15	Residential	65	60	B	70	62.1	58.5	63.0	59.8	0.9	1.3	61.9	58.6	-0.2	0.1
	NM_16	Residential	65	60	B	70	60.6	57.5	61.5	58.8	0.9	1.3	60.7	57.7	0.1	0.2
	NM_17	Residential	65	60	B	70	60.4	57.4	61.3	58.6	0.9	1.2	60.5	57.6	0.1	0.2
	NM_18	Residential	65	60	B	70	59.5	56.6	60.4	57.8	0.9	1.2	59.8	57.0	0.3	0.4
	NM_19	Residential	65	60	B	70	59.5	56.5	60.4	57.7	0.9	1.2	60.0	56.9	0.5	0.4
	NM_20	Residential	65	60	B	70	59.5	56.5	60.4	57.7	0.9	1.2	59.9	56.8	0.4	0.3
	NM_21	Residential	65	60	B	70	59.8	56.7	60.6	57.9	0.8	1.2	60.1	57.0	0.3	0.3
	NM_22	Residential	65	60	B	70	59.7	56.5	60.5	57.7	0.8	1.2	59.9	56.7	0.2	0.2
	NM_23	Residential	65	60	B	70	60.0	56.7	60.8	57.9	0.8	1.2	60.1	56.9	0.1	0.2
	NM_24	Residential	65	60	B	70	60.2	56.8	61.1	58.1	0.9	1.3	60.2	57.0	0.0	0.2
	NM_25	Residential	65	60	B	70	60.4	57.2	61.3	58.4	0.9	1.2	60.4	57.3	0.0	0.1
	NM_26	Residential	65	60	B	70	60.6	57.3	61.5	58.6	0.9	1.3	60.5	57.4	-0.1	0.1
	NM_27	Residential	65	60	B	70	60.4	57.1	61.3	58.4	0.9	1.3	60.2	57.1	-0.2	0.0
	NM_28	Residential	65	60	B	70	61.5	58.2	62.4	59.4	0.9	1.2	61.3	58.1	-0.2	-0.1
	NM_29	Residential	65	60	B	70	62.4	58.8	63.2	60.0	0.8	1.2	62.0	58.7	-0.4	-0.1
	NM_30	Residential	65	60	B	70	62.2	58.5	63.1	59.8	0.9	1.3	61.7	58.3	-0.5	-0.2
	NM_31	Residential	65	60	B	70	66.0	61.0	66.9	62.3	0.9	1.3	65.3	60.7	-0.7	-0.3
	NM_32	Residential	65	60	B	70	65.9	61.2	66.8	62.6	0.9	1.4	65.7	61.2	-0.2	0.0
	NM_33	Residential	65	60	B	70	59.2	56.4	60.0	57.6	0.8	1.2	59.4	56.7	0.2	0.3
	NM_34	Residential	65	60	B	70	59.2	56.4	60.1	57.6	0.9	1.2	59.3	56.6	0.1	0.2
	NM_35	Residential	65	60	B	70	59.3	56.4	60.2	57.6	0.9	1.2	59.4	56.6	0.1	0.2
	NM_36	Residential	65	60	B	70	59.3	56.5	60.2	57.7	0.9	1.2	59.4	56.6	0.1	0.1
	NM_37	Residential	65	60	B	70	59.5	56.6	60.3	57.8	0.8	1.2	59.4	56.7	-0.1	0.1
	NM_38	Residential	65	60	B	70	59.7	56.8	60.6	58.0	0.9	1.2	59.7	56.9	0.0	0.1
	NM_39	Residential	65	60	B	70	60.1	57.1	61.0	58.3	0.9	1.2	60.0	57.1	-0.1	0.0
	NM_40	Residential	65	60	B	70	60.5	57.3	61.4	58.6	0.9	1.3	60.3	57.4	-0.2	0.1
	NM_41	Residential	65	60	B	70	61.0	57.7	61.9	59.0	0.9	1.3	60.8	57.8	-0.2	0.1
	NM_42	Residential	65	60	B	70	61.8	58.2	62.7	59.5	0.9	1.3	61.6	58.2	-0.2	0.0

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NM cont...	NM_43	Residential	65	60	B	70	64.2	60.0	65.1	61.3	0.9	1.3	64.0	60.0	-0.2	0.0
	NM_44	Residential	65	60	B	70	58.6	55.9	59.4	57.1	0.8	1.2	58.6	56.0	0.0	0.1
	NM_45	Residential	65	60	B	70	58.8	56.1	59.7	57.3	0.9	1.2	58.8	56.2	0.0	0.1
	NM_46	Residential	65	60	B	70	58.9	56.1	59.8	57.3	0.9	1.2	58.9	56.3	0.0	0.2
	NM_47	Residential	65	60	B	70	59.3	56.4	60.2	57.6	0.9	1.2	59.2	56.5	-0.1	0.1
	NM_48	Residential	65	60	B	70	61.0	57.6	61.9	58.8	0.9	1.2	60.8	57.6	-0.2	0.0
	NM_49	Residential	65	60	B	70	62.4	58.6	63.3	59.9	0.9	1.3	62.2	58.6	-0.2	0.0
	NM_50	Residential	65	60	B	70	61.3	57.8	62.2	59.1	0.9	1.3	61.2	57.9	-0.1	0.1

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SN	SN_1	Residential	65	60	B	70	58.2	55.3	59.1	56.5	0.9	1.2	58.5	55.6	0.3	0.3
	SN_2	Residential	65	60	B	70	58.8	55.8	59.7	57.0	0.9	1.2	59.1	56.1	0.3	0.3
	SN_3	Residential	65	60	B	70	59.5	56.3	60.4	57.6	0.9	1.3	59.8	56.7	0.3	0.4
	SN_4	Residential	65	60	B	70	60.4	57.0	61.3	58.3	0.9	1.3	60.6	57.4	0.2	0.4
	SN_5	Residential	65	60	B	70	61.3	57.7	62.2	59.0	0.9	1.3	61.5	58.0	0.2	0.3
	SN_6	Residential	65	60	B	70	62.5	58.5	63.4	59.8	0.9	1.3	62.7	58.8	0.2	0.3
	SN_7	Residential	65	60	B	70	63.7	59.2	64.6	60.5	0.9	1.3	63.9	59.5	0.2	0.3
	SN_8	Residential	65	60	B	70	64.2	58.7	65.2	60.1	1.0	1.4	64.5	59.1	0.3	0.4
	SN_9	Residential	65	60	B	70	62.2	58.0	63.1	59.3	0.9	1.3	62.4	58.4	0.2	0.4
	SN_10	Residential	65	60	B	70	61.0	57.4	61.9	58.6	0.9	1.2	61.2	57.7	0.2	0.3
	SN_11	Residential	65	60	B	70	60.7	57.3	61.6	58.5	0.9	1.2	61.0	57.6	0.3	0.3
	SN_12	Residential	65	60	B	70	59.9	56.7	60.7	57.9	0.8	1.2	60.2	57.0	0.3	0.3
	SN_13	Residential	65	60	B	70	59.1	56.0	60.0	57.2	0.9	1.2	59.4	56.4	0.3	0.4
	SN_14	Residential	65	60	B	70	58.2	55.3	59.1	56.5	0.9	1.2	58.5	55.7	0.3	0.4
	SN_15	Residential	65	60	B	70	58.8	55.8	59.7	57.0	0.9	1.2	59.1	56.2	0.3	0.4
	SN_16	Residential	65	60	B	70	59.5	56.4	60.4	57.7	0.9	1.3	59.9	56.8	0.4	0.4
	SN_17	Residential	65	60	B	70	60.0	56.8	60.9	58.0	0.9	1.2	60.4	57.2	0.4	0.4
	SN_18	Residential	65	60	B	70	60.3	57.0	61.2	58.3	0.9	1.3	60.6	57.4	0.3	0.4
	SN_19	Residential	65	60	B	70	59.8	56.3	60.7	57.5	0.9	1.2	60.0	56.6	0.2	0.3
	SN_20	Residential	65	60	B	70	59.6	56.3	60.5	57.5	0.9	1.2	59.9	56.6	0.3	0.3
	SN_21	Residential	65	60	B	70	59.7	56.5	60.5	57.7	0.8	1.2	60.0	56.8	0.3	0.3
	SN_22	Residential	65	60	B	70	59.2	56.2	60.1	57.4	0.9	1.2	59.6	56.6	0.4	0.4
	SN_23	Residential	65	60	B	70	58.8	55.8	59.7	57.0	0.9	1.2	59.1	56.2	0.3	0.4
	SN_24	Residential	65	60	B	70	58.0	55.2	58.9	56.4	0.9	1.2	58.4	55.6	0.4	0.4
	SN_25	Residential	65	60	B	70	57.5	54.7	58.4	55.9	0.9	1.2	57.9	55.1	0.4	0.4
	SN_26	Residential	65	60	B	70	58.2	55.3	59.1	56.5	0.9	1.2	58.6	55.7	0.4	0.4
	SN_27	Residential	65	60	B	70	58.6	55.6	59.4	56.8	0.8	1.2	58.9	56.0	0.3	0.4
	SN_28	Residential	65	60	B	70	59.2	56.2	60.1	57.4	0.9	1.2	59.6	56.5	0.4	0.3
	SN_29	Residential	65	60	B	70	60.0	56.7	60.9	57.9	0.9	1.2	60.3	57.1	0.3	0.4
	SN_30	Residential	65	60	B	70	60.1	56.7	61.0	57.9	0.9	1.2	60.4	57.1	0.3	0.4
	SN_31	Residential	65	60	B	70	59.8	56.6	60.7	57.8	0.9	1.2	60.1	57.0	0.3	0.4
	SN_32	Residential	65	60	B	70	59.5	56.3	60.4	57.5	0.9	1.2	59.8	56.7	0.3	0.4
	SN_33	Residential	65	60	B	70	58.4	55.5	59.3	56.7	0.9	1.2	58.8	55.9	0.4	0.4
	SN_34	Residential	65	60	B	70	58.0	55.1	58.9	56.3	0.9	1.2	58.3	55.5	0.3	0.4
	SN_35	Residential	65	60	B	70	60.3	56.8	61.2	58.0	0.9	1.2	60.6	57.1	0.3	0.3
	SN_36	Residential	65	60	B	70	59.6	56.3	60.4	57.5	0.8	1.2	59.9	56.7	0.3	0.4
	SN_37	Residential	65	60	B	70	59.1	56.0	60.0	57.2	0.9	1.2	59.5	56.4	0.4	0.4
	SN_38	Residential	65	60	B	70	58.5	55.5	59.4	56.7	0.9	1.2	58.9	55.9	0.4	0.4
	SN_39	Residential	65	60	B	70	61.0	57.4	61.8	58.6	0.8	1.2	61.3	57.7	0.3	0.3
	SN_40	Residential	65	60	B	70	60.9	57.4	61.8	58.6	0.9	1.2	61.2	57.8	0.3	0.4
	SN_41	Residential	65	60	B	70	60.3	57.0	61.2	58.2	0.9	1.2	60.7	57.4	0.4	0.4
	SN_42	Residential	65	60	B	70	60.0	56.7	60.9	58.0	0.9	1.3	60.4	57.1	0.4	0.4
	SN_43	Residential	65	60	B	70	59.7	56.5	60.6	57.7	0.9	1.2	60.1	56.9	0.4	0.4
	SN_44	Residential	65	60	B	70	59.5	56.3	60.4	57.5	0.9	1.2	59.9	56.7	0.4	0.4
	SN_45	Residential	65	60	B	70	61.2	57.7	62.1	58.9	0.9	1.2	61.6	58.1	0.4	0.4
	SN_46	Residential	65	60	B	70	61.5	57.8	62.3	59.1	0.8	1.3	61.8	58.2	0.3	0.4
	SN_47	Residential	65	60	B	70	61.4	57.8	62.3	59.1	0.9	1.3	61.8	58.2	0.4	0.4
	SN_48	Residential	65	60	B	70	61.3	57.8	62.2	59.0	0.9	1.2	61.6	58.2	0.3	0.4
	SN_49	Residential	65	60	B	70	59.8	56.6	60.7	57.8	0.9	1.2	60.2	57.0	0.4	0.4
	SN_50	Residential	65	60	B	70	59.9	56.6	60.8	57.8	0.9	1.2	60.3	57.0	0.4	0.4
	SN_51	Residential	65	60	B	70	60.3	57.0	61.2	58.2	0.9	1.2	60.7	57.4	0.4	0.4
	SN_52	Residential	65	60	B	70	60.2	56.9	61.1	58.2	0.9	1.3	60.6	57.3	0.4	0.4
	SN_53	Residential	65	60	B	70	60.9	57.2	61.8	58.5	0.9	1.3	61.2	57.5	0.3	0.3
	SN_54	Residential	65	60	B	70	61.0	57.2	61.9	58.5	0.9	1.3	61.2	57.5	0.2	0.3
	SN_55	Residential	65	60	B	70	60.9	57.2	61.8	58.4	0.9	1.2	61.2	57.5	0.3	0.3
	SN_56	Residential	65	60	B	70	61.0	57.3	61.9	58.5	0.9	1.2	61.3	57.6	0.3	0.3
	SN_57	Residential	65	60	B	70	61.0	57.3	61.9	58.6	0.9	1.3	61.3	57.6	0.3	0.3
	SN_58	Residential	65	60	B	70	60.6	56.9	61.5	58.1	0.9	1.2	60.8	57.2	0.2	0.3
	SN_59	Residential	65	60	B	70	60.6	57.0	61.5	58.2	0.9	1.2	60.9	57.3	0.3	0.3
	SN_60	Residential	65	60	B	70	60.8	57.2	61.7	58.4	0.9	1.2	61.0	57.5	0.2	0.3

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SN cont...	SN_61	Residential	65	60	B	70	60.9	57.3	61.8	58.6	0.9	1.3	61.2	57.6	0.3	0.3
	SN_62	Residential	65	60	B	70	61.3	57.6	62.2	58.8	0.9	1.2	61.5	57.9	0.2	0.3
	SN_63	Residential	65	60	B	70	61.6	57.8	62.5	59.1	0.9	1.3	61.9	58.1	0.3	0.3
	SN_64	Residential	65	60	B	70	60.5	57.2	61.4	58.4	0.9	1.2	60.9	57.6	0.4	0.4
	SN_65	Residential	65	60	B	70	60.8	57.4	61.7	58.7	0.9	1.3	61.1	57.8	0.3	0.4
	SN_66	Residential	65	60	B	70	60.8	57.5	61.7	58.7	0.9	1.2	61.2	57.9	0.4	0.4
	SN_67	Residential	65	60	B	70	61.1	57.7	62.0	59.0	0.9	1.3	61.4	58.1	0.3	0.4
NN	NN_1	Residential	65	60	B	70	73.2	67.8	74.2	69.2	1.0	1.4	73.5	68.2	0.3	0.4
	NN_2	Residential	65	60	B	70	72.3	67.1	73.2	68.5	0.9	1.4	72.5	67.5	0.2	0.4
	NN_3	Residential	65	60	B	70	71.2	66.4	72.2	67.8	1.0	1.4	71.5	66.8	0.3	0.4
	NN_4	Residential	65	60	B	70	70.4	65.8	71.3	67.1	0.9	1.3	70.6	66.1	0.2	0.3
	NN_5	Residential	65	60	B	70	69.6	65.2	70.6	66.6	1.0	1.4	69.9	65.6	0.3	0.4
	NN_6	Residential	65	60	B	70	68.9	64.7	69.8	66.0	0.9	1.3	69.2	65.0	0.3	0.3
	NN_7	Residential	65	60	B	70	68.2	64.1	69.1	65.4	0.9	1.3	68.5	64.5	0.3	0.4
	NN_8	Residential	65	60	B	70	67.6	63.6	68.5	64.9	0.9	1.3	67.8	64.0	0.2	0.4
	NN_9	Residential	65	60	B	70	66.9	63.0	67.8	64.3	0.9	1.3	67.1	63.3	0.2	0.3
	NN_10	Residential	65	60	B	70	66.4	62.5	67.3	63.8	0.9	1.3	66.7	62.9	0.3	0.4
	NN_11	Residential	65	60	B	70	66.2	62.3	67.1	63.6	0.9	1.3	66.5	62.6	0.3	0.3
	NN_12	Residential	65	60	B	70	64.2	60.5	65.1	61.8	0.9	1.3	64.5	60.8	0.3	0.3
	NN_13	Residential	65	60	B	70	61.8	58.5	62.7	59.8	0.9	1.3	62.1	58.8	0.3	0.3
	NN_14	Residential	65	60	B	70	60.3	57.2	61.2	58.4	0.9	1.2	60.6	57.5	0.3	0.3
	NN_15	Residential	65	60	B	70	64.1	60.7	65.0	62.0	0.9	1.3	64.4	61.0	0.3	0.3
	NN_16	Residential	65	60	B	70	62.5	59.3	63.4	60.5	0.9	1.2	62.7	59.6	0.2	0.3
	NN_17	Residential	65	60	B	70	60.9	57.9	61.8	59.1	0.9	1.2	61.1	58.2	0.2	0.3
	NN_18	Residential	65	60	B	70	59.9	57.0	60.8	58.2	0.9	1.2	60.1	57.3	0.2	0.3
	NN_19	Residential	65	60	B	70	63.9	60.3	64.9	61.6	1.0	1.3	64.3	60.6	0.4	0.3
	NN_20	Residential	65	60	B	70	62.5	59.2	63.4	60.5	0.9	1.3	62.8	59.6	0.3	0.4
	NN_21	Residential	65	60	B	70	62.0	58.8	63.0	60.0	1.0	1.2	62.3	59.1	0.3	0.3
	NN_22	Residential	65	60	B	70	61.4	58.4	62.3	59.6	0.9	1.2	61.6	58.7	0.2	0.3
	NN_23	Residential	65	60	B	70	60.6	57.7	61.5	58.9	0.9	1.2	60.8	58.0	0.2	0.3
	NN_24	Residential	65	60	B	70	59.4	56.6	60.3	57.8	0.9	1.2	59.7	56.9	0.3	0.3
	NN_25	Residential	65	60	B	70	69.6	64.6	70.5	65.9	0.9	1.3	69.9	65.0	0.3	0.4
	NN_26	Residential	65	60	B	70	67.9	62.5	68.9	63.9	1.0	1.4	68.2	62.9	0.3	0.4
	NN_27	Residential	65	60	B	70	67.4	61.9	68.4	63.3	1.0	1.4	67.7	62.3	0.3	0.4
	NN_28	Residential	65	60	B	70	65.5	59.8	66.5	61.2	1.0	1.4	65.8	60.2	0.3	0.4
	NN_29	Residential	65	60	B	70	67.5	62.2	68.4	63.6	0.9	1.4	67.8	62.6	0.3	0.4
	NN_30	Residential	65	60	B	70	63.8	57.5	64.8	59.0	1.0	1.5	64.0	57.9	0.2	0.4
	NN_31	Residential	65	60	B	70	63.5	57.9	64.5	59.3	1.0	1.4	63.7	58.3	0.2	0.4
	NN_32	Residential	65	60	B	70	64.0	58.5	65.0	59.9	1.0	1.4	64.3	58.9	0.3	0.4
	NN_33	Residential	65	60	B	70	65.7	60.6	66.7	62.0	1.0	1.4	66.0	61.0	0.3	0.4
	NN_34	Residential	65	60	B	70	57.0	53.5	57.9	54.8	0.9	1.3	57.4	53.9	0.4	0.4
	NN_35	Residential	65	60	B	70	57.2	53.8	58.1	55.0	0.9	1.2	57.5	54.1	0.3	0.3
	NN_36	Residential	65	60	B	70	62.3	56.4	63.3	57.8	1.0	1.4	62.6	56.8	0.3	0.4
	NN_37	Residential	65	60	B	70	65.7	61.6	66.6	62.9	0.9	1.3	65.9	61.9	0.2	0.3
	NN_38	Residential	65	60	B	70	62.7	57.2	63.7	58.6	1.0	1.4	63.0	57.6	0.3	0.4
	NN_39	Residential	65	60	B	70	62.7	57.5	63.7	58.9	1.0	1.4	63.0	57.9	0.3	0.4
	NN_40	Residential	65	60	B	70	57.1	52.3	58.0	53.6	0.9	1.3	57.3	52.6	0.2	0.3
	NN_41	Residential	65	60	B	70	60.0	54.2	60.9	55.6	0.9	1.4	60.2	54.6	0.2	0.4
	NN_42	Residential	65	60	B	70	58.4	53.8	59.3	55.1	0.9	1.3	58.7	54.2	0.3	0.4
	NN_43	Residential	65	60	B	70	64.1	59.4	65.1	60.7	1.0	1.3	64.5	59.7	0.4	0.3
	NN_44	Residential	65	60	B	70	57.5	49.5	58.7	51.0	1.2	1.5	58.2	50.1	0.7	0.6
	NN_45	Residential	65	60	B	70	57.5	50.4	58.6	51.8	1.1	1.4	58.1	50.8	0.6	0.4
	NN_46	Residential	65	60	B	70	57.8	51.1	58.9	52.5	1.1	1.4	58.4	51.5	0.6	0.4
	NN_47	Residential	65	60	B	70	57.6	51.1	58.8	52.5	1.2	1.4	58.2	51.4	0.6	0.3
	NN_48	Residential	65	60	B	70	58.5	52.2	59.6	53.6	1.1	1.4	59.0	52.6	0.5	0.4
	NN_49	Residential	65	60	B	70	69.0	64.2	69.9	65.6	0.9	1.4	69.2	64.6	0.2	0.4
	NN_50	Residential	65	60	B	70	70.2	65.0	71.2	66.4	1.0	1.4	70.5	65.3	0.3	0.3
	NN_51	Residential	65	60	B	70	65.9	60.2	66.9	61.6	1.0	1.4	66.2	60.6	0.3	0.4
	NN_52	Residential	65	60	B	70	67.4	62.2	68.4	63.6	1.0	1.4	67.7	62.5	0.3	0.3
	NN_53	Residential	65	60	B	70	65.0	59.4	66.0	60.8	1.0	1.4	65.3	59.9	0.3	0.5

Table B1

Daytime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria
XX	Increase of 5dBA or more (FHWA L10)

Receptor			Minnesota Standards		FHWA Noise Abatement Criteria		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	Land Use	L_{10}	L_{50}	Criteria	L10	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NN cont...	NN_54	Residential	65	60	B	70	62.6	57.1	63.6	58.5	1.0	1.4	63.0	57.5	0.4	0.4
	NN_55	Residential	65	60	B	70	65.8	60.7	66.7	62.1	0.9	1.4	66.0	61.1	0.2	0.4
	NN_56	Residential	65	60	B	70	62.1	55.7	63.1	57.2	1.0	1.5	62.4	56.2	0.3	0.5
	NN_57	Residential	65	60	B	70	56.7	52.9	57.6	54.2	0.9	1.3	57.0	53.3	0.3	0.4
	NN_58	Residential	65	60	B	70	64.2	59.4	65.1	60.8	0.9	1.4	64.4	59.8	0.2	0.4
	NN_59	Residential	65	60	B	70	60.3	55.5	61.2	56.8	0.9	1.3	60.6	55.9	0.3	0.4
	NN_60	Residential	65	60	B	70	58.6	52.8	59.5	54.2	0.9	1.4	58.9	53.2	0.3	0.4
	NN_61	Residential	65	60	B	70	58.7	53.1	59.6	54.5	0.9	1.4	59.0	53.5	0.3	0.4
	NN_62	Residential	65	60	B	70	58.3	53.3	59.3	54.7	1.0	1.4	58.6	53.7	0.3	0.4
	NN_63	Residential	65	60	B	70	57.0	51.9	58.0	53.3	1.0	1.4	57.3	52.3	0.3	0.4
	NN_64	Residential	65	60	B	70	60.6	56.6	61.5	57.9	0.9	1.3	60.8	57.0	0.2	0.4
	NN_65	Residential	65	60	B	70	58.3	51.8	59.4	53.2	1.1	1.4	58.9	52.2	0.6	0.4
	NN_66	Residential	65	60	B	70	56.1	49.5	57.2	50.9	1.1	1.4	56.6	49.8	0.5	0.3
	NN_67	Residential	65	60	B	70	56.3	50.2	57.4	51.6	1.1	1.4	56.8	50.5	0.5	0.3
	NN_68	Residential	65	60	B	70	56.1	50.6	57.1	52.0	1.0	1.4	56.6	51.0	0.5	0.4
	NN_69	Residential	65	60	B	70	55.7	50.5	56.7	51.8	1.0	1.3	56.2	50.8	0.5	0.3
	NN_70	Residential	65	60	B	70	60.3	56.3	61.2	57.6	0.9	1.3	60.6	56.7	0.3	0.4
	NN_71	Residential	65	60	B	70	61.9	55.9	62.9	57.3	1.0	1.4	62.4	56.2	0.5	0.3
	NN_72	Residential	65	60	B	70	60.0	56.9	60.9	58.2	0.9	1.3	60.3	57.3	0.3	0.4
	NN_73	Residential	65	60	B	70	58.6	55.9	59.5	57.1	0.9	1.2	58.8	56.2	0.2	0.3
	NN_74	Residential	65	60	B	70	58.1	55.4	59.0	56.6	0.9	1.2	58.3	55.7	0.2	0.3
	NN_75	Residential	65	60	B	70	59.7	55.5	60.7	56.7	1.0	1.2	60.2	55.8	0.5	0.3
	NN_76	Residential	65	60	B	70	58.7	55.7	59.6	56.9	0.9	1.2	59.1	56.1	0.4	0.4
	NN_77	Residential	65	60	B	70	58.3	55.6	59.2	56.8	0.9	1.2	58.6	56.0	0.3	0.4
	NN_78	Residential	65	60	B	70	57.6	55.0	58.5	56.2	0.9	1.2	57.8	55.3	0.2	0.3
	NN_79	Residential	65	60	B	70	59.7	55.6	60.7	56.9	1.0	1.3	60.2	56.0	0.5	0.4
	NN_80	Residential	65	60	B	70	58.6	55.6	59.6	56.8	1.0	1.2	59.0	56.0	0.4	0.4
	NN_81	Residential	65	60	B	70	57.8	55.2	58.7	56.4	0.9	1.2	58.1	55.5	0.3	0.3
	NN_82	Residential	65	60	B	70	57.4	54.9	58.3	56.0	0.9	1.1	57.6	55.2	0.2	0.3
	NN_83	Religious	65	60	C	70	65.0	60.7	65.9	62.0	0.9	1.3	65.2	61.0	0.2	0.3
	NN_84	Residential	65	60	B	70	60.0	55.5	61.1	56.8	1.1	1.3	60.6	55.8	0.6	0.3
	NN_85	Residential	65	60	B	70	58.3	55.4	59.2	56.6	0.9	1.2	58.7	55.8	0.4	0.4
	NN_86	Residential	65	60	B	70	58.3	55.3	59.3	56.5	1.0	1.2	58.7	55.7	0.4	0.4
	NN_87	Residential	65	60	B	70	60.5	55.1	61.5	56.5	1.0	1.4	61.0	55.4	0.5	0.3
	NN_88	Residential	65	60	B	70	61.1	54.2	62.2	55.6	1.1	1.4	61.6	54.5	0.5	0.3
	NN_89	Residential	65	60	B	70	59.1	55.2	60.0	56.4	0.9	1.2	59.5	55.5	0.4	0.3
	NN_90	Residential	65	60	B	70	59.1	55.0	60.1	56.2	1.0	1.2	59.5	55.3	0.4	0.3
	NN_91	Residential	65	60	B	70	61.0	53.1	62.1	54.6	1.1	1.5	61.5	53.5	0.5	0.4
	NN_92	Residential	65	60	B	70	60.5	53.2	61.6	54.6	1.1	1.4	61.0	53.6	0.5	0.4
	NN_93	Residential	65	60	B	70	58.0	54.4	59.0	55.6	1.0	1.2	58.5	54.6	0.5	0.2

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SA	SA_1	80	75	69.8	67.1	70.4	68.0	0.6	0.9	70.1	67.7	0.3	0.6
	SA_2	70	65	70.3	67.7	71.0	68.5	0.7	0.8	70.1	67.7	-0.2	0.0
	SA_3	80	75	71.5	68.7	72.1	69.6	0.6	0.9	71.2	68.3	-0.3	-0.4
	SA_4	70	65	68.8	66.5	69.5	67.3	0.7	0.8	68.7	66.3	-0.1	-0.2
	SA_5	70	65	68.8	66.4	69.5	67.3	0.7	0.9	68.8	66.3	0.0	-0.1
	SA_6	70	65	69.8	66.7	70.5	67.6	0.7	0.9	70.0	66.7	0.2	0.0
NA	NA_1	70	65	68.1	65.5	68.8	66.4	0.7	0.9	68.7	66.3	0.6	0.8
	NA_2	70	65	69.5	66.9	70.2	67.8	0.7	0.9	69.8	67.3	0.3	0.4
	NA_3	55	50	67.9	65.4	68.6	66.3	0.7	0.9	67.8	64.9	-0.1	-0.5
	NA_4	70	65	70.7	66.7	71.4	67.7	0.7	1.0	70.6	66.5	-0.1	-0.2
	NA_5	70	65	67.0	64.3	67.8	65.2	0.8	0.9	67.0	64.1	0.0	-0.2
	NA_6	70	65	71.2	67.2	71.9	68.2	0.7	1.0	70.7	66.6	-0.5	-0.6
	NA_7	70	65	67.3	64.0	68.0	64.9	0.7	0.9	67.4	63.8	0.1	-0.2
	NA_8	70	65	71.6	68.0	72.3	68.9	0.7	0.9	70.9	67.0	-0.7	-1.0

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SB	SB_1	70	65	72.6	69.5	73.2	70.4	0.6	0.9	72.2	69.1	-0.4	-0.4
	SB_2	70	65	71.7	68.9	72.3	69.7	0.6	0.8	71.7	68.7	0.0	-0.2
	SB_3	70	65	71.3	68.5	71.9	69.4	0.6	0.9	71.3	68.4	0.0	-0.1
	SB_4	80	75	74.5	71.1	75.1	71.9	0.6	0.8	74.5	70.9	0.0	-0.2
	SB_5	80	75	67.6	65.0	68.2	65.8	0.6	0.8	67.5	65.0	-0.1	0.0
NB	NB_1	70	65	74.3	70.9	75.0	71.8	0.7	0.9	73.6	70.1	-0.7	-0.8
	NB_2	70	65	68.6	66.3	69.3	67.2	0.7	0.9	68.2	65.9	-0.4	-0.4
	NB_3	70	65	65.8	63.9	66.5	64.8	0.7	0.9	65.6	63.7	-0.2	-0.2
	NB_4	70	65	78.1	73.6	78.7	74.5	0.6	0.9	76.9	72.5	-1.2	-1.1
	NB_5	70	65	74.1	70.7	74.7	71.6	0.6	0.9	73.2	69.9	-0.9	-0.8
	NB_6	70	65	78.1	73.6	78.7	74.5	0.6	0.9	77.2	72.7	-0.9	-0.9
	NB_7	70	65	77.8	73.4	78.5	74.3	0.7	0.9	77.2	72.7	-0.6	-0.7
	NB_8	70	65	77.6	73.3	78.2	74.2	0.6	0.9	77.0	72.6	-0.6	-0.7
	NB_9	70	65	77.1	72.9	77.7	73.8	0.6	0.9	76.5	72.3	-0.6	-0.6
	NB_10	70	65	68.7	65.8	69.3	66.7	0.6	0.9	68.4	65.5	-0.3	-0.3
	NB_11	70	65	77.4	73.1	78.1	74.0	0.7	0.9	76.7	72.5	-0.7	-0.6
	NB_12	55	50	75.2	71.2	75.9	72.1	0.7	0.9	74.6	70.6	-0.6	-0.6
	NB_13	70	65	77.8	73.3	78.4	74.3	0.6	1.0	77.0	72.7	-0.8	-0.6
	NB_14	70	65	63.9	61.2	64.6	62.1	0.7	0.9	63.7	61.1	-0.2	-0.1
	NB_15	70	65	77.9	73.4	78.5	74.3	0.6	0.9	76.9	72.6	-1.0	-0.8
	NB_16	70	65	78.3	73.7	79.0	74.6	0.7	0.9	77.2	72.8	-1.1	-0.9
	NB_17	70	65	74.9	71.2	75.5	72.1	0.6	0.9	74.1	70.6	-0.8	-0.6
	NB_18	70	65	77.4	73.1	78.1	74.0	0.7	0.9	76.3	72.2	-1.1	-0.9
	NB_19	55	50	77.4	73.1	78.1	74.0	0.7	0.9	76.2	72.2	-1.2	-0.9
	NB_20	70	65	78.2	73.6	78.9	74.6	0.7	1.0	76.9	72.7	-1.3	-0.9
	NB_21	70	65	79.4	74.3	80.0	75.3	0.6	1.0	77.9	73.4	-1.5	-0.9
	NB_22	70	65	78.9	74.0	79.6	75.0	0.7	1.0	77.9	73.4	-1.0	-0.6
	NB_23	70	65	65.6	63.2	66.3	64.0	0.7	0.8	65.3	62.9	-0.3	-0.3
	NB_24	70	65	78.2	73.7	78.9	74.6	0.7	0.9	77.8	73.3	-0.4	-0.4
	NB_25	55	50	77.0	72.8	77.6	73.7	0.6	0.9	76.6	72.5	-0.4	-0.3
	NB_26	70	65	77.5	73.2	78.1	74.1	0.6	0.9	77.1	72.8	-0.4	-0.4
	NB_27	70	65	71.1	67.8	71.7	68.6	0.6	0.8	70.7	67.3	-0.4	-0.5
	NB_28	70	65	74.6	71.0	75.2	71.9	0.6	0.9	74.3	70.7	-0.3	-0.3
	NB_29	70	65	71.8	68.3	72.5	69.2	0.7	0.9	71.6	67.9	-0.2	-0.4
	NB_30	70	65	70.0	66.9	70.6	67.8	0.6	0.9	69.8	66.6	-0.2	-0.3
	NB_31	70	65	69.2	65.6	69.9	66.5	0.7	0.9	69.2	65.4	0.0	-0.2
	NB_32	70	65	69.3	64.8	70.0	65.8	0.7	1.0	69.6	64.5	0.3	-0.3
	NB_33	70	65	71.3	64.8	72.0	65.9	0.7	1.1	71.2	64.5	-0.1	-0.3
	NB_34	70	65	66.1	64.0	66.7	64.8	0.6	0.8	65.8	63.7	-0.3	-0.3

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SC	SC_1	70	65	75.2	71.4	75.8	72.3	0.6	0.9	74.7	70.8	-0.5	-0.6
	SC_2	70	65	75.5	71.6	76.1	72.5	0.6	0.9	74.9	70.8	-0.6	-0.8
	SC_3	70	65	75.1	71.4	75.7	72.2	0.6	0.8	74.2	70.3	-0.9	-1.1
	SC_4	80	75	73.3	70.2	74.0	71.1	0.7	0.9	73.1	69.9	-0.2	-0.3
	SC_5	80	75	71.4	68.5	72.0	69.4	0.6	0.9	71.2	68.2	-0.2	-0.3
	SC_6	80	75	69.7	67.2	70.4	68.1	0.7	0.9	69.6	67.0	-0.1	-0.2
	SC_7	80	75	72.0	69.2	72.7	70.1	0.7	0.9	71.9	69.0	-0.1	-0.2
	SC_8	80	75	70.6	68.1	71.3	68.9	0.7	0.8	70.6	68.0	0.0	-0.1
	SC_9	80	75	71.0	68.4	71.6	69.2	0.6	0.8	71.1	68.4	0.1	0.0
	SC_10	80	75	69.0	66.6	69.6	67.4	0.6	0.8	69.0	66.5	0.0	-0.1
NC	NC_1	70	65	67.5	65.1	68.2	65.9	0.7	0.8	67.4	64.9	-0.1	-0.2
	NC_2	55	50	66.7	64.5	67.3	65.3	0.6	0.8	66.4	64.2	-0.3	-0.3
	NC_3	55	50	66.8	64.6	67.4	65.4	0.6	0.8	66.5	64.2	-0.3	-0.4
	NC_4	55	50	67.5	65.2	68.1	66.0	0.6	0.8	67.1	64.7	-0.4	-0.5
	NC_5	55	50	66.8	64.4	67.4	65.3	0.6	0.9	66.4	64.0	-0.4	-0.4
	NC_6	55	50	67.2	64.8	67.8	65.6	0.6	0.8	66.8	64.3	-0.4	-0.5
	NC_7	55	50	66.8	64.2	67.4	65.0	0.6	0.8	66.3	63.6	-0.5	-0.6
	NC_8_1	55	50	65.5	62.6	66.1	63.4	0.6	0.8	65.1	62.0	-0.4	-0.6
	NC_8_2	55	50	66.0	63.2	66.6	64.0	0.6	0.8	65.7	62.7	-0.3	-0.5
	NC_8_3	55	50	66.2	63.5	66.8	64.3	0.6	0.8	65.9	63.2	-0.3	-0.3
	NC_9_1	55	50	65.5	62.3	66.1	63.1	0.6	0.8	65.1	61.8	-0.4	-0.5
	NC_9_2	55	50	66.2	63.3	66.9	64.1	0.7	0.8	65.9	62.9	-0.3	-0.4
	NC_9_3	55	50	66.4	63.7	67.1	64.5	0.7	0.8	66.2	63.4	-0.2	-0.3
	NC_10_1	55	50	65.4	62.0	66.1	62.9	0.7	0.9	65.1	61.5	-0.3	-0.5
	NC_10_2	55	50	66.0	62.9	66.7	63.8	0.7	0.9	65.7	62.5	-0.3	-0.4
	NC_10_3	55	50	66.2	63.2	66.8	64.1	0.6	0.9	66.0	63.0	-0.2	-0.2
	NC_11_1	55	50	66.3	62.8	66.9	63.7	0.6	0.9	65.8	62.3	-0.5	-0.5
	NC_11_2	55	50	66.5	63.2	67.2	64.1	0.7	0.9	66.2	62.8	-0.3	-0.4
	NC_11_3	55	50	66.6	63.3	67.2	64.2	0.6	0.9	66.4	63.1	-0.2	-0.2
	NC_12_1	55	50	67.9	64.2	68.5	65.1	0.6	0.9	67.4	63.6	-0.5	-0.6
	NC_12_2	55	50	68.2	64.6	68.8	65.5	0.6	0.9	67.8	64.2	-0.4	-0.4
	NC_12_3	55	50	68.2	64.8	68.9	65.7	0.7	0.9	68.0	64.6	-0.2	-0.2
	NC_13_1	55	50	68.4	64.7	69.1	65.6	0.7	0.9	68.0	64.1	-0.4	-0.6
	NC_13_2	55	50	68.7	65.1	69.3	66.0	0.6	0.9	68.4	64.6	-0.3	-0.5
	NC_13_3	55	50	68.8	65.2	69.4	66.1	0.6	0.9	68.6	65.0	-0.2	-0.2
	NC_14_1	55	50	69.7	65.8	70.3	66.7	0.6	0.9	69.2	65.0	-0.5	-0.8
	NC_14_2	55	50	69.8	66.0	70.4	66.9	0.6	0.9	69.5	65.5	-0.3	-0.5
	NC_14_3	55	50	69.8	66.0	70.4	66.9	0.6	0.9	69.6	65.7	-0.2	-0.3
	NC_15_1	55	50	69.4	65.0	70.0	65.9	0.6	0.9	69.1	64.4	-0.3	-0.6
	NC_15_2	55	50	70.2	66.4	70.8	67.3	0.6	0.9	70.1	66.1	-0.1	-0.3
	NC_15_3	55	50	70.2	66.4	70.9	67.3	0.7	0.9	70.2	66.4	0.0	0.0
	NC_16_1	55	50	68.1	64.1	68.7	65.0	0.6	0.9	67.8	63.7	-0.3	-0.4
	NC_16_2	55	50	69.0	65.4	69.6	66.2	0.6	0.8	68.8	64.9	-0.2	-0.5
	NC_16_3	55	50	69.1	65.6	69.8	66.5	0.7	0.9	69.1	65.5	0.0	-0.1
	NC_17_1	55	50	67.6	63.8	68.3	64.7	0.7	0.9	67.3	63.3	-0.3	-0.5
	NC_17_2	55	50	68.4	64.8	69.0	65.7	0.6	0.9	68.2	64.4	-0.2	-0.4
	NC_17_3	55	50	68.6	65.1	69.2	66.0	0.6	0.9	68.5	65.0	-0.1	-0.1
	NC_18_1	55	50	66.6	62.8	67.2	63.7	0.6	0.9	66.2	62.2	-0.4	-0.6
	NC_18_2	55	50	67.1	63.4	67.7	64.3	0.6	0.9	66.8	63.1	-0.3	-0.3
	NC_18_3	55	50	67.3	63.8	67.9	64.7	0.6	0.9	67.2	63.7	-0.1	-0.1
	NC_19_1	55	50	65.9	62.3	66.5	63.1	0.6	0.8	65.4	61.5	-0.5	-0.8
	NC_19_2	55	50	66.3	62.8	67.0	63.7	0.7	0.9	66.1	62.4	-0.2	-0.4
	NC_19_3	55	50	66.6	63.4	67.3	64.3	0.7	0.9	66.6	63.3	0.0	-0.1
	NC_20_1	55	50	65.9	62.4	66.5	63.2	0.6	0.8	65.4	61.6	-0.5	-0.8
	NC_20_2	55	50	66.4	63.0	67.1	63.9	0.7	0.9	66.1	62.5	-0.3	-0.5
	NC_20_3	55	50	66.8	63.7	67.4	64.5	0.6	0.8	66.7	63.5	-0.1	-0.2
	NC_21_1	55	50	65.6	62.0	66.2	62.9	0.6	0.9	65.0	61.2	-0.6	-0.8
	NC_21_2	55	50	66.0	62.7	66.6	63.5	0.6	0.8	65.7	62.2	-0.3	-0.5
	NC_21_3	55	50	66.4	63.3	67.0	64.2	0.6	0.9	66.3	63.2	-0.1	-0.1
	NC_22_1	55	50	59.6	52.3	60.4	53.5	0.8	1.2	60.3	53.3	0.7	1.0

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NC cont...	NC_22_2	55	50	60.1	53.2	60.8	54.4	0.7	1.2	60.7	54.1	0.6	0.9
	NC_22_3	55	50	61.9	56.8	62.5	57.9	0.6	1.1	62.3	57.5	0.4	0.7
	NC_23_1	55	50	58.5	51.8	59.2	53.0	0.7	1.2	59.1	52.8	0.6	1.0
	NC_23_2	55	50	59.1	53.0	59.8	54.2	0.7	1.2	59.6	53.9	0.5	0.9
	NC_23_3	55	50	61.3	57.4	61.9	58.4	0.6	1.0	61.6	58.0	0.3	0.6
	NC_24_1	55	50	57.7	51.8	58.4	52.9	0.7	1.1	58.2	52.7	0.5	0.9
	NC_24_2	55	50	58.3	52.9	58.9	54.0	0.6	1.1	58.7	53.7	0.4	0.8
	NC_24_3	55	50	60.6	57.4	61.2	58.3	0.6	0.9	60.9	57.8	0.3	0.4
	NC_25_1	55	50	57.6	51.7	58.3	52.9	0.7	1.2	58.2	52.6	0.6	0.9
	NC_25_2	55	50	58.3	53.0	58.9	54.1	0.6	1.1	58.7	53.8	0.4	0.8
	NC_25_3	55	50	60.6	57.4	61.2	58.3	0.6	0.9	60.9	57.9	0.3	0.5
	NC_26_1	55	50	59.0	52.0	59.7	53.2	0.7	1.2	59.6	53.0	0.6	1.0
	NC_26_2	55	50	59.7	53.4	60.4	54.6	0.7	1.2	60.2	54.3	0.5	0.9
	NC_26_3	55	50	61.8	57.6	62.3	58.6	0.5	1.0	62.1	58.1	0.3	0.5
	NC_27_1	55	50	59.7	52.3	60.4	53.6	0.7	1.3	60.3	53.4	0.6	1.1
	NC_27_2	55	50	60.2	53.4	61.0	54.6	0.8	1.2	60.8	54.3	0.6	0.9
	NC_27_3	55	50	62.1	57.2	62.7	58.2	0.6	1.0	62.4	57.8	0.3	0.6
	NC_28_1	55	50	65.8	62.3	66.4	63.1	0.6	0.8	65.3	61.4	-0.5	-0.9
	NC_28_2	55	50	66.2	62.8	66.8	63.7	0.6	0.9	65.9	62.4	-0.3	-0.4
	NC_28_3	55	50	66.5	63.5	67.2	64.3	0.7	0.8	66.5	63.3	0.0	-0.2
	NC_29_1	55	50	66.2	62.6	66.8	63.5	0.6	0.9	65.7	61.9	-0.5	-0.7
	NC_29_2	55	50	66.6	63.2	67.3	64.1	0.7	0.9	66.4	62.8	-0.2	-0.4
	NC_29_3	55	50	67.0	63.9	67.6	64.7	0.6	0.8	66.9	63.7	-0.1	-0.2
	NC_30_1	55	50	66.2	62.6	66.9	63.5	0.7	0.9	65.8	61.9	-0.4	-0.7
	NC_30_2	55	50	66.6	63.2	67.3	64.0	0.7	0.8	66.5	62.8	-0.1	-0.4
	NC_30_3	55	50	66.9	63.7	67.5	64.5	0.6	0.8	66.9	63.6	0.0	-0.1
	NC_31_1	55	50	67.0	63.2	67.6	64.1	0.6	0.9	66.7	62.7	-0.3	-0.5
	NC_31_2	55	50	67.4	63.9	68.1	64.7	0.7	0.8	67.4	63.6	0.0	-0.3
	NC_31_3	55	50	67.6	64.1	68.2	65.0	0.6	0.9	67.7	64.1	0.1	0.0
	NC_32_1	55	50	68.3	64.3	68.9	65.2	0.6	0.9	68.2	63.9	-0.1	-0.4
	NC_32_2	55	50	69.1	65.3	69.7	66.2	0.6	0.9	69.0	65.1	-0.1	-0.2
	NC_32_3	55	50	69.2	65.6	69.8	66.4	0.6	0.8	69.4	65.6	0.2	0.0
	NC_33_1	55	50	69.0	64.7	69.7	65.6	0.7	0.9	68.9	64.3	-0.1	-0.4
	NC_33_2	55	50	70.0	66.2	70.6	67.1	0.6	0.9	70.0	65.9	0.0	-0.3
	NC_33_3	55	50	70.1	66.3	70.7	67.2	0.6	0.9	70.3	66.4	0.2	0.1
	NC_34_1	55	50	70.4	65.8	71.1	66.8	0.7	1.0	70.4	65.4	0.0	-0.4
	NC_34_2	55	50	71.1	67.0	71.7	67.9	0.6	0.9	71.2	66.8	0.1	-0.2
	NC_34_3	55	50	71.1	67.0	71.7	67.9	0.6	0.9	71.4	67.2	0.3	0.2
	NC_35_1	55	50	71.5	67.3	72.1	68.2	0.6	0.9	71.9	67.5	0.4	0.2
	NC_35_2	55	50	71.7	67.6	72.3	68.5	0.6	0.9	72.2	68.1	0.5	0.5
	NC_35_3	55	50	71.7	67.7	72.4	68.6	0.7	0.9	72.3	68.4	0.6	0.7
	NC_36_1	55	50	70.3	66.3	70.9	67.2	0.6	0.9	70.6	66.5	0.3	0.2
	NC_36_2	55	50	70.5	66.7	71.1	67.6	0.6	0.9	70.9	67.1	0.4	0.4
	NC_36_3	55	50	70.6	67.0	71.3	67.9	0.7	0.9	71.2	67.6	0.6	0.6
	NC_37_1	55	50	69.4	65.5	70.0	66.4	0.6	0.9	69.7	65.7	0.3	0.2
	NC_37_2	55	50	69.6	65.9	70.3	66.8	0.7	0.9	70.1	66.3	0.5	0.4
	NC_37_3	55	50	69.8	66.3	70.5	67.2	0.7	0.9	70.3	66.9	0.5	0.6
	NC_38_1	55	50	68.0	64.0	68.6	64.9	0.6	0.9	68.2	64.3	0.2	0.3
	NC_38_2	55	50	68.2	64.5	68.9	65.4	0.7	0.9	68.6	64.9	0.4	0.4
	NC_38_3	55	50	68.5	65.0	69.1	65.8	0.6	0.8	68.9	65.5	0.4	0.5
	NC_39_1	55	50	67.1	63.4	67.8	64.3	0.7	0.9	67.4	63.7	0.3	0.3
	NC_39_2	55	50	67.5	64.0	68.1	64.9	0.6	0.9	67.8	64.3	0.3	0.3
	NC_39_3	55	50	67.8	64.6	68.4	65.5	0.6	0.9	68.2	65.1	0.4	0.5
	NC_40_1	55	50	67.1	63.5	67.7	64.4	0.6	0.9	67.3	63.7	0.2	0.2
	NC_40_2	55	50	67.5	64.2	68.1	65.0	0.6	0.8	67.8	64.5	0.3	0.3
	NC_40_3	55	50	67.9	64.8	68.5	65.7	0.6	0.9	68.2	65.3	0.3	0.5
	NC_41_1	55	50	66.6	63.1	67.2	64.0	0.6	0.9	66.8	63.3	0.2	0.2
	NC_41_2	55	50	67.1	63.9	67.8	64.7	0.7	0.8	67.4	64.2	0.3	0.3
	NC_41_3	55	50	67.6	64.6	68.2	65.4	0.6	0.8	67.9	65.0	0.3	0.4
	NC_42_1	55	50	59.6	52.5	60.3	53.7	0.7	1.2	60.2	53.5	0.6	1.0

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NC cont...	NC_42_2	55	50	60.1	53.4	60.8	54.6	0.7	1.2	60.6	54.3	0.5	0.9
	NC_42_3	55	50	61.9	57.1	62.5	58.1	0.6	1.0	62.3	57.7	0.4	0.6
	NC_43_1	55	50	58.8	52.3	59.5	53.4	0.7	1.1	59.4	53.3	0.6	1.0
	NC_43_2	55	50	59.5	53.5	60.1	54.6	0.6	1.1	60.0	54.3	0.5	0.8
	NC_43_3	55	50	61.6	57.7	62.1	58.7	0.5	1.0	61.9	58.3	0.3	0.6
	NC_44_1	55	50	57.8	52.2	58.4	53.3	0.6	1.1	58.3	53.1	0.5	0.9
	NC_44_2	55	50	58.3	53.3	58.9	54.3	0.6	1.0	58.8	54.0	0.5	0.7
	NC_44_3	55	50	60.6	57.6	61.2	58.5	0.6	0.9	60.9	58.1	0.3	0.5
	NC_45_1	55	50	57.8	52.1	58.4	53.3	0.6	1.2	58.3	53.1	0.5	1.0
	NC_45_2	55	50	58.4	53.3	59.0	54.4	0.6	1.1	58.8	54.1	0.4	0.8
	NC_45_3	55	50	60.7	57.6	61.2	58.5	0.5	0.9	61.0	58.1	0.3	0.5
	NC_46_1	55	50	58.7	52.1	59.4	53.3	0.7	1.2	59.4	53.2	0.7	1.1
	NC_46_2	55	50	59.5	53.5	60.1	54.7	0.6	1.2	60.0	54.4	0.5	0.9
	NC_46_3	55	50	61.6	57.8	62.1	58.7	0.5	0.9	61.9	58.4	0.3	0.6
	NC_47_1	55	50	59.4	52.2	60.1	53.4	0.7	1.2	60.0	53.3	0.6	1.1
	NC_47_2	55	50	60.0	53.3	60.7	54.5	0.7	1.2	60.6	54.3	0.6	1.0
	NC_47_3	55	50	61.9	57.3	62.5	58.3	0.6	1.0	62.3	58.0	0.4	0.7
	NC_48	55	50	67.2	63.3	67.8	64.2	0.6	0.9	67.7	63.8	0.5	0.5
	NC_49	55	50	65.9	62.7	66.5	63.5	0.6	0.8	66.3	63.2	0.4	0.5
	NC_50	55	50	65.7	61.8	66.3	62.7	0.6	0.9	66.1	62.5	0.4	0.7
	NC_51	55	50	64.7	59.8	65.3	60.8	0.6	1.0	65.1	60.6	0.4	0.8
	NC_52	55	50	67.1	62.2	67.7	63.2	0.6	1.0	67.4	63.1	0.3	0.9
	NC_53	70	65	66.4	61.9	67.0	62.8	0.6	0.9	66.9	62.5	0.5	0.6
	NC_54	55	50	65.0	60.7	65.6	61.7	0.6	1.0	65.4	61.3	0.4	0.6
	NC_55	55	50	64.6	60.8	65.2	61.7	0.6	0.9	65.0	61.3	0.4	0.5
	NC_56	55	50	65.4	61.8	66.0	62.8	0.6	1.0	65.7	62.2	0.3	0.4
	NC_57	70	65	74.0	70.3	74.7	71.2	0.7	0.9	74.3	70.6	0.3	0.3
	NC_58	55	50	75.0	71.0	75.6	71.9	0.6	0.9	75.0	71.0	0.0	0.0
	NC_59_1	55	50	74.1	70.4	74.8	71.3	0.7	0.9	74.0	70.2	-0.1	-0.2
	NC_59_2	55	50	74.3	70.8	74.9	71.7	0.6	0.9	74.3	70.8	0.0	0.0
	NC_59_3	55	50	74.4	71.1	75.1	72.0	0.7	0.9	74.6	71.4	0.2	0.3
	NC_60_1	55	50	68.3	63.1	69.0	64.1	0.7	1.0	68.2	62.9	-0.1	-0.2
	NC_60_2	55	50	69.3	65.0	70.0	65.9	0.7	0.9	69.3	65.1	0.0	0.1
	NC_60_3	55	50	71.0	67.8	71.6	68.7	0.6	0.9	71.1	68.2	0.1	0.4
	NC_61_1	55	50	66.9	61.7	67.6	62.7	0.7	1.0	66.8	61.6	-0.1	-0.1
	NC_61_2	55	50	68.2	64.1	68.8	65.0	0.6	0.9	68.2	64.3	0.0	0.2
	NC_61_3	55	50	70.0	67.0	70.6	67.9	0.6	0.9	70.1	67.3	0.1	0.3
	NC_62_1	55	50	60.3	53.3	61.1	54.6	0.8	1.3	60.9	54.3	0.6	1.0
	NC_62_2	55	50	62.1	56.7	62.7	57.8	0.6	1.1	62.5	57.4	0.4	0.7
	NC_62_3	55	50	67.9	65.2	68.5	66.1	0.6	0.9	68.1	65.7	0.2	0.5
	NC_63_1	55	50	74.3	70.7	75.0	71.6	0.7	0.9	74.2	70.5	-0.1	-0.2
	NC_63_2	55	50	74.4	70.9	75.1	71.8	0.7	0.9	74.4	71.0	0.0	0.1
	NC_63_3	55	50	74.5	71.2	75.2	72.1	0.7	0.9	74.6	71.4	0.1	0.2
	NC_64_1	55	50	69.7	64.8	70.4	65.8	0.7	1.0	69.5	64.5	-0.2	-0.3
	NC_64_2	55	50	69.9	65.1	70.5	66.1	0.6	1.0	69.8	65.1	-0.1	0.0
	NC_64_3	55	50	71.3	67.9	72.0	68.8	0.7	0.9	71.4	68.2	0.1	0.3
	NC_65_1	55	50	68.3	63.3	69.0	64.3	0.7	1.0	68.1	63.0	-0.2	-0.3
	NC_65_2	55	50	68.5	63.8	69.2	64.8	0.7	1.0	68.5	63.9	0.0	0.1
	NC_65_3	55	50	70.1	66.9	70.8	67.8	0.7	0.9	70.3	67.2	0.2	0.3
	NC_66_1	55	50	66.3	61.2	66.9	62.2	0.6	1.0	66.1	61.1	-0.2	-0.1
	NC_66_2	55	50	66.6	61.9	67.3	62.9	0.7	1.0	66.6	62.1	0.0	0.2
	NC_66_3	55	50	68.6	65.5	69.2	66.4	0.6	0.9	68.7	65.8	0.1	0.3
	NC_67_1	55	50	76.4	72.6	77.1	73.5	0.7	0.9	76.2	72.4	-0.2	-0.2
	NC_67_2	55	50	76.4	72.6	77.0	73.5	0.6	0.9	76.4	72.7	0.0	0.1
	NC_67_3	55	50	76.3	72.5	76.9	73.5	0.6	1.0	76.4	72.8	0.1	0.3
	NC_68_1	55	50	76.4	72.6	77.0	73.5	0.6	0.9	76.2	72.3	-0.2	-0.3
	NC_68_2	55	50	76.3	72.6	77.0	73.5	0.7	0.9	76.4	72.7	0.1	0.1
	NC_68_3	55	50	76.3	72.5	76.9	73.5	0.6	1.0	76.4	72.8	0.1	0.3
	NC_69_1	55	50	76.4	72.6	77.1	73.6	0.7	1.0	76.2	72.3	-0.2	-0.3
	NC_69_2	55	50	76.4	72.6	77.0	73.5	0.6	0.9	76.4	72.7	0.0	0.1

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NC cont...	NC_69_3	55	50	76.3	72.6	76.9	73.5	0.6	0.9	76.4	72.8	0.1	0.2
	NC_70_1	55	50	76.4	72.6	77.1	73.6	0.7	1.0	76.2	72.4	-0.2	-0.2
	NC_70_2	55	50	76.4	72.6	77.0	73.5	0.6	0.9	76.4	72.7	0.0	0.1
	NC_70_3	55	50	76.3	72.6	76.9	73.5	0.6	0.9	76.4	72.8	0.1	0.2
	NC_71_1	55	50	59.2	55.5	59.8	56.5	0.6	1.0	59.5	56.2	0.3	0.7
	NC_71_2	55	50	61.4	58.5	62.0	59.3	0.6	0.8	61.6	59.0	0.2	0.5
	NC_71_3	55	50	68.4	66.0	69.1	66.8	0.7	0.8	68.6	66.4	0.2	0.4
	NC_72_1	55	50	59.3	55.5	59.9	56.4	0.6	0.9	59.6	56.1	0.3	0.6
	NC_72_2	55	50	61.9	59.2	62.6	60.1	0.7	0.9	62.2	59.7	0.3	0.5
	NC_72_3	55	50	67.9	65.6	68.6	66.4	0.7	0.8	68.1	66.0	0.2	0.4
	NC_73_1	55	50	59.4	55.7	60.0	56.6	0.6	0.9	59.7	56.3	0.3	0.6
	NC_73_2	55	50	62.0	59.4	62.7	60.3	0.7	0.9	62.3	59.9	0.3	0.5
	NC_73_3	55	50	67.9	65.6	68.6	66.4	0.7	0.8	68.2	66.0	0.3	0.4
	NC_74_1	55	50	59.3	55.8	59.9	56.8	0.6	1.0	59.6	56.4	0.3	0.6
	NC_74_2	55	50	61.8	59.2	62.4	60.1	0.6	0.9	62.1	59.7	0.3	0.5
	NC_74_3	55	50	68.4	65.9	69.0	66.7	0.6	0.8	68.6	66.3	0.2	0.4
	NC_75	55	50	63.9	59.5	64.6	60.4	0.7	0.9	64.1	59.9	0.2	0.4
	NC_76_1	55	50	76.2	72.4	76.8	73.3	0.6	0.9	75.9	72.1	-0.3	-0.3
	NC_76_2	55	50	76.1	72.4	76.8	73.4	0.7	1.0	76.1	72.5	0.0	0.1
	NC_76_3	55	50	76.1	72.4	76.7	73.3	0.6	0.9	76.1	72.6	0.0	0.2
	NC_77_1	55	50	70.8	66.1	71.5	67.1	0.7	1.0	70.6	65.8	-0.2	-0.3
	NC_77_2	55	50	70.9	66.3	71.6	67.3	0.7	1.0	70.9	66.3	0.0	0.0
	NC_77_3	55	50	72.0	68.5	72.7	69.4	0.7	0.9	72.1	68.7	0.1	0.2
	NC_78_1	55	50	69.1	64.2	69.8	65.2	0.7	1.0	68.9	63.9	-0.2	-0.3
	NC_78_2	55	50	69.3	64.6	70.0	65.6	0.7	1.0	69.2	64.7	-0.1	0.1
	NC_78_3	55	50	70.7	67.3	71.3	68.2	0.6	0.9	70.8	67.6	0.1	0.3
	NC_79_1	55	50	67.0	62.1	67.7	63.1	0.7	1.0	66.9	62.0	-0.1	-0.1
	NC_79_2	55	50	67.3	62.8	68.0	63.7	0.7	0.9	67.3	62.9	0.0	0.1
	NC_79_3	55	50	69.0	65.9	69.7	66.8	0.7	0.9	69.2	66.3	0.2	0.4
	NC_80_1	55	50	76.3	72.5	76.9	73.4	0.6	0.9	76.0	72.2	-0.3	-0.3
	NC_80_2	55	50	76.3	72.6	77.0	73.5	0.7	0.9	76.3	72.6	0.0	0.0
	NC_80_3	55	50	76.2	72.5	76.9	73.4	0.7	0.9	76.3	72.7	0.1	0.2
	NC_81_1	55	50	70.3	65.4	70.9	66.4	0.6	1.0	70.0	65.0	-0.3	-0.4
	NC_81_2	55	50	70.8	66.5	71.5	67.4	0.7	0.9	70.7	66.5	-0.1	0.0
	NC_81_3	55	50	71.9	68.6	72.6	69.5	0.7	0.9	72.0	68.9	0.1	0.3
	NC_82_1	55	50	69.2	64.2	69.9	65.2	0.7	1.0	68.9	64.0	-0.3	-0.2
	NC_82_2	55	50	69.8	65.6	70.5	66.5	0.7	0.9	69.8	65.7	0.0	0.1
	NC_82_3	55	50	71.1	67.9	71.8	68.8	0.7	0.9	71.2	68.2	0.1	0.3
	NC_83_1	55	50	59.5	53.7	60.2	54.8	0.7	1.1	59.9	54.4	0.4	0.7
	NC_83_2	55	50	61.2	56.7	61.8	57.7	0.6	1.0	61.5	57.4	0.3	0.7
	NC_83_3	55	50	67.4	64.7	68.0	65.5	0.6	0.8	67.6	65.1	0.2	0.4
	NC_84	55	50	75.4	70.4	76.1	71.4	0.7	1.0	75.1	70.1	-0.3	-0.3
	NC_85	55	50	66.0	62.4	66.6	63.4	0.6	1.0	66.2	62.7	0.2	0.3
	NC_86	55	50	66.0	62.2	66.6	63.2	0.6	1.0	66.1	62.5	0.1	0.3
	NC_87	55	50	65.6	61.7	66.2	62.6	0.6	0.9	65.7	61.9	0.1	0.2
	NC_88	55	50	65.2	61.1	65.8	62.1	0.6	1.0	65.5	61.5	0.3	0.4
	NC_89	55	50	65.2	60.9	65.8	61.9	0.6	1.0	65.4	61.2	0.2	0.3
	NC_90	55	50	64.7	60.3	65.3	61.3	0.6	1.0	64.9	60.6	0.2	0.3
	NC_91	55	50	65.2	61.0	65.8	62.0	0.6	1.0	65.4	61.2	0.2	0.2
	NC_92	55	50	65.4	61.2	66.0	62.2	0.6	1.0	65.5	61.4	0.1	0.2
	NC_93	55	50	65.4	61.2	66.0	62.2	0.6	1.0	65.5	61.5	0.1	0.3
	NC_94	55	50	65.6	61.6	66.2	62.6	0.6	1.0	65.8	61.9	0.2	0.3
	NC_95	55	50	66.2	62.5	66.8	63.5	0.6	1.0	66.3	62.7	0.1	0.2
	NC_96	55	50	66.6	63.1	67.2	64.1	0.6	1.0	66.7	63.2	0.1	0.1
	NC_97	55	50	67.1	63.6	67.7	64.6	0.6	1.0	67.1	63.7	0.0	0.1
	NC_98	55	50	67.2	64.0	67.8	64.9	0.6	0.9	67.2	64.1	0.0	0.1
	NC_99	55	50	67.4	64.3	68.0	65.2	0.6	0.9	67.4	64.3	0.0	0.0
	NC_100	55	50	73.9	70.0	74.6	70.9	0.7	0.9	73.8	69.9	-0.1	-0.1
	NC_101	55	50	74.8	71.4	75.4	72.3	0.6	0.9	74.6	71.3	-0.2	-0.1
	NC_102	55	50	74.8	71.5	75.5	72.4	0.7	0.9	74.6	71.3	-0.2	-0.2

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NC cont...	NC_103	55	50	75.6	72.1	76.3	73.0	0.7	0.9	75.1	71.7	-0.5	-0.4
	NC_104	55	50	75.5	72.0	76.2	72.9	0.7	0.9	75.0	71.6	-0.5	-0.4
	NC_105	55	50	68.2	65.1	68.8	66.0	0.6	0.9	68.2	65.1	0.0	0.0
	NC_106	55	50	68.6	65.6	69.2	66.5	0.6	0.9	68.5	65.5	-0.1	-0.1
	NC_107	70	65	69.0	65.7	69.6	66.6	0.6	0.9	68.9	65.6	-0.1	-0.1
	NC_108	70	65	69.2	66.0	69.8	66.9	0.6	0.9	69.1	65.9	-0.1	-0.1
	NC_109	70	65	69.4	66.3	70.0	67.2	0.6	0.9	69.3	66.2	-0.1	-0.1
	NC_110	70	65	69.9	66.7	70.5	67.6	0.6	0.9	69.7	66.5	-0.2	-0.2
	NC_111	70	65	69.9	67.0	70.6	67.9	0.7	0.9	69.8	66.9	-0.1	-0.1
	NC_112	55	50	69.7	66.9	70.4	67.8	0.7	0.9	69.5	66.8	-0.2	-0.1
	NC_113	70	65	62.8	60.7	63.5	61.5	0.7	0.8	62.7	60.6	-0.1	-0.1
	NC_114	70	65	69.0	66.2	69.6	67.1	0.6	0.9	68.8	66.1	-0.2	-0.1
	NC_115	80	75	66.1	63.3	66.7	64.2	0.6	0.9	66.1	63.5	0.0	0.2
	NC_116	70	65	61.1	59.2	61.8	60.0	0.7	0.8	61.2	59.4	0.1	0.2

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SD	SD_1	80	75	69.2	66.6	69.9	67.4	0.7	0.8	68.9	66.5	-0.3	-0.1
	SD_2	80	75	72.6	69.7	73.3	70.6	0.7	0.9	73.2	70.4	0.6	0.7
	SD_3	80	75	73.5	70.4	74.1	71.3	0.6	0.9	74.2	71.3	0.7	0.9
	SD_4	70	65	67.6	65.5	68.3	66.3	0.7	0.8	68.1	66.1	0.5	0.6
	SD_5	80	75	70.3	67.8	71.0	68.7	0.7	0.9	70.7	68.4	0.4	0.6
	SD_6	70	65	70.5	68.0	71.2	68.8	0.7	0.8	70.3	67.8	-0.2	-0.2
ND	ND_1	55	50	64.3	61.8	64.9	62.7	0.6	0.9	63.9	61.6	-0.4	-0.2
	ND_2	55	50	61.6	59.6	62.2	60.5	0.6	0.9	61.2	59.6	-0.4	0.0
	ND_3	55	50	66.6	63.7	67.2	64.6	0.6	0.9	66.4	63.5	-0.2	-0.2
	ND_4	55	50	60.0	58.4	60.7	59.2	0.7	0.8	59.7	58.4	-0.3	0.0
	ND_5	55	50	60.5	58.7	61.2	59.6	0.7	0.9	60.3	58.8	-0.2	0.1
	ND_6	55	50	62.8	59.9	63.4	60.7	0.6	0.8	62.5	59.9	-0.3	0.0
	ND_7	55	50	69.4	66.6	70.1	67.5	0.7	0.9	69.1	66.6	-0.3	0.0
	ND_8	55	50	66.7	64.1	67.4	64.9	0.7	0.8	66.7	64.4	0.0	0.3
	ND_9	55	50	68.6	66.0	69.2	66.9	0.6	0.9	68.6	66.3	0.0	0.3
	ND_10	55	50	63.7	61.0	64.4	61.9	0.7	0.9	63.8	61.3	0.1	0.3
	ND_11	55	50	67.5	65.4	68.2	66.2	0.7	0.8	67.2	65.0	-0.3	-0.4
	ND_12	70	65	66.5	64.5	67.2	65.4	0.7	0.9	66.5	64.6	0.0	0.1

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SE	SE_1	55	50	69.9	67.3	70.6	68.2	0.7	0.9	69.6	67.1	-0.3	-0.2
	SE_2	55	50	69.5	66.9	70.2	67.8	0.7	0.9	69.3	66.7	-0.2	-0.2
	SE_3	55	50	67.9	64.0	68.6	65.0	0.7	1.0	67.8	63.9	-0.1	-0.1
	SE_4	55	50	67.8	64.9	68.5	65.8	0.7	0.9	67.8	65.0	0.0	0.1
	SE_5	55	50	68.6	65.6	69.3	66.5	0.7	0.9	68.8	65.9	0.2	0.3
	SE_6	55	50	65.8	63.3	66.5	64.2	0.7	0.9	65.9	63.5	0.1	0.2
	SE_7	55	50	62.9	60.4	63.6	61.3	0.7	0.9	63.1	60.8	0.2	0.4
	SE_8	55	50	65.8	63.5	66.4	64.4	0.6	0.9	65.6	63.4	-0.2	-0.1
	SE_9	55	50	65.4	63.2	66.1	64.0	0.7	0.8	65.3	63.1	-0.1	-0.1
	SE_10	55	50	65.0	62.7	65.6	63.5	0.6	0.8	64.9	62.7	-0.1	0.0
	SE_11	55	50	64.2	61.9	64.9	62.8	0.7	0.9	64.2	62.0	0.0	0.1
	SE_12	55	50	63.5	61.2	64.2	62.1	0.7	0.9	63.5	61.4	0.0	0.2
	SE_13	55	50	62.9	60.8	63.6	61.6	0.7	0.8	63.0	61.0	0.1	0.2
	SE_14	55	50	62.4	60.3	63.1	61.2	0.7	0.9	62.5	60.6	0.1	0.3
	SE_15	55	50	62.0	60.1	62.7	60.9	0.7	0.8	62.1	60.4	0.1	0.3
	SE_16	55	50	68.5	66.3	69.2	67.1	0.7	0.8	68.7	66.6	0.2	0.3
	SE_17	55	50	69.0	66.6	69.7	67.5	0.7	0.9	69.1	66.9	0.1	0.3
	SE_18	55	50	70.1	67.2	70.8	68.1	0.7	0.9	70.1	67.5	0.0	0.3
	SE_19	55	50	70.7	68.0	71.4	68.9	0.7	0.9	70.7	68.2	0.0	0.2
	SE_20	55	50	70.7	68.1	71.4	69.0	0.7	0.9	70.7	68.3	0.0	0.2
	SE_21	55	50	70.4	67.9	71.1	68.8	0.7	0.9	70.4	68.0	0.0	0.1
	SE_22	55	50	70.3	67.7	70.9	68.6	0.6	0.9	70.3	67.9	0.0	0.2
	SE_23	55	50	70.1	67.5	70.8	68.4	0.7	0.9	70.1	67.7	0.0	0.2
	SE_24	55	50	61.6	59.2	62.3	60.1	0.7	0.9	61.8	59.6	0.2	0.4
	SE_25	55	50	60.3	58.0	61.0	58.8	0.7	0.8	60.5	58.4	0.2	0.4
	SE_26	55	50	59.8	57.7	60.5	58.6	0.7	0.9	60.1	58.2	0.3	0.5
	SE_27	55	50	62.3	58.4	63.0	59.4	0.7	1.0	62.5	58.9	0.2	0.5
	SE_28	55	50	62.9	60.2	63.6	61.1	0.7	0.9	63.1	60.6	0.2	0.4
	SE_29	55	50	65.4	62.7	66.1	63.6	0.7	0.9	65.4	62.9	0.0	0.2
	SE_30	55	50	60.8	59.2	61.5	60.1	0.7	0.9	61.0	59.6	0.2	0.4
	SE_31	55	50	60.9	59.3	61.6	60.1	0.7	0.8	61.1	59.6	0.2	0.3
	SE_32	55	50	60.9	59.2	61.6	60.0	0.7	0.8	61.1	59.6	0.2	0.4
	SE_33	55	50	60.9	59.1	61.6	60.0	0.7	0.9	61.1	59.5	0.2	0.4
	SE_34	55	50	61.5	59.5	62.2	60.4	0.7	0.9	61.7	59.9	0.2	0.4
	SE_35	55	50	62.1	60.0	62.8	60.8	0.7	0.8	62.2	60.3	0.1	0.3
	SE_36	55	50	62.3	60.2	63.0	61.0	0.7	0.8	62.5	60.5	0.2	0.3
	SE_37	55	50	62.6	60.3	63.3	61.2	0.7	0.9	62.7	60.6	0.1	0.3
	SE_38	55	50	62.1	60.0	62.8	60.8	0.7	0.8	62.2	60.2	0.1	0.2
	SE_39	55	50	62.3	60.0	63.0	60.9	0.7	0.9	62.4	60.3	0.1	0.3
	SE_40_1	55	50	71.0	66.8	71.7	67.8	0.7	1.0	70.7	66.6	-0.3	-0.2
	SE_40_2	55	50	70.9	66.8	71.6	67.8	0.7	1.0	70.8	66.8	-0.1	0.0
	SE_40_3	55	50	72.1	68.9	72.8	69.8	0.7	0.9	72.1	69.1	0.0	0.2
	SE_41_1	55	50	74.1	70.2	74.8	71.2	0.7	1.0	73.8	69.9	-0.3	-0.3
	SE_41_2	55	50	74.1	70.2	74.8	71.2	0.7	1.0	73.9	70.2	-0.2	0.0
	SE_41_3	55	50	74.4	70.9	75.1	71.9	0.7	1.0	74.3	71.1	-0.1	0.2
	SE_42_1	55	50	73.9	70.1	74.6	71.1	0.7	1.0	73.6	69.8	-0.3	-0.3
	SE_42_2	55	50	73.9	70.1	74.6	71.1	0.7	1.0	73.7	70.1	-0.2	0.0
	SE_42_3	55	50	74.2	70.8	74.9	71.7	0.7	0.9	74.1	71.0	-0.1	0.2
	SE_43_1	55	50	73.5	69.8	74.2	70.8	0.7	1.0	73.2	69.5	-0.3	-0.3
	SE_43_2	55	50	73.5	69.9	74.2	70.8	0.7	0.9	73.3	69.8	-0.2	-0.1
	SE_43_3	55	50	73.9	70.6	74.5	71.5	0.6	0.9	73.8	70.7	-0.1	0.1
	SE_44_1	55	50	73.8	70.1	74.5	71.1	0.7	1.0	73.5	69.8	-0.3	-0.3
	SE_44_2	55	50	73.8	70.1	74.5	71.1	0.7	1.0	73.6	70.1	-0.2	0.0
	SE_44_3	55	50	74.1	70.8	74.8	71.7	0.7	0.9	74.1	71.0	0.0	0.2
	SE_45_1	55	50	68.9	64.6	69.6	65.6	0.7	1.0	68.7	64.5	-0.2	-0.1
	SE_45_2	55	50	69.0	64.7	69.7	65.7	0.7	1.0	68.9	64.8	-0.1	0.1
	SE_45_3	55	50	70.7	67.7	71.4	68.6	0.7	0.9	70.8	68.1	0.1	0.4
	SE_46_1	55	50	68.3	63.8	69.0	64.8	0.7	1.0	68.1	63.7	-0.2	-0.1
	SE_46_2	55	50	68.4	64.0	69.1	65.0	0.7	1.0	68.3	64.1	-0.1	0.1
	SE_46_3	55	50	70.1	67.2	70.8	68.1	0.7	0.9	70.2	67.5	0.1	0.3

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SE cont...	SE_47_1	55	50	58.7	57.1	59.4	57.9	0.7	0.8	58.9	57.5	0.2	0.4
	SE_47_2	55	50	61.3	59.6	62.1	60.4	0.8	0.8	61.6	60.0	0.3	0.4
	SE_47_3	55	50	67.0	64.9	67.7	65.7	0.7	0.8	67.2	65.3	0.2	0.4
	SE_48_1	55	50	58.2	56.4	58.9	57.3	0.7	0.9	58.4	56.9	0.2	0.5
	SE_48_2	55	50	61.2	59.3	61.9	60.2	0.7	0.9	61.4	59.8	0.2	0.5
	SE_48_3	55	50	67.4	65.2	68.1	66.0	0.7	0.8	67.5	65.6	0.1	0.4
	SE_49_1	55	50	58.5	56.8	59.2	57.7	0.7	0.9	58.7	57.3	0.2	0.5
	SE_49_2	55	50	61.4	59.6	62.1	60.5	0.7	0.9	61.6	60.1	0.2	0.5
	SE_49_3	55	50	67.5	65.3	68.2	66.2	0.7	0.9	67.7	65.7	0.2	0.4
	SE_50_1	55	50	59.9	58.2	60.6	59.0	0.7	0.8	60.1	58.6	0.2	0.4
	SE_50_2	55	50	62.0	60.3	62.7	61.2	0.7	0.9	62.2	60.7	0.2	0.4
	SE_50_3	55	50	67.4	65.3	68.1	66.1	0.7	0.8	67.6	65.7	0.2	0.4
	SE_51_1	55	50	70.8	66.8	71.5	67.8	0.7	1.0	70.5	66.6	-0.3	-0.2
	SE_51_2	55	50	70.8	66.8	71.4	67.8	0.6	1.0	70.6	66.8	-0.2	0.0
	SE_51_3	55	50	71.6	68.4	72.3	69.3	0.7	0.9	71.6	68.7	0.0	0.3
	SE_52_1	55	50	69.3	64.7	70.0	65.7	0.7	1.0	69.1	64.4	-0.2	-0.3
	SE_52_2	55	50	69.4	64.8	70.1	65.8	0.7	1.0	69.3	64.8	-0.1	0.0
	SE_52_3	55	50	71.0	67.9	71.7	68.8	0.7	0.9	71.1	68.2	0.1	0.3
	SE_53_1	55	50	72.7	69.0	73.3	70.0	0.6	1.0	72.5	68.9	-0.2	-0.1
	SE_53_2	55	50	72.6	69.0	73.3	70.0	0.7	1.0	72.6	69.1	0.0	0.1
	SE_53_3	55	50	73.1	69.9	73.7	70.8	0.6	0.9	73.1	70.1	0.0	0.2
	SE_54_1	55	50	72.4	68.8	73.1	69.8	0.7	1.0	72.2	68.7	-0.2	-0.1
	SE_54_2	55	50	72.4	68.9	73.1	69.8	0.7	0.9	72.3	69.0	-0.1	0.1
	SE_54_3	55	50	72.8	69.7	73.5	70.6	0.7	0.9	72.8	69.9	0.0	0.2
	SE_55_1	55	50	72.4	69.0	73.1	70.0	0.7	1.0	72.2	68.8	-0.2	-0.2
	SE_55_2	55	50	72.4	69.1	73.1	70.0	0.7	0.9	72.4	69.1	0.0	0.0
	SE_55_3	55	50	72.8	69.8	73.5	70.7	0.7	0.9	72.8	70.1	0.0	0.3
	SE_56_1	55	50	72.7	69.3	73.4	70.3	0.7	1.0	72.5	69.2	-0.2	-0.1
	SE_56_2	55	50	72.7	69.4	73.4	70.3	0.7	0.9	72.6	69.4	-0.1	0.0
	SE_56_3	55	50	73.0	70.0	73.7	71.0	0.7	1.0	73.1	70.3	0.1	0.3
	SE_57_1	55	50	67.4	63.1	68.1	64.1	0.7	1.0	67.4	63.2	0.0	0.1
	SE_57_2	55	50	68.4	64.9	69.1	65.9	0.7	1.0	68.6	65.3	0.2	0.4
	SE_57_3	55	50	69.9	67.3	70.6	68.2	0.7	0.9	70.1	67.7	0.2	0.4
	SE_58_1	55	50	66.8	62.4	67.5	63.4	0.7	1.0	66.8	62.5	0.0	0.1
	SE_58_2	55	50	68.2	64.8	68.9	65.7	0.7	0.9	68.3	65.1	0.1	0.3
	SE_58_3	55	50	69.5	66.9	70.2	67.8	0.7	0.9	69.7	67.3	0.2	0.4
	SE_59_1	55	50	58.0	56.5	58.8	57.4	0.8	0.9	58.4	57.1	0.4	0.6
	SE_59_2	55	50	60.9	59.3	61.6	60.1	0.7	0.8	61.2	59.7	0.3	0.4
	SE_59_3	55	50	66.6	64.6	67.3	65.5	0.7	0.9	66.8	65.0	0.2	0.4
	SE_60_1	55	50	57.8	56.2	58.5	57.1	0.7	0.9	58.2	56.8	0.4	0.6
	SE_60_2	55	50	60.9	59.2	61.6	60.0	0.7	0.8	61.1	59.7	0.2	0.5
	SE_60_3	55	50	66.9	64.8	67.6	65.6	0.7	0.8	67.1	65.2	0.2	0.4
	SE_61_1	55	50	58.0	56.4	58.7	57.3	0.7	0.9	58.3	56.9	0.3	0.5
	SE_61_2	55	50	61.0	59.3	61.7	60.2	0.7	0.9	61.2	59.8	0.2	0.5
	SE_61_3	55	50	66.8	64.7	67.5	65.5	0.7	0.8	67.0	65.1	0.2	0.4
	SE_62_1	55	50	58.2	56.7	58.9	57.6	0.7	0.9	58.5	57.2	0.3	0.5
	SE_62_2	55	50	61.1	59.5	61.8	60.3	0.7	0.8	61.4	60.0	0.3	0.5
	SE_62_3	55	50	66.6	64.5	67.3	65.4	0.7	0.9	66.8	65.0	0.2	0.5
	SE_63_1	55	50	68.5	63.6	69.2	64.6	0.7	1.0	68.3	63.4	-0.2	-0.2
	SE_63_2	55	50	68.6	63.9	69.3	64.9	0.7	1.0	68.5	63.9	-0.1	0.0
	SE_63_3	55	50	70.3	67.2	71.0	68.1	0.7	0.9	70.4	67.5	0.1	0.3
	SE_64	55	50	69.4	66.7	70.1	67.6	0.7	0.9	69.3	66.7	-0.1	0.0
	SE_65	55	50	68.6	65.8	69.3	66.8	0.7	1.0	68.5	65.8	-0.1	0.0
	SE_66	55	50	67.8	64.9	68.5	65.9	0.7	1.0	67.7	65.0	-0.1	0.1
	SE_67	55	50	66.4	63.6	67.1	64.5	0.7	0.9	66.3	63.6	-0.1	0.0
	SE_68	55	50	64.4	61.9	65.0	62.8	0.6	0.9	64.4	62.1	0.0	0.2
	SE_69	55	50	64.4	61.7	65.1	62.6	0.7	0.9	64.4	61.9	0.0	0.2
	SE_70	55	50	63.4	60.9	64.0	61.8	0.6	0.9	63.5	61.3	0.1	0.4
	SE_71	55	50	62.3	60.6	63.0	61.4	0.7	0.8	62.5	61.0	0.2	0.4
	SE_72	55	50	62.7	60.8	63.4	61.7	0.7	0.9	62.9	61.2	0.2	0.4

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	SE_73	55	50	65.5	63.0	66.2	63.9	0.7	0.9	65.5	63.1	0.0	0.1
	SE_74	55	50	65.2	62.7	65.9	63.6	0.7	0.9	65.1	62.7	-0.1	0.0
	SE_75	55	50	65.0	62.5	65.7	63.4	0.7	0.9	64.9	62.5	-0.1	0.0
	SE_76	55	50	63.9	61.6	64.6	62.5	0.7	0.9	63.9	61.6	0.0	0.0
	SE_77	55	50	63.2	61.0	63.9	61.9	0.7	0.9	63.2	61.1	0.0	0.1
	SE_78	55	50	62.8	60.7	63.5	61.6	0.7	0.9	62.9	60.9	0.1	0.2
	SE_79	55	50	62.2	60.3	62.9	61.1	0.7	0.8	62.3	60.5	0.1	0.2
	SE_80	55	50	62.2	60.3	62.9	61.2	0.7	0.9	62.4	60.6	0.2	0.3
	SE_81	55	50	62.8	60.5	63.5	61.4	0.7	0.9	62.8	60.6	0.0	0.1
SE cont...	SE_82	55	50	62.7	60.4	63.4	61.3	0.7	0.9	62.7	60.5	0.0	0.1
	SE_83	55	50	62.9	60.6	63.6	61.5	0.7	0.9	62.8	60.7	-0.1	0.1
	SE_84	55	50	61.8	59.8	62.5	60.7	0.7	0.9	61.8	60.0	0.0	0.2
	SE_85	55	50	61.6	59.7	62.3	60.6	0.7	0.9	61.7	59.9	0.1	0.2
	SE_86	55	50	61.7	59.9	62.4	60.8	0.7	0.9	61.8	60.1	0.1	0.2
	SE_87	55	50	61.6	59.9	62.3	60.7	0.7	0.8	61.7	60.2	0.1	0.3
	SE_88	70	65	75.8	72.2	76.5	73.2	0.7	1.0	75.8	72.2	0.0	0.0
	SE_89	70	65	74.9	71.6	75.6	72.6	0.7	1.0	74.9	71.6	0.0	0.0
	SE_90	55	50	65.2	62.6	65.9	63.5	0.7	0.9	65.3	62.9	0.1	0.3
	SE_91	65	60	64.7	62.5	65.4	63.4	0.7	0.9	64.8	62.8	0.1	0.3

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SF	SF_1	70	65	67.9	65.8	68.5	66.7	0.6	0.9	67.8	65.8	-0.1	0.0
	SF_2	70	65	70.4	68.0	71.1	68.8	0.7	0.8	70.1	67.8	-0.3	-0.2
	SF_3	70	65	70.7	68.1	71.3	68.9	0.6	0.8	70.3	67.9	-0.4	-0.2
	SF_4	70	65	73.7	70.7	74.3	71.5	0.6	0.8	73.2	70.3	-0.5	-0.4
	SF_5	80	75	74.2	71.0	74.8	71.8	0.6	0.8	73.9	70.7	-0.3	-0.3
	SF_6	80	75	73.3	70.3	73.9	71.1	0.6	0.8	73.1	70.0	-0.2	-0.3
	SF_7	70	65	70.9	68.3	71.5	69.1	0.6	0.8	70.6	68.0	-0.3	-0.3
	SF_8	55	50	69.1	66.5	69.8	67.3	0.7	0.8	69.1	66.4	0.0	-0.1
NF	NF_1	70	65	68.3	66.2	68.9	67.0	0.6	0.8	68.5	66.5	0.2	0.3
	NF_2	70	65	69.5	67.1	70.1	68.0	0.6	0.9	70.3	68.0	0.8	0.9
	NF_3	70	65	69.3	67.0	70.0	67.8	0.7	0.8	70.1	67.8	0.8	0.8
	NF_4	70	65	69.6	67.2	70.3	68.0	0.7	0.8	70.3	67.9	0.7	0.7
	NF_5	80	75	68.1	65.8	68.7	66.5	0.6	0.7	68.4	66.2	0.3	0.4
	NF_6	80	75	67.3	65.1	67.9	65.8	0.6	0.7	67.3	65.2	0.0	0.1

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SG	SG_1	70	65	67.6	65.4	68.1	66.1	0.5	0.7	67.5	65.3	-0.1	-0.1
	SG_2	70	65	67.0	64.5	67.6	65.3	0.6	0.8	66.8	64.4	-0.2	-0.1
	SG_4	80	75	59.4	56.9	60.1	57.7	0.7	0.8	59.9	57.5	0.5	0.6
	SG_3	70	65	65.5	62.1	66.2	62.9	0.7	0.8	65.9	62.3	0.4	0.2
	SG_5	80	75	65.4	62.7	66.0	63.4	0.6	0.7	65.5	62.8	0.1	0.1
	SG_6	70	65	68.2	64.6	68.9	65.4	0.7	0.8	68.3	64.5	0.1	-0.1
	SG_7	80	75	72.3	69.3	72.9	70.1	0.6	0.8	71.9	69.0	-0.4	-0.3
	SG_8	70	65	71.4	68.5	71.9	69.2	0.5	0.7	71.0	68.2	-0.4	-0.3
	SG_9	70	65	71.6	68.7	72.2	69.4	0.6	0.7	71.8	68.9	0.2	0.2
	SG_10	80	75	67.0	63.5	67.7	64.3	0.7	0.8	67.3	63.8	0.3	0.3
	SG_11	70	65	71.0	63.8	71.8	64.9	0.8	1.1	71.5	64.3	0.5	0.5
	SG_12	70	65	68.3	64.8	68.9	65.6	0.6	0.8	68.6	65.1	0.3	0.3
	SG_13	70	65	71.8	64.7	72.7	65.8	0.9	1.1	72.4	65.2	0.6	0.5
	SG_14	70	65	68.0	65.1	68.7	65.9	0.7	0.8	68.3	65.4	0.3	0.3
	SG_15	70	65	72.3	65.3	73.1	66.4	0.8	1.1	72.9	65.9	0.6	0.6
	SG_16	80	75	66.6	64.1	67.2	64.9	0.6	0.8	66.9	64.5	0.3	0.4
	SG_17	70	65	71.9	65.1	72.7	66.1	0.8	1.0	72.6	65.8	0.7	0.7
	SG_18	70	65	71.5	64.5	72.4	65.6	0.9	1.1	72.2	65.4	0.7	0.9
	SG_19	55	50	68.1	64.9	68.8	65.8	0.7	0.9	68.6	65.4	0.5	0.5
	SG_20	70	65	71.3	64.0	72.2	65.2	0.9	1.2	72.1	65.0	0.8	1.0
	SG_21	70	65	70.7	63.0	71.7	64.4	1.0	1.4	71.7	64.3	1.0	1.3
	SG_22	70	65	70.8	63.2	71.9	64.7	1.1	1.5	71.9	64.6	1.1	1.4
	SG_23	70	65	71.6	64.5	72.8	66.1	1.2	1.6	72.7	65.8	1.1	1.3
	SG_24	55	50	64.2	62.1	65.1	63.1	0.9	1.0	65.0	62.9	0.8	0.8
	SG_25	55	50	66.2	63.4	67.2	64.5	1.0	1.1	67.0	64.2	0.8	0.8
	SG_26	55	50	63.7	61.8	64.6	62.8	0.9	1.0	64.4	62.5	0.7	0.7
	SG_27	55	50	64.7	62.5	65.7	63.6	1.0	1.1	65.5	63.3	0.8	0.8
	SG_28	55	50	62.3	60.6	63.1	61.6	0.8	1.0	62.9	61.3	0.6	0.7
	SG_29	55	50	62.8	61.1	63.7	62.0	0.9	0.9	63.4	61.7	0.6	0.6
	SG_30	55	50	63.5	61.6	64.4	62.6	0.9	1.0	64.2	62.3	0.7	0.7
	SG_31	55	50	64.3	62.2	65.3	63.2	1.0	1.0	65.1	62.9	0.8	0.7
	SG_32	55	50	62.0	60.4	62.8	61.3	0.8	0.9	62.6	61.0	0.6	0.6
	SG_33	55	50	61.5	60.0	62.3	60.9	0.8	0.9	62.0	60.6	0.5	0.6
	SG_34	55	50	62.1	60.5	62.9	61.4	0.8	0.9	62.7	61.1	0.6	0.6
	SG_35	55	50	62.7	61.1	63.6	62.0	0.9	0.9	63.4	61.7	0.7	0.6
	SG_36	55	50	63.2	61.4	64.1	62.4	0.9	1.0	63.9	62.1	0.7	0.7
	SG_37	55	50	61.0	59.5	61.8	60.4	0.8	0.9	61.5	60.1	0.5	0.6
	SG_38	55	50	61.6	60.1	62.5	61.0	0.9	0.9	62.2	60.7	0.6	0.6
	SG_39	55	50	62.2	60.6	63.1	61.6	0.9	1.0	62.8	61.2	0.6	0.6
	SG_40	55	50	62.7	61.0	63.6	62.0	0.9	1.0	63.4	61.7	0.7	0.7
	SG_41	55	50	60.6	59.2	61.4	60.1	0.8	0.9	61.1	59.7	0.5	0.5
	SG_42	55	50	61.1	59.6	61.9	60.6	0.8	1.0	61.6	60.2	0.5	0.6
	SG_43	55	50	61.7	60.2	62.6	61.1	0.9	0.9	62.3	60.8	0.6	0.6
	SG_44	55	50	62.3	60.7	63.2	61.7	0.9	1.0	63.0	61.4	0.7	0.7
	SG_45	55	50	60.8	59.4	61.6	60.3	0.8	0.9	61.3	59.9	0.5	0.5
NG	NG_1	55	50	56.9	55.0	57.5	55.7	0.6	0.7	57.5	55.7	0.6	0.7
	NG_2	55	50	57.4	55.5	58.0	56.3	0.6	0.8	58.0	56.2	0.6	0.7
	NG_3	55	50	57.6	55.9	58.2	56.6	0.6	0.7	58.2	56.6	0.6	0.7
	NG_4	55	50	57.3	55.7	57.9	56.4	0.6	0.7	57.8	56.3	0.5	0.6
	NG_5	55	50	57.4	55.7	58.0	56.4	0.6	0.7	58.0	56.4	0.6	0.7
	NG_6	55	50	57.7	56.0	58.3	56.7	0.6	0.7	58.2	56.7	0.5	0.7
	NG_7	55	50	57.7	56.0	58.3	56.7	0.6	0.7	58.2	56.7	0.5	0.7
	NG_8	55	50	57.8	56.2	58.4	56.9	0.6	0.7	58.4	56.8	0.6	0.6
	NG_9	55	50	57.9	56.3	58.5	57.0	0.6	0.7	58.5	56.9	0.6	0.6
	NG_10	55	50	58.1	56.4	58.7	57.1	0.6	0.7	58.6	57.0	0.5	0.6
	NG_11	55	50	58.2	56.5	58.8	57.2	0.6	0.7	58.7	57.1	0.5	0.6
	NG_12	55	50	58.3	56.6	58.9	57.3	0.6	0.7	58.8	57.3	0.5	0.7
	NG_13	55	50	58.6	56.7	59.1	57.4	0.5	0.7	58.9	57.3	0.3	0.6
	NG_14	55	50	58.6	56.8	59.1	57.5	0.5	0.7	59.0	57.4	0.4	0.6
	NG_15	55	50	58.5	56.8	59.1	57.5	0.6	0.7	59.0	57.4	0.5	0.6

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NG cont...	NG_16	55	50	58.3	56.7	58.9	57.4	0.6	0.7	58.8	57.3	0.5	0.6
	NG_17	55	50	59.4	57.4	60.0	58.1	0.6	0.7	59.7	58.0	0.3	0.6
	NG_18	55	50	59.4	57.5	60.0	58.3	0.6	0.8	59.7	58.1	0.3	0.6
	NG_19	55	50	59.2	57.4	59.7	58.1	0.5	0.7	59.5	57.9	0.3	0.5
	NG_20	55	50	58.8	57.1	59.4	57.9	0.6	0.8	59.2	57.7	0.4	0.6
	NG_21	55	50	58.6	57.0	59.2	57.7	0.6	0.7	59.0	57.5	0.4	0.5
	NG_22	55	50	58.3	56.7	58.9	57.4	0.6	0.7	58.7	57.3	0.4	0.6
	NG_23	55	50	59.8	57.8	60.4	58.5	0.6	0.7	60.1	58.3	0.3	0.5
	NG_24	55	50	59.4	57.6	60.0	58.3	0.6	0.7	59.7	58.1	0.3	0.5
	NG_25	55	50	59.2	57.5	59.8	58.2	0.6	0.7	59.6	58.0	0.4	0.5
	NG_26	55	50	58.8	57.2	59.4	57.9	0.6	0.7	59.2	57.7	0.4	0.5
	NG_27	55	50	58.6	57.0	59.2	57.7	0.6	0.7	59.0	57.5	0.4	0.5
	NG_28	55	50	58.3	56.7	58.9	57.4	0.6	0.7	58.7	57.3	0.4	0.6
	NG_29	55	50	59.9	57.7	60.5	58.4	0.6	0.7	60.2	58.2	0.3	0.5
	NG_30	55	50	59.8	57.4	60.3	58.1	0.5	0.7	60.0	57.9	0.2	0.5
	NG_31	55	50	60.1	57.7	60.6	58.4	0.5	0.7	60.3	58.2	0.2	0.5
	NG_32	55	50	60.6	58.4	61.2	59.1	0.6	0.7	60.8	58.9	0.2	0.5
	NG_33	55	50	59.7	57.8	60.3	58.5	0.6	0.7	59.9	58.3	0.2	0.5
	NG_34	55	50	59.4	57.6	60.0	58.3	0.6	0.7	59.6	58.1	0.2	0.5
	NG_35	55	50	59.1	57.4	59.7	58.1	0.6	0.7	59.4	57.9	0.3	0.5
	NG_36	55	50	58.7	57.1	59.3	57.9	0.6	0.8	59.0	57.7	0.3	0.6
	NG_37	55	50	58.5	57.0	59.1	57.7	0.6	0.7	58.9	57.5	0.4	0.5
	NG_38	55	50	60.4	57.7	60.9	58.4	0.5	0.7	60.7	58.3	0.3	0.6
	NG_39	55	50	60.4	57.5	60.9	58.2	0.5	0.7	60.7	58.1	0.3	0.6
	NG_40	55	50	60.4	57.7	61.0	58.4	0.6	0.7	60.7	58.3	0.3	0.6
	NG_41	55	50	60.4	57.6	61.0	58.3	0.6	0.7	60.7	58.2	0.3	0.6
	NG_42	55	50	60.4	57.4	61.0	58.2	0.6	0.8	60.7	58.0	0.3	0.6
	NG_43	55	50	60.7	58.4	61.2	59.1	0.5	0.7	60.9	58.9	0.2	0.5
	NG_44	55	50	60.5	57.6	61.0	58.4	0.5	0.8	60.7	58.2	0.2	0.6
	NG_45	55	50	60.5	58.3	61.1	59.0	0.6	0.7	60.7	58.7	0.2	0.4
	NG_46	55	50	60.4	57.9	60.9	58.6	0.5	0.7	60.6	58.4	0.2	0.5
	NG_47	55	50	60.3	57.6	60.9	58.4	0.6	0.8	60.6	58.2	0.3	0.6
	NG_48	55	50	60.5	58.4	61.1	59.1	0.6	0.7	60.7	58.9	0.2	0.5
	NG_49	55	50	61.0	59.1	61.6	59.8	0.6	0.7	61.1	59.5	0.1	0.4
	NG_50	55	50	61.5	59.5	62.1	60.2	0.6	0.7	61.5	59.9	0.0	0.4
	NG_51	55	50	61.8	59.8	62.4	60.5	0.6	0.7	61.9	60.2	0.1	0.4
	NG_52	55	50	62.2	60.0	62.7	60.7	0.5	0.7	62.4	60.4	0.2	0.4
	NG_53	55	50	59.2	57.5	59.8	58.2	0.6	0.7	59.5	58.0	0.3	0.5
	NG_54	55	50	59.3	57.6	59.9	58.3	0.6	0.7	59.5	58.1	0.2	0.5
	NG_55	55	50	59.3	57.6	59.8	58.3	0.5	0.7	59.5	58.1	0.2	0.5
	NG_56	55	50	59.3	57.6	59.9	58.3	0.6	0.7	59.5	58.1	0.2	0.5
	NG_57	55	50	59.3	57.6	59.9	58.4	0.6	0.8	59.5	58.1	0.2	0.5
	NG_58	55	50	59.4	57.8	60.0	58.5	0.6	0.7	59.6	58.2	0.2	0.4
	NG_59	55	50	59.1	57.5	59.7	58.2	0.6	0.7	59.4	58.1	0.3	0.6
	NG_60	55	50	59.1	57.5	59.6	58.2	0.5	0.7	59.4	58.0	0.3	0.5
	NG_61	55	50	59.0	57.4	59.6	58.1	0.6	0.7	59.3	57.9	0.3	0.5
	NG_62	55	50	60.2	58.4	60.7	59.1	0.5	0.7	60.3	58.9	0.1	0.5
	NG_63	55	50	59.8	58.2	60.4	58.9	0.6	0.7	60.0	58.6	0.2	0.4
	NG_64	55	50	59.9	58.3	60.5	59.0	0.6	0.7	60.2	58.7	0.3	0.4
	NG_65	55	50	59.9	58.2	60.5	58.9	0.6	0.7	60.2	58.7	0.3	0.5
	NG_66	55	50	59.9	58.1	60.5	58.8	0.6	0.7	60.2	58.6	0.3	0.5
	NG_67	55	50	59.9	58.0	60.4	58.7	0.5	0.7	60.2	58.5	0.3	0.5
	NG_68	55	50	60.3	58.5	60.9	59.2	0.6	0.7	60.4	58.9	0.1	0.4
	NG_69	55	50	60.2	58.5	60.8	59.2	0.6	0.7	60.4	59.0	0.2	0.5
	NG_70	55	50	60.2	58.5	60.8	59.2	0.6	0.7	60.4	59.0	0.2	0.5
	NG_71	55	50	60.1	58.4	60.7	59.1	0.6	0.7	60.3	58.9	0.2	0.5
	NG_72	55	50	60.2	58.4	60.8	59.1	0.6	0.7	60.4	58.9	0.2	0.5
	NG_73	55	50	60.1	58.3	60.7	59.1	0.6	0.8	60.4	58.8	0.3	0.5
	NG_74	55	50	60.2	58.2	60.7	58.9	0.5	0.7	60.4	58.7	0.2	0.5
	NG_75	55	50	62.4	60.2	62.9	60.9	0.5	0.7	62.3	60.6	-0.1	0.4

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NG cont...	NG_76	55	50	62.8	60.4	63.4	61.2	0.6	0.8	62.9	60.9	0.1	0.5
	NG_77	55	50	62.4	60.0	62.9	60.7	0.5	0.7	62.5	60.5	0.1	0.5
	NG_78	55	50	62.2	59.8	62.8	60.5	0.6	0.7	62.4	60.3	0.2	0.5
	NG_79	55	50	62.5	59.9	63.0	60.6	0.5	0.7	62.7	60.3	0.2	0.4
	NG_80	55	50	61.3	59.0	61.8	59.7	0.5	0.7	61.5	59.5	0.2	0.5
	NG_81	55	50	61.4	59.0	61.9	59.7	0.5	0.7	61.6	59.4	0.2	0.4
	NG_82	55	50	61.2	58.8	61.7	59.5	0.5	0.7	61.4	59.2	0.2	0.4
	NG_83	55	50	69.1	64.9	69.6	65.7	0.5	0.8	69.2	65.3	0.1	0.4
	NG_84	55	50	67.5	63.8	68.1	64.6	0.6	0.8	67.6	64.2	0.1	0.4
	NG_85	55	50	66.6	63.1	67.2	63.8	0.6	0.7	66.7	63.4	0.1	0.3
	NG_86	55	50	65.0	61.8	65.5	62.5	0.5	0.7	65.1	62.1	0.1	0.3
	NG_87	55	50	64.0	61.0	64.6	61.7	0.6	0.7	64.2	61.3	0.2	0.3
	NG_88	55	50	63.2	60.3	63.7	61.1	0.5	0.8	63.3	60.7	0.1	0.4
	NG_89	55	50	62.5	59.7	63.0	60.5	0.5	0.8	62.6	60.1	0.1	0.4
	NG_90	80	75	70.5	66.5	71.1	67.3	0.6	0.8	70.5	66.7	0.0	0.2

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SH	SH_1	70	65	66.3	63.4	67.1	64.6	0.8	1.2	67.0	64.4	0.7	1.0
	SH_3	70	65	66.7	64.0	68.6	65.8	1.9	1.8	68.4	65.5	1.7	1.5
	SH_2	70	65	65.5	63.2	67.1	64.8	1.6	1.6	67.5	64.3	2.0	1.1
	SH_4	65	60	64.8	63.2	65.6	64.2	0.8	1.0	65.3	63.9	0.5	0.7
	SH_5	80	75	69.2	67.3	69.9	68.1	0.7	0.8	69.7	67.9	0.5	0.6
	SH_6	80	75	71.2	68.8	71.8	69.7	0.6	0.9	71.7	69.5	0.5	0.7
	SH_7	55	50	66.3	64.0	67.2	65.1	0.9	1.1	66.7	64.7	0.4	0.7
	SH_8	55	50	65.7	62.9	66.6	64.1	0.9	1.2	66.2	63.7	0.5	0.8
	SH_9	55	50	66.4	63.6	67.3	64.8	0.9	1.2	66.9	64.4	0.5	0.8
	SH_10	55	50	66.7	64.1	67.6	65.3	0.9	1.2	67.3	65.0	0.6	0.9
	SH_11	55	50	64.7	62.7	65.6	63.8	0.9	1.1	65.4	63.6	0.7	0.9
	SH_12	55	50	64.3	62.2	65.2	63.3	0.9	1.1	64.9	63.1	0.6	0.9
	SH_13	55	50	65.1	62.8	66.0	64.0	0.9	1.2	65.7	63.8	0.6	1.0
	SH_14	55	50	65.5	63.2	66.4	64.4	0.9	1.2	66.2	64.1	0.7	0.9
	SH_15	55	50	65.1	62.9	66.0	64.0	0.9	1.1	65.7	63.8	0.6	0.9
	SH_16	55	50	65.8	63.5	66.7	64.7	0.9	1.2	66.4	64.4	0.6	0.9
	SH_17	55	50	65.7	63.4	66.6	64.6	0.9	1.2	66.3	64.3	0.6	0.9
	SH_18	55	50	65.9	63.6	66.8	64.8	0.9	1.2	66.6	64.6	0.7	1.0
	SH_19	55	50	65.7	63.5	66.7	64.7	1.0	1.2	66.4	64.4	0.7	0.9
	SH_20	55	50	64.4	62.3	65.3	63.4	0.9	1.1	65.0	63.1	0.6	0.8
	SH_21	55	50	63.2	61.2	64.1	62.3	0.9	1.1	63.8	62.0	0.6	0.8
	SH_22	55	50	67.2	64.6	68.1	65.8	0.9	1.2	67.7	65.4	0.5	0.8
	SH_23	55	50	67.2	64.6	68.1	65.8	0.9	1.2	67.7	65.4	0.5	0.8
	SH_24	55	50	67.4	64.8	68.3	66.0	0.9	1.2	67.9	65.5	0.5	0.7
	SH_25	55	50	67.6	65.0	68.5	66.2	0.9	1.2	68.1	65.7	0.5	0.7
	SH_26	55	50	67.7	65.0	68.6	66.2	0.9	1.2	68.2	65.8	0.5	0.8
	SH_27	55	50	68.0	65.3	68.9	66.5	0.9	1.2	68.5	66.1	0.5	0.8
	SH_28	55	50	68.2	65.5	69.1	66.7	0.9	1.2	68.6	66.2	0.4	0.7
	SH_29	55	50	68.4	65.6	69.3	66.8	0.9	1.2	68.8	66.4	0.4	0.8
	SH_30	55	50	68.5	65.7	69.4	66.9	0.9	1.2	69.0	66.5	0.5	0.8
	SH_31	55	50	66.6	64.2	67.6	65.4	1.0	1.2	67.1	65.0	0.5	0.8
	SH_32	55	50	66.8	64.3	67.7	65.5	0.9	1.2	67.2	65.1	0.4	0.8
	SH_33	55	50	66.9	64.4	67.8	65.6	0.9	1.2	67.4	65.1	0.5	0.7
	SH_34	55	50	66.9	64.5	67.9	65.6	1.0	1.1	67.4	65.2	0.5	0.7
	SH_35	55	50	66.9	64.5	67.9	65.6	1.0	1.1	67.4	65.2	0.5	0.7
	SH_36	55	50	67.0	64.5	67.9	65.7	0.9	1.2	67.5	65.2	0.5	0.7
	SH_37	55	50	67.0	64.5	67.9	65.7	0.9	1.2	67.5	65.2	0.5	0.7
	SH_38	55	50	67.0	64.5	67.9	65.7	0.9	1.2	67.5	65.2	0.5	0.7
	SH_39	55	50	67.2	64.7	68.1	65.9	0.9	1.2	67.7	65.4	0.5	0.7
	SH_40	55	50	69.0	66.2	69.9	67.4	0.9	1.2	69.6	67.1	0.6	0.9
	SH_41	55	50	68.8	66.1	69.7	67.3	0.9	1.2	69.3	66.8	0.5	0.7
	SH_42	55	50	68.3	65.7	69.2	66.9	0.9	1.2	68.8	66.4	0.5	0.7
	SH_43	55	50	67.7	65.2	68.6	66.4	0.9	1.2	68.2	65.9	0.5	0.7
	SH_44	55	50	67.1	64.8	68.0	65.9	0.9	1.1	67.7	65.4	0.6	0.6
	SH_45	55	50	67.5	65.1	68.5	66.3	1.0	1.2	68.1	65.8	0.6	0.7
	SH_46	55	50	68.2	65.7	69.1	66.9	0.9	1.2	68.8	66.4	0.6	0.7
	SH_47	55	50	67.8	65.3	68.7	66.5	0.9	1.2	68.4	66.2	0.6	0.9
	SH_48	55	50	68.7	66.1	69.6	67.3	0.9	1.2	69.3	66.9	0.6	0.8
	SH_49	55	50	66.6	64.3	67.5	65.5	0.9	1.2	67.3	65.2	0.7	0.9
	SH_50	55	50	66.8	64.5	67.7	65.7	0.9	1.2	67.5	65.4	0.7	0.9
	SH_51	55	50	65.2	62.9	66.1	64.1	0.9	1.2	65.8	63.8	0.6	0.9
	SH_52	55	50	63.6	61.5	64.5	62.6	0.9	1.1	64.2	62.4	0.6	0.9
	SH_53	55	50	64.6	62.5	65.5	63.6	0.9	1.1	65.3	63.4	0.7	0.9
	SH_54	55	50	64.3	62.3	65.2	63.4	0.9	1.1	65.0	63.2	0.7	0.9
	SH_55	55	50	63.5	61.6	64.5	62.8	1.0	1.2	64.2	62.5	0.7	0.9
	SH_56	55	50	62.6	60.8	63.6	62.0	1.0	1.2	63.3	61.7	0.7	0.9
	SH_57	55	50	64.3	62.4	65.2	63.5	0.9	1.1	64.9	63.2	0.6	0.8
	SH_58	55	50	68.7	66.2	69.6	67.4	0.9	1.2	69.3	66.9	0.6	0.7
	SH_59	55	50	68.9	66.2	69.8	67.4	0.9	1.2	69.5	67.0	0.6	0.8
	SH_60	55	50	69.0	66.3	69.9	67.5	0.9	1.2	69.6	67.1	0.6	0.8

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	SH_61	55	50	68.9	66.3	69.8	67.5	0.9	1.2	69.5	67.1	0.6	0.8
	SH_62	55	50	69.1	66.4	70.0	67.6	0.9	1.2	69.7	67.2	0.6	0.8
	SH_63	55	50	69.1	66.4	70.0	67.6	0.9	1.2	69.7	67.2	0.6	0.8
	SH_64	55	50	67.9	65.5	68.8	66.6	0.9	1.1	68.4	66.2	0.5	0.7
	SH_65	55	50	68.1	65.7	69.0	66.8	0.9	1.1	68.7	66.4	0.6	0.7
	SH_66	55	50	68.0	65.6	68.9	66.8	0.9	1.2	68.6	66.3	0.6	0.7
	SH_67	55	50	68.6	66.2	69.5	67.4	0.9	1.2	69.2	66.9	0.6	0.7
	SH_68	55	50	62.9	61.1	63.8	62.2	0.9	1.1	63.5	61.9	0.6	0.8
	SH_69	55	50	63.6	61.8	64.5	62.9	0.9	1.1	64.2	62.6	0.6	0.8
	SH_70	55	50	69.4	66.9	70.3	68.0	0.9	1.1	70.0	67.5	0.6	0.6
	SH_71	55	50	69.2	66.8	70.1	68.0	0.9	1.2	69.8	67.5	0.6	0.7
	SH_72	55	50	69.0	66.6	69.9	67.8	0.9	1.2	69.5	67.3	0.5	0.7
	SH_73	55	50	68.8	66.4	69.7	67.6	0.9	1.2	69.3	67.1	0.5	0.7
	SH_74	55	50	68.0	65.8	68.9	67.0	0.9	1.2	68.5	66.5	0.5	0.7
	SH_75	55	50	68.7	66.3	69.6	67.5	0.9	1.2	69.2	67.1	0.5	0.8
	SH_76	55	50	69.0	66.6	69.9	67.8	0.9	1.2	69.6	67.3	0.6	0.7
	SH_77	55	50	67.8	65.4	68.7	66.6	0.9	1.2	68.3	66.1	0.5	0.7
	SH_78	55	50	66.4	64.3	67.4	65.4	1.0	1.1	67.0	65.0	0.6	0.7
	SH_79	55	50	63.6	61.7	64.5	62.9	0.9	1.2	64.3	62.6	0.7	0.9
	SH_80	55	50	61.9	60.2	62.9	61.3	1.0	1.1	62.6	61.1	0.7	0.9
	SH_81	55	50	61.9	60.1	62.8	61.2	0.9	1.1	62.6	61.0	0.7	0.9
	SH_82	55	50	62.2	60.3	63.1	61.4	0.9	1.1	62.8	61.2	0.6	0.9
	SH_83	55	50	62.6	60.7	63.5	61.8	0.9	1.1	63.2	61.5	0.6	0.8
	SH_84	55	50	62.3	60.3	63.3	61.4	1.0	1.1	62.9	61.1	0.6	0.8
	SH_85	55	50	62.1	60.1	63.1	61.2	1.0	1.1	62.7	60.9	0.6	0.8
	SH_86	55	50	62.9	60.9	63.8	62.1	0.9	1.2	63.4	61.6	0.5	0.7
	SH_87	55	50	62.1	60.1	63.0	61.3	0.9	1.2	62.6	60.9	0.5	0.8
	SH_88	55	50	60.8	58.9	61.8	60.0	1.0	1.1	61.4	59.7	0.6	0.8
	SH_89	55	50	61.6	59.8	62.5	61.0	0.9	1.2	62.1	60.5	0.5	0.7
	SH_90	55	50	63.0	61.0	64.0	62.1	1.0	1.1	63.5	61.6	0.5	0.6
SH cont...	SH_91	55	50	65.6	63.0	66.6	64.3	1.0	1.3	66.1	63.6	0.5	0.6
	SH_92	55	50	68.2	66.0	69.1	67.2	0.9	1.2	68.7	66.6	0.5	0.6
	SH_93	55	50	67.6	65.5	68.5	66.7	0.9	1.2	68.1	66.1	0.5	0.6
	SH_94	55	50	68.5	66.2	69.5	67.4	1.0	1.2	69.0	66.8	0.5	0.6
	SH_95	55	50	68.3	66.1	69.2	67.3	0.9	1.2	68.8	66.7	0.5	0.6
	SH_96	55	50	68.1	65.9	69.1	67.1	1.0	1.2	68.6	66.5	0.5	0.6
	SH_97	55	50	67.4	65.3	68.3	66.4	0.9	1.1	67.8	65.9	0.4	0.6
	SH_98	55	50	66.9	64.9	67.8	66.1	0.9	1.2	67.3	65.5	0.4	0.6
	SH_99	55	50	66.1	64.2	67.1	65.4	1.0	1.2	66.6	64.8	0.5	0.6
	SH_100	55	50	65.7	63.8	66.6	65.0	0.9	1.2	66.1	64.4	0.4	0.6
	SH_101	55	50	65.1	63.3	66.1	64.4	1.0	1.1	65.6	63.8	0.5	0.5
	SH_102	55	50	65.8	63.7	66.8	64.9	1.0	1.2	66.3	64.3	0.5	0.6
	SH_103	55	50	65.9	64.0	66.9	65.1	1.0	1.1	66.6	64.8	0.7	0.8
	SH_104	55	50	65.5	63.5	66.5	64.7	1.0	1.2	66.1	64.3	0.6	0.8
	SH_105	55	50	65.4	63.4	66.4	64.6	1.0	1.2	66.0	64.2	0.6	0.8
	SH_106	55	50	65.3	63.2	66.3	64.4	1.0	1.2	65.9	64.0	0.6	0.8
	SH_107	55	50	65.3	63.2	66.3	64.4	1.0	1.2	65.9	64.0	0.6	0.8
	SH_108	55	50	65.3	63.2	66.3	64.4	1.0	1.2	65.9	63.9	0.6	0.7
	SH_109	55	50	65.3	63.2	66.3	64.4	1.0	1.2	65.9	63.9	0.6	0.7
	SH_110	55	50	65.4	63.2	66.3	64.4	0.9	1.2	65.9	63.9	0.5	0.7
	SH_111	55	50	65.5	63.3	66.4	64.5	0.9	1.2	66.0	64.0	0.5	0.7
	SH_112	55	50	65.5	63.3	66.5	64.5	1.0	1.2	66.1	64.1	0.6	0.8
	SH_113	55	50	65.6	63.5	66.6	64.7	1.0	1.2	66.2	64.2	0.6	0.7
	SH_114	55	50	65.8	63.6	66.7	64.8	0.9	1.2	66.3	64.3	0.5	0.7
	SH_115	55	50	65.8	63.7	66.8	64.9	1.0	1.2	66.4	64.4	0.6	0.7
	SH_116	55	50	65.9	63.8	66.9	65.0	1.0	1.2	66.5	64.5	0.6	0.7
	SH_117	55	50	66.0	63.9	66.9	65.0	0.9	1.1	66.6	64.6	0.6	0.7
	SH_118	55	50	66.1	64.0	67.1	65.2	1.0	1.2	66.7	64.8	0.6	0.8
	SH_119	55	50	66.2	64.1	67.2	65.3	1.0	1.2	66.8	64.9	0.6	0.8
	SH_120	55	50	66.2	64.1	67.1	65.3	0.9	1.2	66.8	64.8	0.6	0.7
	SH_121	55	50	66.3	64.2	67.2	65.4	0.9	1.2	66.9	65.0	0.6	0.8

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
	SH_122	55	50	66.4	64.3	67.3	65.5	0.9	1.2	67.0	65.1	0.6	0.8
	SH_123	55	50	66.4	64.4	67.4	65.6	1.0	1.2	67.1	65.1	0.7	0.7
	SH_124	55	50	66.5	64.5	67.5	65.6	1.0	1.1	67.1	65.2	0.6	0.7
	SH_125	55	50	66.6	64.6	67.5	65.7	0.9	1.1	67.2	65.3	0.6	0.7
	SH_126	55	50	66.6	64.6	67.6	65.7	1.0	1.1	67.2	65.3	0.6	0.7
	SH_127	55	50	66.7	64.7	67.6	65.8	0.9	1.1	67.3	65.4	0.6	0.7
	SH_128	55	50	66.7	64.6	67.6	65.8	0.9	1.2	67.2	65.4	0.5	0.8
	SH_129	55	50	66.7	64.6	67.6	65.8	0.9	1.2	67.2	65.4	0.5	0.8
	SH_130	55	50	66.8	64.7	67.7	65.9	0.9	1.2	67.3	65.4	0.5	0.7
	SH_131	55	50	66.0	64.1	66.9	65.2	0.9	1.1	66.5	64.8	0.5	0.7
	SH_132	55	50	65.2	63.4	66.2	64.6	1.0	1.2	65.7	64.1	0.5	0.7
	SH_133	55	50	64.7	63.0	65.7	64.1	1.0	1.1	65.3	63.7	0.6	0.7
	SH_134	55	50	66.8	64.8	67.8	66.0	1.0	1.2	67.3	65.5	0.5	0.7
	SH_135	55	50	66.6	64.6	67.5	65.8	0.9	1.2	67.0	65.3	0.4	0.7
	SH_136	55	50	66.1	64.2	67.0	65.3	0.9	1.1	66.5	64.8	0.4	0.6
SH cont...	SH_137	55	50	65.9	64.0	66.8	65.2	0.9	1.2	66.4	64.6	0.5	0.6
	SH_138	55	50	65.7	63.9	66.7	65.0	1.0	1.1	66.2	64.5	0.5	0.6
	SH_139	55	50	64.5	62.7	65.4	63.9	0.9	1.2	65.1	63.6	0.6	0.9
	SH_140	55	50	64.3	62.6	65.3	63.7	1.0	1.1	65.0	63.4	0.7	0.8
	SH_141	55	50	64.4	62.5	65.3	63.7	0.9	1.2	65.0	63.3	0.6	0.8
	SH_142	55	50	64.4	62.6	65.3	63.7	0.9	1.1	65.0	63.4	0.6	0.8
	SH_143	55	50	64.4	62.6	65.4	63.8	1.0	1.2	65.1	63.4	0.7	0.8
	SH_144	55	50	64.5	62.6	65.4	63.8	0.9	1.2	65.1	63.4	0.6	0.8
	SH_145	55	50	64.5	62.7	65.5	63.8	1.0	1.1	65.2	63.5	0.7	0.8
	SH_146	55	50	64.6	62.7	65.5	63.9	0.9	1.2	65.2	63.5	0.6	0.8
	SH_147	55	50	64.7	62.8	65.6	64.0	0.9	1.2	65.3	63.6	0.6	0.8
	SH_148	55	50	64.8	62.9	65.7	64.1	0.9	1.2	65.3	63.7	0.5	0.8
	SH_149	55	50	64.9	63.0	65.8	64.2	0.9	1.2	65.4	63.8	0.5	0.8
	SH_150	55	50	64.9	63.1	65.9	64.3	1.0	1.2	65.5	63.8	0.6	0.7
	SH_151	55	50	64.9	63.1	65.9	64.3	1.0	1.2	65.5	63.9	0.6	0.8
	SH_152	55	50	65.0	63.2	65.9	64.3	0.9	1.1	65.5	63.9	0.5	0.7
NH	NH_1	70	65	69.0	66.7	70.0	68.0	1.0	1.3	69.7	67.6	0.7	0.9

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SI	SI_1	55	50	63.8	60.7	64.7	61.9	0.9	1.2	64.1	61.3	0.3	0.6
	SI_2	55	50	64.4	62.2	65.4	63.3	1.0	1.1	64.7	62.7	0.3	0.5
	SI_3	55	50	66.2	63.8	67.1	65.0	0.9	1.2	66.6	64.5	0.4	0.7
	SI_4	55	50	65.7	63.4	66.6	64.6	0.9	1.2	66.1	64.0	0.4	0.6
	SI_5	55	50	65.0	62.8	65.9	64.0	0.9	1.2	65.4	63.4	0.4	0.6
	SI_6	55	50	65.3	62.8	66.2	64.0	0.9	1.2	65.5	63.3	0.2	0.5
	SI_7	55	50	64.3	61.8	65.2	63.0	0.9	1.2	64.6	62.3	0.3	0.5
	SI_8	55	50	64.3	62.0	65.2	63.2	0.9	1.2	64.5	62.5	0.2	0.5
	SI_9	55	50	63.9	61.7	64.8	62.9	0.9	1.2	64.1	62.2	0.2	0.5
	SI_10	55	50	63.2	61.2	64.2	62.4	1.0	1.2	63.5	61.7	0.3	0.5
	SI_11	55	50	62.5	60.6	63.5	61.8	1.0	1.2	62.8	61.1	0.3	0.5
	SI_12	55	50	62.2	60.4	63.2	61.5	1.0	1.1	62.6	60.9	0.4	0.5
	SI_13	55	50	61.8	60.0	62.8	61.2	1.0	1.2	62.2	60.6	0.4	0.6
	SI_14	55	50	61.4	59.6	62.4	60.8	1.0	1.2	61.8	60.2	0.4	0.6
	SI_15	55	50	64.0	61.2	65.0	62.4	1.0	1.2	64.3	61.7	0.3	0.5
	SI_16	55	50	64.3	61.8	65.2	63.0	0.9	1.2	64.6	62.3	0.3	0.5
	SI_17	55	50	64.0	61.7	64.9	62.8	0.9	1.1	64.2	62.1	0.2	0.4
	SI_18	55	50	63.4	61.3	64.4	62.4	1.0	1.1	63.7	61.7	0.3	0.4
	SI_19	55	50	62.7	60.7	63.7	61.9	1.0	1.2	63.0	61.2	0.3	0.5
	SI_20	55	50	62.1	60.1	63.0	61.3	0.9	1.2	62.3	60.6	0.2	0.5
	SI_21	55	50	61.6	59.7	62.5	60.9	0.9	1.2	61.9	60.2	0.3	0.5
	SI_22	55	50	61.2	59.3	62.1	60.5	0.9	1.2	61.5	59.9	0.3	0.6
	SI_23	55	50	60.8	59.0	61.7	60.1	0.9	1.1	61.1	59.5	0.3	0.5
	SI_24	55	50	65.3	62.3	66.2	63.5	0.9	1.2	65.6	62.8	0.3	0.5
	SI_25	55	50	64.0	61.8	64.9	62.9	0.9	1.1	64.4	62.3	0.4	0.5
	SI_26	55	50	64.2	61.8	65.1	63.0	0.9	1.2	64.4	62.3	0.2	0.5
	SI_27	55	50	63.6	61.3	64.5	62.5	0.9	1.2	63.8	61.8	0.2	0.5
	SI_28	55	50	62.9	60.7	63.8	61.8	0.9	1.1	63.1	61.1	0.2	0.4
	SI_29	55	50	62.1	60.1	63.1	61.2	1.0	1.1	62.4	60.5	0.3	0.4
	SI_30	55	50	61.5	59.5	62.4	60.7	0.9	1.2	61.7	60.0	0.2	0.5
	SI_31	55	50	61.0	59.1	61.9	60.3	0.9	1.2	61.3	59.6	0.3	0.5
	SI_32	55	50	60.5	58.7	61.4	59.8	0.9	1.1	60.8	59.2	0.3	0.5
	SI_33	55	50	60.1	58.4	61.1	59.5	1.0	1.1	60.5	58.9	0.4	0.5
	SI_34	55	50	59.7	58.0	60.6	59.2	0.9	1.2	60.0	58.6	0.3	0.6
	SI_35	55	50	59.3	57.7	60.2	58.8	0.9	1.1	59.7	58.3	0.4	0.6
	SI_36	55	50	64.9	61.9	65.8	63.1	0.9	1.2	65.2	62.4	0.3	0.5
	SI_37	55	50	64.7	62.1	65.6	63.3	0.9	1.2	65.0	62.6	0.3	0.5
	SI_38	55	50	63.9	61.5	64.8	62.7	0.9	1.2	64.1	62.0	0.2	0.5
	SI_39	55	50	63.1	60.8	64.1	62.0	1.0	1.2	63.3	61.3	0.2	0.5
	SI_40	55	50	62.4	60.1	63.3	61.3	0.9	1.2	62.5	60.6	0.1	0.5
	SI_41	55	50	61.6	59.5	62.6	60.7	1.0	1.2	61.8	59.9	0.2	0.4
	SI_42	55	50	61.1	59.0	62.0	60.2	0.9	1.2	61.3	59.5	0.2	0.5
	SI_43	55	50	60.6	58.6	61.5	59.8	0.9	1.2	60.8	59.1	0.2	0.5
	SI_44	55	50	60.2	58.4	61.2	59.6	1.0	1.2	60.5	59.0	0.3	0.6
	SI_45	55	50	59.9	58.2	60.8	59.3	0.9	1.1	60.2	58.7	0.3	0.5
	SI_46	55	50	59.7	58.0	60.6	59.2	0.9	1.2	60.0	58.6	0.3	0.6
	SI_47	55	50	67.2	63.4	68.1	64.7	0.9	1.3	67.2	63.8	0.0	0.4
	SI_48	55	50	65.7	62.5	66.6	63.7	0.9	1.2	65.6	62.9	-0.1	0.4
	SI_49	55	50	64.8	61.9	65.7	63.1	0.9	1.2	64.9	62.3	0.1	0.4
	SI_50	55	50	63.8	60.9	64.7	62.1	0.9	1.2	63.9	61.3	0.1	0.4
	SI_51	55	50	62.7	60.0	63.7	61.2	1.0	1.2	62.8	60.4	0.1	0.4
	SI_52	55	50	61.7	59.2	62.6	60.4	0.9	1.2	61.8	59.7	0.1	0.5
	SI_53	55	50	61.4	59.2	62.3	60.4	0.9	1.2	61.6	59.7	0.2	0.5
	SI_54	55	50	61.0	59.1	61.9	60.2	0.9	1.1	61.2	59.6	0.2	0.5
	SI_55	55	50	60.5	58.7	61.5	59.9	1.0	1.2	60.8	59.3	0.3	0.6
	SI_56	55	50	59.8	58.1	60.7	59.3	0.9	1.2	60.1	58.7	0.3	0.6
	SI_57	55	50	59.3	57.7	60.3	58.9	1.0	1.2	59.7	58.3	0.4	0.6
	SI_58	55	50	59.0	57.4	59.9	58.6	0.9	1.2	59.3	58.0	0.3	0.6
	SI_59	55	50	67.3	64.0	68.2	65.2	0.9	1.2	67.2	64.3	-0.1	0.3
	SI_60	55	50	67.3	64.0	68.2	65.2	0.9	1.2	67.2	64.3	-0.1	0.3

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SI cont...	SI_61	55	50	64.5	60.3	65.5	61.7	1.0	1.4	64.5	60.8	0.0	0.5
	SI_62	55	50	64.5	60.4	65.4	61.7	0.9	1.3	64.5	60.9	0.0	0.5
	SI_63	55	50	64.4	61.3	65.3	62.6	0.9	1.3	64.4	61.8	0.0	0.5
	SI_64	55	50	64.5	61.5	65.4	62.7	0.9	1.2	64.5	61.9	0.0	0.4
	SI_65	55	50	62.9	59.2	63.8	60.5	0.9	1.3	62.9	59.6	0.0	0.4
	SI_66	55	50	62.8	59.1	63.8	60.4	1.0	1.3	62.8	59.6	0.0	0.5
	SI_67	55	50	61.9	59.0	62.8	60.2	0.9	1.2	62.0	59.5	0.1	0.5
	SI_68	55	50	62.2	59.2	63.1	60.4	0.9	1.2	62.2	59.6	0.0	0.4
	SI_69	55	50	61.5	58.1	62.4	59.4	0.9	1.3	61.5	58.6	0.0	0.5
	SI_70	55	50	61.4	58.1	62.3	59.3	0.9	1.2	61.4	58.5	0.0	0.4
	SI_71	55	50	59.8	57.0	60.7	58.2	0.9	1.2	60.0	57.5	0.2	0.5
	SI_72	55	50	60.3	57.3	61.2	58.5	0.9	1.2	60.4	57.8	0.1	0.5
	SI_73	55	50	60.3	57.3	61.3	58.6	1.0	1.3	60.4	57.8	0.1	0.5
	SI_74	55	50	60.3	57.4	61.3	58.6	1.0	1.2	60.4	57.9	0.1	0.5
	SI_75	55	50	61.2	59.2	62.1	60.4	0.9	1.2	61.5	59.8	0.3	0.6
	SI_76	55	50	61.3	59.3	62.3	60.5	1.0	1.2	61.6	59.8	0.3	0.5
	SI_77	55	50	61.4	59.4	62.4	60.6	1.0	1.2	61.7	59.9	0.3	0.5
	SI_78	55	50	61.4	59.4	62.4	60.6	1.0	1.2	61.7	59.9	0.3	0.5
	SI_79	55	50	61.3	59.4	62.2	60.5	0.9	1.1	61.5	59.8	0.2	0.4
	SI_80	55	50	61.3	59.4	62.2	60.5	0.9	1.1	61.5	59.8	0.2	0.4
	SI_81	55	50	61.1	59.2	62.0	60.4	0.9	1.2	61.3	59.7	0.2	0.5
	SI_82	55	50	61.0	59.2	62.0	60.3	1.0	1.1	61.3	59.7	0.3	0.5
	SI_83	55	50	60.2	58.4	61.1	59.6	0.9	1.2	60.5	59.0	0.3	0.6
	SI_84	55	50	60.2	58.5	61.1	59.6	0.9	1.1	60.5	59.0	0.3	0.5
	SI_85	55	50	59.9	58.3	60.9	59.4	1.0	1.1	60.3	58.8	0.4	0.5
	SI_86	55	50	59.8	58.1	60.8	59.3	1.0	1.2	60.1	58.7	0.3	0.6
	SI_87	55	50	59.4	57.8	60.4	59.0	1.0	1.2	59.8	58.4	0.4	0.6
	SI_88	55	50	59.4	57.8	60.4	59.0	1.0	1.2	59.8	58.4	0.4	0.6
	SI_89	55	50	59.2	57.7	60.2	58.8	1.0	1.1	59.6	58.2	0.4	0.5
	SI_90	55	50	59.2	57.6	60.1	58.8	0.9	1.2	59.5	58.2	0.3	0.6
	SI_91	55	50	58.8	57.3	59.8	58.5	1.0	1.2	59.2	57.9	0.4	0.6
	SI_92	55	50	58.8	57.3	59.8	58.5	1.0	1.2	59.2	57.9	0.4	0.6
	SI_93	55	50	58.7	57.2	59.6	58.4	0.9	1.2	59.1	57.8	0.4	0.6
	SI_94	55	50	68.6	65.3	69.5	66.5	0.9	1.2	68.5	65.6	-0.1	0.3
	SI_95	55	50	65.1	61.1	66.0	62.4	0.9	1.3	65.0	61.5	-0.1	0.4
	SI_96	55	50	64.1	60.1	65.0	61.3	0.9	1.2	64.0	60.5	-0.1	0.4
	SI_97	55	50	63.9	59.9	64.8	61.2	0.9	1.3	63.8	60.3	-0.1	0.4
	SI_98	55	50	62.8	58.7	63.7	60.0	0.9	1.3	62.7	59.1	-0.1	0.4
	SI_99	55	50	62.6	58.9	63.5	60.2	0.9	1.3	62.5	59.3	-0.1	0.4
	SI_100	55	50	61.3	57.5	62.2	58.7	0.9	1.2	61.3	57.9	0.0	0.4
	SI_101	55	50	61.7	58.5	62.6	59.7	0.9	1.2	61.7	59.0	0.0	0.5
	SI_102	55	50	62.1	59.3	63.0	60.5	0.9	1.2	62.2	59.8	0.1	0.5
	SI_103	55	50	61.9	59.2	62.8	60.4	0.9	1.2	61.9	59.6	0.0	0.4
	SI_104	55	50	61.7	59.3	62.7	60.5	1.0	1.2	61.8	59.7	0.1	0.4
	SI_105	55	50	61.5	59.2	62.4	60.4	0.9	1.2	61.6	59.7	0.1	0.5
	SI_106	55	50	61.2	59.1	62.2	60.3	1.0	1.2	61.4	59.6	0.2	0.5
	SI_107	55	50	61.0	59.0	61.9	60.1	0.9	1.1	61.2	59.5	0.2	0.5
	SI_108	55	50	60.6	58.7	61.5	59.9	0.9	1.2	60.9	59.2	0.3	0.5
	SI_109	55	50	60.3	58.5	61.3	59.7	1.0	1.2	60.6	59.0	0.3	0.5
	SI_110	55	50	60.0	58.3	60.9	59.4	0.9	1.1	60.3	58.8	0.3	0.5
	SI_111	55	50	59.9	58.2	60.8	59.3	0.9	1.1	60.2	58.8	0.3	0.6
	SI_112	55	50	59.6	57.9	60.5	59.1	0.9	1.2	60.0	58.5	0.4	0.6
	SI_113	55	50	59.4	57.8	60.3	59.0	0.9	1.2	59.8	58.4	0.4	0.6
	SI_114	55	50	59.1	57.6	60.1	58.8	1.0	1.2	59.6	58.2	0.5	0.6
	SI_115	55	50	59.0	57.6	60.0	58.7	1.0	1.1	59.5	58.2	0.5	0.6
	SI_116	55	50	59.1	57.6	60.1	58.8	1.0	1.2	59.6	58.3	0.5	0.7
	SI_117	55	50	59.2	57.7	60.2	58.9	1.0	1.2	59.7	58.4	0.5	0.7
	SI_118	55	50	59.3	57.8	60.3	59.0	1.0	1.2	59.8	58.5	0.5	0.7
	SI_119	55	50	59.4	57.9	60.4	59.0	1.0	1.1	59.9	58.6	0.5	0.7
	SI_120	55	50	66.4	62.9	67.3	64.2	0.9	1.3	66.3	63.2	-0.1	0.3

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SI cont...	SI_121	55	50	63.8	59.5	64.7	60.8	0.9	1.3	63.7	59.9	-0.1	0.4
	SI_122	55	50	62.7	58.6	63.6	59.9	0.9	1.3	62.6	59.0	-0.1	0.4
	SI_123	55	50	63.9	61.0	64.8	62.2	0.9	1.2	64.0	61.5	0.1	0.5
	SI_124	55	50	63.6	60.8	64.5	62.0	0.9	1.2	63.6	61.2	0.0	0.4
	SI_125	55	50	63.0	60.3	63.9	61.6	0.9	1.3	63.0	60.7	0.0	0.4
	SI_126	55	50	62.6	60.0	63.5	61.2	0.9	1.2	62.6	60.4	0.0	0.4
	SI_127	55	50	62.2	59.7	63.1	60.9	0.9	1.2	62.2	60.1	0.0	0.4
	SI_128	55	50	61.9	59.6	62.9	60.8	1.0	1.2	62.0	60.1	0.1	0.5
	SI_129	55	50	61.6	59.4	62.5	60.6	0.9	1.2	61.8	59.9	0.2	0.5
	SI_130	55	50	61.3	59.2	62.2	60.4	0.9	1.2	61.5	59.7	0.2	0.5
	SI_131	55	50	60.9	59.0	61.8	60.1	0.9	1.1	61.2	59.5	0.3	0.5
	SI_132	55	50	60.6	58.8	61.6	59.9	1.0	1.1	60.9	59.3	0.3	0.5
	SI_133	55	50	60.3	58.6	61.3	59.7	1.0	1.1	60.7	59.1	0.4	0.5
	SI_134	55	50	60.0	58.3	61.0	59.5	1.0	1.2	60.4	58.9	0.4	0.6
	SI_135	55	50	59.8	58.2	60.8	59.3	1.0	1.1	60.2	58.8	0.4	0.6
	SI_136	55	50	59.6	58.0	60.6	59.1	1.0	1.1	60.0	58.6	0.4	0.6
	SI_137	55	50	65.8	63.3	66.7	64.5	0.9	1.2	65.9	63.7	0.1	0.4
	SI_138	55	50	63.2	59.7	64.2	61.0	1.0	1.3	63.4	60.3	0.2	0.6
	SI_139	55	50	63.9	61.5	64.8	62.6	0.9	1.1	64.3	62.1	0.4	0.6
	SI_140	55	50	64.2	61.6	65.1	62.8	0.9	1.2	64.2	62.0	0.0	0.4
	SI_141	55	50	63.8	61.3	64.7	62.5	0.9	1.2	63.8	61.7	0.0	0.4
	SI_142	55	50	63.4	60.9	64.3	62.1	0.9	1.2	63.4	61.3	0.0	0.4
	SI_143	55	50	63.0	60.6	63.9	61.8	0.9	1.2	63.1	61.0	0.1	0.4
	SI_144	55	50	62.6	60.2	63.5	61.4	0.9	1.2	62.7	60.7	0.1	0.5
	SI_145	55	50	62.3	60.0	63.2	61.2	0.9	1.2	62.4	60.4	0.1	0.4
	SI_146	55	50	61.9	59.8	62.9	60.9	1.0	1.1	62.1	60.2	0.2	0.4
	SI_147	55	50	61.6	59.5	62.5	60.7	0.9	1.2	61.8	60.0	0.2	0.5
	SI_148	55	50	61.2	59.3	62.2	60.4	1.0	1.1	61.5	59.8	0.3	0.5
	SI_149	55	50	60.9	59.0	61.9	60.2	1.0	1.2	61.2	59.6	0.3	0.6
	SI_150	55	50	60.6	58.8	61.5	59.9	0.9	1.1	60.9	59.4	0.3	0.6
	SI_151	55	50	60.3	58.6	61.3	59.7	1.0	1.1	60.7	59.2	0.4	0.6
	SI_152	55	50	60.0	58.4	61.0	59.5	1.0	1.1	60.4	59.0	0.4	0.6
	SI_153	55	50	59.7	58.2	60.7	59.3	1.0	1.1	60.2	58.8	0.5	0.6
	SI_154	55	50	69.4	65.9	70.3	67.1	0.9	1.2	69.3	66.2	-0.1	0.3
	SI_155	55	50	67.4	64.4	68.3	65.6	0.9	1.2	67.4	64.9	0.0	0.5
	SI_156	55	50	66.6	63.8	67.5	65.0	0.9	1.2	66.7	64.3	0.1	0.5
	SI_157	55	50	66.8	63.9	67.7	65.1	0.9	1.2	66.8	64.3	0.0	0.4
	SI_158	55	50	65.9	63.3	66.8	64.5	0.9	1.2	66.0	63.8	0.1	0.5
	SI_159	55	50	65.2	62.8	66.1	64.0	0.9	1.2	65.4	63.4	0.2	0.6
	SI_160	55	50	64.8	62.5	65.7	63.7	0.9	1.2	65.0	63.1	0.2	0.6
	SI_161	55	50	64.4	62.2	65.3	63.4	0.9	1.2	64.6	62.8	0.2	0.6
	SI_162	55	50	64.2	62.1	65.2	63.3	1.0	1.2	64.5	62.7	0.3	0.6
	SI_163	55	50	63.5	61.5	64.4	62.6	0.9	1.1	63.9	62.2	0.4	0.7
	SI_164	55	50	62.7	60.8	63.7	62.0	1.0	1.2	63.2	61.5	0.5	0.7
	SI_165	55	50	63.0	61.0	63.9	62.2	0.9	1.2	63.4	61.7	0.4	0.7
	SI_166	55	50	62.8	60.7	63.8	61.9	1.0	1.2	63.3	61.5	0.5	0.8
	SI_167	55	50	62.5	60.4	63.4	61.5	0.9	1.1	62.9	61.1	0.4	0.7
	SI_168	55	50	62.2	60.0	63.1	61.2	0.9	1.2	62.6	60.7	0.4	0.7
	SI_169	55	50	62.7	60.3	63.7	61.5	1.0	1.2	63.2	61.0	0.5	0.7
	SI_170	55	50	64.0	60.9	64.9	62.2	0.9	1.3	64.5	61.9	0.5	1.0
	SI_171	55	50	68.6	64.4	69.6	65.8	1.0	1.4	69.3	65.6	0.7	1.2
	SI_172	55	50	65.9	63.3	66.8	64.5	0.9	1.2	66.1	63.8	0.2	0.5
	SI_173	55	50	65.9	63.4	66.9	64.6	1.0	1.2	66.2	63.8	0.3	0.4
	SI_174	55	50	65.9	63.3	66.8	64.5	0.9	1.2	66.2	63.8	0.3	0.5
	SI_175	55	50	66.0	63.4	66.9	64.6	0.9	1.2	66.2	63.9	0.2	0.5
	SI_176	55	50	66.0	63.4	66.9	64.6	0.9	1.2	66.2	63.9	0.2	0.5
	SI_177	55	50	66.0	63.4	66.9	64.6	0.9	1.2	66.2	63.9	0.2	0.5
	SI_178	55	50	65.8	63.3	66.7	64.5	0.9	1.2	66.0	63.8	0.2	0.5
	SI_179	55	50	65.6	63.2	66.6	64.4	1.0	1.2	65.8	63.7	0.2	0.5
	SI_180	55	50	65.3	62.9	66.2	64.1	0.9	1.2	65.5	63.4	0.2	0.5

Table B2

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Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SI cont...	SI_181	55	50	63.9	61.0	64.8	62.2	0.9	1.2	64.0	61.6	0.1	0.6
	SI_182	55	50	63.2	61.1	64.1	62.2	0.9	1.1	63.6	61.7	0.4	0.6
	SI_183	55	50	63.1	61.2	64.0	62.3	0.9	1.1	63.6	61.8	0.5	0.6
	SI_184	55	50	63.0	61.1	63.9	62.3	0.9	1.2	63.6	61.9	0.6	0.8
	SI_185	55	50	63.0	61.2	64.0	62.4	1.0	1.2	63.5	61.9	0.5	0.7
	SI_186	55	50	63.1	61.3	64.0	62.5	0.9	1.2	63.7	62.0	0.6	0.7
	SI_187	55	50	63.1	61.3	64.0	62.4	0.9	1.1	63.6	62.0	0.5	0.7
	SI_188	55	50	62.9	61.1	63.9	62.3	1.0	1.2	63.5	61.9	0.6	0.8
	SI_189	55	50	63.9	61.7	64.8	62.9	0.9	1.2	64.4	62.5	0.5	0.8
	SI_190	55	50	63.7	61.6	64.7	62.8	1.0	1.2	64.0	62.2	0.3	0.6
	SI_191	70	65	63.1	60.7	64.0	61.9	0.9	1.2	63.2	61.2	0.1	0.5
	SI_192	55	50	63.1	61.0	64.1	62.2	1.0	1.2	63.4	61.6	0.3	0.6
	SI_193	55	50	63.7	61.0	64.6	62.2	0.9	1.2	64.1	61.9	0.4	0.9
	SI_194	55	50	62.1	58.8	63.0	60.1	0.9	1.3	62.3	59.5	0.2	0.7
	SI_195	55	50	61.9	59.3	62.8	60.5	0.9	1.2	62.2	60.0	0.3	0.7
	SI_196	55	50	62.5	60.2	63.4	61.4	0.9	1.2	62.8	60.8	0.3	0.6
	SI_197	55	50	63.4	61.4	64.3	62.6	0.9	1.2	63.8	62.1	0.4	0.7
	SI_198	55	50	63.4	61.4	64.3	62.6	0.9	1.2	63.8	62.2	0.4	0.8
	SI_199	55	50	65.4	62.8	66.3	64.1	0.9	1.3	66.0	63.7	0.6	0.9
	SI_200	55	50	64.9	62.2	65.8	63.4	0.9	1.2	65.6	63.2	0.7	1.0
	SI_201	55	50	63.7	61.0	64.7	62.2	1.0	1.2	64.5	62.1	0.8	1.1
	SI_202	55	50	63.2	60.5	64.1	61.7	0.9	1.2	64.0	61.7	0.8	1.2
	SI_203	55	50	62.7	60.1	63.6	61.4	0.9	1.3	63.5	61.3	0.8	1.2
	SI_204	55	50	62.2	60.0	63.1	61.2	0.9	1.2	62.3	60.5	0.1	0.5
	SI_205	55	50	62.2	60.0	63.1	61.2	0.9	1.2	62.4	60.6	0.2	0.6
	SI_206	55	50	62.2	60.1	63.2	61.3	1.0	1.2	62.5	60.7	0.3	0.6
	SI_207	55	50	62.3	60.2	63.2	61.4	0.9	1.2	62.6	60.8	0.3	0.6
	SI_208	55	50	62.3	60.3	63.3	61.5	1.0	1.2	62.6	60.9	0.3	0.6
	SI_209	55	50	62.4	60.4	63.4	61.6	1.0	1.2	62.7	61.0	0.3	0.6
	SI_210	55	50	62.5	60.6	63.5	61.8	1.0	1.2	62.9	61.2	0.4	0.6
	SI_211	55	50	62.7	60.7	63.6	61.9	0.9	1.2	63.0	61.4	0.3	0.7
	SI_212	55	50	62.8	60.9	63.8	62.1	1.0	1.2	63.2	61.6	0.4	0.7
	SI_213	55	50	62.8	60.9	63.8	62.1	1.0	1.2	63.3	61.6	0.5	0.7
	SI_214	55	50	62.8	61.0	63.8	62.1	1.0	1.1	63.3	61.7	0.5	0.7
	SI_215	55	50	62.8	60.9	63.8	62.1	1.0	1.2	63.3	61.7	0.5	0.8
	SI_216	55	50	62.4	60.3	63.3	61.5	0.9	1.2	62.8	61.0	0.4	0.7
	SI_217	55	50	62.3	60.3	63.3	61.4	1.0	1.1	62.9	61.0	0.6	0.7
	SI_218	55	50	62.8	60.4	63.7	61.7	0.9	1.3	63.6	61.5	0.8	1.1
	SI_219	55	50	61.2	59.3	62.2	60.5	1.0	1.2	61.5	59.9	0.3	0.6
	SI_220	55	50	61.3	59.4	62.2	60.5	0.9	1.1	61.6	59.9	0.3	0.5
	SI_221	55	50	61.3	59.5	62.3	60.6	1.0	1.1	61.7	60.1	0.4	0.6
	SI_222	55	50	61.4	59.5	62.4	60.7	1.0	1.2	61.8	60.1	0.4	0.6
	SI_223	55	50	61.5	59.6	62.4	60.8	0.9	1.2	61.9	60.3	0.4	0.7
	SI_224	55	50	61.6	59.8	62.5	60.9	0.9	1.1	62.0	60.4	0.4	0.6
	SI_225	55	50	61.7	59.9	62.7	61.1	1.0	1.2	62.2	60.6	0.5	0.7
	SI_226	55	50	62.0	60.2	63.0	61.4	1.0	1.2	62.5	60.9	0.5	0.7
	SI_227	55	50	61.9	60.1	62.9	61.3	1.0	1.2	62.4	60.9	0.5	0.8
	SI_228	55	50	62.1	60.3	63.1	61.5	1.0	1.2	62.6	61.1	0.5	0.8
	SI_229	55	50	61.9	60.1	62.8	61.3	0.9	1.2	62.4	60.9	0.5	0.8
	SI_230	55	50	57.1	54.4	58.0	55.7	0.9	1.3	58.1	55.7	1.0	1.3
	SI_231	55	50	57.6	54.7	58.6	56.0	1.0	1.3	58.7	56.0	1.1	1.3
	SI_232	55	50	61.7	59.5	62.7	60.7	1.0	1.2	62.7	60.6	1.0	1.1
	SI_233	55	50	60.6	58.8	61.5	60.0	0.9	1.2	61.0	59.4	0.4	0.6
	SI_234	55	50	60.6	58.9	61.6	60.1	1.0	1.2	61.1	59.5	0.5	0.6
	SI_235	55	50	60.7	59.0	61.7	60.2	1.0	1.2	61.2	59.7	0.5	0.7
	SI_236	55	50	60.7	59.0	61.7	60.2	1.0	1.2	61.2	59.7	0.5	0.7
	SI_237	55	50	60.8	59.1	61.8	60.3	1.0	1.2	61.3	59.8	0.5	0.7
	SI_238	55	50	60.9	59.2	61.8	60.3	0.9	1.1	61.4	59.8	0.5	0.6
	SI_239	55	50	61.1	59.4	62.1	60.6	1.0	1.2	61.6	60.1	0.5	0.7
	SI_240	55	50	61.3	59.6	62.3	60.7	1.0	1.1	61.8	60.3	0.5	0.7

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SI cont...	SI_241	55	50	61.4	59.7	62.4	60.9	1.0	1.2	62.0	60.5	0.6	0.8
	SI_242	55	50	61.5	59.8	62.5	61.0	1.0	1.2	62.1	60.6	0.6	0.8
	SI_243	55	50	61.3	59.6	62.2	60.7	0.9	1.1	61.9	60.4	0.6	0.8
	SI_244	55	50	59.3	57.4	60.3	58.6	1.0	1.2	60.0	58.3	0.7	0.9
	SI_245	55	50	59.7	57.5	60.6	58.7	0.9	1.2	60.5	58.6	0.8	1.1
	SI_246	55	50	61.9	59.9	62.8	61.1	0.9	1.2	62.8	61.0	0.9	1.1
	SI_247	55	50	60.0	58.4	60.9	59.5	0.9	1.1	60.4	59.0	0.4	0.6
	SI_248	55	50	60.0	58.4	61.0	59.6	1.0	1.2	60.5	59.1	0.5	0.7
	SI_249	55	50	60.0	58.5	61.0	59.6	1.0	1.1	60.5	59.2	0.5	0.7
	SI_250	55	50	60.1	58.5	61.1	59.7	1.0	1.2	60.6	59.2	0.5	0.7
	SI_251	55	50	60.1	58.5	61.1	59.7	1.0	1.2	60.7	59.3	0.6	0.8
	SI_252	55	50	60.3	58.7	61.3	59.8	1.0	1.1	60.9	59.4	0.6	0.7
	SI_253	55	50	60.3	58.7	61.3	59.9	1.0	1.2	60.9	59.4	0.6	0.7
	SI_254	55	50	60.5	58.9	61.5	60.0	1.0	1.1	61.1	59.6	0.6	0.7
	SI_255	55	50	60.7	59.0	61.6	60.2	0.9	1.2	61.3	59.8	0.6	0.8
	SI_256	55	50	60.7	59.1	61.7	60.2	1.0	1.1	61.4	59.9	0.7	0.8
	SI_257	55	50	60.5	58.9	61.5	60.1	1.0	1.2	61.1	59.7	0.6	0.8
	SI_258	55	50	57.7	54.6	58.7	55.9	1.0	1.3	58.7	56.0	1.0	1.4
	SI_259	55	50	58.5	55.5	59.4	56.8	0.9	1.3	59.5	56.8	1.0	1.3
	SI_260	55	50	60.8	58.6	61.8	59.9	1.0	1.3	61.8	59.8	1.0	1.2
	SI_261	55	50	59.4	57.9	60.4	59.1	1.0	1.2	59.9	58.7	0.5	0.8
	SI_262	55	50	59.5	58.0	60.5	59.2	1.0	1.2	60.0	58.7	0.5	0.7
	SI_263	55	50	59.6	58.1	60.6	59.3	1.0	1.2	60.2	58.9	0.6	0.8
	SI_264	55	50	59.6	58.2	60.6	59.3	1.0	1.1	60.2	58.9	0.6	0.7
	SI_265	55	50	59.8	58.3	60.8	59.5	1.0	1.2	60.4	59.0	0.6	0.7
	SI_266	55	50	59.8	58.3	60.8	59.5	1.0	1.2	60.4	59.1	0.6	0.8
	SI_267	55	50	59.9	58.4	60.9	59.5	1.0	1.1	60.5	59.1	0.6	0.7
	SI_268	55	50	59.9	58.3	60.9	59.5	1.0	1.2	60.5	59.1	0.6	0.8
	SI_269	55	50	60.1	58.4	61.1	59.6	1.0	1.2	60.7	59.2	0.6	0.8
	SI_270	55	50	60.2	58.6	61.2	59.8	1.0	1.2	60.9	59.4	0.7	0.8
	SI_271	55	50	60.0	58.3	61.0	59.5	1.0	1.2	60.7	59.1	0.7	0.8
	SI_272	55	50	59.2	57.2	60.1	58.4	0.9	1.2	60.0	58.1	0.8	0.9
	SI_273	55	50	60.0	57.8	60.9	59.0	0.9	1.2	60.9	58.9	0.9	1.1
	SI_274	55	50	61.4	59.5	62.4	60.7	1.0	1.2	62.4	60.6	1.0	1.1
	SI_275	55	50	70.9	66.3	71.9	67.8	1.0	1.5	71.4	67.6	0.5	1.3
	SI_276	55	50	69.4	65.1	70.4	66.5	1.0	1.4	70.0	66.3	0.6	1.2
	SI_277	55	50	68.2	64.1	69.2	65.5	1.0	1.4	68.8	65.4	0.6	1.3
	SI_278	55	50	67.5	63.6	68.4	65.0	0.9	1.4	68.2	64.9	0.7	1.3
	SI_279	55	50	66.9	63.3	67.9	64.7	1.0	1.4	67.7	64.6	0.8	1.3
	SI_280	55	50	65.6	62.1	66.6	63.5	1.0	1.4	66.6	63.5	1.0	1.4
	SI_281	55	50	65.8	62.6	66.7	63.9	0.9	1.3	66.8	63.9	1.0	1.3
	SI_282	55	50	65.7	62.6	66.7	63.9	1.0	1.3	66.7	63.9	1.0	1.3
	SI_283	55	50	65.1	62.1	66.1	63.4	1.0	1.3	66.2	63.5	1.1	1.4
	SI_284	55	50	65.2	62.2	66.1	63.5	0.9	1.3	66.3	63.6	1.1	1.4
	SI_285	55	50	64.7	61.8	65.7	63.1	1.0	1.3	65.8	63.2	1.1	1.4
	SI_286	55	50	64.8	61.9	65.8	63.2	1.0	1.3	65.9	63.3	1.1	1.4
	SI_287	55	50	64.5	61.7	65.5	63.0	1.0	1.3	65.7	63.1	1.2	1.4
	SI_288	55	50	64.5	61.6	65.5	62.9	1.0	1.3	65.6	63.0	1.1	1.4
	SI_289	55	50	64.5	61.7	65.5	63.0	1.0	1.3	65.6	63.0	1.1	1.3
	SI_290	55	50	64.4	61.6	65.4	62.9	1.0	1.3	65.5	62.9	1.1	1.3
	SI_291	55	50	63.3	60.6	64.3	61.9	1.0	1.3	64.4	62.0	1.1	1.4
	SI_292	55	50	63.3	60.6	64.3	61.9	1.0	1.3	64.4	62.0	1.1	1.4
	SI_293	55	50	63.4	60.9	64.4	62.2	1.0	1.3	64.5	62.2	1.1	1.3
	SI_294	55	50	63.3	60.7	64.3	62.0	1.0	1.3	64.4	62.0	1.1	1.3
	SI_295	55	50	60.1	58.1	61.2	59.4	1.1	1.3	61.2	59.4	1.1	1.3
	SI_296	55	50	60.1	58.1	61.1	59.4	1.0	1.3	61.1	59.4	1.0	1.3
	SI_297	55	50	60.5	58.4	61.5	59.7	1.0	1.3	61.5	59.6	1.0	1.2
	SI_298	55	50	60.1	58.2	61.1	59.4	1.0	1.2	61.1	59.4	1.0	1.2
	SI_299	55	50	59.0	57.1	60.0	58.3	1.0	1.2	59.9	58.2	0.9	1.1
	SI_300	55	50	59.6	58.1	60.6	59.3	1.0	1.2	60.3	59.0	0.7	0.9

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SI cont...	SI_301	55	50	59.7	58.2	60.7	59.3	1.0	1.1	60.4	59.1	0.7	0.9
	SI_302	55	50	59.5	58.1	60.5	59.3	1.0	1.2	60.2	59.0	0.7	0.9
	SI_303	55	50	59.5	58.1	60.5	59.3	1.0	1.2	60.2	59.0	0.7	0.9
	SI_304	55	50	59.4	58.1	60.4	59.2	1.0	1.1	60.2	58.9	0.8	0.8
	SI_305	55	50	59.7	58.3	60.7	59.5	1.0	1.2	60.4	59.2	0.7	0.9
	SI_306	55	50	59.6	58.3	60.6	59.4	1.0	1.1	60.4	59.1	0.8	0.8
	SI_307	55	50	59.6	58.2	60.6	59.4	1.0	1.2	60.3	59.1	0.7	0.9
	SI_308	55	50	59.6	58.2	60.6	59.4	1.0	1.2	60.3	59.1	0.7	0.9
	SI_309	55	50	59.4	58.1	60.4	59.2	1.0	1.1	60.1	58.9	0.7	0.8
	SI_310	55	50	59.4	58.0	60.4	59.2	1.0	1.2	60.0	58.9	0.6	0.9
	SI_311	55	50	59.3	58.0	60.3	59.2	1.0	1.2	60.0	58.8	0.7	0.8
	SI_312	55	50	59.3	58.0	60.3	59.1	1.0	1.1	60.0	58.8	0.7	0.8
	SI_313	55	50	59.1	57.8	60.1	59.0	1.0	1.2	59.8	58.6	0.7	0.8
	SI_314	55	50	59.1	57.8	60.1	59.0	1.0	1.2	59.8	58.6	0.7	0.8
	SI_315	55	50	59.1	57.8	60.1	58.9	1.0	1.1	59.7	58.6	0.6	0.8
	SI_316	55	50	59.0	57.7	60.0	58.9	1.0	1.2	59.7	58.5	0.7	0.8
	SI_317	55	50	58.9	57.6	59.9	58.7	1.0	1.1	59.5	58.3	0.6	0.7
	SI_318	55	50	58.9	57.5	59.9	58.7	1.0	1.2	59.5	58.3	0.6	0.8
	SI_319	55	50	58.8	57.5	59.8	58.7	1.0	1.2	59.4	58.3	0.6	0.8
	SI_320	55	50	58.8	57.5	59.8	58.6	1.0	1.1	59.4	58.2	0.6	0.7
	SI_321	55	50	58.6	57.3	59.6	58.4	1.0	1.1	59.2	58.0	0.6	0.7
	SI_322	55	50	58.6	57.3	59.6	58.5	1.0	1.2	59.2	58.1	0.6	0.8
	SI_323	55	50	58.6	57.3	59.6	58.4	1.0	1.1	59.1	58.0	0.5	0.7
	SI_324	55	50	58.6	57.2	59.6	58.4	1.0	1.2	59.1	58.0	0.5	0.8
	SI_325	55	50	58.4	57.1	59.4	58.2	1.0	1.1	58.9	57.8	0.5	0.7
	SI_326	55	50	58.4	57.1	59.4	58.2	1.0	1.1	59.0	57.8	0.6	0.7
	SI_327	55	50	58.4	57.0	59.3	58.2	0.9	1.2	58.9	57.7	0.5	0.7
	SI_328	55	50	58.3	57.0	59.3	58.2	1.0	1.2	58.9	57.7	0.6	0.7
	SI_329	70	65	58.0	56.7	59.0	57.9	1.0	1.2	58.6	57.5	0.6	0.8
	SI_330	55	50	58.7	57.4	59.7	58.6	1.0	1.2	59.5	58.3	0.8	0.9
	SI_331	55	50	59.3	57.7	60.4	58.9	1.1	1.2	60.1	58.7	0.8	1.0
	SI_332	70	65	60.5	58.3	61.5	59.6	1.0	1.3	61.4	59.5	0.9	1.2
	SI_333	70	65	63.1	60.5	64.1	61.8	1.0	1.3	64.1	61.8	1.0	1.3
	SI_334	70	65	63.6	61.1	64.6	62.4	1.0	1.3	64.6	62.4	1.0	1.3
	SI_335	70	65	62.4	60.2	63.4	61.5	1.0	1.3	63.4	61.5	1.0	1.3
	SI_336	70	65	63.0	60.7	64.0	62.0	1.0	1.3	64.1	62.0	1.1	1.3
	SI_337	80	75	69.4	66.5	70.3	67.7	0.9	1.2	69.1	66.2	-0.3	-0.3
	SI_338	80	75	71.5	68.1	72.5	69.4	1.0	1.3	71.2	67.8	-0.3	-0.3
NI	NI_1	70	65	75.1	70.9	76.1	72.2	1.0	1.3	75.8	72.1	0.7	1.2
	NI_2	70	65	68.9	66.2	69.9	67.5	1.0	1.3	69.6	67.3	0.7	1.1
	NI_3	70	65	65.6	63.4	66.9	64.7	1.3	1.3	66.7	64.5	1.1	1.1
	NI_4	70	65	68.5	64.3	69.2	65.6	0.7	1.3	69.2	65.5	0.7	1.2
	NI_5	70	65	68.8	64.5	69.5	65.8	0.7	1.3	69.5	65.8	0.7	1.3
	NI_6	70	65	69.1	65.7	69.8	66.9	0.7	1.2	69.8	66.9	0.7	1.2
	NI_7	70	65	71.3	67.7	72.0	68.9	0.7	1.2	71.9	68.9	0.6	1.2
	NI_8	70	65	73.1	69.3	73.9	70.5	0.8	1.2	73.7	70.4	0.6	1.1
	NI_9	70	65	72.9	68.9	73.7	70.1	0.8	1.2	73.4	69.9	0.5	1.0
	NI_10	70	65	71.4	67.6	72.1	68.8	0.7	1.2	71.8	68.4	0.4	0.8
	NI_11	70	65	70.3	65.9	71.0	67.1	0.7	1.2	70.8	66.7	0.5	0.8
	NI_12	70	65	69.3	64.5	70.0	65.8	0.7	1.3	69.8	65.5	0.5	1.0
	NI_13	70	65	69.1	63.8	69.8	65.1	0.7	1.3	69.6	64.7	0.5	0.9
	NI_14	70	65	68.9	63.3	69.6	64.6	0.7	1.3	69.4	64.3	0.5	1.0
	NI_15	70	65	67.6	62.3	68.3	63.6	0.7	1.3	68.2	63.4	0.6	1.1
	NI_16	70	65	66.7	61.2	67.4	62.4	0.7	1.2	67.3	62.3	0.6	1.1
	NI_17	70	65	62.3	60.3	63.2	61.4	0.9	1.1	62.9	61.1	0.6	0.8
	NI_18	70	65	60.3	58.8	61.3	59.9	1.0	1.1	61.0	59.6	0.7	0.8
	NI_19	70	65	59.0	57.6	59.9	58.7	0.9	1.1	59.6	58.4	0.6	0.8
	NI_20	70	65	65.7	61.2	66.3	62.4	0.6	1.2	66.1	62.1	0.4	0.9
	NI_21	55	50	63.6	61.1	64.3	62.2	0.7	1.1	64.1	61.9	0.5	0.8
	NI_22	55	50	60.5	59.0	61.5	60.1	1.0	1.1	61.1	59.8	0.6	0.8

Table B2

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Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NI cont...	NI_23	55	50	59.3	57.9	60.3	59.1	1.0	1.2	60.0	58.7	0.7	0.8
	NI_24	70	65	66.0	61.2	66.6	62.4	0.6	1.2	66.4	62.0	0.4	0.8
	NI_25	55	50	62.5	60.6	63.3	61.7	0.8	1.1	63.0	61.3	0.5	0.7
	NI_26	55	50	61.0	59.3	61.9	60.4	0.9	1.1	61.5	60.1	0.5	0.8
	NI_27	55	50	59.9	58.4	60.8	59.5	0.9	1.1	60.5	59.1	0.6	0.7
	NI_28	70	65	66.3	61.4	66.9	62.6	0.6	1.2	66.6	62.0	0.3	0.6
	NI_29	55	50	62.5	60.5	63.3	61.6	0.8	1.1	62.9	61.2	0.4	0.7
	NI_30	55	50	60.8	59.1	61.7	60.2	0.9	1.1	61.3	59.8	0.5	0.7
	NI_31	55	50	59.7	58.1	60.6	59.2	0.9	1.1	60.2	58.8	0.5	0.7
	NI_32	70	65	66.7	61.3	67.3	62.5	0.6	1.2	67.0	61.9	0.3	0.6
	NI_33	55	50	62.6	60.6	63.4	61.7	0.8	1.1	63.0	61.2	0.4	0.6
	NI_34	70	65	67.1	61.4	67.7	62.6	0.6	1.2	67.3	62.0	0.2	0.6
	NI_35	55	50	63.0	60.9	63.8	62.0	0.8	1.1	63.3	61.4	0.3	0.5
	NI_36	55	50	61.3	59.6	62.2	60.7	0.9	1.1	61.8	60.2	0.5	0.6
	NI_37	55	50	60.1	58.5	61.1	59.6	1.0	1.1	60.6	59.1	0.5	0.6
	NI_38	70	65	67.0	61.3	67.6	62.5	0.6	1.2	67.3	61.8	0.3	0.5
	NI_39	70	65	66.9	60.7	67.5	61.9	0.6	1.2	67.1	61.2	0.2	0.5
	NI_40	70	65	66.4	60.1	67.0	61.3	0.6	1.2	66.7	60.6	0.3	0.5
	NI_41	70	65	65.4	59.3	66.0	60.5	0.6	1.2	65.7	59.9	0.3	0.6
	NI_42	55	50	67.7	64.1	68.6	65.4	0.9	1.3	68.3	64.9	0.6	0.8

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SJ	SJ_1	70	65	62.6	60.3	63.7	61.6	1.1	1.3	63.7	61.6	1.1	1.3
	SJ_2	70	65	62.2	59.8	63.2	61.1	1.0	1.3	63.3	61.1	1.1	1.3
	SJ_3	70	65	60.6	58.2	61.6	59.5	1.0	1.3	61.7	59.5	1.1	1.3
	SJ_4	55	50	65.1	60.9	66.2	62.4	1.1	1.5	66.3	62.6	1.2	1.7
	SJ_5	55	50	60.8	56.9	61.8	58.3	1.0	1.4	62.0	58.8	1.2	1.9
	SJ_6	55	50	58.9	54.7	60.0	56.2	1.1	1.5	60.0	56.2	1.1	1.5
	SJ_7	55	50	59.0	55.0	60.0	56.5	1.0	1.5	60.2	56.8	1.2	1.8
	SJ_8	55	50	65.1	60.9	66.2	62.4	1.1	1.5	66.3	62.6	1.2	1.7
	SJ_9	55	50	68.8	64.9	69.8	66.3	1.0	1.4	69.9	66.4	1.1	1.5
	SJ_10	55	50	66.5	62.6	67.5	64.0	1.0	1.4	67.6	64.2	1.1	1.6
	SJ_11	55	50	66.4	62.5	67.4	63.9	1.0	1.4	67.5	64.1	1.1	1.6
	SJ_12	55	50	65.3	61.6	66.3	63.0	1.0	1.4	66.4	63.1	1.1	1.5
	SJ_13	55	50	63.3	59.2	64.3	60.6	1.0	1.4	64.4	60.8	1.1	1.6
	SJ_14	55	50	60.8	57.1	61.9	58.5	1.1	1.4	62.0	58.7	1.2	1.6
	SJ_15	55	50	58.3	54.9	59.3	56.3	1.0	1.4	59.4	56.5	1.1	1.6
	SJ_16	55	50	58.6	55.1	59.6	56.5	1.0	1.4	59.7	56.6	1.1	1.5
	SJ_17	55	50	73.3	68.7	74.4	70.2	1.1	1.5	74.4	70.3	1.1	1.6
	SJ_18	55	50	72.6	67.8	73.7	69.3	1.1	1.5	73.7	69.4	1.1	1.6
	SJ_19	55	50	69.5	65.6	70.5	67.0	1.0	1.4	70.6	67.1	1.1	1.5
	SJ_20	55	50	68.8	64.9	69.8	66.3	1.0	1.4	69.9	66.4	1.1	1.5
	SJ_21	55	50	67.6	63.5	68.6	65.0	1.0	1.5	68.7	65.1	1.1	1.6
	SJ_22	55	50	66.3	62.9	67.3	64.3	1.0	1.4	67.3	64.3	1.0	1.4
	SJ_23	55	50	66.0	62.6	67.1	64.0	1.1	1.4	67.1	64.1	1.1	1.5
	SJ_24	55	50	65.6	62.3	66.6	63.7	1.0	1.4	66.7	63.8	1.1	1.5
	SJ_25	55	50	73.7	69.0	74.8	70.5	1.1	1.5	74.8	70.6	1.1	1.6
	SJ_26	55	50	63.6	60.7	64.6	62.1	1.0	1.4	64.6	62.1	1.0	1.4
	SJ_27	55	50	60.6	54.2	61.5	56.0	0.9	1.8	61.8	55.6	1.2	1.4
	SJ_28	55	50	60.7	54.9	61.6	56.6	0.9	1.7	62.0	56.3	1.3	1.4
	SJ_29	55	50	59.9	56.3	60.7	57.7	0.8	1.4	61.1	57.6	1.2	1.3
	SJ_30	55	50	59.9	56.6	60.7	57.9	0.8	1.3	61.0	57.9	1.1	1.3
	SJ_31	55	50	60.2	56.8	61.1	58.2	0.9	1.4	61.4	58.2	1.2	1.4
	SJ_32	55	50	60.6	57.1	61.5	58.5	0.9	1.4	61.8	58.4	1.2	1.3
	SJ_33	55	50	61.0	57.5	61.9	58.9	0.9	1.4	62.2	58.9	1.2	1.4
	SJ_34	55	50	61.2	57.8	62.1	59.2	0.9	1.4	62.3	59.2	1.1	1.4
	SJ_35	55	50	62.5	58.1	63.4	59.6	0.9	1.5	63.8	59.5	1.3	1.4
	SJ_36	55	50	63.1	58.9	64.0	60.4	0.9	1.5	64.2	60.3	1.1	1.4
	SJ_37	55	50	62.6	58.9	63.6	60.3	1.0	1.4	63.7	60.4	1.1	1.5
	SJ_38	55	50	61.8	58.4	62.8	59.8	1.0	1.4	62.9	59.9	1.1	1.5
	SJ_39	55	50	62.9	59.2	63.8	60.6	0.9	1.4	64.1	60.7	1.2	1.5
	SJ_40	55	50	62.6	58.4	63.5	59.9	0.9	1.5	63.8	59.8	1.2	1.4
	SJ_41	55	50	62.9	58.0	63.8	59.6	0.9	1.6	64.2	59.4	1.3	1.4
	SJ_42	55	50	56.8	54.6	57.8	55.9	1.0	1.3	57.9	55.9	1.1	1.3
	SJ_43	55	50	57.2	54.9	58.2	56.2	1.0	1.3	58.3	56.2	1.1	1.3
	SJ_44	55	50	57.4	55.0	58.4	56.3	1.0	1.3	58.5	56.4	1.1	1.4
	SJ_45	55	50	58.1	55.6	59.1	56.9	1.0	1.3	59.2	56.9	1.1	1.3
	SJ_46	55	50	58.2	55.6	59.2	56.9	1.0	1.3	59.3	57.0	1.1	1.4
	SJ_47	55	50	58.8	56.1	59.8	57.4	1.0	1.3	59.9	57.5	1.1	1.4
	SJ_48	55	50	59.0	56.2	60.0	57.5	1.0	1.3	60.1	57.6	1.1	1.4
	SJ_49	55	50	59.0	56.1	60.0	57.5	1.0	1.4	60.0	57.5	1.0	1.4
	SJ_50	55	50	59.3	56.4	60.3	57.7	1.0	1.3	60.3	57.8	1.0	1.4
	SJ_51	55	50	59.5	56.6	60.5	57.9	1.0	1.3	60.5	58.0	1.0	1.4
	SJ_52	55	50	59.5	56.6	60.5	58.0	1.0	1.4	60.6	58.0	1.1	1.4
	SJ_53	55	50	59.9	57.0	60.9	58.4	1.0	1.4	61.0	58.5	1.1	1.5
	SJ_54	55	50	60.1	57.3	61.1	58.6	1.0	1.3	61.2	58.7	1.1	1.4
	SJ_55	55	50	60.1	57.2	61.0	58.5	0.9	1.3	61.1	58.6	1.0	1.4
	SJ_56	55	50	61.2	57.7	62.1	59.1	0.9	1.4	62.4	59.1	1.2	1.4
	SJ_57	55	50	56.0	53.8	57.1	55.1	1.1	1.3	57.1	55.2	1.1	1.4
	SJ_58	55	50	55.7	53.5	56.7	54.8	1.0	1.3	56.8	54.8	1.1	1.3
	SJ_59	55	50	56.1	53.8	57.1	55.1	1.0	1.3	57.1	55.1	1.0	1.3

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SJ cont...	SJ_60	55	50	56.4	54.1	57.4	55.4	1.0	1.3	57.5	55.4	1.1	1.3
	SJ_61	55	50	57.0	54.5	58.0	55.8	1.0	1.3	58.0	55.8	1.0	1.3
	SJ_62	55	50	57.3	54.8	58.3	56.1	1.0	1.3	58.4	56.1	1.1	1.3
	SJ_63	55	50	57.5	54.9	58.5	56.2	1.0	1.3	58.5	56.3	1.0	1.4
	SJ_64	55	50	57.8	55.2	58.8	56.5	1.0	1.3	58.9	56.6	1.1	1.4
	SJ_65	55	50	58.1	55.5	59.1	56.8	1.0	1.3	59.2	56.9	1.1	1.4
	SJ_66	55	50	58.2	55.6	59.2	56.9	1.0	1.3	59.3	56.9	1.1	1.3
	SJ_67	55	50	58.5	55.8	59.5	57.2	1.0	1.4	59.5	57.2	1.0	1.4
	SJ_68	55	50	58.8	56.1	59.8	57.4	1.0	1.3	59.8	57.5	1.0	1.4
	SJ_69	55	50	59.0	56.3	60.0	57.6	1.0	1.3	60.1	57.6	1.1	1.3
	SJ_70	55	50	59.7	56.7	60.7	58.1	1.0	1.4	60.8	58.1	1.1	1.4
	SJ_71	55	50	60.8	56.9	61.6	58.4	0.8	1.5	61.9	58.4	1.1	1.5
	SJ_72	55	50	62.3	55.1	63.3	56.9	1.0	1.8	63.6	56.6	1.3	1.5
	SJ_73	55	50	61.0	56.2	61.9	57.7	0.9	1.5	62.3	57.6	1.3	1.4
	SJ_74	55	50	54.1	52.1	55.1	53.3	1.0	1.2	55.1	53.4	1.0	1.3
	SJ_75	55	50	54.3	52.2	55.3	53.5	1.0	1.3	55.3	53.5	1.0	1.3
	SJ_76	55	50	54.4	52.3	55.5	53.6	1.1	1.3	55.5	53.7	1.1	1.4
	SJ_77	55	50	54.7	52.6	55.7	53.8	1.0	1.2	55.8	53.9	1.1	1.3
	SJ_78	55	50	55.0	52.8	56.0	54.1	1.0	1.3	56.0	54.1	1.0	1.3
	SJ_79	55	50	55.1	52.9	56.1	54.2	1.0	1.3	56.1	54.2	1.0	1.3
	SJ_80	55	50	55.3	53.0	56.3	54.3	1.0	1.3	56.4	54.4	1.1	1.4
	SJ_81	55	50	55.5	53.2	56.5	54.5	1.0	1.3	56.5	54.5	1.0	1.3
	SJ_82	55	50	55.6	53.3	56.6	54.6	1.0	1.3	56.7	54.6	1.1	1.3
	SJ_83	55	50	56.0	53.6	57.0	54.9	1.0	1.3	57.0	55.0	1.0	1.4
	SJ_84	55	50	56.1	53.7	57.1	55.0	1.0	1.3	57.2	55.0	1.1	1.3
	SJ_85	55	50	56.3	53.9	57.3	55.2	1.0	1.3	57.4	55.2	1.1	1.3
	SJ_86	55	50	56.6	54.1	57.7	55.4	1.1	1.3	57.7	55.5	1.1	1.4
	SJ_87	55	50	57.2	54.5	58.2	55.8	1.0	1.3	58.2	55.9	1.0	1.4
	SJ_88	55	50	57.6	54.8	58.6	56.1	1.0	1.3	58.6	56.2	1.0	1.4
	SJ_89	55	50	58.5	55.5	59.5	56.8	1.0	1.3	59.6	56.9	1.1	1.4
	SJ_90	55	50	59.3	56.0	60.2	57.3	0.9	1.3	60.4	57.4	1.1	1.4
	SJ_91	55	50	59.9	56.0	60.8	57.4	0.9	1.4	61.0	57.5	1.1	1.5
NJ	NJ_1	70	65	68.1	64.7	69.1	66.1	1.0	1.4	69.2	66.3	1.1	1.6
	NJ_2	70	65	71.5	67.4	72.5	68.9	1.0	1.5	72.8	69.1	1.3	1.7

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SK	SK_1	80	75	69.0	66.0	69.9	67.3	0.9	1.3	69.1	66.3	0.1	0.3
	SK_2	70	65	66.5	63.4	67.4	64.7	0.9	1.3	66.1	63.0	-0.4	-0.4
	SK_3	70	65	66.5	63.5	67.4	64.7	0.9	1.2	66.1	63.0	-0.4	-0.5
	SK_4	70	65	65.8	62.9	66.7	64.1	0.9	1.2	65.4	62.3	-0.4	-0.6
	SK_5	70	65	65.6	62.7	66.5	63.9	0.9	1.2	65.2	62.1	-0.4	-0.6
	SK_6	70	65	66.9	63.7	67.8	65.0	0.9	1.3	66.5	63.2	-0.4	-0.5
	SK_7	70	65	67.3	64.0	68.3	65.3	1.0	1.3	66.7	63.3	-0.6	-0.7
	SK_8	55	50	64.4	61.6	65.3	62.8	0.9	1.2	65.0	62.5	0.6	0.9
	SK_9	55	50	64.2	61.4	65.1	62.6	0.9	1.2	64.8	62.4	0.6	1.0
	SK_10	55	50	63.6	60.8	64.5	62.0	0.9	1.2	64.1	61.7	0.5	0.9
	SK_11	55	50	63.2	60.4	64.1	61.6	0.9	1.2	63.7	61.4	0.5	1.0
	SK_12	55	50	62.8	60.1	63.7	61.3	0.9	1.2	63.4	61.0	0.6	0.9
	SK_13	55	50	62.4	59.7	63.3	60.9	0.9	1.2	62.9	60.6	0.5	0.9
	SK_14	55	50	61.8	59.1	62.8	60.3	1.0	1.2	62.4	60.1	0.6	1.0
	SK_15	55	50	61.2	58.6	62.1	59.8	0.9	1.2	61.8	59.5	0.6	0.9
	SK_16	55	50	60.5	57.9	61.4	59.1	0.9	1.2	61.0	58.8	0.5	0.9
	SK_17	55	50	60.0	57.5	60.9	58.6	0.9	1.1	60.5	58.3	0.5	0.8
	SK_18	55	50	59.6	57.2	60.6	58.3	1.0	1.1	60.1	58.0	0.5	0.8
	SK_19	55	50	59.0	56.6	59.9	57.8	0.9	1.2	59.5	57.5	0.5	0.9
	SK_20	55	50	60.5	58.1	61.4	59.3	0.9	1.2	61.0	59.0	0.5	0.9
	SK_21	55	50	60.3	57.9	61.2	59.1	0.9	1.2	60.8	58.8	0.5	0.9
	SK_22	55	50	59.9	57.6	60.9	58.8	1.0	1.2	60.5	58.5	0.6	0.9
NK	NK_1	80	75	66.9	63.1	67.8	64.4	0.9	1.3	67.7	64.1	0.8	1.0
	NK_2	55	50	74.3	69.1	75.3	70.5	1.0	1.4	74.3	69.7	0.0	0.6
	NK_3	55	50	70.8	65.7	71.7	67.1	0.9	1.4	70.9	66.5	0.1	0.8
	NK_4	55	50	68.7	63.9	69.6	65.3	0.9	1.4	69.0	64.9	0.3	1.0
	NK_5	55	50	67.6	62.8	68.5	64.2	0.9	1.4	68.2	63.6	0.6	0.8
	NK_6	55	50	67.1	62.1	68.0	63.5	0.9	1.4	67.9	62.9	0.8	0.8
	NK_7	55	50	66.8	61.6	67.7	62.9	0.9	1.3	67.7	62.4	0.9	0.8
	NK_8	55	50	66.2	60.6	67.1	62.0	0.9	1.4	67.1	61.5	0.9	0.9
	NK_9	55	50	65.6	59.8	66.6	61.3	1.0	1.5	66.6	60.7	1.0	0.9
	NK_10	55	50	64.5	58.6	65.5	60.1	1.0	1.5	65.5	59.5	1.0	0.9
	NK_11	55	50	63.4	58.1	64.3	59.5	0.9	1.4	64.3	58.9	0.9	0.8
	NK_12	55	50	62.3	57.8	63.3	59.2	1.0	1.4	63.2	58.6	0.9	0.8
	NK_13	55	50	74.3	69.0	75.3	70.4	1.0	1.4	74.3	69.6	0.0	0.6
	NK_14	55	50	74.3	69.0	75.3	70.4	1.0	1.4	74.3	69.6	0.0	0.6
	NK_15	55	50	74.0	68.7	75.0	70.1	1.0	1.4	73.9	69.3	-0.1	0.6
	NK_16	55	50	73.9	68.7	74.9	70.1	1.0	1.4	73.8	69.3	-0.1	0.6
	NK_17	55	50	73.8	68.6	74.8	70.0	1.0	1.4	73.7	69.2	-0.1	0.6
	NK_18	55	50	74.2	68.9	75.2	70.3	1.0	1.4	74.0	69.4	-0.2	0.5
	NK_19	55	50	73.6	68.5	74.6	69.9	1.0	1.4	73.5	69.0	-0.1	0.5
	NK_20	55	50	73.4	68.3	74.3	69.7	0.9	1.4	73.2	68.8	-0.2	0.5
	NK_21	55	50	73.2	68.2	74.2	69.6	1.0	1.4	73.0	68.7	-0.2	0.5
	NK_22	55	50	65.0	61.1	65.9	62.4	0.9	1.3	64.7	61.4	-0.3	0.3
	NK_23	55	50	65.0	61.3	65.9	62.6	0.9	1.3	64.6	61.7	-0.4	0.4
	NK_24	55	50	64.9	61.3	65.8	62.6	0.9	1.3	64.5	61.6	-0.4	0.3
	NK_25	55	50	64.7	61.2	65.6	62.4	0.9	1.2	64.3	61.5	-0.4	0.3
	NK_26	55	50	64.7	61.1	65.6	62.4	0.9	1.3	64.2	61.4	-0.5	0.3
	NK_27	55	50	64.6	61.1	65.5	62.4	0.9	1.3	64.1	61.4	-0.5	0.3
	NK_28	55	50	64.7	61.3	65.6	62.5	0.9	1.2	64.3	61.5	-0.4	0.2
	NK_29	55	50	65.0	61.5	65.9	62.8	0.9	1.3	64.7	61.8	-0.3	0.3
	NK_30	55	50	65.1	60.7	66.0	62.1	0.9	1.4	65.0	61.2	-0.1	0.5
	NK_31	55	50	65.5	61.3	66.4	62.6	0.9	1.3	65.4	61.7	-0.1	0.4
	NK_32	55	50	63.0	59.7	63.9	60.9	0.9	1.2	62.8	60.1	-0.2	0.4
	NK_33	55	50	62.5	59.6	63.4	60.8	0.9	1.2	62.4	60.0	-0.1	0.4
	NK_34	55	50	62.4	59.5	63.3	60.8	0.9	1.3	62.3	59.9	-0.1	0.4
	NK_35	55	50	62.2	59.4	63.1	60.6	0.9	1.2	62.1	59.8	-0.1	0.4
	NK_36	55	50	62.0	59.2	62.9	60.4	0.9	1.2	61.9	59.6	-0.1	0.4
	NK_37	55	50	62.0	59.1	62.9	60.4	0.9	1.3	61.9	59.6	-0.1	0.5
	NK_38	55	50	61.8	59.0	62.8	60.2	1.0	1.2	61.8	59.5	0.0	0.5
	NK_39	55	50	61.6	58.8	62.5	60.0	0.9	1.2	61.7	59.2	0.1	0.4
	NK_40	55	50	61.4	58.0	62.3	59.3	0.9	1.3	61.1	58.3	-0.3	0.3
	NK_41	55	50	62.5	58.8	63.4	60.1	0.9	1.3	62.4	59.3	-0.1	0.5

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_42	55	50	61.5	58.3	62.5	59.6	1.0	1.3	61.7	58.9	0.2	0.6
	NK_43	55	50	61.9	59.1	62.8	60.3	0.9	1.2	62.1	59.5	0.2	0.4
	NK_44	55	50	61.8	59.1	62.7	60.3	0.9	1.2	62.1	59.5	0.3	0.4
	NK_45	55	50	61.3	58.8	62.3	60.0	1.0	1.2	61.8	59.3	0.5	0.5
	NK_46	55	50	61.1	58.6	62.0	59.8	0.9	1.2	61.3	59.1	0.2	0.5
	NK_47	55	50	60.8	58.4	61.8	59.5	1.0	1.1	61.0	58.9	0.2	0.5
	NK_48	55	50	60.2	57.3	61.1	58.5	0.9	1.2	60.5	57.9	0.3	0.6
	NK_49	55	50	60.4	57.8	61.3	59.0	0.9	1.2	60.9	58.5	0.5	0.7
	NK_50	55	50	60.2	57.8	61.1	59.0	0.9	1.2	60.8	58.4	0.6	0.6
	NK_51	55	50	60.0	57.7	61.0	58.9	1.0	1.2	60.5	58.3	0.5	0.6
	NK_52	55	50	60.2	57.6	61.1	58.8	0.9	1.2	60.2	58.1	0.0	0.5
	NK_53	55	50	59.8	57.4	60.7	58.6	0.9	1.2	59.9	57.8	0.1	0.4
	NK_54	55	50	59.3	57.0	60.3	58.2	1.0	1.2	59.5	57.4	0.2	0.4
	NK_55	55	50	60.2	57.6	61.1	58.8	0.9	1.2	60.4	58.1	0.2	0.5
	NK_56	55	50	59.4	57.0	60.3	58.2	0.9	1.2	59.6	57.5	0.2	0.5
	NK_57	55	50	59.0	56.8	60.0	57.9	1.0	1.1	59.2	57.2	0.2	0.4
	NK_58	55	50	60.1	57.7	61.0	58.8	0.9	1.1	60.2	58.2	0.1	0.5
	NK_59	55	50	60.3	57.8	61.2	59.0	0.9	1.2	60.6	58.3	0.3	0.5
	NK_60	55	50	60.4	57.7	61.3	58.9	0.9	1.2	60.3	58.1	-0.1	0.4
	NK_61	55	50	60.1	57.5	61.0	58.7	0.9	1.2	60.1	58.0	0.0	0.5
	NK_62	55	50	59.7	57.3	60.7	58.5	1.0	1.2	59.8	57.7	0.1	0.4
	NK_63	55	50	59.4	57.0	60.3	58.2	0.9	1.2	59.5	57.5	0.1	0.5
	NK_64	55	50	59.0	56.7	59.9	57.9	0.9	1.2	59.1	57.2	0.1	0.5
	NK_65	55	50	60.4	57.8	61.3	59.0	0.9	1.2	60.7	58.3	0.3	0.5
	NK_66	55	50	60.8	57.9	61.7	59.1	0.9	1.2	60.7	58.3	-0.1	0.4
	NK_67	55	50	60.6	57.8	61.5	59.0	0.9	1.2	60.6	58.2	0.0	0.4
	NK_68	55	50	60.4	57.7	61.3	58.9	0.9	1.2	60.3	58.1	-0.1	0.4
	NK_69	55	50	60.0	57.4	60.9	58.6	0.9	1.2	60.0	57.9	0.0	0.5
	NK_70	55	50	59.6	57.2	60.6	58.4	1.0	1.2	59.7	57.6	0.1	0.4
	NK_71	55	50	59.3	56.9	60.2	58.1	0.9	1.2	59.4	57.3	0.1	0.4
	NK_72	55	50	73.3	68.2	74.3	69.6	1.0	1.4	73.1	68.7	-0.2	0.5
	NK_73	55	50	66.1	62.1	67.1	63.4	1.0	1.3	66.1	62.6	0.0	0.5
	NK_74	55	50	63.1	58.5	64.0	59.8	0.9	1.3	63.2	59.1	0.1	0.6
	NK_75	55	50	61.5	57.3	62.4	58.6	0.9	1.3	61.6	58.0	0.1	0.7
	NK_76	55	50	61.1	57.2	62.0	58.5	0.9	1.3	61.3	57.9	0.2	0.7
	NK_77	55	50	60.1	56.3	61.0	57.6	0.9	1.3	60.2	57.1	0.1	0.8
	NK_78	55	50	64.2	60.4	65.1	61.7	0.9	1.3	63.8	60.6	-0.4	0.2
	NK_79	55	50	62.0	57.0	63.0	58.4	1.0	1.4	62.0	57.6	0.0	0.6
	NK_80	55	50	60.9	56.1	61.9	57.4	1.0	1.3	61.0	56.8	0.1	0.7
	NK_81	55	50	60.1	55.4	61.1	56.8	1.0	1.4	60.2	56.1	0.1	0.7
	NK_82	55	50	59.1	54.7	60.1	56.0	1.0	1.3	59.2	55.4	0.1	0.7
	NK_83	55	50	60.4	57.7	61.3	58.9	0.9	1.2	60.4	58.1	0.0	0.4
	NK_84	55	50	59.6	57.1	60.5	58.3	0.9	1.2	59.6	57.5	0.0	0.4
	NK_85	55	50	58.2	56.0	59.1	57.1	0.9	1.1	58.3	56.4	0.1	0.4
	NK_86	55	50	74.0	68.7	74.9	70.1	0.9	1.4	73.6	69.0	-0.4	0.3
	NK_87	55	50	67.8	62.2	68.8	63.6	1.0	1.4	67.9	62.9	0.1	0.7
	NK_88	55	50	65.7	60.3	66.7	61.7	1.0	1.4	65.8	61.0	0.1	0.7
	NK_89	55	50	64.2	59.5	65.2	60.9	1.0	1.4	64.1	60.0	-0.1	0.5
	NK_90	55	50	62.4	57.6	63.4	59.0	1.0	1.4	62.4	58.2	0.0	0.6
	NK_91	55	50	61.0	56.5	62.0	57.8	1.0	1.3	61.1	57.1	0.1	0.6
	NK_92	55	50	57.6	54.4	58.5	55.6	0.9	1.2	57.8	54.9	0.2	0.5
	NK_93	55	50	60.2	57.6	61.1	58.8	0.9	1.2	60.3	58.0	0.1	0.4
	NK_94	55	50	60.1	57.5	61.0	58.7	0.9	1.2	60.2	57.9	0.1	0.4
	NK_95	55	50	59.8	57.2	60.7	58.4	0.9	1.2	59.8	57.6	0.0	0.4
	NK_96	55	50	59.4	56.9	60.3	58.1	0.9	1.2	59.4	57.3	0.0	0.4
	NK_97	55	50	58.9	56.5	59.8	57.7	0.9	1.2	59.0	56.9	0.1	0.4
	NK_98	55	50	58.1	55.9	59.0	57.1	0.9	1.2	58.2	56.3	0.1	0.4
	NK_99	55	50	57.8	55.6	58.7	56.8	0.9	1.2	57.9	56.1	0.1	0.5
	NK_100	55	50	74.0	68.7	75.0	70.1	1.0	1.4	73.5	69.0	-0.5	0.3
	NK_101	55	50	65.4	59.1	66.4	60.6	1.0	1.5	65.4	59.9	0.0	0.8

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_102	55	50	63.1	57.4	64.1	58.8	1.0	1.4	63.1	58.1	0.0	0.7
	NK_103	55	50	61.1	55.8	62.1	57.2	1.0	1.4	61.1	56.5	0.0	0.7
	NK_104	55	50	60.3	55.5	61.2	56.9	0.9	1.4	60.3	56.2	0.0	0.7
	NK_105	55	50	59.6	55.3	60.5	56.6	0.9	1.3	59.6	55.9	0.0	0.6
	NK_106	55	50	59.0	54.7	59.9	56.0	0.9	1.3	59.0	55.3	0.0	0.6
	NK_107	55	50	60.3	57.6	61.2	58.8	0.9	1.2	60.3	58.0	0.0	0.4
	NK_108	55	50	60.2	57.5	61.1	58.7	0.9	1.2	60.2	57.9	0.0	0.4
	NK_109	55	50	59.6	57.1	60.5	58.3	0.9	1.2	59.6	57.4	0.0	0.3
	NK_110	55	50	59.3	56.8	60.2	58.0	0.9	1.2	59.3	57.2	0.0	0.4
	NK_111	55	50	58.7	56.4	59.6	57.6	0.9	1.2	58.7	56.7	0.0	0.3
	NK_112	55	50	58.1	55.9	59.0	57.0	0.9	1.1	58.1	56.3	0.0	0.4
	NK_113	55	50	57.8	55.7	58.7	56.8	0.9	1.1	57.9	56.1	0.1	0.4
	NK_114	55	50	74.3	68.9	75.2	70.3	0.9	1.4	73.7	69.2	-0.6	0.3
	NK_115	55	50	69.3	63.6	70.3	65.1	1.0	1.5	69.2	64.3	-0.1	0.7
	NK_116	55	50	64.7	58.8	65.7	60.2	1.0	1.4	64.7	59.5	0.0	0.7
	NK_117	55	50	62.5	57.1	63.5	58.5	1.0	1.4	62.5	57.8	0.0	0.7
	NK_118	55	50	61.1	55.9	62.0	57.3	0.9	1.4	61.1	56.6	0.0	0.7
	NK_119	55	50	59.5	55.0	60.4	56.3	0.9	1.3	59.5	55.7	0.0	0.7
	NK_120	55	50	58.3	54.2	59.2	55.5	0.9	1.3	58.1	54.8	-0.2	0.6
	NK_121	55	50	60.3	57.4	61.2	58.6	0.9	1.2	60.2	57.8	-0.1	0.4
	NK_122	55	50	60.1	57.5	61.0	58.7	0.9	1.2	60.2	57.8	0.1	0.3
	NK_123	55	50	59.7	57.2	60.6	58.4	0.9	1.2	59.7	57.5	0.0	0.3
	NK_124	55	50	59.3	56.9	60.2	58.0	0.9	1.1	59.3	57.2	0.0	0.3
	NK_125	55	50	58.8	56.5	59.7	57.6	0.9	1.1	58.9	56.8	0.1	0.3
	NK_126	55	50	58.3	56.1	59.3	57.3	1.0	1.2	58.4	56.5	0.1	0.4
	NK_127	55	50	57.8	55.7	58.7	56.8	0.9	1.1	57.9	56.1	0.1	0.4
	NK_128	55	50	73.7	68.5	74.7	69.9	1.0	1.4	73.2	68.8	-0.5	0.3
	NK_129	55	50	65.1	58.4	66.1	59.9	1.0	1.5	65.1	59.1	0.0	0.7
	NK_130	55	50	62.9	57.5	63.9	58.9	1.0	1.4	62.9	58.1	0.0	0.6
	NK_131	55	50	61.5	56.2	62.5	57.6	1.0	1.4	61.4	56.7	-0.1	0.5
	NK_132	55	50	60.1	55.0	61.1	56.4	1.0	1.4	60.1	55.7	0.0	0.7
	NK_133	55	50	59.3	54.5	60.2	55.9	0.9	1.4	59.2	55.2	-0.1	0.7
	NK_134	55	50	58.9	54.8	59.8	56.1	0.9	1.3	59.0	55.3	0.1	0.5
	NK_135	55	50	60.0	57.2	60.9	58.4	0.9	1.2	60.0	57.7	0.0	0.5
	NK_136	55	50	60.0	57.3	60.9	58.5	0.9	1.2	60.0	57.7	0.0	0.4
	NK_137	55	50	59.7	57.1	60.6	58.3	0.9	1.2	59.7	57.5	0.0	0.4
	NK_138	55	50	59.2	56.7	60.1	57.9	0.9	1.2	59.2	57.1	0.0	0.4
	NK_139	55	50	58.7	56.3	59.6	57.5	0.9	1.2	58.7	56.7	0.0	0.4
	NK_140	55	50	58.2	56.0	59.1	57.1	0.9	1.1	58.2	56.3	0.0	0.3
	NK_141	55	50	57.9	55.8	58.9	56.9	1.0	1.1	58.0	56.2	0.1	0.4
	NK_142	55	50	73.9	68.6	74.9	70.0	1.0	1.4	73.4	68.9	-0.5	0.3
	NK_143	55	50	70.0	64.3	71.0	65.7	1.0	1.4	69.8	64.9	-0.2	0.6
	NK_144	55	50	64.7	58.7	65.7	60.1	1.0	1.4	64.7	59.4	0.0	0.7
	NK_145	55	50	62.5	57.3	63.5	58.7	1.0	1.4	62.5	57.9	0.0	0.6
	NK_146	55	50	60.9	55.9	61.8	57.3	0.9	1.4	60.8	56.5	-0.1	0.6
	NK_147	55	50	59.7	55.3	60.6	56.6	0.9	1.3	59.6	55.9	-0.1	0.6
	NK_148	55	50	58.9	54.9	59.8	56.2	0.9	1.3	58.7	55.5	-0.2	0.6
	NK_149	55	50	60.1	57.4	61.0	58.6	0.9	1.2	60.2	57.9	0.1	0.5
	NK_150	55	50	59.9	57.3	60.8	58.5	0.9	1.2	59.9	57.7	0.0	0.4
	NK_151	55	50	59.7	57.2	60.7	58.4	1.0	1.2	59.8	57.5	0.1	0.3
	NK_152	55	50	59.2	56.7	60.1	57.9	0.9	1.2	59.2	57.1	0.0	0.4
	NK_153	55	50	58.8	56.4	59.7	57.6	0.9	1.2	58.8	56.8	0.0	0.4
	NK_154	55	50	58.3	56.0	59.2	57.2	0.9	1.2	58.3	56.4	0.0	0.4
	NK_155	55	50	57.8	55.7	58.8	56.9	1.0	1.2	58.0	56.1	0.2	0.4
	NK_156	55	50	74.1	68.8	75.1	70.2	1.0	1.4	73.6	69.0	-0.5	0.2
	NK_157	55	50	65.2	59.0	66.2	60.4	1.0	1.4	65.2	59.7	0.0	0.7
	NK_158	55	50	63.3	57.5	64.3	59.0	1.0	1.5	63.3	58.2	0.0	0.7
	NK_159	55	50	61.8	56.3	62.7	57.7	0.9	1.4	61.7	56.9	-0.1	0.6
	NK_160	55	50	60.9	55.6	61.9	57.0	1.0	1.4	60.8	56.3	-0.1	0.7
	NK_161	55	50	59.9	55.3	60.8	56.6	0.9	1.3	59.8	55.9	-0.1	0.6

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_162	55	50	60.2	56.8	61.1	58.0	0.9	1.2	60.2	57.3	0.0	0.5
	NK_163	55	50	60.4	57.6	61.4	58.8	1.0	1.2	60.4	58.0	0.0	0.4
	NK_164	55	50	60.1	57.5	61.0	58.7	0.9	1.2	60.1	57.9	0.0	0.4
	NK_165	55	50	59.6	57.1	60.5	58.3	0.9	1.2	59.7	57.5	0.1	0.4
	NK_166	55	50	59.3	56.9	60.2	58.1	0.9	1.2	59.3	57.2	0.0	0.3
	NK_167	55	50	58.8	56.4	59.7	57.6	0.9	1.2	58.8	56.8	0.0	0.4
	NK_168	55	50	58.3	56.1	59.2	57.2	0.9	1.1	58.4	56.4	0.1	0.3
	NK_169	55	50	57.9	55.7	58.8	56.9	0.9	1.2	58.0	56.1	0.1	0.4
	NK_170	55	50	72.8	67.3	73.8	68.8	1.0	1.5	72.4	67.7	-0.4	0.4
	NK_171	55	50	70.2	64.6	71.2	66.0	1.0	1.4	70.0	65.1	-0.2	0.5
	NK_172	55	50	64.9	58.9	65.9	60.4	1.0	1.5	64.9	59.6	0.0	0.7
	NK_173	55	50	62.4	57.0	63.4	58.4	1.0	1.4	62.4	57.7	0.0	0.7
	NK_174	55	50	61.0	56.0	62.0	57.4	1.0	1.4	61.0	56.7	0.0	0.7
	NK_175	55	50	60.4	55.7	61.3	57.1	0.9	1.4	60.4	56.4	0.0	0.7
	NK_176	55	50	59.0	55.1	59.9	56.4	0.9	1.3	58.9	55.7	-0.1	0.6
	NK_177	55	50	60.4	57.6	61.3	58.8	0.9	1.2	60.4	58.0	0.0	0.4
	NK_178	55	50	59.9	57.3	60.8	58.5	0.9	1.2	59.9	57.7	0.0	0.4
	NK_179	55	50	59.8	57.3	60.7	58.4	0.9	1.1	59.8	57.6	0.0	0.3
	NK_180	55	50	59.2	56.8	60.2	58.0	1.0	1.2	59.3	57.2	0.1	0.4
	NK_181	55	50	58.9	56.6	59.9	57.7	1.0	1.1	59.0	56.9	0.1	0.3
	NK_182	55	50	58.3	56.0	59.2	57.2	0.9	1.2	58.4	56.4	0.1	0.4
	NK_183	55	50	57.8	55.6	58.7	56.8	0.9	1.2	57.9	56.0	0.1	0.4
	NK_184	55	50	73.0	67.9	74.0	69.3	1.0	1.4	72.5	68.2	-0.5	0.3
	NK_185	55	50	65.3	59.2	66.4	60.6	1.1	1.4	65.3	59.9	0.0	0.7
	NK_186	55	50	62.9	57.1	63.9	58.6	1.0	1.5	62.9	57.8	0.0	0.7
	NK_187	55	50	61.6	56.2	62.6	57.6	1.0	1.4	61.6	56.9	0.0	0.7
	NK_188	55	50	60.4	55.6	61.4	57.0	1.0	1.4	60.4	56.3	0.0	0.7
	NK_189	55	50	59.8	55.3	60.7	56.6	0.9	1.3	59.7	55.9	-0.1	0.6
	NK_190	55	50	59.1	54.7	60.0	56.0	0.9	1.3	59.1	55.3	0.0	0.6
	NK_191	55	50	59.9	57.3	60.9	58.5	1.0	1.2	60.0	57.7	0.1	0.4
	NK_192	55	50	59.8	57.2	60.7	58.4	0.9	1.2	59.8	57.6	0.0	0.4
	NK_193	55	50	59.1	56.7	60.0	57.8	0.9	1.1	59.1	57.0	0.0	0.3
	NK_194	70	65	58.7	56.4	59.6	57.5	0.9	1.1	58.7	56.7	0.0	0.3
	NK_195	55	50	58.2	56.0	59.1	57.2	0.9	1.2	58.3	56.4	0.1	0.4
	NK_196	55	50	57.9	55.8	58.9	56.9	1.0	1.1	58.0	56.2	0.1	0.4
	NK_197	55	50	74.3	68.9	75.2	70.3	0.9	1.4	73.6	69.1	-0.7	0.2
	NK_198	55	50	69.1	63.4	70.1	64.9	1.0	1.5	68.9	64.0	-0.2	0.6
	NK_199	55	50	64.6	58.7	65.7	60.2	1.1	1.5	64.7	59.5	0.1	0.8
	NK_200	55	50	62.4	57.0	63.4	58.5	1.0	1.5	62.5	57.7	0.1	0.7
	NK_201	55	50	61.3	56.2	62.3	57.6	1.0	1.4	61.3	56.9	0.0	0.7
	NK_202	55	50	59.7	55.2	60.6	56.5	0.9	1.3	59.6	55.8	-0.1	0.6
	NK_203	55	50	58.5	54.4	59.4	55.7	0.9	1.3	58.5	55.1	0.0	0.7
	NK_204	55	50	60.3	57.5	61.2	58.7	0.9	1.2	60.3	57.9	0.0	0.4
	NK_205	55	50	60.0	57.4	61.0	58.6	1.0	1.2	60.1	57.8	0.1	0.4
	NK_206	55	50	59.8	57.2	60.7	58.4	0.9	1.2	59.8	57.6	0.0	0.4
	NK_207	55	50	59.3	56.8	60.2	58.0	0.9	1.2	59.3	57.2	0.0	0.4
	NK_208	55	50	58.8	56.4	59.7	57.6	0.9	1.2	58.8	56.8	0.0	0.4
	NK_209	55	50	58.3	56.0	59.2	57.2	0.9	1.2	58.4	56.4	0.1	0.4
	NK_210	55	50	57.8	55.6	58.7	56.8	0.9	1.2	57.9	56.1	0.1	0.5
	NK_211	55	50	72.8	67.7	73.7	69.1	0.9	1.4	72.2	68.0	-0.6	0.3
	NK_212	55	50	64.7	58.5	65.7	59.9	1.0	1.4	64.7	59.2	0.0	0.7
	NK_213	55	50	62.9	57.1	63.8	58.5	0.9	1.4	62.8	57.8	-0.1	0.7
	NK_214	55	50	61.4	56.2	62.4	57.6	1.0	1.4	61.4	56.8	0.0	0.6
	NK_215	55	50	60.3	55.3	61.2	56.7	0.9	1.4	60.3	56.0	0.0	0.7
	NK_216	55	50	59.6	55.1	60.6	56.5	1.0	1.4	59.6	55.8	0.0	0.7
	NK_217	55	50	59.1	55.0	60.0	56.3	0.9	1.3	59.1	55.6	0.0	0.6
	NK_218	55	50	59.9	57.1	60.8	58.3	0.9	1.2	59.9	57.5	0.0	0.4
	NK_219	55	50	60.0	57.4	60.9	58.6	0.9	1.2	60.0	57.8	0.0	0.4
	NK_220	55	50	59.6	57.1	60.5	58.2	0.9	1.1	59.6	57.4	0.0	0.3
	NK_221	55	50	59.1	56.6	60.0	57.8	0.9	1.2	59.1	57.0	0.0	0.4

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_222	55	50	58.7	56.4	59.6	57.5	0.9	1.1	58.7	56.8	0.0	0.4
	NK_223	55	50	58.2	56.0	59.1	57.2	0.9	1.2	58.3	56.4	0.1	0.4
	NK_224	55	50	57.6	55.5	58.6	56.7	1.0	1.2	57.8	55.9	0.2	0.4
	NK_225	55	50	73.2	67.7	74.1	69.1	0.9	1.4	72.6	68.0	-0.6	0.3
	NK_226	55	50	68.8	63.3	69.8	64.7	1.0	1.4	68.6	63.9	-0.2	0.6
	NK_227	55	50	62.6	57.1	63.6	58.5	1.0	1.4	62.6	57.8	0.0	0.7
	NK_228	55	50	61.3	56.2	62.3	57.6	1.0	1.4	61.3	56.9	0.0	0.7
	NK_229	55	50	59.7	55.2	60.6	56.5	0.9	1.3	59.6	55.8	-0.1	0.6
	NK_230	55	50	58.3	54.4	59.2	55.7	0.9	1.3	58.2	55.1	-0.1	0.7
	NK_231	55	50	59.9	57.3	60.8	58.5	0.9	1.2	60.0	57.7	0.1	0.4
	NK_232	55	50	60.0	57.4	60.9	58.6	0.9	1.2	60.1	57.8	0.1	0.4
	NK_233	55	50	59.8	57.2	60.7	58.4	0.9	1.2	59.9	57.7	0.1	0.5
	NK_234	55	50	59.3	56.8	60.2	58.0	0.9	1.2	59.4	57.2	0.1	0.4
	NK_235	55	50	58.8	56.4	59.7	57.6	0.9	1.2	58.9	56.8	0.1	0.4
	NK_236	55	50	58.2	56.0	59.1	57.1	0.9	1.1	58.3	56.4	0.1	0.4
	NK_237	55	50	57.8	55.7	58.7	56.8	0.9	1.1	57.9	56.1	0.1	0.4
	NK_238	55	50	71.8	66.6	72.8	68.0	1.0	1.4	71.3	66.9	-0.5	0.3
	NK_239	55	50	65.6	59.3	66.6	60.8	1.0	1.5	65.5	60.0	-0.1	0.7
	NK_240	55	50	63.2	57.3	64.2	58.8	1.0	1.5	63.1	57.9	-0.1	0.6
	NK_241	55	50	61.4	56.1	62.4	57.5	1.0	1.4	61.4	56.7	0.0	0.6
	NK_242	55	50	60.3	55.2	61.3	56.6	1.0	1.4	60.3	55.9	0.0	0.7
	NK_243	55	50	59.4	54.8	60.4	56.2	1.0	1.4	59.5	55.5	0.1	0.7
	NK_244	55	50	58.8	54.6	59.7	55.9	0.9	1.3	58.8	55.2	0.0	0.6
	NK_245	55	50	60.2	57.4	61.1	58.6	0.9	1.2	60.2	57.8	0.0	0.4
	NK_246	55	50	60.0	57.3	60.9	58.5	0.9	1.2	60.1	57.7	0.1	0.4
	NK_247	55	50	59.5	57.0	60.5	58.2	1.0	1.2	59.6	57.4	0.1	0.4
	NK_248	55	50	59.1	56.7	60.0	57.8	0.9	1.1	59.1	57.1	0.0	0.4
	NK_249	55	50	58.7	56.4	59.6	57.6	0.9	1.2	58.8	56.8	0.1	0.4
	NK_250	55	50	58.3	56.0	59.2	57.2	0.9	1.2	58.4	56.5	0.1	0.5
	NK_251	55	50	57.9	55.7	58.8	56.9	0.9	1.2	58.0	56.1	0.1	0.4
	NK_252	55	50	74.7	69.2	75.7	70.6	1.0	1.4	73.8	69.2	-0.9	0.0
	NK_253	55	50	68.6	62.8	69.6	64.3	1.0	1.5	68.3	63.4	-0.3	0.6
	NK_254	55	50	64.1	58.2	65.1	59.6	1.0	1.4	64.1	58.9	0.0	0.7
	NK_255	55	50	62.1	56.5	63.1	57.9	1.0	1.4	62.1	57.1	0.0	0.6
	NK_256	55	50	60.5	55.3	61.5	56.7	1.0	1.4	60.5	56.0	0.0	0.7
	NK_257	55	50	58.8	54.4	59.7	55.7	0.9	1.3	58.7	55.0	-0.1	0.6
	NK_258	55	50	58.0	54.2	58.9	55.5	0.9	1.3	58.0	54.8	0.0	0.6
	NK_259	55	50	59.9	57.2	60.8	58.4	0.9	1.2	59.9	57.7	0.0	0.5
	NK_260	55	50	60.0	57.3	60.9	58.5	0.9	1.2	60.0	57.8	0.0	0.5
	NK_261	55	50	59.8	57.2	60.7	58.4	0.9	1.2	59.8	57.6	0.0	0.4
	NK_262	55	50	59.3	56.9	60.2	58.0	0.9	1.1	59.4	57.3	0.1	0.4
	NK_263	55	50	58.8	56.4	59.7	57.6	0.9	1.2	58.9	56.9	0.1	0.5
	NK_264	55	50	58.2	56.0	59.1	57.2	0.9	1.2	58.3	56.4	0.1	0.4
	NK_265	55	50	57.7	55.6	58.7	56.8	1.0	1.2	57.9	56.0	0.2	0.4
	NK_266	55	50	73.9	68.6	74.8	70.0	0.9	1.4	73.1	68.7	-0.8	0.1
	NK_267	55	50	65.1	58.8	66.1	60.3	1.0	1.5	64.9	59.5	-0.2	0.7
	NK_268	55	50	63.0	57.1	64.0	58.5	1.0	1.4	62.9	57.8	-0.1	0.7
	NK_269	55	50	61.3	55.9	62.3	57.3	1.0	1.4	61.3	56.6	0.0	0.7
	NK_270	55	50	60.3	55.3	61.3	56.7	1.0	1.4	60.3	56.0	0.0	0.7
	NK_271	55	50	59.4	54.8	60.4	56.2	1.0	1.4	59.5	55.5	0.1	0.7
	NK_272	55	50	58.9	54.7	59.8	56.0	0.9	1.3	59.0	55.3	0.1	0.6
	NK_273	55	50	60.3	57.4	61.2	58.6	0.9	1.2	60.3	57.8	0.0	0.4
	NK_274	55	50	60.0	57.3	60.9	58.5	0.9	1.2	60.0	57.7	0.0	0.4
	NK_275	55	50	59.6	57.0	60.5	58.2	0.9	1.2	59.6	57.4	0.0	0.4
	NK_276	55	50	59.4	56.9	60.3	58.1	0.9	1.2	59.5	57.4	0.1	0.5
	NK_277	55	50	58.9	56.5	59.8	57.7	0.9	1.2	59.0	57.0	0.1	0.5
	NK_278	55	50	58.2	56.0	59.2	57.2	1.0	1.2	58.4	56.5	0.2	0.5
	NK_279	55	50	57.7	55.6	58.6	56.8	0.9	1.2	57.9	56.0	0.2	0.4
	NK_280	55	50	74.7	69.2	75.6	70.6	0.9	1.4	73.8	69.3	-0.9	0.1
	NK_281	55	50	69.5	63.8	70.5	65.3	1.0	1.5	69.2	64.3	-0.3	0.5

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_282	55	50	64.4	58.4	65.4	59.8	1.0	1.4	64.4	59.1	0.0	0.7
	NK_283	55	50	62.1	56.4	63.1	57.9	1.0	1.5	62.1	57.1	0.0	0.7
	NK_284	55	50	60.9	55.9	61.9	57.3	1.0	1.4	60.9	56.6	0.0	0.7
	NK_285	55	50	59.6	54.9	60.5	56.3	0.9	1.4	59.5	55.6	-0.1	0.7
	NK_286	55	50	58.6	54.3	59.6	55.6	1.0	1.3	58.6	54.9	0.0	0.6
	NK_287	55	50	60.4	57.6	61.3	58.8	0.9	1.2	60.5	58.1	0.1	0.5
	NK_288	55	50	59.9	57.3	60.8	58.5	0.9	1.2	60.0	57.7	0.1	0.4
	NK_289	55	50	59.7	57.1	60.6	58.3	0.9	1.2	59.8	57.6	0.1	0.5
	NK_290	55	50	59.3	56.8	60.2	58.0	0.9	1.2	59.4	57.3	0.1	0.5
	NK_291	55	50	58.9	56.5	59.8	57.7	0.9	1.2	59.0	56.9	0.1	0.4
	NK_292	55	50	58.3	56.1	59.2	57.2	0.9	1.1	58.4	56.5	0.1	0.4
	NK_293	55	50	57.8	55.7	58.7	56.8	0.9	1.1	58.0	56.1	0.2	0.4
	NK_294	55	50	72.2	66.8	73.2	68.2	1.0	1.4	71.8	67.2	-0.4	0.4
	NK_295	55	50	66.7	60.8	67.7	62.3	1.0	1.5	66.7	61.6	0.0	0.8
	NK_296	55	50	63.5	57.6	64.5	59.0	1.0	1.4	63.6	58.4	0.1	0.8
	NK_297	55	50	61.2	55.7	62.2	57.1	1.0	1.4	61.3	56.4	0.1	0.7
	NK_298	55	50	60.0	55.1	60.9	56.4	0.9	1.3	60.1	55.9	0.1	0.8
	NK_299	55	50	59.4	54.8	60.3	56.1	0.9	1.3	59.5	55.5	0.1	0.7
	NK_300	55	50	60.0	55.9	61.0	57.2	1.0	1.3	59.7	56.4	-0.3	0.5
	NK_301	55	50	60.2	57.3	61.1	58.5	0.9	1.2	60.2	57.8	0.0	0.5
	NK_302	55	50	60.0	57.4	60.9	58.6	0.9	1.2	60.1	57.9	0.1	0.5
	NK_303	55	50	59.8	57.3	60.7	58.5	0.9	1.2	59.9	57.7	0.1	0.4
	NK_304	55	50	59.3	56.9	60.3	58.1	1.0	1.2	59.5	57.3	0.2	0.4
	NK_305	55	50	58.8	56.4	59.7	57.6	0.9	1.2	58.9	56.9	0.1	0.5
	NK_306	55	50	58.4	56.1	59.3	57.3	0.9	1.2	58.6	56.6	0.2	0.5
	NK_307	55	50	58.2	56.0	59.1	57.1	0.9	1.1	58.3	56.4	0.1	0.4
	NK_308	55	50	57.9	55.8	58.8	56.9	0.9	1.1	58.1	56.2	0.2	0.4
	NK_309	55	50	73.5	68.3	74.4	69.7	0.9	1.4	73.1	68.7	-0.4	0.4
	NK_310	55	50	68.2	62.4	69.2	63.8	1.0	1.4	68.1	63.0	-0.1	0.6
	NK_311	55	50	66.7	60.8	67.7	62.3	1.0	1.5	66.7	61.6	0.0	0.8
	NK_312	55	50	63.7	58.0	64.7	59.4	1.0	1.4	63.8	58.7	0.1	0.7
	NK_313	55	50	62.5	57.1	63.5	58.5	1.0	1.4	62.7	57.8	0.2	0.7
	NK_314	55	50	61.0	55.9	62.0	57.3	1.0	1.4	61.1	56.7	0.1	0.8
	NK_315	55	50	60.2	55.6	61.2	57.0	1.0	1.4	60.3	56.3	0.1	0.7
	NK_316	55	50	58.8	55.0	59.7	56.3	0.9	1.3	59.0	55.6	0.2	0.6
	NK_317	55	50	60.3	57.6	61.2	58.8	0.9	1.2	60.4	58.1	0.1	0.5
	NK_318	55	50	60.1	57.5	61.0	58.7	0.9	1.2	60.2	58.0	0.1	0.5
	NK_319	55	50	59.9	57.3	60.8	58.5	0.9	1.2	60.0	57.8	0.1	0.5
	NK_320	55	50	59.4	56.9	60.3	58.1	0.9	1.2	59.5	57.4	0.1	0.5
	NK_321	55	50	59.0	56.6	59.9	57.8	0.9	1.2	59.1	57.1	0.1	0.5
	NK_322	55	50	58.7	56.4	59.6	57.6	0.9	1.2	58.8	56.8	0.1	0.4
	NK_323	55	50	58.2	56.0	59.2	57.2	1.0	1.2	58.4	56.5	0.2	0.5
	NK_324	55	50	57.9	55.8	58.9	57.0	1.0	1.2	58.1	56.3	0.2	0.5
	NK_325	55	50	73.8	68.6	74.8	70.0	1.0	1.4	73.6	69.1	-0.2	0.5
	NK_326	55	50	65.1	59.0	66.1	60.5	1.0	1.5	65.4	59.9	0.3	0.9
	NK_327	55	50	63.0	57.4	64.0	58.8	1.0	1.4	63.3	58.3	0.3	0.9
	NK_328	55	50	61.5	56.2	62.5	57.6	1.0	1.4	61.7	57.0	0.2	0.8
	NK_329	55	50	60.4	55.4	61.3	56.8	0.9	1.4	60.6	56.2	0.2	0.8
	NK_330	55	50	59.9	55.4	60.8	56.7	0.9	1.3	60.1	56.2	0.2	0.8
	NK_331	55	50	59.5	55.2	60.4	56.5	0.9	1.3	59.7	55.9	0.2	0.7
	NK_332	55	50	60.6	57.6	61.5	58.9	0.9	1.3	60.6	58.1	0.0	0.5
	NK_333	55	50	60.3	57.6	61.2	58.8	0.9	1.2	60.4	58.1	0.1	0.5
	NK_334	55	50	59.9	57.4	60.8	58.5	0.9	1.1	60.0	57.8	0.1	0.4
	NK_335	55	50	59.4	57.0	60.3	58.1	0.9	1.1	59.5	57.4	0.1	0.4
	NK_336	55	50	58.8	56.5	59.7	57.7	0.9	1.2	59.0	57.0	0.2	0.5
	NK_337	55	50	58.3	56.1	59.3	57.3	1.0	1.2	58.5	56.6	0.2	0.5
	NK_338	55	50	57.8	55.7	58.7	56.9	0.9	1.2	58.0	56.2	0.2	0.5
	NK_339	55	50	73.5	68.4	74.5	69.8	1.0	1.4	73.8	69.2	0.3	0.8
	NK_340	55	50	64.4	58.5	65.4	60.0	1.0	1.5	64.7	59.4	0.3	0.9
	NK_341	55	50	62.3	56.9	63.3	58.3	1.0	1.4	62.5	57.6	0.2	0.7

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_342	55	50	61.0	55.9	62.0	57.3	1.0	1.4	61.2	56.6	0.2	0.7
	NK_343	55	50	59.9	54.9	60.8	56.3	0.9	1.4	60.0	55.7	0.1	0.8
	NK_344	55	50	58.7	54.3	59.6	55.6	0.9	1.3	58.7	55.0	0.0	0.7
	NK_345	55	50	60.2	57.5	61.1	58.7	0.9	1.2	60.4	58.1	0.2	0.6
	NK_346	55	50	60.2	57.6	61.1	58.8	0.9	1.2	60.4	58.1	0.2	0.5
	NK_347	55	50	59.9	57.4	60.8	58.6	0.9	1.2	60.1	57.9	0.2	0.5
	NK_348	55	50	59.5	57.1	60.4	58.3	0.9	1.2	59.7	57.6	0.2	0.5
	NK_349	55	50	59.0	56.7	59.9	57.8	0.9	1.1	59.2	57.1	0.2	0.4
	NK_350	55	50	58.5	56.3	59.4	57.4	0.9	1.1	58.7	56.7	0.2	0.4
	NK_351	55	50	58.0	55.9	59.0	57.0	1.0	1.1	58.2	56.3	0.2	0.4
	NK_352	55	50	73.0	68.0	74.0	69.4	1.0	1.4	73.5	69.0	0.5	1.0
	NK_353	55	50	64.9	58.5	65.9	60.0	1.0	1.5	65.5	59.6	0.6	1.1
	NK_354	55	50	62.4	56.6	63.4	58.0	1.0	1.4	62.9	57.6	0.5	1.0
	NK_355	55	50	61.0	55.6	62.0	57.1	1.0	1.5	61.4	56.6	0.4	1.0
	NK_356	55	50	60.0	55.1	61.0	56.4	1.0	1.3	60.4	55.9	0.4	0.8
	NK_357	55	50	59.6	55.3	60.5	56.7	0.9	1.4	59.9	56.1	0.3	0.8
	NK_358	55	50	59.0	55.0	60.0	56.3	1.0	1.3	59.4	55.8	0.4	0.8
	NK_359	55	50	60.7	57.8	61.6	59.0	0.9	1.2	60.9	58.4	0.2	0.6
	NK_360	55	50	60.5	57.8	61.4	59.0	0.9	1.2	60.7	58.3	0.2	0.5
	NK_361	55	50	60.1	57.5	61.0	58.7	0.9	1.2	60.3	58.1	0.2	0.6
	NK_362	55	50	59.7	57.2	60.6	58.4	0.9	1.2	59.9	57.7	0.2	0.5
	NK_363	55	50	59.1	56.7	60.0	57.9	0.9	1.2	59.3	57.2	0.2	0.5
	NK_364	55	50	58.7	56.5	59.7	57.7	1.0	1.2	59.0	57.0	0.3	0.5
	NK_365	55	50	58.2	56.0	59.1	57.2	0.9	1.2	58.4	56.5	0.2	0.5
	NK_366	55	50	71.1	65.6	72.1	67.0	1.0	1.4	71.7	66.6	0.6	1.0
	NK_367	55	50	67.0	60.9	68.0	62.4	1.0	1.5	67.6	62.1	0.6	1.2
	NK_368	55	50	61.9	56.3	62.8	57.7	0.9	1.4	62.3	57.2	0.4	0.9
	NK_369	55	50	60.8	55.6	61.7	57.0	0.9	1.4	61.1	56.4	0.3	0.8
	NK_370	55	50	59.3	55.2	60.2	56.5	0.9	1.3	59.5	55.9	0.2	0.7
	NK_371	55	50	60.4	57.7	61.3	58.9	0.9	1.2	60.7	58.3	0.3	0.6
	NK_372	55	50	60.3	57.7	61.2	58.9	0.9	1.2	60.5	58.2	0.2	0.5
	NK_373	55	50	59.9	57.4	60.8	58.6	0.9	1.2	60.1	57.9	0.2	0.5
	NK_374	55	50	59.5	57.1	60.4	58.2	0.9	1.1	59.7	57.5	0.2	0.4
	NK_375	55	50	73.1	68.1	74.0	69.5	0.9	1.4	73.8	69.2	0.7	1.1
	NK_376	55	50	65.1	58.9	66.1	60.4	1.0	1.5	65.9	60.1	0.8	1.2
	NK_377	55	50	63.2	57.4	64.2	58.9	1.0	1.5	63.8	58.4	0.6	1.0
	NK_378	55	50	61.8	56.7	62.8	58.1	1.0	1.4	62.3	57.6	0.5	0.9
	NK_379	55	50	60.2	55.9	61.1	57.2	0.9	1.3	60.6	56.7	0.4	0.8
	NK_380	55	50	59.7	55.6	60.6	56.9	0.9	1.3	60.0	56.4	0.3	0.8
	NK_381	55	50	60.8	58.0	61.7	59.2	0.9	1.2	61.1	58.6	0.3	0.6
	NK_382	55	50	60.7	58.0	61.6	59.2	0.9	1.2	60.9	58.6	0.2	0.6
	NK_383	55	50	60.4	57.8	61.3	59.0	0.9	1.2	60.6	58.3	0.2	0.5
	NK_384	55	50	59.8	57.3	60.7	58.5	0.9	1.2	60.1	57.9	0.3	0.6
	NK_385	55	50	73.2	68.2	74.1	69.5	0.9	1.3	73.9	69.3	0.7	1.1
	NK_386	55	50	65.3	59.4	66.3	60.8	1.0	1.4	66.0	60.5	0.7	1.1
	NK_387	55	50	62.8	57.4	63.8	58.9	1.0	1.5	63.4	58.4	0.6	1.0
	NK_388	55	50	61.8	56.9	62.8	58.2	1.0	1.3	62.2	57.8	0.4	0.9
	NK_389	55	50	60.4	55.8	61.3	57.1	0.9	1.3	60.8	56.6	0.4	0.8
	NK_390	55	50	59.2	55.3	60.1	56.6	0.9	1.3	59.5	56.0	0.3	0.7
	NK_391	55	50	60.5	57.8	61.4	59.0	0.9	1.2	60.8	58.4	0.3	0.6
	NK_392	55	50	60.4	57.8	61.3	59.0	0.9	1.2	60.7	58.4	0.3	0.6
	NK_393	55	50	60.1	57.6	61.0	58.7	0.9	1.1	60.3	58.1	0.2	0.5
	NK_394	55	50	59.6	57.2	60.6	58.4	1.0	1.2	59.9	57.7	0.3	0.5
	NK_395	55	50	59.2	56.9	60.1	58.0	0.9	1.1	59.5	57.4	0.3	0.5
	NK_396	55	50	58.8	56.5	59.7	57.7	0.9	1.2	59.0	57.0	0.2	0.5
	NK_397	55	50	58.3	56.1	59.2	57.3	0.9	1.2	58.6	56.6	0.3	0.5
	NK_398	55	50	72.9	68.0	73.9	69.4	1.0	1.4	73.7	69.1	0.8	1.1
	NK_399	55	50	65.3	59.4	66.3	60.8	1.0	1.4	65.9	60.5	0.6	1.1
	NK_400	55	50	63.6	57.9	64.6	59.3	1.0	1.4	64.2	58.9	0.6	1.0
	NK_401	55	50	61.3	56.1	62.3	57.5	1.0	1.4	61.8	57.1	0.5	1.0

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_402	55	50	60.2	55.4	61.1	56.8	0.9	1.4	60.6	56.3	0.4	0.9
	NK_403	55	50	59.5	55.1	60.4	56.4	0.9	1.3	59.9	56.0	0.4	0.9
	NK_404	55	50	60.7	58.0	61.6	59.2	0.9	1.2	61.0	58.6	0.3	0.6
	NK_405	55	50	60.6	57.9	61.5	59.1	0.9	1.2	60.8	58.5	0.2	0.6
	NK_406	55	50	60.4	57.8	61.3	59.0	0.9	1.2	60.7	58.3	0.3	0.5
	NK_407	55	50	60.0	57.5	60.9	58.7	0.9	1.2	60.2	58.0	0.2	0.5
	NK_408	55	50	59.5	57.1	60.4	58.2	0.9	1.1	59.7	57.6	0.2	0.5
	NK_409	55	50	59.0	56.7	59.9	57.9	0.9	1.2	59.3	57.2	0.3	0.5
	NK_410	55	50	58.5	56.3	59.4	57.5	0.9	1.2	58.8	56.8	0.3	0.5
	NK_411	55	50	73.4	68.3	74.3	69.7	0.9	1.4	74.1	69.4	0.7	1.1
	NK_412	55	50	67.6	62.0	68.6	63.4	1.0	1.4	68.3	63.1	0.7	1.1
	NK_413	55	50	63.9	58.2	64.9	59.7	1.0	1.5	64.5	59.3	0.6	1.1
	NK_414	55	50	61.9	56.6	62.9	58.0	1.0	1.4	62.5	57.6	0.6	1.0
	NK_415	55	50	61.0	56.0	62.0	57.4	1.0	1.4	61.5	57.0	0.5	1.0
	NK_416	55	50	58.8	54.4	59.8	55.7	1.0	1.3	59.3	55.2	0.5	0.8
	NK_417	55	50	61.0	58.1	61.9	59.3	0.9	1.2	61.2	58.6	0.2	0.5
	NK_418	55	50	60.7	58.0	61.6	59.2	0.9	1.2	60.9	58.5	0.2	0.5
	NK_419	55	50	60.3	57.7	61.2	58.9	0.9	1.2	60.6	58.2	0.3	0.5
	NK_420	55	50	59.9	57.4	60.8	58.5	0.9	1.1	60.1	57.9	0.2	0.5
	NK_421	55	50	59.4	57.0	60.3	58.2	0.9	1.2	59.7	57.5	0.3	0.5
	NK_422	55	50	58.6	56.3	59.5	57.5	0.9	1.2	58.8	56.8	0.2	0.5
	NK_423	55	50	58.3	56.1	59.2	57.3	0.9	1.2	58.5	56.6	0.2	0.5
	NK_424	55	50	73.1	68.1	74.0	69.5	0.9	1.4	73.8	69.2	0.7	1.1
	NK_425	55	50	65.8	59.8	66.8	61.2	1.0	1.4	66.5	60.9	0.7	1.1
	NK_426	55	50	63.6	57.9	64.6	59.3	1.0	1.4	64.1	59.0	0.5	1.1
	NK_427	55	50	61.8	56.5	62.8	57.9	1.0	1.4	62.3	57.5	0.5	1.0
	NK_428	55	50	60.8	56.0	61.8	57.3	1.0	1.3	61.2	56.9	0.4	0.9
	NK_429	55	50	59.9	55.5	60.8	56.8	0.9	1.3	60.3	56.4	0.4	0.9
	NK_430	55	50	60.8	58.1	61.8	59.3	1.0	1.2	61.1	58.7	0.3	0.6
	NK_431	55	50	60.5	57.8	61.4	59.0	0.9	1.2	60.8	58.4	0.3	0.6
	NK_432	55	50	60.0	57.5	60.9	58.7	0.9	1.2	60.3	58.0	0.3	0.5
	NK_433	55	50	59.8	57.3	60.7	58.5	0.9	1.2	60.0	57.8	0.2	0.5
	NK_434	55	50	59.3	56.9	60.2	58.1	0.9	1.2	59.5	57.4	0.2	0.5
	NK_435	55	50	58.8	56.5	59.7	57.7	0.9	1.2	59.0	57.0	0.2	0.5
	NK_436	55	50	73.0	68.0	73.9	69.4	0.9	1.4	73.6	69.1	0.6	1.1
	NK_437	55	50	68.9	63.3	69.8	64.7	0.9	1.4	69.5	64.4	0.6	1.1
	NK_438	55	50	64.4	58.7	65.4	60.2	1.0	1.5	65.0	59.7	0.6	1.0
	NK_439	55	50	62.9	57.4	63.9	58.8	1.0	1.4	63.4	58.4	0.5	1.0
	NK_440	55	50	61.6	56.4	62.6	57.8	1.0	1.4	62.1	57.4	0.5	1.0
	NK_441	55	50	59.2	54.7	60.1	56.0	0.9	1.3	59.6	55.5	0.4	0.8
	NK_442	55	50	61.1	58.2	62.0	59.4	0.9	1.2	61.3	58.8	0.2	0.6
	NK_443	55	50	60.9	58.1	61.8	59.3	0.9	1.2	61.1	58.7	0.2	0.6
	NK_444	55	50	60.4	57.8	61.3	59.0	0.9	1.2	60.7	58.3	0.3	0.5
	NK_445	55	50	60.0	57.5	60.9	58.7	0.9	1.2	60.3	58.0	0.3	0.5
	NK_446	55	50	59.7	57.2	60.6	58.4	0.9	1.2	59.9	57.7	0.2	0.5
	NK_447	55	50	59.1	56.7	60.0	57.9	0.9	1.2	59.3	57.2	0.2	0.5
	NK_448	55	50	58.6	56.3	59.5	57.5	0.9	1.2	58.8	56.8	0.2	0.5
	NK_449	55	50	72.9	68.0	73.9	69.4	1.0	1.4	73.6	69.1	0.7	1.1
	NK_450	55	50	64.9	58.9	65.9	60.3	1.0	1.4	65.5	60.1	0.6	1.2
	NK_451	55	50	62.8	57.3	63.8	58.7	1.0	1.4	63.3	58.4	0.5	1.1
	NK_452	55	50	61.4	56.5	62.3	57.9	0.9	1.4	61.8	57.5	0.4	1.0
	NK_453	55	50	60.6	56.2	61.5	57.5	0.9	1.3	61.0	57.1	0.4	0.9
	NK_454	55	50	61.4	58.3	62.3	59.5	0.9	1.2	61.6	59.0	0.2	0.7
	NK_455	55	50	61.2	58.4	62.1	59.6	0.9	1.2	61.5	59.0	0.3	0.6
	NK_456	55	50	60.8	58.1	61.7	59.3	0.9	1.2	61.0	58.6	0.2	0.5
	NK_457	55	50	60.2	57.6	61.1	58.8	0.9	1.2	60.5	58.2	0.3	0.6
	NK_458	55	50	59.9	57.4	60.8	58.6	0.9	1.2	60.1	57.9	0.2	0.5
	NK_459	55	50	59.2	56.8	60.1	58.0	0.9	1.2	59.4	57.3	0.2	0.5
	NK_460	55	50	58.9	56.6	59.8	57.8	0.9	1.2	59.2	57.1	0.3	0.5
	NK_461	55	50	73.0	68.0	74.0	69.4	1.0	1.4	73.5	69.0	0.5	1.0

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_462	55	50	66.2	60.4	67.1	61.8	0.9	1.4	66.8	61.6	0.6	1.2
	NK_463	55	50	63.7	58.1	64.7	59.5	1.0	1.4	64.2	59.2	0.5	1.1
	NK_464	55	50	62.2	56.9	63.1	58.3	0.9	1.4	62.7	57.9	0.5	1.0
	NK_465	55	50	59.1	54.8	60.0	56.1	0.9	1.3	59.4	55.6	0.3	0.8
	NK_466	55	50	61.8	58.6	62.7	59.8	0.9	1.2	62.0	59.1	0.2	0.5
	NK_467	55	50	61.3	58.4	62.2	59.6	0.9	1.2	61.5	59.0	0.2	0.6
	NK_468	55	50	60.7	58.0	61.6	59.2	0.9	1.2	60.9	58.6	0.2	0.6
	NK_469	55	50	60.5	57.8	61.4	59.0	0.9	1.2	60.7	58.4	0.2	0.6
	NK_470	55	50	60.0	57.4	60.9	58.6	0.9	1.2	60.2	58.0	0.2	0.6
	NK_471	55	50	59.4	56.9	60.3	58.1	0.9	1.2	59.6	57.4	0.2	0.5
	NK_472	55	50	58.7	56.4	59.7	57.6	1.0	1.2	59.0	56.9	0.3	0.5
	NK_473	55	50	73.3	68.2	74.2	69.6	0.9	1.4	73.7	69.2	0.4	1.0
	NK_474	55	50	66.3	60.1	67.3	61.5	1.0	1.4	66.8	61.2	0.5	1.1
	NK_475	55	50	63.7	58.0	64.7	59.4	1.0	1.4	64.1	59.0	0.4	1.0
	NK_476	55	50	62.1	57.0	63.0	58.4	0.9	1.4	62.4	58.0	0.3	1.0
	NK_477	55	50	61.4	56.7	62.3	58.1	0.9	1.4	61.7	57.6	0.3	0.9
	NK_478	55	50	61.9	58.6	62.8	59.9	0.9	1.3	62.1	59.3	0.2	0.7
	NK_479	55	50	61.7	58.7	62.6	60.0	0.9	1.3	62.0	59.4	0.3	0.7
	NK_480	55	50	61.3	58.5	62.2	59.7	0.9	1.2	61.6	59.0	0.3	0.5
	NK_481	55	50	60.7	58.0	61.7	59.2	1.0	1.2	61.0	58.6	0.3	0.6
	NK_482	55	50	60.2	57.6	61.1	58.8	0.9	1.2	60.5	58.1	0.3	0.5
	NK_483	55	50	59.8	57.2	60.7	58.4	0.9	1.2	60.0	57.8	0.2	0.6
	NK_484	55	50	59.0	56.6	60.0	57.8	1.0	1.2	59.3	57.2	0.3	0.6
	NK_485	55	50	73.3	68.2	74.3	69.6	1.0	1.4	73.7	69.2	0.4	1.0
	NK_486	55	50	70.0	64.1	71.0	65.6	1.0	1.5	70.5	65.3	0.5	1.2
	NK_487	55	50	65.1	59.0	66.1	60.4	1.0	1.4	65.6	60.1	0.5	1.1
	NK_488	55	50	62.6	57.1	63.6	58.5	1.0	1.4	63.1	58.2	0.5	1.1
	NK_489	55	50	61.2	56.3	62.1	57.7	0.9	1.4	61.6	57.3	0.4	1.0
	NK_490	55	50	62.3	58.9	63.2	60.2	0.9	1.3	62.4	59.5	0.1	0.6
	NK_491	55	50	61.9	58.9	62.8	60.1	0.9	1.2	62.1	59.4	0.2	0.5
	NK_492	55	50	61.3	58.4	62.2	59.6	0.9	1.2	61.6	59.0	0.3	0.6
	NK_493	55	50	60.8	58.0	61.7	59.2	0.9	1.2	61.0	58.6	0.2	0.6
	NK_494	55	50	60.3	57.6	61.2	58.8	0.9	1.2	60.5	58.2	0.2	0.6
	NK_495	55	50	59.7	57.1	60.6	58.3	0.9	1.2	59.9	57.7	0.2	0.6
	NK_496	55	50	59.0	56.6	60.0	57.8	1.0	1.2	59.3	57.2	0.3	0.6
	NK_497	55	50	73.2	68.1	74.2	69.5	1.0	1.4	73.6	69.1	0.4	1.0
	NK_498	55	50	65.2	59.2	66.2	60.7	1.0	1.5	65.7	60.3	0.5	1.1
	NK_499	55	50	62.7	57.7	63.7	59.1	1.0	1.4	63.1	58.6	0.4	0.9
	NK_500	55	50	62.8	59.2	63.7	60.5	0.9	1.3	62.9	59.9	0.1	0.7
	NK_501	55	50	62.4	59.2	63.3	60.4	0.9	1.2	62.6	59.8	0.2	0.6
	NK_502	55	50	61.9	58.8	62.8	60.0	0.9	1.2	62.1	59.4	0.2	0.6
	NK_503	55	50	60.9	58.0	61.8	59.3	0.9	1.3	61.1	58.6	0.2	0.6
	NK_504	55	50	60.4	57.6	61.3	58.9	0.9	1.3	60.6	58.2	0.2	0.6
	NK_505	55	50	60.1	57.4	61.0	58.6	0.9	1.2	60.3	58.0	0.2	0.6
	NK_506	55	50	59.6	57.1	60.5	58.3	0.9	1.2	59.9	57.7	0.3	0.6
	NK_507	55	50	59.2	56.8	60.2	58.0	1.0	1.2	59.5	57.4	0.3	0.6
	NK_508	55	50	73.3	68.2	74.3	69.6	1.0	1.4	73.8	69.2	0.5	1.0
	NK_509	55	50	67.1	61.3	68.1	62.8	1.0	1.5	67.6	62.4	0.5	1.1
	NK_510	55	50	64.6	59.1	65.5	60.5	0.9	1.4	65.1	60.1	0.5	1.0
	NK_511	55	50	62.7	57.8	63.6	59.2	0.9	1.4	63.1	58.7	0.4	0.9
	NK_512	55	50	62.7	59.3	63.6	60.6	0.9	1.3	62.9	59.9	0.2	0.6
	NK_513	55	50	62.3	59.1	63.2	60.4	0.9	1.3	62.5	59.7	0.2	0.6
	NK_514	55	50	61.7	58.7	62.6	59.9	0.9	1.2	61.9	59.2	0.2	0.5
	NK_515	55	50	61.2	58.3	62.1	59.5	0.9	1.2	61.4	58.8	0.2	0.5
	NK_516	55	50	60.6	57.9	61.5	59.1	0.9	1.2	60.9	58.4	0.3	0.5
	NK_517	55	50	60.1	57.5	61.0	58.7	0.9	1.2	60.3	58.0	0.2	0.5
	NK_518	55	50	59.6	57.1	60.5	58.3	0.9	1.2	59.8	57.7	0.2	0.6
	NK_519	55	50	72.4	67.5	73.3	68.8	0.9	1.3	72.9	68.5	0.5	1.0
	NK_520	55	50	66.8	60.6	67.9	62.1	1.1	1.5	67.4	61.7	0.6	1.1
	NK_521	55	50	63.8	58.1	64.8	59.6	1.0	1.5	64.3	59.1	0.5	1.0

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NK cont...	NK_522	55	50	62.6	57.5	63.6	58.9	1.0	1.4	63.1	58.4	0.5	0.9
	NK_523	55	50	63.1	59.3	64.0	60.6	0.9	1.3	63.3	59.9	0.2	0.6
	NK_524	55	50	62.6	59.2	63.6	60.4	1.0	1.2	62.8	59.7	0.2	0.5
	NK_525	55	50	61.9	58.7	62.8	59.9	0.9	1.2	62.0	59.2	0.1	0.5
	NK_526	55	50	61.4	58.4	62.3	59.6	0.9	1.2	61.6	58.9	0.2	0.5
	NK_527	55	50	60.8	58.0	61.7	59.2	0.9	1.2	61.0	58.6	0.2	0.6
	NK_528	55	50	60.3	57.7	61.3	58.9	1.0	1.2	60.6	58.3	0.3	0.6
	NK_529	55	50	59.9	57.4	60.8	58.6	0.9	1.2	60.2	58.0	0.3	0.6
	NK_530	55	50	72.8	67.8	73.8	69.2	1.0	1.4	73.4	68.8	0.6	1.0
	NK_531	55	50	65.9	59.8	67.0	61.2	1.1	1.4	66.6	60.9	0.7	1.1
	NK_532	55	50	62.2	56.8	63.2	58.2	1.0	1.4	62.7	57.8	0.5	1.0
	NK_533	55	50	62.8	59.0	63.7	60.3	0.9	1.3	63.1	59.7	0.3	0.7
	NK_534	55	50	62.4	59.0	63.3	60.3	0.9	1.3	62.6	59.6	0.2	0.6
	NK_535	55	50	62.1	58.7	63.0	60.0	0.9	1.3	62.2	59.3	0.1	0.6
	NK_536	55	50	61.5	58.4	62.4	59.6	0.9	1.2	61.6	59.0	0.1	0.6
	NK_537	55	50	60.9	58.1	61.8	59.3	0.9	1.2	61.2	58.7	0.3	0.6
	NK_538	55	50	60.4	57.8	61.3	59.0	0.9	1.2	60.7	58.4	0.3	0.6
	NK_539	55	50	60.0	57.4	60.9	58.6	0.9	1.2	60.3	58.1	0.3	0.7
	NK_540	55	50	72.8	67.6	73.8	69.0	1.0	1.4	73.4	68.6	0.6	1.0
	NK_541	55	50	65.3	59.4	66.3	60.8	1.0	1.4	65.8	60.2	0.5	0.8
	NK_542	55	50	64.0	58.4	65.0	59.9	1.0	1.5	64.4	59.3	0.4	0.9
	NK_543	55	50	63.0	59.0	63.9	60.3	0.9	1.3	63.2	59.5	0.2	0.5
	NK_544	55	50	62.7	58.9	63.6	60.2	0.9	1.3	63.0	59.5	0.3	0.6
	NK_545	55	50	62.2	58.5	63.1	59.8	0.9	1.3	62.3	59.1	0.1	0.6
	NK_546	55	50	61.5	58.6	62.4	59.8	0.9	1.2	61.7	59.2	0.2	0.6
	NK_547	55	50	61.1	58.4	62.0	59.6	0.9	1.2	61.4	59.0	0.3	0.6
	NK_548	55	50	60.8	58.1	61.7	59.3	0.9	1.2	61.1	58.8	0.3	0.7
	NK_549	55	50	60.6	58.0	61.5	59.2	0.9	1.2	60.9	58.7	0.3	0.7
	NK_550	55	50	69.3	63.4	70.3	64.9	1.0	1.5	69.9	64.5	0.6	1.1
	NK_551	55	50	66.1	60.2	67.1	61.7	1.0	1.5	66.7	61.2	0.6	1.0
	NK_552	55	50	64.3	58.6	65.3	60.0	1.0	1.4	64.8	59.5	0.5	0.9
	NK_553	55	50	62.5	57.5	63.5	58.9	1.0	1.4	63.0	58.4	0.5	0.9
	NK_554	55	50	62.1	57.8	63.0	59.1	0.9	1.3	62.4	58.5	0.3	0.7
	NK_555	55	50	61.5	57.6	62.4	58.8	0.9	1.2	61.8	58.2	0.3	0.6
	NK_556	55	50	61.0	57.2	61.9	58.5	0.9	1.3	61.2	57.9	0.2	0.7
	NK_557	55	50	61.6	58.7	62.5	59.9	0.9	1.2	61.9	59.4	0.3	0.7
	NK_558	55	50	61.4	58.7	62.3	59.9	0.9	1.2	61.7	59.4	0.3	0.7
	NK_559	55	50	61.1	58.5	62.1	59.7	1.0	1.2	61.5	59.2	0.4	0.7
	NK_560	55	50	60.6	58.0	61.5	59.2	0.9	1.2	61.0	58.8	0.4	0.8
	NK_561	80	75	70.3	65.5	71.3	66.9	1.0	1.4	70.6	66.4	0.3	0.9

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SL	SL_1	65	60	65.6	62.2	66.5	63.5	0.9	1.3	65.6	62.4	0.0	0.2
	SL_2	70	65	63.3	60.0	64.2	61.3	0.9	1.3	64.3	61.4	1.0	1.4
NL	NL_1	65	60	58.0	55.3	58.9	56.5	0.9	1.2	58.4	56.0	0.4	0.7
	NL_2	55	50	66.7	62.5	67.7	63.8	1.0	1.3	67.5	63.7	0.8	1.2
	NL_3	55	50	63.9	59.5	64.9	60.9	1.0	1.4	64.7	60.7	0.8	1.2
	NL_4	55	50	61.6	57.6	62.5	59.0	0.9	1.4	62.3	58.8	0.7	1.2
	NL_5	55	50	59.1	55.7	60.0	57.0	0.9	1.3	59.8	56.8	0.7	1.1
	NL_6	55	50	58.1	54.9	59.0	56.2	0.9	1.3	58.8	56.0	0.7	1.1
	NL_7	55	50	57.1	54.4	58.1	55.6	1.0	1.2	57.8	55.3	0.7	0.9
	NL_8	55	50	56.7	54.2	57.7	55.4	1.0	1.2	57.4	55.1	0.7	0.9
	NL_9	55	50	56.2	53.7	57.2	54.9	1.0	1.2	56.9	54.7	0.7	1.0
	NL_10	55	50	55.9	53.4	56.9	54.6	1.0	1.2	56.6	54.3	0.7	0.9
	NL_11	55	50	55.5	53.0	56.5	54.3	1.0	1.3	56.2	54.0	0.7	1.0
	NL_12	55	50	54.6	52.4	55.5	53.6	0.9	1.2	55.2	53.3	0.6	0.9
	NL_13	55	50	54.2	52.1	55.1	53.3	0.9	1.2	54.8	52.9	0.6	0.8
	NL_14	55	50	71.5	66.4	72.5	67.9	1.0	1.5	72.2	67.6	0.7	1.2
	NL_15	55	50	67.9	63.3	68.9	64.7	1.0	1.4	68.6	64.5	0.7	1.2
	NL_16	55	50	66.5	62.1	67.5	63.5	1.0	1.4	67.3	63.3	0.8	1.2
	NL_17	55	50	65.4	61.2	66.3	62.6	0.9	1.4	66.1	62.4	0.7	1.2
	NL_18	55	50	64.0	60.3	64.9	61.6	0.9	1.3	64.7	61.4	0.7	1.1
	NL_19	55	50	63.5	60.0	64.4	61.3	0.9	1.3	64.2	61.1	0.7	1.1
	NL_20	55	50	61.2	57.9	62.2	59.2	1.0	1.3	61.9	59.0	0.7	1.1
	NL_21	55	50	59.7	56.5	60.7	57.8	1.0	1.3	60.4	57.6	0.7	1.1
	NL_22	55	50	58.4	55.3	59.4	56.6	1.0	1.3	59.2	56.4	0.8	1.1
	NL_23	55	50	57.3	54.2	58.3	55.5	1.0	1.3	58.1	55.3	0.8	1.1
	NL_24	55	50	55.7	53.0	56.7	54.3	1.0	1.3	56.4	54.0	0.7	1.0
	NL_25	55	50	54.9	52.7	55.9	53.9	1.0	1.2	55.6	53.6	0.7	0.9
	NL_26	55	50	54.7	52.5	55.6	53.7	0.9	1.2	55.3	53.4	0.6	0.9
	NL_27	55	50	55.1	52.8	56.0	54.0	0.9	1.2	55.7	53.7	0.6	0.9
	NL_28	55	50	54.6	52.4	55.6	53.7	1.0	1.3	55.3	53.3	0.7	0.9
	NL_29	55	50	54.8	50.9	55.8	52.2	1.0	1.3	55.5	52.0	0.7	1.1
	NL_30	55	50	55.7	51.7	56.7	53.0	1.0	1.3	56.4	52.8	0.7	1.1
	NL_31	55	50	55.5	50.9	56.5	52.3	1.0	1.4	56.3	52.0	0.8	1.1
	NL_32	55	50	59.9	56.1	60.9	57.4	1.0	1.3	60.6	57.3	0.7	1.2
	NL_33	55	50	62.9	59.5	63.8	60.9	0.9	1.4	63.6	60.7	0.7	1.2
	NL_34	55	50	63.4	60.0	64.4	61.4	1.0	1.4	64.2	61.2	0.8	1.2
	NL_35	55	50	62.0	58.5	62.9	59.8	0.9	1.3	62.7	59.7	0.7	1.2
	NL_36	55	50	60.2	56.4	61.1	57.7	0.9	1.3	60.9	57.5	0.7	1.1
	NL_37	55	50	59.7	56.2	60.7	57.5	1.0	1.3	60.5	57.3	0.8	1.1
	NL_38	55	50	56.0	52.9	56.9	54.2	0.9	1.3	56.6	53.9	0.6	1.0
	NL_39	55	50	56.0	53.1	57.0	54.4	1.0	1.3	56.6	54.1	0.6	1.0
	NL_40	55	50	55.4	52.8	56.4	54.1	1.0	1.3	56.0	53.7	0.6	0.9
	NL_41	55	50	56.9	53.7	57.8	55.0	0.9	1.3	57.6	54.7	0.7	1.0
	NL_42	55	50	56.5	53.5	57.4	54.8	0.9	1.3	57.2	54.5	0.7	1.0
	NL_43	55	50	55.7	53.0	56.7	54.3	1.0	1.3	56.4	54.0	0.7	1.0
	NL_44	55	50	63.6	59.7	64.5	61.1	0.9	1.4	64.3	60.8	0.7	1.1
	NL_45	55	50	64.4	60.6	65.4	62.0	1.0	1.4	65.1	61.7	0.7	1.1
	NL_46	55	50	66.2	61.4	67.2	62.9	1.0	1.5	66.9	62.6	0.7	1.2
	NL_47	55	50	69.3	64.6	70.3	66.0	1.0	1.4	70.0	65.7	0.7	1.1
	NL_48	55	50	58.3	54.8	59.2	56.1	0.9	1.3	59.0	55.9	0.7	1.1
	NL_49	55	50	58.6	55.1	59.5	56.4	0.9	1.3	59.3	56.2	0.7	1.1
	NL_50	55	50	59.3	55.5	60.2	56.9	0.9	1.4	60.0	56.7	0.7	1.2
	NL_51	55	50	60.0	56.0	61.0	57.3	1.0	1.3	60.7	57.1	0.7	1.1
	NL_52	55	50	60.8	56.5	61.8	57.9	1.0	1.4	61.6	57.7	0.8	1.2
	NL_53	55	50	62.9	58.7	63.8	60.1	0.9	1.4	63.6	59.9	0.7	1.2
	NL_54	55	50	64.2	60.0	65.2	61.4	1.0	1.4	64.9	61.2	0.7	1.2
	NL_55	55	50	64.8	60.2	65.7	61.6	0.9	1.4	65.5	61.4	0.7	1.2
	NL_56	70	65	68.2	63.9	69.2	65.3	1.0	1.4	68.9	65.1	0.7	1.2
	NL_57	70	65	68.9	64.5	69.9	65.9	1.0	1.4	69.6	65.7	0.7	1.2
	NL_58	70	65	74.3	68.5	75.4	70.0	1.1	1.5	74.9	69.6	0.6	1.1

Table B2

Nighttime Noise Analysis Summary
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Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NL cont...	NL_59	70	65	73.9	68.1	74.9	69.6	1.0	1.5	74.5	69.3	0.6	1.2
	NL_60	70	65	73.5	67.9	74.5	69.4	1.0	1.5	74.2	69.1	0.7	1.2
	NL_61	70	65	70.9	66.0	71.9	67.5	1.0	1.5	71.6	67.2	0.7	1.2
	NL_62	70	65	70.0	65.3	70.9	66.7	0.9	1.4	70.7	66.5	0.7	1.2
	NL_63	70	65	69.5	65.0	70.5	66.4	1.0	1.4	70.3	66.2	0.8	1.2
	NL_64	70	65	64.8	61.3	65.7	62.6	0.9	1.3	65.5	62.4	0.7	1.1
	NL_65	70	65	61.9	58.9	62.9	60.2	1.0	1.3	62.7	60.0	0.8	1.1
	NL_66	55	50	54.8	51.5	55.8	52.8	1.0	1.3	55.4	52.5	0.6	1.0
	NL_67	55	50	55.1	51.5	56.1	52.8	1.0	1.3	55.8	52.5	0.7	1.0
	NL_68	55	50	54.4	51.4	55.4	52.7	1.0	1.3	55.0	52.4	0.6	1.0
	NL_69	55	50	54.8	51.1	55.8	52.4	1.0	1.3	55.4	52.2	0.6	1.1
	NL_70	55	50	56.1	52.1	57.1	53.5	1.0	1.4	56.7	53.2	0.6	1.1
	NL_71	55	50	59.0	54.8	60.0	56.2	1.0	1.4	59.8	56.0	0.8	1.2
	NL_72	55	50	61.4	57.3	62.3	58.7	0.9	1.4	62.0	58.4	0.6	1.1
	NL_73	55	50	63.5	59.5	64.5	60.9	1.0	1.4	64.2	60.7	0.7	1.2
	NL_74	55	50	63.1	59.3	64.1	60.6	1.0	1.3	63.8	60.5	0.7	1.2
	NL_75	55	50	54.7	52.3	55.7	53.5	1.0	1.2	55.4	53.2	0.7	0.9
	NL_76	55	50	54.6	52.2	55.6	53.5	1.0	1.3	55.2	53.1	0.6	0.9
	NL_77	55	50	54.7	52.4	55.7	53.6	1.0	1.2	55.3	53.3	0.6	0.9
	NL_78	55	50	55.0	52.3	55.9	53.6	0.9	1.3	55.5	53.2	0.5	0.9
	NL_79	55	50	55.1	52.5	56.1	53.8	1.0	1.3	55.7	53.4	0.6	0.9
	NL_80	55	50	55.2	52.7	56.2	53.9	1.0	1.2	55.8	53.6	0.6	0.9
	NL_81	55	50	56.8	53.1	57.7	54.4	0.9	1.3	57.4	54.2	0.6	1.1
	NL_82	55	50	56.8	53.8	57.8	55.1	1.0	1.3	57.4	54.8	0.6	1.0
	NL_83	55	50	56.5	53.7	57.4	54.9	0.9	1.2	57.2	54.7	0.7	1.0
	NL_84	55	50	56.2	53.4	57.1	54.7	0.9	1.3	56.7	54.3	0.5	0.9
	NL_85	55	50	56.2	52.6	57.2	54.0	1.0	1.4	56.9	53.7	0.7	1.1
	NL_86	55	50	56.7	53.6	57.6	54.8	0.9	1.2	57.2	54.5	0.5	0.9
	NL_87	55	50	56.1	53.4	57.1	54.6	1.0	1.2	56.7	54.3	0.6	0.9
	NL_88	55	50	61.8	57.9	62.8	59.2	1.0	1.3	62.6	59.0	0.8	1.1
	NL_89	55	50	63.3	59.4	64.2	60.8	0.9	1.4	64.0	60.6	0.7	1.2
	NL_90	55	50	63.0	58.9	63.9	60.2	0.9	1.3	63.7	60.0	0.7	1.1
	NL_91	55	50	65.9	61.9	66.9	63.2	1.0	1.3	66.6	63.0	0.7	1.1
	NL_92	55	50	67.8	63.7	68.8	65.1	1.0	1.4	68.5	64.9	0.7	1.2
	NL_93	55	50	67.9	63.7	68.8	65.1	0.9	1.4	68.6	64.9	0.7	1.2
	NL_94	55	50	57.4	54.1	58.3	55.4	0.9	1.3	58.0	55.1	0.6	1.0
	NL_95	55	50	58.1	54.8	59.0	56.1	0.9	1.3	58.8	55.9	0.7	1.1
	NL_96	55	50	58.8	55.6	59.8	56.9	1.0	1.3	59.5	56.6	0.7	1.0
	NL_97	55	50	60.3	56.8	61.3	58.1	1.0	1.3	61.0	57.8	0.7	1.0
	NL_98	55	50	62.0	58.2	63.0	59.5	1.0	1.3	62.7	59.3	0.7	1.1
	NL_99	70	65	61.2	57.1	62.2	58.5	1.0	1.4	61.9	58.3	0.7	1.2
	NL_100	70	65	64.5	60.8	65.5	62.2	1.0	1.4	65.3	62.0	0.8	1.2
	NL_101	70	65	63.7	60.4	64.7	61.7	1.0	1.3	64.5	61.5	0.8	1.1
	NL_102	70	65	61.8	58.8	62.8	60.0	1.0	1.2	62.6	59.9	0.8	1.1
	NL_103	55	50	60.6	57.2	61.6	58.6	1.0	1.4	61.3	58.3	0.7	1.1
	NL_104	55	50	61.7	58.2	62.7	59.5	1.0	1.3	62.4	59.3	0.7	1.1
	NL_105	55	50	62.7	59.3	63.7	60.6	1.0	1.3	63.5	60.4	0.8	1.1
	NL_106	55	50	62.6	59.3	63.6	60.6	1.0	1.3	63.4	60.5	0.8	1.2
	NL_107	55	50	61.6	58.5	62.6	59.8	1.0	1.3	62.4	59.6	0.8	1.1
	NL_108	55	50	60.6	57.6	61.5	58.9	0.9	1.3	61.3	58.7	0.7	1.1
	NL_109	55	50	60.2	57.3	61.1	58.6	0.9	1.3	60.9	58.4	0.7	1.1
	NL_110	55	50	59.7	56.9	60.6	58.1	0.9	1.2	60.4	58.0	0.7	1.1
	NL_111	55	50	58.0	55.2	59.0	56.5	1.0	1.3	58.7	56.2	0.7	1.0
	NL_112	55	50	58.9	56.0	59.8	57.2	0.9	1.2	59.5	57.0	0.6	1.0
	NL_113	55	50	59.7	56.7	60.6	58.0	0.9	1.3	60.4	57.7	0.7	1.0
	NL_114	55	50	57.5	54.8	58.4	56.1	0.9	1.3	58.1	55.8	0.6	1.0
	NL_115	55	50	58.2	55.4	59.1	56.7	0.9	1.3	58.8	56.4	0.6	1.0
	NL_116	55	50	58.8	56.0	59.8	57.3	1.0	1.3	59.5	57.1	0.7	1.1
	NL_117	55	50	56.7	54.2	57.6	55.4	0.9	1.2	57.4	55.2	0.7	1.0
	NL_118	55	50	57.3	54.7	58.2	55.9	0.9	1.2	58.0	55.7	0.7	1.0

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NL cont...	NL_119	55	50	58.0	55.3	58.9	56.6	0.9	1.3	58.7	56.4	0.7	1.1
	NL_120	70	65	64.1	60.5	65.0	61.8	0.9	1.3	64.9	61.6	0.8	1.1
	NL_121	70	65	70.7	65.5	71.7	66.9	1.0	1.4	71.7	66.9	1.0	1.4
	NL_122	70	65	65.5	60.5	66.4	61.9	0.9	1.4	66.3	61.8	0.8	1.3

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Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SM	SM_1	70	65	64.8	60.8	65.7	62.1	0.9	1.3	65.9	62.3	1.1	1.5
	SM_2	70	65	66.8	62.6	67.7	63.9	0.9	1.3	68.0	64.3	1.2	1.7
	SM_3	70	65	68.8	64.3	69.7	65.6	0.9	1.3	70.3	66.1	1.5	1.8
	SM_4	70	65	61.5	58.2	62.4	59.4	0.9	1.2	62.6	59.7	1.1	1.5
	SM_5	70	65	67.1	62.9	68.0	64.2	0.9	1.3	68.3	64.5	1.2	1.6
	SM_6	70	65	59.6	55.2	60.5	56.5	0.9	1.3	60.9	56.9	1.3	1.7
	SM_7	65	60	59.8	55.5	60.7	56.8	0.9	1.3	61.0	57.1	1.2	1.6
	SM_8	70	65	59.4	55.2	60.3	56.5	0.9	1.3	60.6	56.8	1.2	1.6
	SM_9	70	65	58.9	54.9	59.8	56.2	0.9	1.3	60.1	56.5	1.2	1.6
	SM_10	70	65	66.9	62.7	67.8	64.0	0.9	1.3	68.0	64.2	1.1	1.5
	SM_11	65	60	63.3	58.7	64.2	60.1	0.9	1.4	64.4	60.3	1.1	1.6
	SM_12	70	65	60.0	55.4	60.9	56.8	0.9	1.4	61.0	56.9	1.0	1.5
	SM_13	70	65	59.5	55.1	60.4	56.4	0.9	1.3	60.6	56.6	1.1	1.5
	SM_14	70	65	59.7	55.3	60.6	56.7	0.9	1.4	60.7	56.8	1.0	1.5
	SM_15	70	65	59.3	55.2	60.2	56.5	0.9	1.3	60.4	56.6	1.1	1.4
	SM_16	70	65	67.9	63.6	68.8	64.9	0.9	1.3	69.3	65.3	1.4	1.7
	SM_17	70	65	68.2	63.8	69.1	65.2	0.9	1.4	69.4	65.4	1.2	1.6
	SM_18	70	65	64.0	60.4	64.9	61.7	0.9	1.3	65.1	61.9	1.1	1.5
NM	NM_1	80	75	65.8	61.6	66.7	62.9	0.9	1.3	66.7	62.9	0.9	1.3
	NM_2	70	65	73.0	66.8	74.0	68.3	1.0	1.5	73.4	67.9	0.4	1.1
	NM_3	70	65	72.4	66.4	73.4	67.8	1.0	1.4	72.5	67.3	0.1	0.9
	NM_4	70	65	69.7	64.5	70.7	65.9	1.0	1.4	70.2	65.6	0.5	1.1
	NM_5	70	65	68.5	63.6	69.5	65.0	1.0	1.4	69.1	64.8	0.6	1.2
	NM_6	70	65	67.1	62.5	68.1	63.9	1.0	1.4	67.9	63.8	0.8	1.3
	NM_7	70	65	66.6	61.5	67.6	62.9	1.0	1.4	67.5	62.8	0.9	1.3
	NM_8	70	65	65.9	61.6	66.8	63.0	0.9	1.4	66.6	62.9	0.7	1.3
	NM_9	70	65	64.3	60.4	65.2	61.7	0.9	1.3	65.1	61.6	0.8	1.2
	NM_10	70	65	65.2	61.0	66.1	62.3	0.9	1.3	65.9	62.2	0.7	1.2
	NM_11	70	65	61.8	58.3	62.7	59.6	0.9	1.3	62.6	59.5	0.8	1.2
	NM_12	70	65	62.0	58.5	63.0	59.7	1.0	1.2	62.9	59.7	0.9	1.2
	NM_13	70	65	62.4	58.7	63.4	60.0	1.0	1.3	63.3	59.9	0.9	1.2
	NM_14	55	50	61.7	57.2	62.7	58.6	1.0	1.4	62.1	58.3	0.4	1.1
	NM_15	55	50	61.0	56.9	61.9	58.2	0.9	1.3	61.6	58.1	0.6	1.2
	NM_16	55	50	59.5	56.0	60.4	57.2	0.9	1.2	60.4	57.2	0.9	1.2
	NM_17	55	50	59.2	55.8	60.1	57.0	0.9	1.2	60.1	57.1	0.9	1.3
	NM_18	55	50	58.4	55.1	59.3	56.3	0.9	1.2	59.5	56.5	1.1	1.4
	NM_19	55	50	58.4	54.9	59.3	56.2	0.9	1.3	59.6	56.4	1.2	1.5
	NM_20	55	50	58.4	54.8	59.3	56.1	0.9	1.3	59.6	56.3	1.2	1.5
	NM_21	55	50	58.5	55.0	59.4	56.3	0.9	1.3	59.7	56.4	1.2	1.4
	NM_22	55	50	58.5	54.8	59.4	56.1	0.9	1.3	59.6	56.2	1.1	1.4
	NM_23	55	50	58.8	55.0	59.7	56.3	0.9	1.3	59.7	56.3	0.9	1.3
	NM_24	55	50	59.0	55.1	59.9	56.4	0.9	1.3	59.8	56.4	0.8	1.3
	NM_25	55	50	59.2	55.4	60.1	56.7	0.9	1.3	60.0	56.7	0.8	1.3
	NM_26	55	50	59.4	55.6	60.3	56.9	0.9	1.3	60.0	56.8	0.6	1.2
	NM_27	55	50	59.3	55.5	60.2	56.8	0.9	1.3	59.9	56.6	0.6	1.1
	NM_28	55	50	60.4	56.5	61.3	57.8	0.9	1.3	60.9	57.6	0.5	1.1
	NM_29	55	50	61.2	57.0	62.2	58.4	1.0	1.4	61.6	58.1	0.4	1.1
	NM_30	55	50	61.2	56.9	62.1	58.2	0.9	1.3	61.5	57.9	0.3	1.0
	NM_31	55	50	64.9	59.2	65.9	60.6	1.0	1.4	65.0	60.2	0.1	1.0
	NM_32	55	50	64.6	59.4	65.6	60.8	1.0	1.4	65.3	60.6	0.7	1.2
	NM_33	55	50	57.7	54.6	58.6	55.9	0.9	1.3	58.7	55.9	1.0	1.3
	NM_34	55	50	57.7	54.6	58.6	55.8	0.9	1.2	58.6	55.8	0.9	1.2
	NM_35	55	50	57.8	54.6	58.7	55.9	0.9	1.3	58.7	55.9	0.9	1.3
	NM_36	55	50	57.8	54.6	58.8	55.9	1.0	1.3	58.7	55.9	0.9	1.3
	NM_37	55	50	58.0	54.7	58.9	56.0	0.9	1.3	58.7	55.9	0.7	1.2
	NM_38	55	50	58.3	54.9	59.2	56.2	0.9	1.3	59.0	56.1	0.7	1.2
	NM_39	55	50	58.6	55.2	59.5	56.5	0.9	1.3	59.3	56.4	0.7	1.2
	NM_40	55	50	59.0	55.5	60.0	56.8	1.0	1.3	59.7	56.6	0.7	1.1
	NM_41	55	50	59.6	55.9	60.5	57.2	0.9	1.3	60.2	57.0	0.6	1.1
	NM_42	55	50	60.5	56.3	61.4	57.7	0.9	1.4	61.0	57.5	0.5	1.2

Table B2

Nighttime Noise Analysis Summary
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Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NM cont...	NM_43	55	50	62.8	58.1	63.8	59.5	1.0	1.4	63.5	59.3	0.7	1.2
	NM_44	55	50	57.0	54.0	57.9	55.3	0.9	1.3	57.8	55.2	0.8	1.2
	NM_45	55	50	57.3	54.2	58.2	55.5	0.9	1.3	58.1	55.4	0.8	1.2
	NM_46	55	50	57.4	54.3	58.3	55.5	0.9	1.2	58.1	55.5	0.7	1.2
	NM_47	55	50	57.8	54.6	58.7	55.8	0.9	1.2	58.5	55.7	0.7	1.1
	NM_48	55	50	59.6	55.7	60.5	57.0	0.9	1.3	60.2	56.9	0.6	1.2
	NM_49	55	50	61.0	56.7	61.9	58.0	0.9	1.3	61.6	57.9	0.6	1.2
	NM_50	55	50	59.9	55.9	60.8	57.3	0.9	1.4	60.6	57.1	0.7	1.2

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Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SN	SN_1	55	50	56.5	53.5	57.4	54.7	0.9	1.2	57.6	54.9	1.1	1.4
	SN_2	55	50	57.1	54.0	58.1	55.2	1.0	1.2	58.2	55.4	1.1	1.4
	SN_3	55	50	57.8	54.5	58.7	55.8	0.9	1.3	58.9	56.0	1.1	1.5
	SN_4	55	50	58.6	55.2	59.6	56.5	1.0	1.3	59.7	56.6	1.1	1.4
	SN_5	55	50	59.5	55.8	60.4	57.1	0.9	1.3	60.5	57.3	1.0	1.5
	SN_6	55	50	60.5	56.6	61.4	57.9	0.9	1.3	61.6	58.1	1.1	1.5
	SN_7	55	50	61.6	57.3	62.5	58.6	0.9	1.3	62.6	58.7	1.0	1.4
	SN_8	55	50	62.1	56.9	63.1	58.3	1.0	1.4	63.2	58.5	1.1	1.6
	SN_9	55	50	60.0	56.1	60.9	57.4	0.9	1.3	61.0	57.5	1.0	1.4
	SN_10	55	50	58.9	55.5	59.8	56.7	0.9	1.2	59.9	56.9	1.0	1.4
	SN_11	55	50	59.0	55.5	59.9	56.7	0.9	1.2	60.1	56.9	1.1	1.4
	SN_12	55	50	58.2	54.9	59.1	56.1	0.9	1.2	59.3	56.3	1.1	1.4
	SN_13	55	50	57.5	54.2	58.4	55.5	0.9	1.3	58.6	55.7	1.1	1.5
	SN_14	55	50	56.7	53.6	57.6	54.8	0.9	1.2	57.8	55.1	1.1	1.5
	SN_15	55	50	57.3	54.1	58.2	55.3	0.9	1.2	58.4	55.5	1.1	1.4
	SN_16	55	50	58.0	54.7	58.9	55.9	0.9	1.2	59.1	56.1	1.1	1.4
	SN_17	55	50	58.4	55.0	59.3	56.3	0.9	1.3	59.5	56.5	1.1	1.5
	SN_18	55	50	58.4	55.1	59.4	56.4	1.0	1.3	59.5	56.6	1.1	1.5
	SN_19	55	50	57.5	54.2	58.4	55.5	0.9	1.3	58.5	55.6	1.0	1.4
	SN_20	55	50	57.5	54.3	58.4	55.5	0.9	1.2	58.5	55.7	1.0	1.4
	SN_21	55	50	57.9	54.6	58.9	55.9	1.0	1.3	59.0	56.1	1.1	1.5
	SN_22	55	50	57.7	54.4	58.6	55.7	0.9	1.3	58.8	55.9	1.1	1.5
	SN_23	55	50	57.4	54.1	58.3	55.4	0.9	1.3	58.5	55.6	1.1	1.5
	SN_24	55	50	56.6	53.5	57.5	54.7	0.9	1.2	57.7	54.9	1.1	1.4
	SN_25	55	50	56.2	53.0	57.1	54.3	0.9	1.3	57.3	54.5	1.1	1.5
	SN_26	55	50	56.8	53.6	57.8	54.9	1.0	1.3	58.0	55.1	1.2	1.5
	SN_27	55	50	57.1	53.9	58.0	55.1	0.9	1.2	58.2	55.3	1.1	1.4
	SN_28	55	50	57.7	54.4	58.6	55.6	0.9	1.2	58.8	55.8	1.1	1.4
	SN_29	55	50	58.2	54.8	59.1	56.1	0.9	1.3	59.3	56.3	1.1	1.5
	SN_30	55	50	58.1	54.8	59.0	56.0	0.9	1.2	59.1	56.2	1.0	1.4
	SN_31	55	50	58.2	54.8	59.1	56.0	0.9	1.2	59.3	56.3	1.1	1.5
	SN_32	55	50	58.0	54.6	58.9	55.8	0.9	1.2	59.1	56.1	1.1	1.5
	SN_33	55	50	57.0	53.8	58.0	55.0	1.0	1.2	58.2	55.2	1.2	1.4
	SN_34	55	50	56.6	53.4	57.6	54.7	1.0	1.3	57.8	54.9	1.2	1.5
	SN_35	55	50	58.2	54.8	59.1	56.1	0.9	1.3	59.2	56.3	1.0	1.5
	SN_36	55	50	57.8	54.5	58.8	55.7	1.0	1.2	58.9	56.0	1.1	1.5
	SN_37	55	50	57.7	54.3	58.6	55.5	0.9	1.2	58.8	55.8	1.1	1.5
	SN_38	55	50	57.1	53.8	58.1	55.0	1.0	1.2	58.3	55.3	1.2	1.5
	SN_39	55	50	59.0	55.5	59.9	56.7	0.9	1.2	60.1	56.9	1.1	1.4
	SN_40	55	50	59.1	55.5	60.0	56.8	0.9	1.3	60.2	57.0	1.1	1.5
	SN_41	55	50	58.8	55.2	59.7	56.5	0.9	1.3	60.0	56.7	1.2	1.5
	SN_42	55	50	58.6	55.0	59.5	56.2	0.9	1.2	59.7	56.5	1.1	1.5
	SN_43	55	50	58.3	54.7	59.2	56.0	0.9	1.3	59.5	56.2	1.2	1.5
	SN_44	55	50	58.1	54.6	59.0	55.8	0.9	1.2	59.3	56.1	1.2	1.5
	SN_45	55	50	59.5	55.9	60.4	57.1	0.9	1.2	60.7	57.4	1.2	1.5
	SN_46	55	50	59.6	55.9	60.5	57.2	0.9	1.3	60.7	57.4	1.1	1.5
	SN_47	55	50	59.6	56.0	60.5	57.2	0.9	1.2	60.7	57.4	1.1	1.4
	SN_48	55	50	59.6	55.9	60.5	57.2	0.9	1.3	60.7	57.4	1.1	1.5
	SN_49	55	50	58.4	54.8	59.4	56.1	1.0	1.3	59.6	56.3	1.2	1.5
	SN_50	55	50	58.5	54.8	59.4	56.1	0.9	1.3	59.6	56.4	1.1	1.6
	SN_51	55	50	58.8	55.2	59.7	56.5	0.9	1.3	60.0	56.7	1.2	1.5
	SN_52	55	50	58.7	55.1	59.7	56.4	1.0	1.3	59.9	56.7	1.2	1.6
	SN_53	55	50	58.6	55.2	59.5	56.4	0.9	1.2	59.7	56.6	1.1	1.4
	SN_54	55	50	58.7	55.2	59.6	56.4	0.9	1.2	59.7	56.6	1.0	1.4
	SN_55	55	50	58.6	55.1	59.5	56.4	0.9	1.3	59.6	56.5	1.0	1.4
	SN_56	55	50	58.7	55.2	59.6	56.5	0.9	1.3	59.7	56.7	1.0	1.5
	SN_57	55	50	58.7	55.2	59.6	56.5	0.9	1.3	59.7	56.7	1.0	1.5
	SN_58	55	50	58.1	54.8	59.0	56.0	0.9	1.2	59.1	56.2	1.0	1.4
	SN_59	55	50	58.2	54.8	59.1	56.1	0.9	1.3	59.2	56.2	1.0	1.4
	SN_60	55	50	58.3	55.0	59.2	56.3	0.9	1.3	59.3	56.4	1.0	1.4

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
SN cont...	SN_61	55	50	58.4	55.2	59.3	56.4	0.9	1.2	59.5	56.6	1.1	1.4
	SN_62	55	50	58.8	55.5	59.7	56.7	0.9	1.2	59.8	56.9	1.0	1.4
	SN_63	55	50	59.0	55.7	60.0	56.9	1.0	1.2	60.1	57.1	1.1	1.4
	SN_64	55	50	58.9	55.4	59.8	56.7	0.9	1.3	60.1	56.9	1.2	1.5
	SN_65	55	50	59.1	55.6	60.1	56.9	1.0	1.3	60.3	57.1	1.2	1.5
	SN_66	55	50	59.2	55.7	60.1	56.9	0.9	1.2	60.3	57.2	1.1	1.5
	SN_67	55	50	59.4	55.9	60.3	57.2	0.9	1.3	60.5	57.4	1.1	1.5
NN	NN_1	55	50	72.3	66.3	73.3	67.8	1.0	1.5	73.4	68.0	1.1	1.7
	NN_2	55	50	71.3	65.6	72.3	67.1	1.0	1.5	72.4	67.2	1.1	1.6
	NN_3	55	50	70.2	64.8	71.2	66.3	1.0	1.5	71.3	66.4	1.1	1.6
	NN_4	55	50	69.3	64.2	70.3	65.6	1.0	1.4	70.4	65.8	1.1	1.6
	NN_5	55	50	68.5	63.6	69.5	65.0	1.0	1.4	69.6	65.2	1.1	1.6
	NN_6	55	50	67.8	63.1	68.7	64.5	0.9	1.4	68.8	64.6	1.0	1.5
	NN_7	55	50	67.1	62.5	68.0	63.9	0.9	1.4	68.1	64.0	1.0	1.5
	NN_8	55	50	66.4	62.0	67.4	63.4	1.0	1.4	67.5	63.5	1.1	1.5
	NN_9	55	50	65.7	61.3	66.6	62.7	0.9	1.4	66.7	62.8	1.0	1.5
	NN_10	55	50	65.2	60.8	66.2	62.2	1.0	1.4	66.3	62.3	1.1	1.5
	NN_11	55	50	65.0	60.5	65.9	61.9	0.9	1.4	66.0	62.0	1.0	1.5
	NN_12	55	50	62.9	58.8	63.8	60.1	0.9	1.3	63.9	60.2	1.0	1.4
	NN_13	55	50	60.4	56.7	61.3	58.0	0.9	1.3	61.4	58.1	1.0	1.4
	NN_14	55	50	58.9	55.4	59.8	56.7	0.9	1.3	59.9	56.8	1.0	1.4
	NN_15	55	50	62.8	59.0	63.8	60.3	1.0	1.3	63.8	60.4	1.0	1.4
	NN_16	55	50	61.1	57.6	62.0	58.9	0.9	1.3	62.1	59.0	1.0	1.4
	NN_17	55	50	59.4	56.1	60.3	57.4	0.9	1.3	60.4	57.5	1.0	1.4
	NN_18	55	50	58.4	55.3	59.4	56.5	1.0	1.2	59.4	56.6	1.0	1.3
	NN_19	55	50	62.7	58.6	63.7	59.9	1.0	1.3	63.8	60.0	1.1	1.4
	NN_20	55	50	61.2	57.5	62.1	58.8	0.9	1.3	62.2	58.9	1.0	1.4
	NN_21	55	50	60.8	57.1	61.7	58.4	0.9	1.3	61.8	58.5	1.0	1.4
	NN_22	55	50	60.0	56.7	60.9	57.9	0.9	1.2	61.0	58.1	1.0	1.4
	NN_23	55	50	59.2	56.0	60.1	57.2	0.9	1.2	60.2	57.3	1.0	1.3
	NN_24	55	50	58.0	54.9	58.9	56.1	0.9	1.2	59.0	56.2	1.0	1.3
	NN_25	55	50	68.5	62.9	69.5	64.3	1.0	1.4	69.7	64.5	1.2	1.6
	NN_26	55	50	66.8	60.7	67.8	62.2	1.0	1.5	68.0	62.5	1.2	1.8
	NN_27	55	50	66.2	60.1	67.2	61.6	1.0	1.5	67.4	61.8	1.2	1.7
	NN_28	55	50	64.3	57.9	65.3	59.4	1.0	1.5	65.5	59.7	1.2	1.8
	NN_29	55	50	66.3	60.3	67.3	61.8	1.0	1.5	67.4	62.0	1.1	1.7
	NN_30	55	50	62.4	55.5	63.5	57.1	1.1	1.6	63.6	57.3	1.2	1.8
	NN_31	55	50	62.2	56.0	63.2	57.5	1.0	1.5	63.4	57.7	1.2	1.7
	NN_32	55	50	62.7	56.6	63.8	58.1	1.1	1.5	63.9	58.3	1.2	1.7
	NN_33	55	50	64.5	58.7	65.5	60.2	1.0	1.5	65.6	60.4	1.1	1.7
	NN_34	55	50	55.8	51.8	56.7	53.1	0.9	1.3	56.8	53.3	1.0	1.5
	NN_35	55	50	56.0	52.1	56.9	53.4	0.9	1.3	57.0	53.5	1.0	1.4
	NN_36	55	50	60.9	54.5	62.0	56.0	1.1	1.5	62.1	56.2	1.2	1.7
	NN_37	55	50	64.4	59.9	65.3	61.2	0.9	1.3	65.5	61.4	1.1	1.5
	NN_38	55	50	61.3	55.3	62.3	56.8	1.0	1.5	62.5	57.0	1.2	1.7
	NN_39	55	50	61.3	55.5	62.3	57.0	1.0	1.5	62.5	57.2	1.2	1.7
	NN_40	55	50	55.7	50.4	56.7	51.8	1.0	1.4	56.8	52.0	1.1	1.6
	NN_41	55	50	58.5	52.2	59.5	53.7	1.0	1.5	59.7	53.9	1.2	1.7
	NN_42	55	50	57.1	52.0	58.1	53.4	1.0	1.4	58.3	53.6	1.2	1.6
	NN_43	55	50	62.9	57.5	63.9	58.9	1.0	1.4	64.0	59.1	1.1	1.6
	NN_44	55	50	56.4	47.7	57.7	49.3	1.3	1.6	57.8	49.4	1.4	1.7
	NN_45	55	50	56.3	48.4	57.6	50.0	1.3	1.6	57.6	50.1	1.3	1.7
	NN_46	55	50	56.7	49.1	57.9	50.6	1.2	1.5	58.0	50.7	1.3	1.6
	NN_47	55	50	56.5	49.0	57.7	50.5	1.2	1.5	57.8	50.6	1.3	1.6
	NN_48	55	50	57.3	50.1	58.4	51.6	1.1	1.5	58.5	51.8	1.2	1.7
	NN_49	55	50	67.9	62.5	68.8	64.0	0.9	1.5	69.0	64.2	1.1	1.7
	NN_50	55	50	69.1	63.3	70.1	64.8	1.0	1.5	70.2	64.9	1.1	1.6
	NN_51	55	50	64.6	58.3	65.7	59.8	1.1	1.5	65.9	60.1	1.3	1.8
	NN_52	55	50	66.2	60.4	67.2	61.9	1.0	1.5	67.3	62.0	1.1	1.6
	NN_53	55	50	63.7	57.5	64.7	59.0	1.0	1.5	64.9	59.3	1.2	1.8

Table B2

Nighttime Noise Analysis Summary
Existing and Future Scenarios

Noise Level Comparison	
XX	Exceeds MN State Standards

Receptor		Minnesota Standards		2015 Existing Condition		2040 No Build Conditions		Difference - Existing and No Build		2040 Build Conditions		Difference - Existing and Build	
Area	ID	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}
NN cont...	NN_54	55	50	61.3	55.2	62.4	56.6	1.1	1.4	62.5	56.9	1.2	1.7
	NN_55	55	50	64.5	59.0	65.5	60.4	1.0	1.4	65.6	60.6	1.1	1.6
	NN_56	55	50	60.7	53.7	61.7	55.3	1.0	1.6	61.9	55.5	1.2	1.8
	NN_57	55	50	55.4	51.2	56.3	52.5	0.9	1.3	56.5	52.7	1.1	1.5
	NN_58	55	50	62.9	57.6	63.9	59.1	1.0	1.5	64.0	59.2	1.1	1.6
	NN_59	55	50	59.0	53.6	60.0	55.0	1.0	1.4	60.1	55.2	1.1	1.6
	NN_60	55	50	57.1	50.8	58.1	52.3	1.0	1.5	58.3	52.5	1.2	1.7
	NN_61	55	50	57.2	51.1	58.2	52.6	1.0	1.5	58.4	52.8	1.2	1.7
	NN_62	55	50	56.9	51.4	57.9	52.8	1.0	1.4	58.0	53.0	1.1	1.6
	NN_63	55	50	55.6	50.0	56.6	51.4	1.0	1.4	56.8	51.6	1.2	1.6
	NN_64	55	50	59.3	54.9	60.2	56.2	0.9	1.3	60.3	56.4	1.0	1.5
	NN_65	55	50	57.1	49.7	58.3	51.2	1.2	1.5	58.4	51.4	1.3	1.7
	NN_66	55	50	54.9	47.4	56.1	48.9	1.2	1.5	56.2	49.0	1.3	1.6
	NN_67	55	50	55.2	48.1	56.3	49.6	1.1	1.5	56.4	49.8	1.2	1.7
	NN_68	55	50	55.0	48.6	56.1	50.1	1.1	1.5	56.2	50.2	1.2	1.6
	NN_69	55	50	54.6	48.4	55.7	49.9	1.1	1.5	55.8	50.0	1.2	1.6
	NN_70	55	50	59.0	54.6	60.0	55.9	1.0	1.3	60.1	56.0	1.1	1.4
	NN_71	55	50	60.7	53.8	61.8	55.3	1.1	1.5	61.9	55.4	1.2	1.6
	NN_72	55	50	58.7	55.2	59.6	56.5	0.9	1.3	59.7	56.6	1.0	1.4
	NN_73	55	50	57.2	54.1	58.1	55.4	0.9	1.3	58.2	55.5	1.0	1.4
	NN_74	55	50	56.6	53.7	57.5	54.9	0.9	1.2	57.6	55.0	1.0	1.3
	NN_75	55	50	58.6	53.5	59.7	54.8	1.1	1.3	59.8	55.0	1.2	1.5
	NN_76	55	50	57.5	54.0	58.5	55.3	1.0	1.3	58.6	55.4	1.1	1.4
	NN_77	55	50	57.0	53.9	57.9	55.1	0.9	1.2	58.0	55.3	1.0	1.4
	NN_78	55	50	56.1	53.3	57.1	54.5	1.0	1.2	57.2	54.7	1.1	1.4
	NN_79	55	50	58.6	53.7	59.7	55.0	1.1	1.3	59.8	55.2	1.2	1.5
	NN_80	55	50	57.5	53.9	58.4	55.1	0.9	1.2	58.5	55.3	1.0	1.4
	NN_81	55	50	56.4	53.5	57.4	54.7	1.0	1.2	57.5	54.8	1.1	1.3
	NN_82	55	50	55.9	53.1	56.9	54.4	1.0	1.3	57.0	54.5	1.1	1.4
	NN_83	65	60	63.7	59.0	64.6	60.4	0.9	1.4	64.7	60.5	1.0	1.5
	NN_84	55	50	58.9	53.4	60.0	54.8	1.1	1.4	60.1	55.0	1.2	1.6
	NN_85	55	50	57.1	53.7	58.0	54.9	0.9	1.2	58.1	55.1	1.0	1.4
	NN_86	55	50	57.1	53.6	58.1	54.8	1.0	1.2	58.2	55.0	1.1	1.4
	NN_87	55	50	59.3	53.0	60.4	54.4	1.1	1.4	60.5	54.6	1.2	1.6
	NN_88	55	50	59.9	52.0	61.1	53.5	1.2	1.5	61.2	53.7	1.3	1.7
	NN_89	55	50	58.0	53.2	59.0	54.6	1.0	1.4	59.1	54.7	1.1	1.5
	NN_90	55	50	58.0	53.0	59.0	54.3	1.0	1.3	59.1	54.5	1.1	1.5
	NN_91	55	50	59.7	51.0	61.0	52.6	1.3	1.6	61.1	52.7	1.4	1.7
	NN_92	55	50	59.2	51.1	60.5	52.6	1.3	1.5	60.5	52.7	1.3	1.6
	NN_93	55	50	56.9	52.4	57.9	53.7	1.0	1.3	58.0	53.9	1.1	1.5

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Appendix C

Cost Effectiveness Results Tables

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C1
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SA1 in Area SA - West of I-35W between Country Road B2 and Country Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SA1	SA_1	Industrial	Day	80	NA	70.7	66.0	4.7	5	Yes	Yes	20	2,422	47,656	$953,120	$190,624	Not Cost Effective
	SA_2	Office		70	75	70.8	63.9	6.9									
	SA_3	Industrial		80	NA	71.9	63.6	8.3									
	SA_4	Office		70	75	69.4	62.7	6.7									
	SA_5	Office		70	75	69.5	62.8	6.7									
	SA_6	Office		70	75	70.7	63.9	6.8									
	SA_1	Industrial	Night	80	NA	70.1	65.3	4.8	5	Yes	Yes	20	2,422	47,656	$953,120	$190,624	Not Cost Effective
	SA_2	Office		70	75	70.1	63.1	7.0									
	SA_3	Industrial		80	NA	71.2	62.8	8.4									
	SA_4	Office		70	75	68.7	61.9	6.8									
	SA_5	Office		70	75	68.8	62.0	6.8									
	SA_6	Office		70	75	70.0	63.1	6.9									

Table C2
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SA1 in Area SA - West of I-35W between Country Road B2 and Country Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SA1	SA_1	Industrial	Day	80	NA	70.7	67.6	3.1	2	Yes	No	15	2,422	36,006	$720,120	N/A	Does Not Meet Noise Reduction Design Goal
	SA_2	Office		70	75	70.8	66.5	4.3									
	SA_3	Industrial		80	NA	71.9	66.2	5.7									
	SA_4	Office		70	75	69.4	65.5	3.9									
	SA_5	Office		70	75	69.5	65.5	4.0									
	SA_6	Office		70	75	70.7	64.1	6.6									
	SA_1	Industrial	Night	80	NA	70.1	66.8	3.3	2	Yes	No	15	2,422	36,006	$720,120	N/A	Does Not Meet Noise Reduction Design Goal
	SA_2	Office		70	75	70.1	65.6	4.5									
	SA_3	Industrial		80	NA	71.2	65.3	5.9									
	SA_4	Office		70	75	68.7	64.6	4.1									
	SA_5	Office		70	75	68.8	64.6	4.2									
	SA_6	Office		70	75	70.0	63.3	6.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C3
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SA2 in Area SA - West of I-35W between Country Road B2 and Country Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SA2	SA_1	Industrial	Day	80	NA	70.7	67.6	3.1	3	Yes	Yes	20	1,702	33,256	$665,120	$221,707	Not Cost Effective
	SA_2	Office		70	75	70.8	64.0	6.8									
	SA_3	Industrial		80	NA	71.9	63.9	8.0									
	SA_4	Office		70	75	69.4	64.2	5.2									
	SA_5	Office		70	75	69.5	65.9	3.6									
	SA_1	Industrial	Night	80	NA	70.1	65.0	5.1	4	Yes	Yes	20	1,702	33,256	$665,120	$166,280	Not Cost Effective
	SA_2	Office		70	75	70.1	63.2	6.9									
	SA_3	Industrial		80	NA	71.2	63.2	8.0									
	SA_4	Office		70	75	68.7	63.5	5.2									
	SA_5	Office		70	75	68.8	65.2	3.6									

Table C4
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SA2 in Area SA - West of I-35W between Country Road B2 and Country Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SA2	SA_1	Industrial	Day	80	NA	70.7	67.5	3.2	1	Yes	No	15	1,702	25,206	$504,120	N/A	Does Not Meet Noise Reduction Design Goal
	SA_2	Office		70	75	70.8	66.6	4.2									
	SA_3	Industrial		80	NA	71.9	66.4	5.5									
	SA_4	Office		70	75	69.4	66.5	2.9									
	SA_5	Office		70	75	69.5	67.4	2.1									
	SA_1	Industrial	Night	80	NA	70.1	66.6	3.5	1	Yes	No	15	1,702	25,206	$504,120	N/A	Does Not Meet Noise Reduction Design Goal
	SA_2	Office		70	75	70.1	65.7	4.4									
	SA_3	Industrial		80	NA	71.2	65.6	5.6									
	SA_4	Office		70	75	68.7	65.6	3.1									
	SA_5	Office		70	75	68.8	66.5	2.3									

Table C5
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SA3 in Area SA - West of I-35W between Country Road B2 and Country Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SA3	SA_6	Office	Day	70	75	70.7	70.1	0.6	0	No	No	20	145	2,116	$42,320	N/A	Does Not Meet Noise Reduction Design Goal
	SA_6	Office	Night	70	75	70.0	69.5	0.5	0	No	No	20	145	2,116	$42,320	N/A	Does Not Meet Noise Reduction Design Goal

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C6
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NA1 in Area NA - East of I-35W between County Road B2 and County Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NA1	NA_1	Retail	Day	70	NA	70.9	69.5	1.4	3	Yes	Yes	20	2,516	49,536	$1,040,720	$346,907	Not Cost Effective
	NA_2	Retail		70	NA	71.4	67.7	3.7									
	NA_3	Hotel		65	75	70.4	68.1	2.3									
	NA_4	Medical		70	70	71.8	63.3	8.5									
	NA_5	Restaurant		70	75	69.9	68.2	1.7									
	NA_6	Retail		70	NA	71.8	63.7	8.1									
	NA_7	Retail		70	NA	70.5	69.1	1.4									
	NA_8	Restaurant		70	75	71.9	64.2	7.7									
	NA_1	Retail	Night	70	NA	68.7	66.9	1.8	4	Yes	Yes	20	2,516	49,536	$1,040,720	$260,180	Not Cost Effective
	NA_2	Retail		70	NA	69.8	64.4	5.4									
	NA_3	Hotel		55	75	67.8	64.8	3.0									
	NA_4	Medical		70	70	70.6	61.3	9.3									
	NA_5	Restaurant		70	75	67.0	64.9	2.1									
	NA_6	Retail		70	NA	70.7	61.7	9.0									
	NA_7	Retail		70	NA	67.4	65.8	1.6									
	NA_8	Restaurant		70	75	70.9	62.9	8.0									

Table C7
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall NA1 in Area NA - East of I-35W between County Road B2 and County Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NA1	NA_1	Retail	Day	70	NA	70.9	69.6	1.3	3	Yes	Yes	15	2,516	37,416	$798,320	$266,107	Not Cost Effective
	NA_2	Retail		70	NA	71.4	68.5	2.9									
	NA_3	Hotel		65	75	70.4	69.1	1.3									
	NA_4	Medical		70	70	71.8	64.8	7.0									
	NA_5	Restaurant		70	75	69.9	69.1	0.8									
	NA_6	Retail		70	NA	71.8	65.2	6.6									
	NA_7	Retail		70	NA	70.5	69.6	0.9									
	NA_8	Restaurant		70	75	71.9	64.6	7.3									
	NA_1	Retail	Night	70	NA	68.7	67.1	1.6	3	Yes	Yes	15	2,516	37,416	$798,320	$266,107	Not Cost Effective
	NA_2	Retail		70	NA	69.8	65.4	4.4									
	NA_3	Hotel		55	75	67.8	66.1	1.7									
	NA_4	Medical		70	70	70.6	63.3	7.3									
	NA_5	Restaurant		70	75	67.0	66.0	1.0									
	NA_6	Retail		70	NA	70.7	63.7	7.0									
	NA_7	Retail		70	NA	67.4	66.4	1.0									
	NA_8	Restaurant		70	75	70.9	63.2	7.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C8
Build Alternative Noise Wall Cost Effectiveness - 10 Foot Noise Wall
Wall NA1 in Area NA - East of I-35W between County Road B2 and County Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NA1	NA_1	Retail	Day	70	NA	70.9	69.8	1.1	1	Yes	No	10	2,516	25,096	$551,920	N/A	Does Not Meet Noise Reduction Design Goal
	NA_2	Retail		70	NA	71.4	69.4	2.0									
	NA_3	Hotel		65	75	70.4	70.2	0.2									
	NA_4	Medical		70	70	71.8	67.7	4.1									
	NA_5	Restaurant		70	75	69.9	69.9	0.0									
	NA_6	Retail		70	NA	71.8	68.2	3.6									
	NA_7	Retail		70	NA	70.5	70.0	0.5									
	NA_8	Restaurant		70	75	71.9	65.6	6.3									
	NA_1	Retail	Night	70	NA	68.7	67.3	1.4	1	Yes	No	10	2,516	25,096	$551,920	N/A	Does Not Meet Noise Reduction Design Goal
	NA_2	Retail		70	NA	69.8	66.8	3.0									
	NA_3	Hotel		55	75	67.8	67.7	0.1									
	NA_4	Medical		70	70	70.6	66.5	4.1									
	NA_5	Restaurant		70	75	67.0	67.0	0.0									
	NA_6	Retail		70	NA	70.7	67.1	3.6									
	NA_7	Retail		70	NA	67.4	66.9	0.5									
	NA_8	Restaurant		70	75	70.9	64.3	6.6									

Table C9
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NA2 in Area NA - East of I-35W between County Road B2 and County Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NA2	NA_1	Retail	Day	70	NA	70.9	69.4	1.5	1	Yes	Yes	20	1,830	35,816	$716,320	$716,320	Not Cost Effective
	NA_2	Retail		70	NA	71.4	67.7	3.7									
	NA_3	Hotel		65	75	70.4	68.5	1.9									
	NA_4	Medical		70	70	71.8	64.6	7.2									
	NA_5	Restaurant		70	75	69.9	69.1	0.8									
	NA_6	Retail		70	NA	71.8	67.2	4.6									
	NA_7	Retail		70	NA	70.5	70.2	0.3									
	NA_1	Retail	Night	70	NA	68.7	66.9	1.8	2	Yes	Yes	20	1,830	35,816	$716,320	$358,160	Not Cost Effective
	NA_2	Retail		70	NA	69.8	64.5	5.3									
	NA_3	Hotel		55	75	67.8	65.3	2.5									
	NA_4	Medical		70	70	70.6	63.0	7.6									
	NA_5	Restaurant		70	75	67.0	65.9	1.1									
	NA_6	Retail		70	NA	70.7	66.2	4.5									
	NA_7	Retail		70	NA	67.4	67.0	0.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C10
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall NA2 in Area NA - East of I-35W between County Road B2 and County Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NA2	NA_1	Retail	Day	70	NA	70.9	69.6	1.3	1	Yes	No	15	1,830	27,126	$542,520	N/A	Does Not Meet Noise Reduction Design Goal
	NA_2	Retail		70	NA	71.4	68.5	2.9									
	NA_3	Hotel		65	75	70.4	69.5	0.9									
	NA_4	Medical		70	70	71.8	66.6	5.2									
	NA_5	Restaurant		70	75	69.9	69.6	0.3									
	NA_6	Retail		70	NA	71.8	69.1	2.7									
	NA_7	Retail		70	NA	70.5	70.2	0.3									
	NA_1	Retail	Night	70	NA	68.7	67.0	1.7	1	Yes	No	15	1,830	27,126	$542,520	N/A	Does Not Meet Noise Reduction Design Goal
	NA_2	Retail		70	NA	69.8	65.4	4.4									
	NA_3	Hotel		55	75	67.8	66.5	1.3									
	NA_4	Medical		70	70	70.6	65.4	5.2									
	NA_5	Restaurant		70	75	67.0	66.6	0.4									
	NA_6	Retail		70	NA	70.7	68.0	2.7									
	NA_7	Retail		70	NA	67.4	67.1	0.3									

Table C11
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NA2 in Area NA - East of I-35W between County Road B2 and County Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NA2	NA_1	Retail	Day	70	NA	70.9	70.9	0.0	0	No	No	20	109	1,396	$27,920	N/A	Does Not Meet Noise Reduction Design Goal
	NA_2	Retail		70	NA	71.4	71.4	0.0									
	NA_3	Hotel		65	75	70.4	70.3	0.1									
	NA_4	Medical		70	70	71.8	69.2	2.6									
	NA_5	Restaurant		70	75	69.9	69.8	0.1									
	NA_6	Retail		70	NA	71.8	71.4	0.4									
	NA_7	Retail		70	NA	70.5	70.3	0.2									
	NA_1	Retail	Night	70	NA	68.7	68.7	0.0	0	No	No	20	109	1,396	$27,920	N/A	Does Not Meet Noise Reduction Design Goal
	NA_2	Retail		70	NA	69.8	69.8	0.0									
	NA_3	Hotel		55	75	67.8	67.7	0.1									
	NA_4	Medical		70	70	70.6	68.0	2.6									
	NA_5	Restaurant		70	75	67.0	66.9	0.1									
	NA_6	Retail		70	NA	70.7	70.2	0.5									
	NA_7	Retail		70	NA	67.4	67.2	0.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C12
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NA3 in Area NA - West of I-35W between Country Road B2 and Country Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NA3	NA_8	Restaurant	Day	70	75	71.9	70.4	1.5	0	No	No	20	112	1,456	$29,120	N/A	Does Not Meet Noise Reduction Design Goal
	NA_8	Restaurant	Night	70	75	70.9	69.5	1.4	0	No	No	20	112	1,456	$29,120	N/A	Does Not Meet Noise Reduction Design Goal

Table C13
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NA3 in Area NA - West of I-35W between Country Road B2 and Country Road C

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NA3	NA_8	Restaurant	Day	70	75	71.9	70.9	1.0	0	No	No	20	122	1,656	$33,120	N/A	Does Not Meet Noise Reduction Design Goal
	NA_8	Restaurant	Night	70	75	70.9	70.0	0.9	0	No	No	20	122	1,656	$33,120	N/A	Does Not Meet Noise Reduction Design Goal

Table C14
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SB1 in Area SB - West of I-35W between County Road C and County Road D

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SB1	SB_1	Retail	Day	70	NA	72.9	65.6	7.3	3	Yes	Yes	20	1,566	30,536	$610,720	$203,573	Not Cost Effective
	SB_2	Retail		70	NA	72.5	64.7	7.8									
	SB_3	Retail		70	NA	72.1	64.6	7.5									
	SB_1	Retail	Night	70	NA	72.2	64.8	7.4	3	Yes	Yes	20	1,566	30,536	$610,720	$203,573	Not Cost Effective
	SB_2	Retail		70	NA	71.7	64.0	7.7									
	SB_3	Retail		70	NA	71.3	63.9	7.4									

Table C15
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SB1 in Area SB - West of I-35W between County Road C and County Road D

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SB1	SB_1	Retail	Day	70	NA	72.9	68.6	4.3	0	No	No	15	1,566	23,166	$463,320	N/A	Does Not Meet Noise Reduction Design Goal
	SB_2	Retail		70	NA	72.5	67.6	4.9									
	SB_3	Retail		70	NA	72.1	67.4	4.7									
	SB_1	Retail	Night	70	NA	72.2	67.9	4.3	0	No	No	15	1,566	23,166	$463,320	N/A	Does Not Meet Noise Reduction Design Goal
	SB_2	Retail		70	NA	71.7	66.8	4.9									
	SB_3	Retail		70	NA	71.3	66.7	4.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C16
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NB1 in Area NB - East of I-35W between County Road C and County Road D

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NB1	NB_1	Trail	Day	70	70	74.0	63.7	10.3	30	Yes	Yes	20	4,285	84,916	$1,698,320	$56,611	Not Cost Effective
	NB_2	Trail		70	70	68.8	63.4	5.4									
	NB_3	Trail		70	70	66.5	63.6	2.9									
	NB_4	Trail		70	70	77.3	63.2	14.1									
	NB_5	Trail		70	70	73.6	63.3	10.3									
	NB_6	Office		70	75	77.5	63.4	14.1									
	NB_7	Trail		70	70	77.6	63.3	14.3									
	NB_8	Trail		70	70	77.4	62.7	14.7									
	NB_9	Trail		70	70	76.9	63.2	13.7									
	NB_10	Trail		70	70	68.9	61.4	7.5									
	NB_11	Trail		70	70	77.1	62.8	14.3									
	NB_12	Hotel		65	75	75.0	61.7	13.3									
	NB_13	Trail		70	70	77.4	62.6	14.8									
	NB_14	Medical		70	70	64.4	60.2	4.2									
	NB_15	Trail		70	70	77.3	62.6	14.7									
	NB_16	Trail		70	70	77.6	62.7	14.9									
	NB_17	Office		70	75	74.5	62.7	11.8									
	NB_18	Trail		70	70	76.7	63.2	13.5									
	NB_19	Hotel		65	75	76.6	63.8	12.8									
	NB_20	Trail		70	70	77.3	63.7	13.6									
	NB_21	Trail		70	70	78.3	63.3	15.0									
	NB_22	Trail		70	70	78.3	63.1	15.2									
	NB_23	Medical		70	70	66.0	60.7	5.3									
	NB_24	Trail		70	70	78.2	62.9	15.3									
	NB_25	Hotel		65	75	77.0	63.1	13.9									
	NB_26	Trail		70	70	77.6	62.4	15.2									
	NB_27	Retail		70	NA	71.3	61.0	10.3									
	NB_28	Trail		70	70	74.8	61.9	12.9									
	NB_29	Trail		70	70	72.4	60.2	12.2									
	NB_30	Office		70	75	70.5	62.2	8.3									
	NB_31	Trail		70	70	70.0	61.2	8.8									
	NB_32	Trail		70	70	70.5	60.4	10.1									
	NB_33	Trail		70	70	72.0	71.9	0.1									
	NB_34	Trail		70	70	67.6	66.2	1.4									
	NB_1	Trail	Night	70	70	73.6	63.1	10.5	31	Yes	Yes	20	4,285	84,916	$1,698,320	$54,785	Not Cost Effective
	NB_2	Trail		70	70	68.2	62.5	5.7									
	NB_3	Trail		70	70	65.6	61.8	3.8									
	NB_4	Trail		70	70	76.9	62.6	14.3									
	NB_5	Trail		70	70	73.2	62.6	10.6									
	NB_6	Office		70	75	77.2	62.9	14.3									
	NB_7	Trail		70	70	77.2	62.7	14.5									
	NB_8	Trail		70	70	77.0	62.2	14.8									
	NB_9	Trail		70	70	76.5	62.6	13.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C16 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NB1 in Area NB - East of I-35W between County Road C and County Road D

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NB1	NB_10	Trail	Night	70	70	68.4	60.4	8.0	31	Yes	Yes	20	4,285	84,916	$1,698,320	$54,785	Not Cost Effective
	NB_11	Trail		70	70	76.7	62.4	14.3									
	NB_12	Hotel		55	75	74.6	61.2	13.4									
	NB_13	Trail		70	70	77.0	62.2	14.8									
	NB_14	Medical		70	70	63.7	58.4	5.3									
	NB_15	Trail		70	70	76.9	62.1	14.8									
	NB_16	Trail		70	70	77.2	62.3	14.9									
	NB_17	Office		70	75	74.1	62.1	12.0									
	NB_18	Trail		70	70	76.3	62.7	13.6									
	NB_19	Hotel		55	75	76.2	63.2	13.0									
	NB_20	Trail		70	70	76.9	63.1	13.8									
	NB_21	Trail		70	70	77.9	62.8	15.1									
	NB_22	Trail		70	70	77.9	62.6	15.3									
	NB_23	Medical		70	70	65.3	58.9	6.4									
	NB_24	Trail		70	70	77.8	62.5	15.3									
	NB_25	Hotel		55	75	76.6	62.5	14.1									
	NB_26	Trail		70	70	77.1	61.8	15.3									
	NB_27	Retail		70	NA	70.7	60.3	10.4									
	NB_28	Trail		70	70	74.3	61.2	13.1									
	NB_29	Trail		70	70	71.6	59.2	12.4									
	NB_30	Office		70	75	69.8	61.2	8.6									
	NB_31	Trail		70	70	69.2	59.7	9.5									
	NB_32	Trail		70	70	69.6	57.9	11.7									
	NB_33	Trail		70	70	71.2	71.0	0.2									
	NB_34	Trail		70	70	65.8	63.8	2.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C17
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall NB1 in Area NB - East of I-35W between County Road C and County Road D

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NB1	NB_1	Trail	Day	70	70	74.0	65.9	8.1	28	Yes	Yes	15	4,285	63,951	$1,279,020	$45,679	Not Cost Effective
	NB_2	Trail		70	70	68.8	65.0	3.8									
	NB_3	Trail		70	70	66.5	64.6	1.9									
	NB_4	Trail		70	70	77.3	65.3	12.0									
	NB_5	Trail		70	70	73.6	65.5	8.1									
	NB_6	Office		70	75	77.5	65.8	11.7									
	NB_7	Trail		70	70	77.6	65.6	12.0									
	NB_8	Trail		70	70	77.4	64.5	12.9									
	NB_9	Trail		70	70	76.9	65.7	11.2									
	NB_10	Trail		70	70	68.9	63.4	5.5									
	NB_11	Trail		70	70	77.1	65.4	11.7									
	NB_12	Hotel		65	75	75.0	64.6	10.4									
	NB_13	Trail		70	70	77.4	65.0	12.4									
	NB_14	Medical		70	70	64.4	61.2	3.2									
	NB_15	Trail		70	70	77.3	64.9	12.4									
	NB_16	Trail		70	70	77.6	65.2	12.4									
	NB_17	Office		70	75	74.5	65.5	9.0									
	NB_18	Trail		70	70	76.7	65.9	10.8									
	NB_19	Hotel		65	75	76.6	66.7	9.9									
	NB_20	Trail		70	70	77.3	66.5	10.8									
	NB_21	Trail		70	70	78.3	65.7	12.6									
	NB_22	Trail		70	70	78.3	64.9	13.4									
	NB_23	Medical		70	70	66.0	61.8	4.2									
	NB_24	Trail		70	70	78.2	64.7	13.5									
	NB_25	Hotel		65	75	77.0	65.5	11.5									
	NB_26	Trail		70	70	77.6	64.6	13.0									
	NB_27	Retail		70	NA	71.3	63.6	7.7									
	NB_28	Trail		70	70	74.8	64.9	9.9									
	NB_29	Trail		70	70	72.4	62.6	9.8									
	NB_30	Office		70	75	70.5	65.1	5.4									
	NB_31	Trail		70	70	70.0	63.2	6.8									
	NB_32	Trail		70	70	70.5	61.2	9.3									
	NB_33	Trail		70	70	72.0	71.9	0.1									
	NB_34	Trail		70	70	67.6	66.4	1.2									
	NB_1	Trail	Night	70	70	73.6	65.3	8.3	28	Yes	Yes	15	4,285	63,951	$1,279,020	$45,679	Not Cost Effective
	NB_2	Trail		70	70	68.2	64.2	4.0									
	NB_3	Trail		70	70	65.6	63.1	2.5									
	NB_4	Trail		70	70	76.9	64.7	12.2									
	NB_5	Trail		70	70	73.2	64.8	8.4									
	NB_6	Office		70	75	77.2	65.3	11.9									
	NB_7	Trail		70	70	77.2	65.1	12.1									
	NB_8	Trail		70	70	77.0	64.0	13.0									
	NB_9	Trail		70	70	76.5	65.1	11.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C17 Continued
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall NB1 in Area NB - East of I-35W between County Road C and County Road D

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NB1	NB_10	Trail	Night	70	70	68.4	62.5	5.9	28	Yes	Yes	15	4,285	63,951	$1,279,020	$45,679	Not Cost Effective
	NB_11	Trail		70	70	76.7	64.9	11.8									
	NB_12	Hotel		55	75	74.6	64.0	10.6									
	NB_13	Trail		70	70	77.0	64.5	12.5									
	NB_14	Medical		70	70	63.7	59.7	4.0									
	NB_15	Trail		70	70	76.9	64.4	12.5									
	NB_16	Trail		70	70	77.2	64.7	12.5									
	NB_17	Office		70	75	74.1	64.9	9.2									
	NB_18	Trail		70	70	76.3	65.3	11.0									
	NB_19	Hotel		55	75	76.2	66.1	10.1									
	NB_20	Trail		70	70	76.9	65.9	11.0									
	NB_21	Trail		70	70	77.9	65.2	12.7									
	NB_22	Trail		70	70	77.9	64.4	13.5									
	NB_23	Medical		70	70	65.3	60.4	4.9									
	NB_24	Trail		70	70	77.8	64.2	13.6									
	NB_25	Hotel		55	75	76.6	64.9	11.7									
	NB_26	Trail		70	70	77.1	64.0	13.1									
	NB_27	Retail		70	NA	70.7	62.9	7.8									
	NB_28	Trail		70	70	74.3	64.2	10.1									
	NB_29	Trail		70	70	71.6	61.7	9.9									
	NB_30	Office		70	75	69.8	64.3	5.5									
	NB_31	Trail		70	70	69.2	62.2	7.0									
	NB_32	Trail		70	70	69.6	59.2	10.4									
	NB_33	Trail		70	70	71.2	71.1	0.1									
	NB_34	Trail		70	70	65.8	64.1	1.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C18
Build Alternative Noise Wall Cost Effectiveness - 14 Foot Noise Wall
Wall NB1 in Area NB - East of I-35W between County Road C and County Road D

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NB1	NB_1	Trail	Day	70	70	74.0	66.5	7.5	27	Yes	Yes	14	4,182	58,292	$1,165,840	$43,179	Propose to Construct
	NB_2	Trail		70	70	68.8	65.5	3.3									
	NB_3	Trail		70	70	66.5	64.9	1.6									
	NB_4	Trail		70	70	77.3	65.8	11.5									
	NB_5	Trail		70	70	73.6	66.0	7.6									
	NB_6	Office		70	75	77.5	66.4	11.1									
	NB_7	Trail		70	70	77.6	66.3	11.3									
	NB_8	Trail		70	70	77.4	65.1	12.3									
	NB_9	Trail		70	70	76.9	66.3	10.6									
	NB_10	Trail		70	70	68.9	63.8	5.1									
	NB_11	Trail		70	70	77.1	66.0	11.1									
	NB_12	Hotel		65	75	75.0	65.3	9.7									
	NB_13	Trail		70	70	77.4	65.6	11.8									
	NB_14	Medical		70	70	64.4	61.4	3.0									
	NB_15	Trail		70	70	77.3	65.5	11.8									
	NB_16	Trail		70	70	77.6	65.8	11.8									
	NB_17	Office		70	75	74.5	66.2	8.3									
	NB_18	Trail		70	70	76.7	66.6	10.1									
	NB_19	Hotel		65	75	76.6	67.4	9.2									
	NB_20	Trail		70	70	77.3	67.2	10.1									
	NB_21	Trail		70	70	78.3	66.4	11.9									
	NB_22	Trail		70	70	78.3	65.4	12.9									
	NB_23	Medical		70	70	66.0	62.1	3.9									
	NB_24	Trail		70	70	78.2	65.3	12.9									
	NB_25	Hotel		65	75	77.0	66.1	10.9									
	NB_26	Trail		70	70	77.6	65.2	12.4									
	NB_27	Retail		70	NA	71.3	64.3	7.0									
	NB_28	Trail		70	70	74.8	65.6	9.2									
	NB_29	Trail		70	70	72.4	63.2	9.2									
	NB_30	Office		70	75	70.5	65.8	4.7									
	NB_31	Trail		70	70	70.0	63.8	6.2									
	NB_32	Trail		70	70	70.5	61.4	9.1									
	NB_33	Trail		70	70	72.0	71.9	0.1									
	NB_34	Trail		70	70	67.6	66.5	1.1									
	NB_1	Trail	Night	70	70	73.6	65.9	7.7	27	Yes	Yes	14	4,182	58,292	$1,165,840	$43,179	Propose to Construct
	NB_2	Trail		70	70	68.2	64.7	3.5									
	NB_3	Trail		70	70	65.6	63.5	2.1									
	NB_4	Trail		70	70	76.9	65.3	11.6									
	NB_5	Trail		70	70	73.2	65.4	7.8									
	NB_6	Office		70	75	77.2	65.9	11.3									
	NB_7	Trail		70	70	77.2	65.8	11.4									
	NB_8	Trail		70	70	77.0	64.5	12.5									
	NB_9	Trail		70	70	76.5	65.8	10.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C18 Continued
Build Alternative Noise Wall Cost Effectiveness - 14 Foot Noise Wall
Wall NB1 in Area NB - East of I-35W between County Road C and County Road D

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NB1	NB_10	Trail	Night	70	70	68.4	63.0	5.4	27	Yes	Yes	14	4,182	58,292	$1,165,840	$43,179	Propose to Construct
	NB_11	Trail		70	70	76.7	65.6	11.1									
	NB_12	Hotel		55	75	74.6	64.7	9.9									
	NB_13	Trail		70	70	77.0	65.2	11.8									
	NB_14	Medical		70	70	63.7	60.0	3.7									
	NB_15	Trail		70	70	76.9	65.0	11.9									
	NB_16	Trail		70	70	77.2	65.3	11.9									
	NB_17	Office		70	75	74.1	65.5	8.6									
	NB_18	Trail		70	70	76.3	66.0	10.3									
	NB_19	Hotel		55	75	76.2	66.8	9.4									
	NB_20	Trail		70	70	76.9	66.6	10.3									
	NB_21	Trail		70	70	77.9	65.9	12.0									
	NB_22	Trail		70	70	77.9	64.9	13.0									
	NB_23	Medical		70	70	65.3	60.8	4.5									
	NB_24	Trail		70	70	77.8	64.8	13.0									
	NB_25	Hotel		55	75	76.6	65.5	11.1									
	NB_26	Trail		70	70	77.1	64.6	12.5									
	NB_27	Retail		70	NA	70.7	63.5	7.2									
	NB_28	Trail		70	70	74.3	65.0	9.3									
	NB_29	Trail		70	70	71.6	62.4	9.2									
	NB_30	Office		70	75	69.8	65.0	4.8									
	NB_31	Trail		70	70	69.2	62.8	6.4									
	NB_32	Trail		70	70	69.6	59.5	10.1									
	NB_33	Trail		70	70	71.2	71.1	0.1									
	NB_34	Trail		70	70	65.8	64.2	1.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C19
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SC1 in Area SC - West of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SC1	SC_1	Office	Day	70	75	75.6	68.0	7.6	3	Yes	Yes	20	1,470	28,616	$572,320	$190,773	Not Cost Effective
	SC_2	Office		70	75	75.8	66.2	9.6									
	SC_3	Office		70	75	75.1	65.7	9.4									
	SC_1	Office	Night	70	75	74.7	67.2	7.5	3	Yes	Yes	20	1,470	28,616	$572,320	$190,773	Not Cost Effective
	SC_2	Office		70	75	74.9	65.4	9.5									
	SC_3	Office		70	75	74.2	64.9	9.3									

Table C20
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SC1 in Area SC - West of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SC1	SC_1	Office	Day	70	75	75.6	69.9	5.7	3	Yes	No	15	1,470	21,726	$434,520	N/A	Does Not Meet Noise Reduction Design Goal
	SC_2	Office		70	75	75.8	69.9	5.9									
	SC_3	Office		70	75	75.1	69.7	5.4									
	SC_1	Office	Night	70	75	74.7	69.1	5.6	3	Yes	No	15	1,470	21,726	$434,520	N/A	Does Not Meet Noise Reduction Design Goal
	SC_2	Office		70	75	74.9	69.0	5.9									
	SC_3	Office		70	75	74.2	68.7	5.5									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NC_1	Office		70	75	68.2	64.4	3.8									
	NC_2	Residential		65	70	67.4	64.2	3.2									
	NC_3	Residential		65	70	67.5	64.4	3.1									
	NC_4	Residential		65	70	67.9	64.1	3.8									
	NC_5	Residential		65	70	67.6	64.7	2.9									
	NC_6	Residential		65	70	67.7	64.3	3.4									
	NC_7	Residential		65	70	67.3	63.7	3.6									
	NC_8_1	Residential		65	70	65.8	61.5	4.3									
	NC_8_2	Residential		65	70	66.3	63.3	3.0									
	NC_8_3	Residential		65	70	66.5	64.8	1.7									
	NC_9_1	Residential		65	70	65.8	61.2	4.6									
	NC_9_2	Residential		65	70	66.5	63.5	3.0									
	NC_9_3	Residential		65	70	66.8	64.9	1.9									
	NC_10_1	Residential		65	70	65.6	60.9	4.7									
	NC_10_2	Residential		65	70	66.3	63.1	3.2									
	NC_10_3	Residential		65	70	66.6	64.6	2.0									
	NC_11_1	Residential		65	70	66.4	61.1	5.3									
	NC_11_2	Residential		65	70	66.7	63.1	3.6									
	NC_11_3	Residential		65	70	66.9	64.9	2.0									
	NC_12_1	Residential		65	70	67.9	61.7	6.2									
	NC_12_2	Residential		65	70	68.3	63.9	4.4									
Wall NC1	NC_12_3	Residential	Day	65	70	68.5	66.2	2.3	86	Yes	Yes	20	5,409	107,396	$2,147,920	$24,976	Propose to Construct
	NC_13_1	Residential		65	70	68.5	61.9	6.6									
	NC_13_2	Residential		65	70	68.8	64.2	4.6									
	NC_13_3	Residential		65	70	69.0	66.5	2.5									
	NC_14_1	Residential		65	70	69.7	62.1	7.6									
	NC_14_2	Residential		65	70	69.9	64.7	5.2									
	NC_14_3	Residential		65	70	70.1	67.4	2.7									
	NC_15_1	Residential		65	70	69.5	61.4	8.1									
	NC_15_2	Residential		65	70	70.5	64.0	6.5									
	NC_15_3	Residential		65	70	70.7	67.4	3.3									
	NC_16_1	Residential		65	70	68.3	60.9	7.4									
	NC_16_2	Residential		65	70	69.2	63.2	6.0									
	NC_16_3	Residential		65	70	69.5	66.3	3.2									
	NC_17_1	Residential		65	70	67.8	60.6	7.2									
	NC_17_2	Residential		65	70	68.6	62.8	5.8									
	NC_17_3	Residential		65	70	69.0	65.8	3.2									
	NC_18_1	Residential		65	70	66.7	60.0	6.7									
	NC_18_2	Residential		65	70	67.3	62.0	5.3									
	NC_18_3	Residential		65	70	67.7	64.7	3.0									
	NC_19_1	Residential		65	70	66.0	59.5	6.5									
	NC_19_2	Residential		65	70	66.6	62.1	4.5									
	NC_19_3	Residential		65	70	67.1	64.1	3.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NC_20_1	Residential		65	70	66.0	59.8	6.2									
	NC_20_2	Residential		65	70	66.7	62.1	4.6									
	NC_20_3	Residential		65	70	67.2	64.3	2.9									
	NC_21_1	Residential		65	70	65.7	60.0	5.7									
	NC_21_2	Residential		65	70	66.3	61.9	4.4									
	NC_21_3	Residential		65	70	66.9	64.1	2.8									
	NC_22_1	Residential		65	70	63.3	63.3	0.0									
	NC_22_2	Residential		65	70	63.5	63.5	0.0									
	NC_22_3	Residential		65	70	64.9	64.9	0.0									
	NC_23_1	Residential		65	70	62.0	62.0	0.0									
	NC_23_2	Residential		65	70	62.4	62.4	0.0									
	NC_23_3	Residential		65	70	64.3	64.3	0.0									
	NC_24_1	Residential		65	70	61.0	61.0	0.0									
	NC_24_2	Residential		65	70	61.4	61.4	0.0									
	NC_24_3	Residential		65	70	63.6	63.6	0.0									
	NC_25_1	Residential		65	70	60.9	60.9	0.0									
	NC_25_2	Residential		65	70	61.4	61.4	0.0									
	NC_25_3	Residential		65	70	63.6	63.6	0.0									
	NC_26_1	Residential		65	70	62.5	62.5	0.0									
	NC_26_2	Residential		65	70	63.0	63.0	0.0									
	NC_26_3	Residential		65	70	64.7	64.7	0.0									
Wall NC1	NC_27_1	Residential	Day	65	70	63.3	63.3	0.0	86	Yes	Yes	20	5,409	107,396	$2,147,920	$24,976	Propose to Construct
	NC_27_2	Residential		65	70	63.6	63.6	0.0									
	NC_27_3	Residential		65	70	65.0	65.0	0.0									
	NC_28_1	Residential		65	70	66.0	60.5	5.5									
	NC_28_2	Residential		65	70	66.5	62.0	4.5									
	NC_28_3	Residential		65	70	67.1	64.2	2.9									
	NC_29_1	Residential		65	70	66.3	60.2	6.1									
	NC_29_2	Residential		65	70	67.0	62.1	4.9									
	NC_29_3	Residential		65	70	67.5	64.4	3.1									
	NC_30_1	Residential		65	70	66.4	60.1	6.3									
	NC_30_2	Residential		65	70	67.0	62.0	5.0									
	NC_30_3	Residential		65	70	67.4	64.3	3.1									
	NC_31_1	Residential		65	70	67.2	60.8	6.4									
	NC_31_2	Residential		65	70	67.8	62.7	5.1									
	NC_31_3	Residential		65	70	68.2	64.9	3.3									
	NC_32_1	Residential		65	70	68.7	61.5	7.2									
	NC_32_2	Residential		65	70	69.5	63.6	5.9									
	NC_32_3	Residential		65	70	69.8	66.1	3.7									
	NC_33_1	Residential		65	70	69.4	61.8	7.6									
	NC_33_2	Residential		65	70	70.4	64.0	6.4									
	NC_33_3	Residential		65	70	70.7	66.8	3.9									
	NC_34_1	Residential		65	70	70.8	61.8	9.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NC_34_2	Residential		65	70	71.6	64.5	7.1									
	NC_34_3	Residential		65	70	71.8	67.7	4.1									
	NC_35_1	Residential		65	70	72.3	61.3	11.0									
	NC_35_2	Residential		65	70	72.6	64.2	8.4									
	NC_35_3	Residential		65	70	72.8	68.0	4.8									
	NC_36_1	Residential		65	70	71.0	61.0	10.0									
	NC_36_2	Residential		65	70	71.4	63.6	7.8									
	NC_36_3	Residential		65	70	71.6	67.0	4.6									
	NC_37_1	Residential		65	70	70.2	60.8	9.4									
	NC_37_2	Residential		65	70	70.5	63.2	7.3									
	NC_37_3	Residential		65	70	70.8	66.4	4.4									
	NC_38_1	Residential		65	70	68.7	60.4	8.3									
	NC_38_2	Residential		65	70	69.1	62.6	6.5									
	NC_38_3	Residential		65	70	69.4	65.3	4.1									
	NC_39_1	Residential		65	70	67.9	60.2	7.7									
	NC_39_2	Residential		65	70	68.3	62.2	6.1									
	NC_39_3	Residential		65	70	68.7	64.9	3.8									
	NC_40_1	Residential		65	70	67.9	60.5	7.4									
	NC_40_2	Residential		65	70	68.3	62.5	5.8									
	NC_40_3	Residential		65	70	68.8	65.0	3.8									
	NC_41_1	Residential		65	70	67.5	61.1	6.4									
Wall NC1	NC_41_2	Residential	Day	65	70	68.0	62.7	5.3	86	Yes	Yes	20	5,409	107,396	$2,147,920	$24,976	Propose to Construct
	NC_41_3	Residential		65	70	68.5	65.0	3.5									
	NC_42_1	Residential		65	70	63.1	63.1	0.0									
	NC_42_2	Residential		65	70	63.4	63.4	0.0									
	NC_42_3	Residential		65	70	64.9	64.9	0.0									
	NC_43_1	Residential		65	70	62.3	62.3	0.0									
	NC_43_2	Residential		65	70	62.7	62.7	0.0									
	NC_43_3	Residential		65	70	64.6	64.6	0.0									
	NC_44_1	Residential		65	70	61.0	61.0	0.0									
	NC_44_2	Residential		65	70	61.5	61.5	0.0									
	NC_44_3	Residential		65	70	63.7	63.7	0.0									
	NC_45_1	Residential		65	70	61.0	61.0	0.0									
	NC_45_2	Residential		65	70	61.5	61.5	0.0									
	NC_45_3	Residential		65	70	63.7	63.7	0.0									
	NC_46_1	Residential		65	70	62.2	62.2	0.0									
	NC_46_2	Residential		65	70	62.7	62.7	0.0									
	NC_46_3	Residential		65	70	64.6	64.6	0.0									
	NC_47_1	Residential		65	70	62.9	62.9	0.0									
	NC_47_2	Residential		65	70	63.2	63.2	0.0									
	NC_47_3	Residential		65	70	64.9	64.9	0.0									
	NC_48	Residential		65	70	68.5	62.6	5.9									
	NC_49	Residential		65	70	67.3	63.5	3.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NC_50	Residential		65	70	67.0	62.6	4.4									
	NC_51	Residential		65	70	65.8	56.9	8.9									
	NC_52	Residential		65	70	68.2	60.0	8.2									
	NC_53	Retail		70	NA	67.8	60.9	6.9									
	NC_54	Residential		65	70	67.9	66.4	1.5									
	NC_55	Residential		65	70	67.5	66.0	1.5									
	NC_56	Residential		65	70	68.1	66.1	2.0									
	NC_57	Office		70	75	74.8	62.1	12.7									
	NC_58	Residential		65	70	75.3	62.8	12.5									
	NC_59_1	Residential		65	70	74.2	61.8	12.4									
	NC_59_2	Residential		65	70	74.5	65.9	8.6									
	NC_59_3	Residential		65	70	74.8	71.1	3.7									
	NC_60_1	Residential		65	70	68.5	62.0	6.5									
	NC_60_2	Residential		65	70	69.7	64.4	5.3									
	NC_60_3	Residential		65	70	71.5	68.9	2.6									
	NC_61_1	Residential		65	70	67.4	62.5	4.9									
	NC_61_2	Residential		65	70	68.8	64.9	3.9									
	NC_61_3	Residential		65	70	70.6	68.5	2.1									
	NC_62_1	Residential		65	70	63.0	63.0	0.0									
	NC_62_2	Residential		65	70	64.5	64.5	0.0									
	NC_62_3	Residential		65	70	69.8	68.8	1.0									
Wall NC1	NC_63_1	Residential	Day	65	70	74.4	61.9	12.5	86	Yes	Yes	20	5,409	107,396	$2,147,920	$24,976	Propose to Construct
	NC_63_2	Residential		65	70	74.6	66.0	8.6									
	NC_63_3	Residential		65	70	74.9	71.3	3.6									
	NC_64_1	Residential		65	70	69.8	61.9	7.9									
	NC_64_2	Residential		65	70	70.1	64.0	6.1									
	NC_64_3	Residential		65	70	71.8	69.3	2.5									
	NC_65_1	Residential		65	70	68.5	62.5	6.0									
	NC_65_2	Residential		65	70	69.0	64.5	4.5									
	NC_65_3	Residential		65	70	70.7	68.6	2.1									
	NC_66_1	Residential		65	70	67.2	63.2	4.0									
	NC_66_2	Residential		65	70	67.7	64.8	2.9									
	NC_66_3	Residential		65	70	69.8	68.5	1.3									
	NC_67_1	Residential		65	70	76.4	62.3	14.1									
	NC_67_2	Residential		65	70	76.6	67.0	9.6									
	NC_67_3	Residential		65	70	76.6	73.7	2.9									
	NC_68_1	Residential		65	70	76.4	62.3	14.1									
	NC_68_2	Residential		65	70	76.6	66.9	9.7									
	NC_68_3	Residential		65	70	76.6	73.5	3.1									
	NC_69_1	Residential		65	70	76.4	62.4	14.0									
	NC_69_2	Residential		65	70	76.6	67.0	9.6									
	NC_69_3	Residential		65	70	76.6	73.6	3.0									
	NC_70_1	Residential		65	70	76.4	62.6	13.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NC1	NC_70_2	Residential	Day	65	70	76.6	67.3	9.3	86	Yes	Yes	20	5,409	107,396	$2,147,920	$24,976	Propose to Construct
	NC_70_3	Residential		65	70	76.6	73.8	2.8									
	NC_71_1	Residential		65	70	62.0	62.0	0.0									
	NC_71_2	Residential		65	70	63.8	63.8	0.0									
	NC_71_3	Residential		65	70	69.2	68.9	0.3									
	NC_72_1	Residential		65	70	62.1	62.1	0.0									
	NC_72_2	Residential		65	70	64.4	64.4	0.0									
	NC_72_3	Residential		65	70	68.9	68.7	0.2									
	NC_73_1	Residential		65	70	62.2	62.2	0.0									
	NC_73_2	Residential		65	70	64.5	64.5	0.0									
	NC_73_3	Residential		65	70	68.9	68.7	0.2									
	NC_74_1	Residential		65	70	62.1	62.1	0.0									
	NC_74_2	Residential		65	70	64.2	64.2	0.0									
	NC_74_3	Residential		65	70	69.2	68.9	0.3									
	NC_75	Residential		65	70	66.0	64.2	1.8									
	NC_76_1	Residential		65	70	76.1	62.5	13.6									
	NC_76_2	Residential		65	70	76.3	67.2	9.1									
	NC_76_3	Residential		65	70	76.4	73.3	3.1									
	NC_77_1	Residential		65	70	70.9	62.0	8.9									
	NC_77_2	Residential		65	70	71.1	64.3	6.8									
	NC_77_3	Residential		65	70	72.4	69.7	2.7									
	NC_78_1	Residential		65	70	69.3	62.3	7.0									
	NC_78_2	Residential		65	70	69.6	64.4	5.2									
	NC_78_3	Residential		65	70	71.1	68.8	2.3									
	NC_79_1	Residential		65	70	67.7	63.1	4.6									
	NC_79_2	Residential		65	70	68.2	64.9	3.3									
	NC_79_3	Residential		65	70	70.0	68.4	1.6									
	NC_80_1	Residential		65	70	76.2	62.4	13.8									
	NC_80_2	Residential		65	70	76.5	67.4	9.1									
	NC_80_3	Residential		65	70	76.5	73.6	2.9									
	NC_81_1	Residential		65	70	70.3	62.6	7.7									
	NC_81_2	Residential		65	70	71.0	65.0	6.0									
	NC_81_3	Residential		65	70	72.3	69.5	2.8									
	NC_82_1	Residential		65	70	69.3	62.9	6.4									
	NC_82_2	Residential		65	70	70.2	65.1	5.1									
	NC_82_3	Residential		65	70	71.6	68.9	2.7									
	NC_83_1	Residential		65	70	61.8	61.8	0.0									
	NC_83_2	Residential		65	70	63.5	63.5	0.0									
	NC_83_3	Residential		65	70	68.8	68.3	0.5									
	NC_84	Residential		65	70	75.3	62.6	12.7									
	NC_85	Residential		65	70	68.5	66.0	2.5									
	NC_86	Residential		65	70	68.4	66.0	2.4									
	NC_87	Residential		65	70	68.0	65.9	2.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NC1	NC_88	Residential	Day	65	70	67.8	65.9	1.9	86	Yes	Yes	20	5,409	107,396	$2,147,920	$24,976	Propose to Construct
	NC_89	Residential		65	70	67.7	66.0	1.7									
	NC_90	Residential		65	70	67.2	65.9	1.3									
	NC_91	Residential		65	70	67.6	65.9	1.7									
	NC_92	Residential		65	70	67.7	65.9	1.8									
	NC_93	Residential		65	70	67.8	65.9	1.9									
	NC_94	Residential		65	70	68.0	65.9	2.1									
	NC_95	Residential		65	70	68.5	65.9	2.6									
	NC_96	Residential		65	70	68.9	66.0	2.9									
	NC_97	Residential		65	70	69.3	66.2	3.1									
	NC_98	Residential		65	70	69.3	65.9	3.4									
	NC_99	Residential		65	70	69.5	66.0	3.5									
	NC_100	Residential		65	70	74.0	62.6	11.4									
	NC_101	Residential		65	70	74.9	64.1	10.8									
	NC_102	Residential		65	70	74.8	64.7	10.1									
	NC_103	Residential		65	70	75.3	63.1	12.2									
	NC_104	Residential		65	70	75.2	61.2	14.0									
	NC_105	Residential		65	70	70.3	66.5	3.8									
	NC_106	Residential		65	70	70.6	66.6	4.0									
	NC_107	Recreation		70	70	70.9	66.7	4.2									
	NC_108	Recreation		70	70	71.2	66.9	4.3									
	NC_109	Recreation		70	70	71.4	66.9	4.5									
	NC_110	Recreation		70	70	71.8	67.1	4.7									
	NC_111	Retail		70	NA	71.7	66.6	5.1									
	NC_112	Residential		65	70	71.3	66.2	5.1									
	NC_113	Office		70	75	63.1	58.2	4.9									
	NC_114	Retail		70	NA	70.3	65.2	5.1									
	NC_115	Industrial		80	NA	68.5	65.0	3.5									
	NC_116	Retail		70	NA	61.6	57.5	4.1									
	NC_1	Office	Night	70	75	67.4	63.2	4.2	103	Yes	Yes	20	5,409	107,396	$2,147,920	$20,854	Propose to Construct
	NC_2	Residential		55	70	66.4	61.9	4.5									
	NC_3	Residential		55	70	66.5	62.1	4.4									
	NC_4	Residential		55	70	67.1	62.3	4.8									
	NC_5	Residential		55	70	66.4	62.3	4.1									
	NC_6	Residential		55	70	66.8	62.1	4.7									
	NC_7	Residential		55	70	66.3	61.4	4.9									
	NC_8_1	Residential		55	70	65.1	60.0	5.1									
	NC_8_2	Residential		55	70	65.7	62.1	3.6									
	NC_8_3	Residential		55	70	65.9	63.7	2.2									
	NC_9_1	Residential		55	70	65.1	60.0	5.1									
	NC_9_2	Residential		55	70	65.9	62.4	3.5									
	NC_9_3	Residential		55	70	66.2	63.9	2.3									
	NC_10_1	Residential		55	70	65.1	59.9	5.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NC_10_2	Residential		55	70	65.7	62.1	3.6									
	NC_10_3	Residential		55	70	66.0	63.7	2.3									
	NC_11_1	Residential		55	70	65.8	60.2	5.6									
	NC_11_2	Residential		55	70	66.2	62.2	4.0									
	NC_11_3	Residential		55	70	66.4	64.0	2.4									
	NC_12_1	Residential		55	70	67.4	60.9	6.5									
	NC_12_2	Residential		55	70	67.8	63.1	4.7									
	NC_12_3	Residential		55	70	68.0	65.3	2.7									
	NC_13_1	Residential		55	70	68.0	61.0	7.0									
	NC_13_2	Residential		55	70	68.4	63.4	5.0									
	NC_13_3	Residential		55	70	68.6	65.7	2.9									
	NC_14_1	Residential		55	70	69.2	61.4	7.8									
	NC_14_2	Residential		55	70	69.5	63.9	5.6									
	NC_14_3	Residential		55	70	69.6	66.5	3.1									
	NC_15_1	Residential		55	70	69.1	60.7	8.4									
	NC_15_2	Residential		55	70	70.1	63.3	6.8									
	NC_15_3	Residential		55	70	70.2	66.5	3.7									
	NC_16_1	Residential		55	70	67.8	60.1	7.7									
	NC_16_2	Residential		55	70	68.8	62.4	6.4									
	NC_16_3	Residential		55	70	69.1	65.4	3.7									
	NC_17_1	Residential		55	70	67.3	59.8	7.5									
Wall NC1	NC_17_2	Residential	Night	55	70	68.2	62.0	6.2	103	Yes	Yes	20	5,409	107,396	$2,147,920	$20,854	Propose to Construct
	NC_17_3	Residential		55	70	68.5	64.9	3.6									
	NC_18_1	Residential		55	70	66.2	59.2	7.0									
	NC_18_2	Residential		55	70	66.8	61.1	5.7									
	NC_18_3	Residential		55	70	67.2	63.7	3.5									
	NC_19_1	Residential		55	70	65.4	58.7	6.7									
	NC_19_2	Residential		55	70	66.1	61.2	4.9									
	NC_19_3	Residential		55	70	66.6	63.2	3.4									
	NC_20_1	Residential		55	70	65.4	58.7	6.7									
	NC_20_2	Residential		55	70	66.1	61.0	5.1									
	NC_20_3	Residential		55	70	66.7	63.4	3.3									
	NC_21_1	Residential		55	70	65.0	58.6	6.4									
	NC_21_2	Residential		55	70	65.7	60.8	4.9									
	NC_21_3	Residential		55	70	66.3	63.1	3.2									
	NC_22_1	Residential		55	70	60.3	60.3	0.0									
	NC_22_2	Residential		55	70	60.7	60.6	0.1									
	NC_22_3	Residential		55	70	62.3	62.3	0.0									
	NC_23_1	Residential		55	70	59.1	59.1	0.0									
	NC_23_2	Residential		55	70	59.6	59.6	0.0									
	NC_23_3	Residential		55	70	61.6	61.6	0.0									
	NC_24_1	Residential		55	70	58.2	58.2	0.0									
	NC_24_2	Residential		55	70	58.7	58.7	0.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NC_24_3	Residential		55	70	60.9	60.9	0.0									
	NC_25_1	Residential		55	70	58.2	58.2	0.0									
	NC_25_2	Residential		55	70	58.7	58.7	0.0									
	NC_25_3	Residential		55	70	60.9	60.9	0.0									
	NC_26_1	Residential		55	70	59.6	59.6	0.0									
	NC_26_2	Residential		55	70	60.2	60.2	0.0									
	NC_26_3	Residential		55	70	62.1	62.1	0.0									
	NC_27_1	Residential		55	70	60.3	60.3	0.0									
	NC_27_2	Residential		55	70	60.8	60.8	0.0									
	NC_27_3	Residential		55	70	62.4	62.4	0.0									
	NC_28_1	Residential		55	70	65.3	58.9	6.4									
	NC_28_2	Residential		55	70	65.9	60.8	5.1									
	NC_28_3	Residential		55	70	66.5	63.1	3.4									
	NC_29_1	Residential		55	70	65.7	59.1	6.6									
	NC_29_2	Residential		55	70	66.4	61.1	5.3									
	NC_29_3	Residential		55	70	66.9	63.5	3.4									
	NC_30_1	Residential		55	70	65.8	59.3	6.5									
	NC_30_2	Residential		55	70	66.5	61.1	5.4									
	NC_30_3	Residential		55	70	66.9	63.5	3.4									
	NC_31_1	Residential		55	70	66.7	60.0	6.7									
	NC_31_2	Residential		55	70	67.4	61.9	5.5									
Wall NC1	NC_31_3	Residential	Night	55	70	67.7	64.1	3.6	103	Yes	Yes	20	5,409	107,396	$2,147,920	$20,854	Propose to Construct
	NC_32_1	Residential		55	70	68.2	60.8	7.4									
	NC_32_2	Residential		55	70	69.0	62.8	6.2									
	NC_32_3	Residential		55	70	69.4	65.3	4.1									
	NC_33_1	Residential		55	70	68.9	61.1	7.8									
	NC_33_2	Residential		55	70	70.0	63.3	6.7									
	NC_33_3	Residential		55	70	70.3	66.0	4.3									
	NC_34_1	Residential		55	70	70.4	61.2	9.2									
	NC_34_2	Residential		55	70	71.2	63.8	7.4									
	NC_34_3	Residential		55	70	71.4	66.9	4.5									
	NC_35_1	Residential		55	70	71.9	60.6	11.3									
	NC_35_2	Residential		55	70	72.2	63.5	8.7									
	NC_35_3	Residential		55	70	72.3	67.3	5.0									
	NC_36_1	Residential		55	70	70.6	60.2	10.4									
	NC_36_2	Residential		55	70	70.9	62.9	8.0									
	NC_36_3	Residential		55	70	71.2	66.2	5.0									
	NC_37_1	Residential		55	70	69.7	60.0	9.7									
	NC_37_2	Residential		55	70	70.1	62.5	7.6									
	NC_37_3	Residential		55	70	70.3	65.6	4.7									
	NC_38_1	Residential		55	70	68.2	59.6	8.6									
	NC_38_2	Residential		55	70	68.6	61.8	6.8									
	NC_38_3	Residential		55	70	68.9	64.5	4.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NC_39_1	Residential		55	70	67.4	59.3	8.1									
	NC_39_2	Residential		55	70	67.8	61.4	6.4									
	NC_39_3	Residential		55	70	68.2	64.1	4.1									
	NC_40_1	Residential		55	70	67.3	59.4	7.9									
	NC_40_2	Residential		55	70	67.8	61.5	6.3									
	NC_40_3	Residential		55	70	68.2	64.2	4.0									
	NC_41_1	Residential		55	70	66.8	59.4	7.4									
	NC_41_2	Residential		55	70	67.4	61.4	6.0									
	NC_41_3	Residential		55	70	67.9	64.0	3.9									
	NC_42_1	Residential		55	70	60.2	60.2	0.0									
	NC_42_2	Residential		55	70	60.6	60.6	0.0									
	NC_42_3	Residential		55	70	62.3	62.3	0.0									
	NC_43_1	Residential		55	70	59.4	59.4	0.0									
	NC_43_2	Residential		55	70	60.0	60.0	0.0									
	NC_43_3	Residential		55	70	61.9	61.9	0.0									
	NC_44_1	Residential		55	70	58.3	58.3	0.0									
	NC_44_2	Residential		55	70	58.8	58.7	0.1									
	NC_44_3	Residential		55	70	60.9	60.9	0.0									
	NC_45_1	Residential		55	70	58.3	58.3	0.0									
	NC_45_2	Residential		55	70	58.8	58.8	0.0									
	NC_45_3	Residential		55	70	61.0	61.0	0.0									
Wall NC1	NC_46_1	Residential	Night	55	70	59.4	59.3	0.1	103	Yes	Yes	20	5,409	107,396	$2,147,920	$20,854	Propose to Construct
	NC_46_2	Residential		55	70	60.0	60.0	0.0									
	NC_46_3	Residential		55	70	61.9	61.9	0.0									
	NC_47_1	Residential		55	70	60.0	60.0	0.0									
	NC_47_2	Residential		55	70	60.6	60.5	0.1									
	NC_47_3	Residential		55	70	62.3	62.3	0.0									
	NC_48	Residential		55	70	67.7	60.9	6.8									
	NC_49	Residential		55	70	66.3	61.3	5.0									
	NC_50	Residential		55	70	66.1	60.0	6.1									
	NC_51	Residential		55	70	65.1	56.4	8.7									
	NC_52	Residential		55	70	67.4	57.8	9.6									
	NC_53	Retail		70	NA	66.9	58.4	8.5									
	NC_54	Residential		55	70	65.4	63.9	1.5									
	NC_55	Residential		55	70	65.0	63.5	1.5									
	NC_56	Residential		55	70	65.7	63.6	2.1									
	NC_57	Office		70	75	74.3	61.0	13.3									
	NC_58	Residential		55	70	75.0	62.2	12.8									
	NC_59_1	Residential		55	70	74.0	61.5	12.5									
	NC_59_2	Residential		55	70	74.3	65.5	8.8									
	NC_59_3	Residential		55	70	74.6	70.7	3.9									
	NC_60_1	Residential		55	70	68.2	60.1	8.1									
	NC_60_2	Residential		55	70	69.3	63.1	6.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NC_60_3	Residential		55	70	71.1	68.3	2.8									
	NC_61_1	Residential		55	70	66.8	60.5	6.3									
	NC_61_2	Residential		55	70	68.2	63.0	5.2									
	NC_61_3	Residential		55	70	70.1	67.4	2.7									
	NC_62_1	Residential		55	70	60.9	60.9	0.0									
	NC_62_2	Residential		55	70	62.5	62.5	0.0									
	NC_62_3	Residential		55	70	68.1	66.7	1.4									
	NC_63_1	Residential		55	70	74.2	61.5	12.7									
	NC_63_2	Residential		55	70	74.4	65.6	8.8									
	NC_63_3	Residential		55	70	74.6	70.9	3.7									
	NC_64_1	Residential		55	70	69.5	59.9	9.6									
	NC_64_2	Residential		55	70	69.8	62.6	7.2									
	NC_64_3	Residential		55	70	71.4	68.7	2.7									
	NC_65_1	Residential		55	70	68.1	60.3	7.8									
	NC_65_2	Residential		55	70	68.5	62.6	5.9									
	NC_65_3	Residential		55	70	70.3	67.7	2.6									
	NC_66_1	Residential		55	70	66.1	61.3	4.8									
	NC_66_2	Residential		55	70	66.6	62.8	3.8									
	NC_66_3	Residential		55	70	68.7	66.7	2.0									
	NC_67_1	Residential		55	70	76.2	62.0	14.2									
	NC_67_2	Residential		55	70	76.4	66.7	9.7									
Wall NC1	NC_67_3	Residential	Night	55	70	76.4	73.3	3.1	103	Yes	Yes	20	5,409	107,396	$2,147,920	$20,854	Propose to Construct
	NC_68_1	Residential		55	70	76.2	62.0	14.2									
	NC_68_2	Residential		55	70	76.4	66.6	9.8									
	NC_68_3	Residential		55	70	76.4	73.2	3.2									
	NC_69_1	Residential		55	70	76.2	62.1	14.1									
	NC_69_2	Residential		55	70	76.4	66.6	9.8									
	NC_69_3	Residential		55	70	76.4	73.3	3.1									
	NC_70_1	Residential		55	70	76.2	62.3	13.9									
	NC_70_2	Residential		55	70	76.4	67.0	9.4									
	NC_70_3	Residential		55	70	76.4	73.5	2.9									
	NC_71_1	Residential		55	70	59.5	59.5	0.0									
	NC_71_2	Residential		55	70	61.6	61.6	0.0									
	NC_71_3	Residential		55	70	68.6	68.2	0.4									
	NC_72_1	Residential		55	70	59.6	59.6	0.0									
	NC_72_2	Residential		55	70	62.2	62.2	0.0									
	NC_72_3	Residential		55	70	68.1	67.9	0.2									
	NC_73_1	Residential		55	70	59.7	59.7	0.0									
	NC_73_2	Residential		55	70	62.3	62.3	0.0									
	NC_73_3	Residential		55	70	68.2	67.9	0.3									
	NC_74_1	Residential		55	70	59.6	59.6	0.0									
	NC_74_2	Residential		55	70	62.1	62.1	0.0									
	NC_74_3	Residential		55	70	68.6	68.2	0.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NC_75	Residential		55	70	64.1	61.7	2.4									
	NC_76_1	Residential		55	70	75.9	62.2	13.7									
	NC_76_2	Residential		55	70	76.1	66.9	9.2									
	NC_76_3	Residential		55	70	76.1	73.0	3.1									
	NC_77_1	Residential		55	70	70.6	60.1	10.5									
	NC_77_2	Residential		55	70	70.9	63.2	7.7									
	NC_77_3	Residential		55	70	72.1	69.2	2.9									
	NC_78_1	Residential		55	70	68.9	60.2	8.7									
	NC_78_2	Residential		55	70	69.2	62.7	6.5									
	NC_78_3	Residential		55	70	70.8	68.0	2.8									
	NC_79_1	Residential		55	70	66.9	61.0	5.9									
	NC_79_2	Residential		55	70	67.3	62.8	4.5									
	NC_79_3	Residential		55	70	69.2	66.9	2.3									
	NC_80_1	Residential		55	70	76.0	62.1	13.9									
	NC_80_2	Residential		55	70	76.3	67.1	9.2									
	NC_80_3	Residential		55	70	76.3	73.3	3.0									
	NC_81_1	Residential		55	70	70.0	60.8	9.2									
	NC_81_2	Residential		55	70	70.7	63.9	6.8									
	NC_81_3	Residential		55	70	72.0	69.0	3.0									
	NC_82_1	Residential		55	70	68.9	60.9	8.0									
	NC_82_2	Residential		55	70	69.8	63.5	6.3									
Wall NC1	NC_82_3	Residential	Night	55	70	71.2	68.2	3.0	103	Yes	Yes	20	5,409	107,396	$2,147,920	$20,854	Propose to Construct
	NC_83_1	Residential		55	70	59.9	59.9	0.0									
	NC_83_2	Residential		55	70	61.5	61.5	0.0									
	NC_83_3	Residential		55	70	67.6	66.8	0.8									
	NC_84	Residential		55	70	75.1	61.7	13.4									
	NC_85	Residential		55	70	66.2	63.5	2.7									
	NC_86	Residential		55	70	66.1	63.6	2.5									
	NC_87	Residential		55	70	65.7	63.4	2.3									
	NC_88	Residential		55	70	65.5	63.5	2.0									
	NC_89	Residential		55	70	65.4	63.6	1.8									
	NC_90	Residential		55	70	64.9	63.4	1.5									
	NC_91	Residential		55	70	65.4	63.5	1.9									
	NC_92	Residential		55	70	65.5	63.4	2.1									
	NC_93	Residential		55	70	65.5	63.4	2.1									
	NC_94	Residential		55	70	65.8	63.5	2.3									
	NC_95	Residential		55	70	66.3	63.5	2.8									
	NC_96	Residential		55	70	66.7	63.6	3.1									
	NC_97	Residential		55	70	67.1	63.8	3.3									
	NC_98	Residential		55	70	67.2	63.5	3.7									
	NC_99	Residential		55	70	67.4	63.6	3.8									
	NC_100	Residential		55	70	73.8	61.1	12.7									
	NC_101	Residential		55	70	74.6	62.5	12.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C21 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NC1 in Area NC - East of I-35W between County Road D and freight tracks

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NC1	NC_102	Residential	Night	55	70	74.6	62.4	12.2	103	Yes	Yes	20	5,409	107,396	$2,147,920	$20,854	Propose to Construct
	NC_103	Residential		55	70	75.1	61.3	13.8									
	NC_104	Residential		55	70	75.0	61.0	14.0									
	NC_105	Residential		55	70	68.2	64.1	4.1									
	NC_106	Residential		55	70	68.5	64.2	4.3									
	NC_107	Recreation		70	70	68.9	64.4	4.5									
	NC_108	Recreation		70	70	69.1	64.5	4.6									
	NC_109	Recreation		70	70	69.3	64.5	4.8									
	NC_110	Recreation		70	70	69.7	64.7	5.0									
	NC_111	Retail		70	NA	69.8	64.2	5.6									
	NC_112	Residential		55	70	69.5	63.6	5.9									
	NC_113	Office		70	75	62.7	56.6	6.1									
	NC_114	Retail		70	NA	68.8	62.4	6.4									
	NC_115	Industrial		80	NA	66.1	62.2	3.9									
	NC_116	Retail		70	NA	61.2	56.3	4.9									

Table C22
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SD1 in Area SD - West of I-35W between freight tracks and Country Road E2

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SD1	SD_3	Industrial	Day	80	NA	74.5	68.7	5.8	1	Yes	No	20	914	17,496	$349,920	N/A	Does Not Meet Noise Reduction Design Goal
	SD_4	Office		70	75	68.4	64.4	4.0									
	SD_5	Industrial		80	NA	71.0	66.7	4.3									
	SD_3	Industrial	Night	80	NA	74.2	68.4	5.8	1	Yes	No	20	914	17,496	$349,920	N/A	Does Not Meet Noise Reduction Design Goal
	SD_4	Office		70	75	68.1	64.1	4.0									
	SD_5	Industrial		80	NA	70.7	66.5	4.2									

Table C23
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SD2 in Area SD - West of I-35W between freight tracks and Country Road E2

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SD2	SD_6	Retail	Day	70	NA	70.6	66.7	3.9	0	No	No	20	421	7,636	$152,720	N/A	Does Not Meet Noise Reduction Design Goal
	SD_6	Retail	Night	70	NA	70.3	66.4	3.9	0	No	No	20	421	7,636	$152,720	N/A	Does Not Meet Noise Reduction Design Goal

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C24
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall ND1 in Area ND - East of I-35W between freight tracks and Country Road E2

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall ND1	ND_1	Residential	Day	65	70	66.2	65.0	1.2	3	Yes	No	20	2,605	51,316	$1,026,320	N/A	Does Not Meet Noise Reduction Design Goal
	ND_2	Residential		65	70	61.9	59.7	2.2									
	ND_3	Residential		65	70	68.8	66.9	1.9									
	ND_4	Residential		65	70	60.8	59.4	1.4									
	ND_5	Residential		65	70	61.1	59.7	1.4									
	ND_6	Residential		65	70	63.0	60.2	2.8									
	ND_7	Residential		65	70	69.7	65.2	4.5									
	ND_8	Residential		65	70	67.0	61.9	5.1									
	ND_9	Residential		65	70	68.9	63.2	5.7									
	ND_10	Residential		65	70	64.1	60.8	3.3									
	ND_11	Residential		65	70	67.5	61.8	5.7									
	ND_12	Office		70	75	67.6	65.6	2.0									
	ND_1	Residential	Night	55	70	63.9	62.6	1.3	4	Yes	No	20	2,605	51,316	$1,026,320	N/A	Does Not Meet Noise Reduction Design Goal
	ND_2	Residential		55	70	61.2	58.3	2.9									
	ND_3	Residential		55	70	66.4	64.5	1.9									
	ND_4	Residential		55	70	59.7	57.9	1.8									
	ND_5	Residential		55	70	60.3	58.4	1.9									
	ND_6	Residential		55	70	62.5	58.8	3.7									
	ND_7	Residential		55	70	69.1	62.9	6.2									
	ND_8	Residential		55	70	66.7	61.0	5.7									
	ND_9	Residential		55	70	68.6	62.1	6.5									
	ND_10	Residential		55	70	63.8	60.3	3.5									
	ND_11	Residential		55	70	67.2	60.8	6.4									
	ND_12	Office		70	75	66.5	63.6	2.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C25
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SE1 in Area SE - West of I-35W between County Road E2 and 10th Street West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SE_1	Residential		65	70	69.9	67.7	2.2									
	SE_2	Residential		65	70	69.6	65.3	4.3									
	SE_3	Residential		65	70	68.1	57.0	11.1									
	SE_4	Residential		65	70	68.1	62.5	5.6									
	SE_5	Residential		65	70	69.0	60.1	8.9									
	SE_6	Residential		65	70	66.1	62.3	3.8									
	SE_7	Residential		65	70	63.3	61.2	2.1									
	SE_8	Residential		65	70	65.9	64.9	1.0									
	SE_9	Residential		65	70	65.6	64.3	1.3									
	SE_10	Residential		65	70	65.2	63.4	1.8									
	SE_11	Residential		65	70	64.5	62.5	2.0									
	SE_12	Residential		65	70	63.8	61.8	2.0									
	SE_13	Residential		65	70	63.3	61.4	1.9									
	SE_14	Residential		65	70	62.8	61.0	1.8									
	SE_15	Residential		65	70	62.4	60.8	1.6									
	SE_16	Residential		65	70	69.0	64.4	4.6									
	SE_17	Residential		65	70	69.5	65.7	3.8									
	SE_18	Residential		65	70	70.5	66.6	3.9									
	SE_19	Residential		65	70	71.2	67.8	3.4									
	SE_20	Residential		65	70	71.2	68.8	2.4									
	SE_21	Residential		65	70	70.9	69.0	1.9									
Wall SE1	SE_22	Residential	Day	65	70	70.7	69.0	1.7	33	Yes	Yes	20	2,560	50,416	$1,008,320	$30,555	Propose to Construct
	SE_23	Residential		65	70	70.5	68.4	2.1									
	SE_24	Residential		65	70	62.0	58.5	3.5									
	SE_25	Residential		65	70	60.8	58.3	2.5									
	SE_26	Residential		65	70	60.4	59.2	1.2									
	SE_27	Residential		65	70	62.9	61.2	1.7									
	SE_28	Residential		65	70	63.5	62.9	0.6									
	SE_29	Residential		65	70	65.9	64.4	1.5									
	SE_30	Residential		65	70	61.3	60.0	1.3									
	SE_31	Residential		65	70	61.5	60.0	1.5									
	SE_32	Residential		65	70	61.4	60.2	1.2									
	SE_33	Residential		65	70	61.5	60.4	1.1									
	SE_34	Residential		65	70	62.1	60.9	1.2									
	SE_35	Residential		65	70	62.7	61.5	1.2									
	SE_36	Residential		65	70	62.9	61.7	1.2									
	SE_37	Residential		65	70	63.1	61.9	1.2									
	SE_38	Residential		65	70	62.7	61.3	1.4									
	SE_39	Residential		65	70	62.8	61.1	1.7									
	SE_40_1	Residential		65	70	71.1	63.9	7.2									
	SE_40_2	Residential		65	70	71.2	67.6	3.6									
	SE_40_3	Residential		65	70	72.5	71.6	0.9									
	SE_41_1	Residential		65	70	74.2	63.5	10.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C25 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SE1 in Area SE - West of I-35W between County Road E2 and 10th Street West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SE_41_2	Residential		65	70	74.3	68.4	5.9									
	SE_41_3	Residential		65	70	74.8	73.2	1.6									
	SE_42_1	Residential		65	70	74.0	63.3	10.7									
	SE_42_2	Residential		65	70	74.1	68.1	6.0									
	SE_42_3	Residential		65	70	74.5	72.9	1.6									
	SE_43_1	Residential		65	70	73.6	63.1	10.5									
	SE_43_2	Residential		65	70	73.8	67.7	6.1									
	SE_43_3	Residential		65	70	74.2	72.4	1.8									
	SE_44_1	Residential		65	70	73.9	63.4	10.5									
	SE_44_2	Residential		65	70	74.1	68.1	6.0									
	SE_44_3	Residential		65	70	74.5	72.8	1.7									
	SE_45_1	Residential		65	70	69.2	60.6	8.6									
	SE_45_2	Residential		65	70	69.4	63.7	5.7									
	SE_45_3	Residential		65	70	71.2	70.0	1.2									
	SE_46_1	Residential		65	70	68.5	60.0	8.5									
	SE_46_2	Residential		65	70	68.8	63.1	5.7									
	SE_46_3	Residential		65	70	70.6	69.1	1.5									
	SE_47_1	Residential		65	70	59.3	58.6	0.7									
	SE_47_2	Residential		65	70	62.0	61.7	0.3									
	SE_47_3	Residential		65	70	67.6	67.6	0.0									
	SE_48_1	Residential		65	70	58.8	58.4	0.4									
Wall SE1	SE_48_2	Residential	Day	65	70	61.8	61.6	0.2	33	Yes	Yes	20	2,560	50,416	$1,008,320	$30,555	Propose to Construct
	SE_48_3	Residential		65	70	68.0	68.0	0.0									
	SE_49_1	Residential		65	70	59.1	58.5	0.6									
	SE_49_2	Residential		65	70	62.0	61.8	0.2									
	SE_49_3	Residential		65	70	68.1	68.0	0.1									
	SE_50_1	Residential		65	70	60.4	59.2	1.2									
	SE_50_2	Residential		65	70	62.6	62.2	0.4									
	SE_50_3	Residential		65	70	68.0	68.0	0.0									
	SE_51_1	Residential		65	70	70.9	63.9	7.0									
	SE_51_2	Residential		65	70	71.0	67.3	3.7									
	SE_51_3	Residential		65	70	72.0	70.9	1.1									
	SE_52_1	Residential		65	70	69.5	60.5	9.0									
	SE_52_2	Residential		65	70	69.7	63.8	5.9									
	SE_52_3	Residential		65	70	71.5	70.0	1.5									
	SE_53_1	Residential		65	70	72.9	62.9	10.0									
	SE_53_2	Residential		65	70	73.0	66.6	6.4									
	SE_53_3	Residential		65	70	73.5	71.4	2.1									
	SE_54_1	Residential		65	70	72.7	62.5	10.2									
	SE_54_2	Residential		65	70	72.8	66.3	6.5									
	SE_54_3	Residential		65	70	73.3	70.9	2.4									
	SE_55_1	Residential		65	70	72.7	62.4	10.3									
	SE_55_2	Residential		65	70	72.8	66.2	6.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C25 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SE1 in Area SE - West of I-35W between County Road E2 and 10th Street West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SE_55_3	Residential		65	70	73.3	70.8	2.5									
	SE_56_1	Residential		65	70	73.0	62.7	10.3									
	SE_56_2	Residential		65	70	73.1	66.6	6.5									
	SE_56_3	Residential		65	70	73.5	71.1	2.4									
	SE_57_1	Residential		65	70	67.9	61.2	6.7									
	SE_57_2	Residential		65	70	69.0	64.1	4.9									
	SE_57_3	Residential		65	70	70.6	69.1	1.5									
	SE_58_1	Residential		65	70	67.3	61.0	6.3									
	SE_58_2	Residential		65	70	68.8	63.9	4.9									
	SE_58_3	Residential		65	70	70.1	68.4	1.7									
	SE_59_1	Residential		65	70	58.8	58.4	0.4									
	SE_59_2	Residential		65	70	61.6	61.5	0.1									
	SE_59_3	Residential		65	70	67.3	67.2	0.1									
	SE_60_1	Residential		65	70	58.6	58.2	0.4									
	SE_60_2	Residential		65	70	61.6	61.4	0.2									
	SE_60_3	Residential		65	70	67.5	67.4	0.1									
	SE_61_1	Residential		65	70	58.7	58.3	0.4									
	SE_61_2	Residential		65	70	61.7	61.5	0.2									
	SE_61_3	Residential		65	70	67.4	67.4	0.0									
	SE_62_1	Residential		65	70	58.9	58.5	0.4									
	SE_62_2	Residential		65	70	61.8	61.6	0.2									
Wall SE1	SE_62_3	Residential	Day	65	70	67.3	67.3	0.0	33	Yes	Yes	20	2,560	50,416	$1,008,320	$30,555	Propose to Construct
	SE_63_1	Residential		65	70	68.7	59.9	8.8									
	SE_63_2	Residential		65	70	69.0	63.2	5.8									
	SE_63_3	Residential		65	70	70.8	69.2	1.6									
	SE_64	Residential		65	70	69.7	66.6	3.1									
	SE_65	Residential		65	70	68.9	65.2	3.7									
	SE_66	Residential		65	70	68.1	64.1	4.0									
	SE_67	Residential		65	70	66.8	62.9	3.9									
	SE_68	Residential		65	70	64.9	61.9	3.0									
	SE_69	Residential		65	70	64.9	61.6	3.3									
	SE_70	Residential		65	70	63.9	61.4	2.5									
	SE_71	Residential		65	70	63.0	61.4	1.6									
	SE_72	Residential		65	70	63.3	61.5	1.8									
	SE_73	Residential		65	70	66.0	62.9	3.1									
	SE_74	Residential		65	70	65.6	61.7	3.9									
	SE_75	Residential		65	70	65.4	61.2	4.2									
	SE_76	Residential		65	70	64.4	60.5	3.9									
	SE_77	Residential		65	70	63.7	60.2	3.5									
	SE_78	Residential		65	70	63.4	60.2	3.2									
	SE_79	Residential		65	70	62.8	60.1	2.7									
	SE_80	Residential		65	70	62.8	60.2	2.6									
	SE_81	Residential		65	70	63.3	60.6	2.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C25 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SE1 in Area SE - West of I-35W between County Road E2 and 10th Street West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SE1	SE_82	Residential	Day	65	70	63.2	60.2	3.0	33	Yes	Yes	20	2,560	50,416	$1,008,320	$30,555	Propose to Construct
	SE_83	Residential		65	70	63.3	60.2	3.1									
	SE_84	Residential		65	70	62.3	59.4	2.9									
	SE_85	Residential		65	70	62.2	59.4	2.8									
	SE_86	Residential		65	70	62.3	59.6	2.7									
	SE_87	Residential		65	70	62.2	59.8	2.4									
	SE_88	Medical		70	70	76.3	64.7	11.6									
	SE_89	Medical		70	70	75.6	67.0	8.6									
	SE_90	Residential		65	70	65.7	61.8	3.9									
	SE_91	Education		65	70	65.3	62.6	2.7									
	SE_1	Residential	Night	55	70	69.6	67.6	2.0	35	Yes	Yes	20	2,560	50,416	$1,008,320	$28,809	Propose to Construct
	SE_2	Residential		55	70	69.3	65.1	4.2									
	SE_3	Residential		55	70	67.8	56.7	11.1									
	SE_4	Residential		55	70	67.8	62.2	5.6									
	SE_5	Residential		55	70	68.8	59.8	9.0									
	SE_6	Residential		55	70	65.9	62.1	3.8									
	SE_7	Residential		55	70	63.1	61.0	2.1									
	SE_8	Residential		55	70	65.6	64.7	0.9									
	SE_9	Residential		55	70	65.3	64.1	1.2									
	SE_10	Residential		55	70	64.9	63.2	1.7									
	SE_11	Residential		55	70	64.2	62.3	1.9									
	SE_12	Residential		55	70	63.5	61.6	1.9									
	SE_13	Residential		55	70	63.0	61.2	1.8									
	SE_14	Residential		55	70	62.5	60.7	1.8									
	SE_15	Residential		55	70	62.1	60.5	1.6									
	SE_16	Residential		55	70	68.7	64.0	4.7									
	SE_17	Residential		55	70	69.1	65.3	3.8									
	SE_18	Residential		55	70	70.1	66.2	3.9									
	SE_19	Residential		55	70	70.7	67.4	3.3									
	SE_20	Residential		55	70	70.7	68.4	2.3									
	SE_21	Residential		55	70	70.4	68.6	1.8									
	SE_22	Residential		55	70	70.3	68.5	1.8									
	SE_23	Residential		55	70	70.1	67.9	2.2									
	SE_24	Residential		55	70	61.8	58.1	3.7									
	SE_25	Residential		55	70	60.5	57.9	2.6									
	SE_26	Residential		55	70	60.1	58.8	1.3									
	SE_27	Residential		55	70	62.5	60.7	1.8									
	SE_28	Residential		55	70	63.1	62.4	0.7									
	SE_29	Residential		55	70	65.4	63.9	1.5									
	SE_30	Residential		55	70	61.0	59.7	1.3									
	SE_31	Residential		55	70	61.1	59.6	1.5									
	SE_32	Residential		55	70	61.1	59.8	1.3									
	SE_33	Residential		55	70	61.1	60.0	1.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C25 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SE1 in Area SE - West of I-35W between County Road E2 and 10th Street West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SE_34	Residential		55	70	61.7	60.5	1.2									
	SE_35	Residential		55	70	62.2	61.0	1.2									
	SE_36	Residential		55	70	62.5	61.2	1.3									
	SE_37	Residential		55	70	62.7	61.4	1.3									
	SE_38	Residential		55	70	62.2	60.8	1.4									
	SE_39	Residential		55	70	62.4	60.6	1.8									
	SE_40_1	Residential		55	70	70.7	63.5	7.2									
	SE_40_2	Residential		55	70	70.8	67.2	3.6									
	SE_40_3	Residential		55	70	72.1	71.2	0.9									
	SE_41_1	Residential		55	70	73.8	63.1	10.7									
	SE_41_2	Residential		55	70	73.9	67.9	6.0									
	SE_41_3	Residential		55	70	74.3	72.8	1.5									
	SE_42_1	Residential		55	70	73.6	62.9	10.7									
	SE_42_2	Residential		55	70	73.7	67.6	6.1									
	SE_42_3	Residential		55	70	74.1	72.5	1.6									
	SE_43_1	Residential		55	70	73.2	62.6	10.6									
	SE_43_2	Residential		55	70	73.3	67.2	6.1									
	SE_43_3	Residential		55	70	73.8	72.0	1.8									
	SE_44_1	Residential		55	70	73.5	62.9	10.6									
	SE_44_2	Residential		55	70	73.6	67.6	6.0									
	SE_44_3	Residential		55	70	74.1	72.4	1.7									
Wall SE1	SE_45_1	Residential	Night	55	70	68.7	60.1	8.6	35	Yes	Yes	20	2,560	50,416	$1,008,320	$28,809	Propose to Construct
	SE_45_2	Residential		55	70	68.9	63.2	5.7									
	SE_45_3	Residential		55	70	70.8	69.5	1.3									
	SE_46_1	Residential		55	70	68.1	59.6	8.5									
	SE_46_2	Residential		55	70	68.3	62.6	5.7									
	SE_46_3	Residential		55	70	70.2	68.7	1.5									
	SE_47_1	Residential		55	70	58.9	58.2	0.7									
	SE_47_2	Residential		55	70	61.6	61.3	0.3									
	SE_47_3	Residential		55	70	67.2	67.1	0.1									
	SE_48_1	Residential		55	70	58.4	58.0	0.4									
	SE_48_2	Residential		55	70	61.4	61.2	0.2									
	SE_48_3	Residential		55	70	67.5	67.5	0.0									
	SE_49_1	Residential		55	70	58.7	58.1	0.6									
	SE_49_2	Residential		55	70	61.6	61.4	0.2									
	SE_49_3	Residential		55	70	67.7	67.7	0.0									
	SE_50_1	Residential		55	70	60.1	58.8	1.3									
	SE_50_2	Residential		55	70	62.2	61.8	0.4									
	SE_50_3	Residential		55	70	67.6	67.6	0.0									
	SE_51_1	Residential		55	70	70.5	63.4	7.1									
	SE_51_2	Residential		55	70	70.6	66.9	3.7									
	SE_51_3	Residential		55	70	71.6	70.5	1.1									
	SE_52_1	Residential		55	70	69.1	60.0	9.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C25 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SE1 in Area SE - West of I-35W between County Road E2 and 10th Street West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SE_52_2	Residential		55	70	69.3	63.4	5.9									
	SE_52_3	Residential		55	70	71.1	69.5	1.6									
	SE_53_1	Residential		55	70	72.5	62.4	10.1									
	SE_53_2	Residential		55	70	72.6	66.1	6.5									
	SE_53_3	Residential		55	70	73.1	70.9	2.2									
	SE_54_1	Residential		55	70	72.2	62.1	10.1									
	SE_54_2	Residential		55	70	72.3	65.8	6.5									
	SE_54_3	Residential		55	70	72.8	70.5	2.3									
	SE_55_1	Residential		55	70	72.2	61.9	10.3									
	SE_55_2	Residential		55	70	72.4	65.7	6.7									
	SE_55_3	Residential		55	70	72.8	70.3	2.5									
	SE_56_1	Residential		55	70	72.5	62.2	10.3									
	SE_56_2	Residential		55	70	72.6	66.1	6.5									
	SE_56_3	Residential		55	70	73.1	70.6	2.5									
	SE_57_1	Residential		55	70	67.4	60.6	6.8									
	SE_57_2	Residential		55	70	68.6	63.5	5.1									
	SE_57_3	Residential		55	70	70.1	68.6	1.5									
	SE_58_1	Residential		55	70	66.8	60.5	6.3									
	SE_58_2	Residential		55	70	68.3	63.3	5.0									
	SE_58_3	Residential		55	70	69.7	67.9	1.8									
	SE_59_1	Residential		55	70	58.4	58.0	0.4									
Wall SE1	SE_59_2	Residential	Night	55	70	61.2	61.0	0.2	35	Yes	Yes	20	2,560	50,416	$1,008,320	$28,809	Propose to Construct
	SE_59_3	Residential		55	70	66.8	66.7	0.1									
	SE_60_1	Residential		55	70	58.2	57.8	0.4									
	SE_60_2	Residential		55	70	61.1	61.0	0.1									
	SE_60_3	Residential		55	70	67.1	67.0	0.1									
	SE_61_1	Residential		55	70	58.3	57.9	0.4									
	SE_61_2	Residential		55	70	61.2	61.1	0.1									
	SE_61_3	Residential		55	70	67.0	67.0	0.0									
	SE_62_1	Residential		55	70	58.5	58.1	0.4									
	SE_62_2	Residential		55	70	61.4	61.2	0.2									
	SE_62_3	Residential		55	70	66.8	66.8	0.0									
	SE_63_1	Residential		55	70	68.3	59.4	8.9									
	SE_63_2	Residential		55	70	68.5	62.7	5.8									
	SE_63_3	Residential		55	70	70.4	68.7	1.7									
	SE_64	Residential		55	70	69.3	66.1	3.2									
	SE_65	Residential		55	70	68.5	64.7	3.8									
	SE_66	Residential		55	70	67.7	63.6	4.1									
	SE_67	Residential		55	70	66.3	62.4	3.9									
	SE_68	Residential		55	70	64.4	61.4	3.0									
	SE_69	Residential		55	70	64.4	61.1	3.3									
	SE_70	Residential		55	70	63.5	60.9	2.6									
	SE_71	Residential		55	70	62.5	60.9	1.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C25 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SE1 in Area SE - West of I-35W between County Road E2 and 10th Street West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SE1	SE_72	Residential	Night	55	70	62.9	61.0	1.9	35	Yes	Yes	20	2,560	50,416	$1,008,320	$28,809	Propose to Construct
	SE_73	Residential		55	70	65.5	62.4	3.1									
	SE_74	Residential		55	70	65.1	61.2	3.9									
	SE_75	Residential		55	70	64.9	60.7	4.2									
	SE_76	Residential		55	70	63.9	60.0	3.9									
	SE_77	Residential		55	70	63.2	59.7	3.5									
	SE_78	Residential		55	70	62.9	59.6	3.3									
	SE_79	Residential		55	70	62.3	59.6	2.7									
	SE_80	Residential		55	70	62.4	59.7	2.7									
	SE_81	Residential		55	70	62.8	60.1	2.7									
	SE_82	Residential		55	70	62.7	59.7	3.0									
	SE_83	Residential		55	70	62.8	59.6	3.2									
	SE_84	Residential		55	70	61.8	58.9	2.9									
	SE_85	Residential		55	70	61.7	58.9	2.8									
	SE_86	Residential		55	70	61.8	59.1	2.7									
	SE_87	Residential		55	70	61.7	59.2	2.5									
	SE_88	Medical		70	70	75.8	64.2	11.6									
	SE_89	Medical		70	70	74.9	66.3	8.6									
	SE_90	Residential		55	70	65.3	61.3	4.0									
	SE_91	Education		65	70	64.8	62.0	2.8									

Table C26
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SF1 in Area SF - West of I-35W between I-694 and County Road 96

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SF1	SF_1	Office	Day	70	75	69.2	63.3	5.9	4	Yes	Yes	20	1,750	34,216	$684,320	$171,080	Not Cost Effective
	SF_2	Office		70	75	71.7	62.4	9.3									
	SF_3	Office		70	75	71.9	61.4	10.5									
	SF_4	Retail		70	NA	74.8	64.0	10.8									
	SF_1	Office	Night	70	75	67.8	62.5	5.3	4	Yes	Yes	20	1,750	34,216	$684,320	$171,080	Not Cost Effective
	SF_2	Office		70	75	70.1	61.3	8.8									
	SF_3	Office		70	75	70.3	60.3	10.0									
	SF_4	Retail		70	NA	73.2	62.7	10.5									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C27
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SF1 in Area SF - West of I-35W between I-694 and County Road 96

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SF1	SF_1	Office	Day	70	75	69.2	64.5	4.7	3	Yes	Yes	15	1,750	25,926	$518,520	$172,840	Not Cost Effective
	SF_2	Office		70	75	71.7	64.2	7.5									
	SF_3	Office		70	75	71.9	63.1	8.8									
	SF_4	Retail		70	NA	74.8	65.9	8.9									
	SF_1	Office	Night	70	75	67.8	63.6	4.2	3	Yes	Yes	15	1,750	25,926	$518,520	$172,840	Not Cost Effective
	SF_2	Office		70	75	70.1	63.1	7.0									
	SF_3	Office		70	75	70.3	62.0	8.3									
	SF_4	Retail		70	NA	73.2	64.6	8.6									

Table C28
Build Alternative Noise Wall Cost Effectiveness - 10 Foot Noise Wall
Wall SF1 in Area SF - West of I-35W between I-694 and County Road 96

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SF1	SF_1	Office	Day	70	75	69.2	66.4	2.8	3	Yes	No	10	1,750	17,436	$348,720	N/A	Does Not Meet Noise Reduction Design Goal
	SF_2	Office		70	75	71.7	66.6	5.1									
	SF_3	Office		70	75	71.9	65.4	6.5									
	SF_4	Retail		70	NA	74.8	68.7	6.1									
	SF_1	Office	Night	70	75	67.8	65.4	2.4	2	Yes	No	10	1,750	17,436	$348,720	N/A	Does Not Meet Noise Reduction Design Goal
	SF_2	Office		70	75	70.1	65.6	4.5									
	SF_3	Office		70	75	70.3	64.2	6.1									
	SF_4	Retail		70	NA	73.2	67.4	5.8									

Table C29
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SF2 in Area SF - West of I-35W between I-694 and County Road 96

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SF2	SF_5	Industrial	Day	80	NA	75.6	75.4	0.2	3	Yes	Yes	20	1,127	21,756	$435,120	$145,040	Not Cost Effective
	SF_6	Industrial		80	NA	75.0	67.3	7.7									
	SF_7	Medical		70	70	72.6	61.5	11.1									
	SF_8	Hotel		65	75	70.9	61.4	9.5									
	SF_5	Industrial	Night	80	NA	73.9	73.6	0.3	3	Yes	Yes	20	1,127	21,756	$435,120	$145,040	Not Cost Effective
	SF_6	Industrial		80	NA	73.1	65.7	7.4									
	SF_7	Medical		70	70	70.6	60.0	10.6									
	SF_8	Hotel		55	75	69.1	59.9	9.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C30
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SF2 in Area SF - West of I-35W between I-694 and County Road 96

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SF2	SF_5	Industrial	Day	80	NA	75.6	75.4	0.2	3	Yes	Yes	15	1,127	16,581	$331,620	$110,540	Not Cost Effective
	SF_6	Industrial		80	NA	75.0	68.0	7.0									
	SF_7	Medical		70	70	72.6	63.3	9.3									
	SF_8	Hotel		65	75	70.9	62.4	8.5									
	SF_5	Industrial	Night	80	NA	73.9	73.7	0.2	3	Yes	Yes	15	1,127	16,581	$331,620	$110,540	Not Cost Effective
	SF_6	Industrial		80	NA	73.1	61.7	11.4									
	SF_7	Medical		70	70	70.6	61.1	9.5									
	SF_8	Hotel		55	75	69.1	60.9	8.2									

Table C31
Build Alternative Noise Wall Cost Effectiveness - 10 Foot Noise Wall
Wall SF2 in Area SF - West of I-35W between I-694 and County Road 96

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SF2	SF_5	Industrial	Day	80	NA	75.6	75.5	0.1	3	Yes	No	10	1,127	11,206	$224,120	N/A	Does Not Meet Noise Reduction Design Goal
	SF_6	Industrial		80	NA	75.0	69.6	5.4									
	SF_7	Medical		70	70	72.6	65.8	6.8									
	SF_8	Hotel		65	75	70.9	64.1	6.8									
	SF_5	Industrial	Night	80	NA	73.9	73.7	0.2	3	Yes	Yes	10	1,127	11,206	$224,120	$74,707	Not Cost Effective
	SF_6	Industrial		80	NA	73.1	64.2	8.9									
	SF_7	Medical		70	70	70.6	62.7	7.9									
	SF_8	Hotel		55	75	69.1	62.6	6.5									

Table C32
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NF1 in Area NF - East of I-35W between I-694 and County Road 96

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NF1	NF_1	Office	Day	70	75	69.4	62.9	6.5	4	Yes	Yes	20	2,708	53,376	$1,067,520	$266,880	Not Cost Effective
	NF_2	Office		70	75	71.3	63.8	7.5									
	NF_3	Office		70	75	71.1	63.7	7.4									
	NF_4	Office		70	75	71.3	64.1	7.2									
	NF_1	Office	Night	70	75	68.5	62.0	6.5	4	Yes	Yes	20	2,708	53,376	$1,067,520	$266,880	Not Cost Effective
	NF_2	Office		70	75	70.3	62.5	7.8									
	NF_3	Office		70	75	70.1	62.5	7.6									
	NF_4	Office		70	75	70.3	62.8	7.5									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C33
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall NF1 in Area NF - East of I-35W between I-694 and County Road 96

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NF1	NF_1	Office	Day	70	75	69.4	64.5	4.9	3	Yes	No	15	2,708	40,296	$805,920	N/A	Does Not Meet Noise Reduction Design Goal
	NF_2	Office		70	75	71.3	66.2	5.1									
	NF_3	Office		70	75	71.1	66.0	5.1									
	NF_4	Office		70	75	71.3	65.9	5.4									
	NF_1	Office	Night	70	75	68.5	63.4	5.1	4	Yes	No	15	2,708	40,296	$805,920	N/A	Does Not Meet Noise Reduction Design Goal
	NF_2	Office		70	75	70.3	64.9	5.4									
	NF_3	Office		70	75	70.1	64.7	5.4									
	NF_4	Office		70	75	70.3	64.6	5.7									

Table C34
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SG1 in Area SG - West of I-35W between County Road 96 and Abele Street

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SG1	SG_1	Retail	Day	70	NA	69.3	61.9	7.4	2	Yes	Yes	20	1,237	23,956	$479,120	$239,560	Not Cost Effective
	SG_2	Retail		70	NA	68.7	62.7	6.0									
	SG_1	Retail	Night	70	NA	67.5	60.9	6.6	2	Yes	No	20	1,237	23,956	$479,120	N/A	Does Not Meet Noise Reduction Design Goal
	SG_2	Retail		70	NA	66.8	61.7	5.1									

Table C35
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SG1 in Area SG - West of I-35W between County Road 96 and Abele Street

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SG1	SG_1	Retail	Day	70	NA	69.3	62.8	6.5	2	Yes	No	15	1,237	18,231	$364,620	N/A	Does Not Meet Noise Reduction Design Goal
	SG_2	Retail		70	NA	68.7	63.1	5.6									
	SG_1	Retail	Night	70	NA	67.5	61.6	5.9	1	Yes	No	15	1,237	18,231	$364,620	N/A	Does Not Meet Noise Reduction Design Goal
	SG_2	Retail		70	NA	66.8	62.0	4.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C36
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SG2 in Area SG - West of I-35W between County Road 96 and Abele Street

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SG2	SG_5	Industrial	Day	80	NA	67.1	63.1	4.0	2	Yes	Yes	20	517	9,556	$191,120	$95,560	Not Cost Effective
	SG_6	Retail		70	NA	69.7	65.9	3.8									
	SG_7	Industrial		80	NA	74.0	63.6	10.4									
	SG_8	Retail		70	NA	73.0	65.8	7.2									
	SG_5	Industrial	Night	80	NA	65.5	62.1	3.4	2	Yes	Yes	20	517	9,556	$191,120	$95,560	Not Cost Effective
	SG_6	Retail		70	NA	68.3	65.0	3.3									
	SG_7	Industrial		80	NA	71.9	62.2	9.7									
	SG_8	Retail		70	NA	71.0	64.3	6.7									

Table C37
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SG2 in Area SG - West of I-35W between County Road 96 and Abele Street

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SG2	SG_5	Industrial	Day	80	NA	67.1	63.3	3.8	2	Yes	Yes	15	517	7,431	$148,620	$74,310	Not Cost Effective
	SG_6	Retail		70	NA	69.7	66.1	3.6									
	SG_7	Industrial		80	NA	74.0	64.2	9.8									
	SG_8	Retail		70	NA	73.0	66.1	6.9									
	SG_5	Industrial	Night	80	NA	65.5	62.2	3.3	2	Yes	Yes	15	517	7,431	$148,620	$74,310	Not Cost Effective
	SG_6	Retail		70	NA	68.3	65.2	3.1									
	SG_7	Industrial		80	NA	71.9	62.8	9.1									
	SG_8	Retail		70	NA	71.0	64.6	6.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C38
Build Alternative Noise Wall Cost Effectiveness - 10 Foot Noise Wall
Wall SG2 in Area SG - West of I-35W between County Road 96 and Abele Street

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SG2	SG_5	Industrial	Day	80	NA	67.1	63.6	3.5	2	Yes	Yes	10	517	5,106	$102,120	$51,060	Not Cost Effective
	SG_6	Retail		70	NA	69.7	66.3	3.4									
	SG_7	Industrial		80	NA	74.0	65.5	8.5									
	SG_8	Retail		70	NA	73.0	66.6	6.4									
	SG_5	Industrial	Night	80	NA	65.5	62.5	3.0	2	Yes	Yes	10	517	5,106	$102,120	$51,060	Not Cost Effective
	SG_6	Retail		70	NA	68.3	65.4	2.9									
	SG_7	Industrial		80	NA	71.9	64.0	7.9									
	SG_8	Retail		70	NA	71.0	65.1	5.9									

Table C39
Build Alternative Noise Wall Cost Effectiveness - 10 Foot Noise Wall
Wall SG2 in Area SG - West of I-35W between County Road 96 and Abele Street

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SG2	SG_5	Industrial	Day	80	NA	67.1	65.6	1.5	1	Yes	No	10	349	3,426	$68,520	N/A	Does Not Meet Noise Reduction Design Goal
	SG_6	Retail		70	NA	69.7	68.5	1.2									
	SG_7	Industrial		80	NA	74.0	68.7	5.3									
	SG_8	Retail		70	NA	73.0	68.9	4.1									
	SG_5	Industrial	Night	80	NA	65.5	64.1	1.4	1	Yes	No	10	349	3,426	$68,520	N/A	Does Not Meet Noise Reduction Design Goal
	SG_6	Retail		70	NA	68.3	67.3	1.0									
	SG_7	Industrial		80	NA	71.9	66.8	5.1									
	SG_8	Retail		70	NA	71.0	67.1	3.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C40
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SG3 in Area SG - West of I-35W between County Road 96 and Abele Street

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SG3	SG_9	Office	Day	70	75	73.6	67.2	6.4	1	Yes	No	20	2,551	50,236	$1,004,720	N/A	Does Not Meet Noise Reduction Design Goal
	SG_10	Industrial		80	NA	68.5	65.4	3.1									
	SG_11	Trail		70	70	72.7	69.8	2.9									
	SG_12	Retail		70	NA	69.8	65.9	3.9									
	SG_13	Trail		70	70	73.6	70.1	3.5									
	SG_14	Office		70	75	69.7	65.3	4.4									
	SG_15	Trail		70	70	74.1	70.4	3.7									
	SG_16	Industrial		80	NA	68.4	63.6	4.8									
	SG_17	Trail		70	70	73.8	69.9	3.9									
	SG_18	Trail		70	70	73.4	69.7	3.7									
	SG_19	Hotel		65	75	69.9	65.7	4.2									
	SG_20	Trail		70	70	73.2	69.8	3.4									
	SG_21	Trail		70	70	72.7	69.7	3.0									
	SG_22	Trail		70	70	72.9	69.7	3.2									
	SG_23	Trail		70	70	73.5	70.0	3.5									
	SG_24	Residential		65	70	66.1	61.7	4.4									
	SG_25	Residential		65	70	67.9	63.8	4.1									
	SG_26	Residential		65	70	65.5	61.4	4.1									
	SG_27	Residential		65	70	66.5	62.8	3.7									
	SG_28	Residential		65	70	64.2	60.0	4.2									
	SG_29	Residential		65	70	64.7	60.5	4.2									
	SG_30	Residential		65	70	65.3	61.5	3.8									
	SG_31	Residential		65	70	66.1	63.0	3.1									
	SG_32	Residential		65	70	63.9	59.8	4.1									
	SG_33	Residential		65	70	63.4	59.5	3.9									
	SG_34	Residential		65	70	64.0	60.2	3.8									
	SG_35	Residential		65	70	64.6	61.1	3.5									
	SG_36	Residential		65	70	65.0	62.0	3.0									
	SG_37	Residential		65	70	62.8	59.3	3.5									
	SG_38	Residential		65	70	63.5	60.0	3.5									
	SG_39	Residential		65	70	64.0	60.8	3.2									
	SG_40	Residential		65	70	64.5	61.8	2.7									
	SG_41	Residential		65	70	62.5	59.1	3.4									
	SG_42	Residential		65	70	63.0	59.8	3.2									
	SG_43	Residential		65	70	63.5	60.6	2.9									
	SG_44	Residential		65	70	64.1	61.4	2.7									
	SG_45	Residential		65	70	62.6	59.6	3.0									
	SG_9	Office	Night	70	75	71.8	65.5	6.3	1	Yes	No	20	2,551	50,236	$1,004,720	N/A	Does Not Meet Noise Reduction Design Goal
	SG_10	Industrial		80	NA	67.3	64.4	2.9									
	SG_11	Trail		70	70	71.5	69.0	2.5									
	SG_12	Retail		70	NA	68.6	65.0	3.6									
	SG_13	Trail		70	70	72.4	69.3	3.1									
	SG_14	Office		70	75	68.3	64.4	3.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C40 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SG3 in Area SG - West of I-35W between County Road 96 and Abele Street

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SG_15	Trail		70	70	72.9	69.6	3.3									
	SG_16	Industrial		80	NA	66.9	62.7	4.2									
	SG_17	Trail		70	70	72.6	69.1	3.5									
	SG_18	Trail		70	70	72.2	68.9	3.3									
	SG_19	Hotel		55	75	68.6	64.8	3.8									
	SG_20	Trail		70	70	72.1	69.0	3.1									
	SG_21	Trail		70	70	71.7	69.0	2.7									
	SG_22	Trail		70	70	71.9	69.0	2.9									
	SG_23	Trail		70	70	72.7	69.3	3.4									
	SG_24	Residential		55	70	65.0	60.9	4.1									
	SG_25	Residential		55	70	67.0	63.1	3.9									
	SG_26	Residential		55	70	64.4	60.6	3.8									
	SG_27	Residential		55	70	65.5	62.1	3.4									
	SG_28	Residential		55	70	62.9	59.0	3.9									
	SG_29	Residential		55	70	63.4	59.6	3.8									
Wall SG3	SG_30	Residential	Night	55	70	64.2	60.7	3.5	1	Yes	No	20	2,551	50,236	$1,004,720	N/A	Does Not Meet Noise Reduction Design Goal
	SG_31	Residential		55	70	65.1	62.2	2.9									
	SG_32	Residential		55	70	62.6	58.7	3.9									
	SG_33	Residential		55	70	62.0	58.5	3.5									
	SG_34	Residential		55	70	62.7	59.2	3.5									
	SG_35	Residential		55	70	63.4	60.2	3.2									
	SG_36	Residential		55	70	63.9	61.2	2.7									
	SG_37	Residential		55	70	61.5	58.2	3.3									
	SG_38	Residential		55	70	62.2	59.0	3.2									
	SG_39	Residential		55	70	62.8	59.9	2.9									
	SG_40	Residential		55	70	63.4	60.9	2.5									
	SG_41	Residential		55	70	61.1	58.0	3.1									
	SG_42	Residential		55	70	61.6	58.7	2.9									
	SG_43	Residential		55	70	62.3	59.6	2.7									
	SG_44	Residential		55	70	63.0	60.5	2.5									
	SG_45	Residential		55	70	61.3	58.5	2.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C41
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SH1 in Area SH - West of I-35W between US-10 and County Road I

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SH1	SH_1	Retail	Day	70	NA	67.7	67.5	0.2	3	Yes	Yes	20	2,000	39,216	$784,320	$261,440	Not Cost Effective
	SH_2	Restaurant		70	75	67.3	62.1	5.2									
	SH_3	Retail		70	NA	68.7	59.6	9.1									
	SH_4	Religious		65	70	65.8	61.8	4.0									
	SH_5	Industrial		80	NA	70.2	65.9	4.3									
	SH_6	Industrial		80	NA	72.3	65.2	7.1									
	SH_1	Retail	Night	70	NA	67.0	66.8	0.2	3	Yes	Yes	20	2,000	39,216	$784,320	$261,440	Not Cost Effective
	SH_2	Restaurant		70	75	67.5	61.6	5.9									
	SH_3	Retail		70	NA	68.4	59.1	9.3									
	SH_4	Religious		65	70	65.3	61.2	4.1									
	SH_5	Industrial		80	NA	69.7	65.1	4.6									
	SH_6	Industrial		80	NA	71.7	64.5	7.2									

Table C42
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SH1 in Area SH - West of I-35W between US-10 and County Road I

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SH1	SH_1	Retail	Day	70	NA	67.7	67.6	0.1	1	Yes	No	15	2,000	29,676	$593,520	N/A	Does Not Meet Noise Reduction Design Goal
	SH_2	Restaurant		70	75	67.3	63.6	3.7									
	SH_3	Retail		70	NA	68.7	62.4	6.3									
	SH_4	Religious		65	70	65.8	63.3	2.5									
	SH_5	Industrial		80	NA	70.2	68.5	1.7									
	SH_6	Industrial		80	NA	72.3	67.9	4.4									
	SH_1	Retail	Night	70	NA	67.0	66.9	0.1	1	Yes	No	15	2,000	29,676	$593,520	N/A	Does Not Meet Noise Reduction Design Goal
	SH_2	Restaurant		70	75	67.5	63.2	4.3									
	SH_3	Retail		70	NA	68.4	62.1	6.3									
	SH_4	Religious		65	70	65.3	62.7	2.6									
	SH_5	Industrial		80	NA	69.7	67.8	1.9									
	SH_6	Industrial		80	NA	71.7	67.2	4.5									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C43
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NH1 in Area NH - East of I-35W between US-10 and County Road I

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NH1	NH_1	Office	Day	70	75	70.8	64.8	6.0	1	Yes	No	20	1,860	36,416	$728,320	N/A	Does Not Meet Noise Reduction Design Goal
	NH_1	Office	Night	70	75	69.7	64.2	5.5	1	Yes	No	20	1,860	36,416	$728,320	N/A	Does Not Meet Noise Reduction Design Goal

Table C44
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SI1	SI_1	Residential	Day	65	70	77.3	62.2	15.1	111	Yes	Yes	20	3,927	77,756	$1,690,272	$15,228	Propose to Construct
	SI_2	Residential		65	70	73.0	63.1	9.9									
	SI_3	Residential		65	70	71.9	62.9	9.0									
	SI_4	Residential		65	70	70.2	65.4	4.8									
	SI_5	Residential		65	70	69.1	65.5	3.6									
	SI_6	Residential		65	70	78.0	63.5	14.5									
	SI_7	Residential		65	70	73.6	63.2	10.4									
	SI_8	Residential		65	70	71.7	62.7	9.0									
	SI_9	Residential		65	70	70.1	62.5	7.6									
	SI_10	Residential		65	70	68.6	62.4	6.2									
	SI_11	Residential		65	70	67.4	62.2	5.2									
	SI_12	Residential		65	70	66.5	62.3	4.2									
	SI_13	Residential		65	70	65.6	62.1	3.5									
	SI_14	Residential		65	70	64.9	61.8	3.1									
	SI_15	Residential		65	70	76.5	62.7	13.8									
	SI_16	Residential		65	70	73.2	63.3	9.9									
	SI_17	Residential		65	70	71.0	62.6	8.4									
	SI_18	Residential		65	70	69.5	62.1	7.4									
	SI_19	Residential		65	70	68.3	61.7	6.6									
	SI_20	Residential		65	70	67.0	61.2	5.8									
	SI_21	Residential		65	70	66.1	61.0	5.1									
	SI_22	Residential		65	70	65.4	60.8	4.6									
	SI_23	Residential		65	70	64.6	60.5	4.1									
	SI_24	Residential		65	70	78.0	63.4	14.6									
	SI_25	Residential		65	70	70.7	63.8	6.9									
	SI_26	Residential		65	70	70.7	63.0	7.7									
	SI_27	Residential		65	70	69.4	62.3	7.1									
	SI_28	Residential		65	70	68.2	61.7	6.5									
	SI_29	Residential		65	70	66.9	61.3	5.6									
	SI_30	Residential		65	70	65.9	60.9	5.0									
	SI_31	Residential		65	70	65.1	60.6	4.5									
	SI_32	Residential		65	70	64.2	60.2	4.0									
	SI_33	Residential		65	70	63.7	60.0	3.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
	SI_34	Residential		65	70	63.0	59.6	3.4									
	SI_35	Residential		65	70	62.5	59.3	3.2									
	SI_36	Residential		65	70	76.8	63.3	13.5									
	SI_37	Residential		65	70	72.9	63.6	9.3									
	SI_38	Residential		65	70	70.7	62.5	8.2									
	SI_39	Residential		65	70	69.4	61.8	7.6									
	SI_40	Residential		65	70	67.8	61.2	6.6									
	SI_41	Residential		65	70	66.6	60.7	5.9									
	SI_42	Residential		65	70	65.7	60.3	5.4									
	SI_43	Residential		65	70	64.7	60.0	4.7									
	SI_44	Residential		65	70	64.0	59.7	4.3									
	SI_45	Residential		65	70	63.3	59.4	3.9									
	SI_46	Residential		65	70	63.0	59.3	3.7									
	SI_47	Residential		65	70	76.7	62.6	14.1									
	SI_48	Residential		65	70	72.0	62.9	9.1									
	SI_49	Residential		65	70	70.5	62.2	8.3									
	SI_50	Residential		65	70	68.9	61.6	7.3									
	SI_51	Residential		65	70	67.5	61.0	6.5									
	SI_52	Residential		65	70	66.2	60.4	5.8									
	SI_53	Residential		65	70	65.4	60.3	5.1									
	SI_54	Residential		65	70	64.6	60.0	4.6									
Wall SI1	SI_55	Residential	Day	65	70	63.9	59.6	4.3	111	Yes	Yes	20	3,927	77,756	$1,690,272	$15,228	Propose to Construct
	SI_56	Residential		65	70	63.2	59.1	4.1									
	SI_57	Residential		65	70	62.6	58.8	3.8									
	SI_58	Residential		65	70	62.1	58.5	3.6									
	SI_59	Residential		65	70	75.8	62.9	12.9									
	SI_60	Residential		65	70	75.8	62.9	12.9									
	SI_61	Residential		65	70	72.2	61.4	10.8									
	SI_62	Residential		65	70	71.9	61.4	10.5									
	SI_63	Residential		65	70	70.1	61.7	8.4									
	SI_64	Residential		65	70	70.3	61.7	8.6									
	SI_65	Residential		65	70	69.0	60.4	8.6									
	SI_66	Residential		65	70	68.8	60.4	8.4									
	SI_67	Residential		65	70	66.9	60.4	6.5									
	SI_68	Residential		65	70	67.2	60.5	6.7									
	SI_69	Residential		65	70	66.6	59.4	7.2									
	SI_70	Residential		65	70	66.5	59.4	7.1									
	SI_71	Residential		65	70	64.4	58.7	5.7									
	SI_72	Residential		65	70	65.0	58.8	6.2									
	SI_73	Residential		65	70	64.9	58.7	6.2									
	SI_74	Residential		65	70	64.9	58.8	6.1									
	SI_75	Residential		65	70	64.5	59.9	4.6									
	SI_76	Residential		65	70	64.8	59.9	4.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
	SI_77	Residential		65	70	64.8	59.9	4.9									
	SI_78	Residential		65	70	64.8	59.9	4.9									
	SI_79	Residential		65	70	64.3	59.7	4.6									
	SI_80	Residential		65	70	64.3	59.7	4.6									
	SI_81	Residential		65	70	64.1	59.6	4.5									
	SI_82	Residential		65	70	64.1	59.5	4.6									
	SI_83	Residential		65	70	63.1	58.9	4.2									
	SI_84	Residential		65	70	63.1	59.0	4.1									
	SI_85	Residential		65	70	62.9	58.8	4.1									
	SI_86	Residential		65	70	62.8	58.8	4.0									
	SI_87	Residential		65	70	62.3	58.5	3.8									
	SI_88	Residential		65	70	62.3	58.5	3.8									
	SI_89	Residential		65	70	62.2	58.4	3.8									
	SI_90	Residential		65	70	62.1	58.4	3.7									
	SI_91	Residential		65	70	61.6	58.3	3.3									
	SI_92	Residential		65	70	61.6	58.3	3.3									
	SI_93	Residential		65	70	61.5	58.2	3.3									
	SI_94	Residential		65	70	77.5	63.7	13.8									
	SI_95	Residential		65	70	72.3	61.6	10.7									
	SI_96	Residential		65	70	70.3	61.0	9.3									
	SI_97	Residential		65	70	69.5	60.9	8.6									
Wall SI1	SI_98	Residential	Day	65	70	67.4	59.8	7.6	111	Yes	Yes	20	3,927	77,756	$1,690,272	$15,228	Propose to Construct
	SI_99	Residential		65	70	66.7	60.0	6.7									
	SI_100	Residential		65	70	65.1	58.9	6.2									
	SI_101	Residential		65	70	64.9	59.6	5.3									
	SI_102	Residential		65	70	64.5	59.3	5.2									
	SI_103	Residential		65	70	64.1	59.2	4.9									
	SI_104	Residential		65	70	63.8	59.5	4.3									
	SI_105	Residential		65	70	63.6	59.4	4.2									
	SI_106	Residential		65	70	63.4	59.3	4.1									
	SI_107	Residential		65	70	63.2	59.2	4.0									
	SI_108	Residential		65	70	63.1	59.1	4.0									
	SI_109	Residential		65	70	62.9	59.0	3.9									
	SI_110	Residential		65	70	62.6	58.8	3.8									
	SI_111	Residential		65	70	62.5	58.8	3.7									
	SI_112	Residential		65	70	62.2	58.6	3.6									
	SI_113	Residential		65	70	62.0	58.5	3.5									
	SI_114	Residential		65	70	61.6	58.5	3.1									
	SI_115	Residential		65	70	61.5	58.4	3.1									
	SI_116	Residential		65	70	61.5	58.5	3.0									
	SI_117	Residential		65	70	61.5	58.6	2.9									
	SI_118	Residential		65	70	61.5	58.6	2.9									
	SI_119	Residential		65	70	61.5	58.7	2.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
	SI_120	Residential		65	70	72.4	62.2	10.2									
	SI_121	Residential		65	70	68.9	60.6	8.3									
	SI_122	Residential		65	70	67.0	59.8	7.2									
	SI_123	Residential		65	70	66.1	60.9	5.2									
	SI_124	Residential		65	70	66.0	60.5	5.5									
	SI_125	Residential		65	70	65.0	60.0	5.0									
	SI_126	Residential		65	70	64.6	59.7	4.9									
	SI_127	Residential		65	70	64.1	59.5	4.6									
	SI_128	Residential		65	70	63.6	59.6	4.0									
	SI_129	Residential		65	70	63.3	59.5	3.8									
	SI_130	Residential		65	70	63.1	59.3	3.8									
	SI_131	Residential		65	70	62.8	59.2	3.6									
	SI_132	Residential		65	70	62.6	59.1	3.5									
	SI_133	Residential		65	70	62.5	58.9	3.6									
	SI_134	Residential		65	70	62.2	58.8	3.4									
	SI_135	Residential		65	70	62.0	58.7	3.3									
	SI_136	Residential		65	70	61.9	58.6	3.3									
	SI_137	Residential		65	70	68.5	62.5	6.0									
	SI_138	Residential		65	70	64.6	60.8	3.8									
	SI_139	Residential		65	70	65.4	61.6	3.8									
	SI_140	Residential		65	70	65.3	61.2	4.1									
Wall SI1	SI_141	Residential	Day	65	70	65.1	60.7	4.4	111	Yes	Yes	20	3,927	77,756	$1,690,272	$15,228	Propose to Construct
	SI_142	Residential		65	70	64.8	60.4	4.4									
	SI_143	Residential		65	70	64.4	60.0	4.4									
	SI_144	Residential		65	70	64.0	59.8	4.2									
	SI_145	Residential		65	70	63.8	59.7	4.1									
	SI_146	Residential		65	70	63.5	59.7	3.8									
	SI_147	Residential		65	70	63.2	59.5	3.7									
	SI_148	Residential		65	70	62.9	59.4	3.5									
	SI_149	Residential		65	70	62.7	59.2	3.5									
	SI_150	Residential		65	70	62.4	59.1	3.3									
	SI_151	Residential		65	70	62.2	59.0	3.2									
	SI_152	Residential		65	70	62.0	58.9	3.1									
	SI_153	Residential		65	70	61.8	58.8	3.0									
	SI_154	Residential		65	70	77.6	64.0	13.6									
	SI_155	Residential		65	70	79.7	63.5	16.2									
	SI_156	Residential		65	70	79.6	63.3	16.3									
	SI_157	Residential		65	70	78.1	62.6	15.5									
	SI_158	Residential		65	70	78.6	62.8	15.8									
	SI_159	Residential		65	70	78.2	62.5	15.7									
	SI_160	Residential		65	70	77.8	62.3	15.5									
	SI_161	Residential		65	70	77.2	61.9	15.3									
	SI_162	Residential		65	70	76.5	61.5	15.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
	SI_163	Residential		65	70	76.3	61.3	15.0									
	SI_164	Residential		65	70	75.7	61.0	14.7									
	SI_165	Residential		65	70	75.0	60.6	14.4									
	SI_166	Residential		65	70	74.5	60.2	14.3									
	SI_167	Residential		65	70	74.1	60.1	14.0									
	SI_168	Residential		65	70	73.9	60.1	13.8									
	SI_169	Residential		65	70	73.3	59.8	13.5									
	SI_170	Residential		65	70	73.1	60.0	13.1									
	SI_171	Residential		65	70	70.4	60.6	9.8									
	SI_172	Residential		65	70	67.7	62.6	5.1									
	SI_173	Residential		65	70	67.6	62.5	5.1									
	SI_174	Residential		65	70	67.5	62.3	5.2									
	SI_175	Residential		65	70	67.6	62.5	5.1									
	SI_176	Residential		65	70	67.5	62.4	5.1									
	SI_177	Residential		65	70	67.4	62.4	5.0									
	SI_178	Residential		65	70	67.2	62.3	4.9									
	SI_179	Residential		65	70	67.0	62.2	4.8									
	SI_180	Residential		65	70	66.7	61.8	4.9									
	SI_181	Residential		65	70	65.7	61.8	3.9									
	SI_182	Residential		65	70	65.4	61.8	3.6									
	SI_183	Residential		65	70	64.9	61.8	3.1									
Wall SI1	SI_184	Residential	Day	65	70	64.7	61.9	2.8	111	Yes	Yes	20	3,927	77,756	$1,690,272	$15,228	Propose to Construct
	SI_185	Residential		65	70	64.7	61.9	2.8									
	SI_186	Residential		65	70	64.8	61.9	2.9									
	SI_187	Residential		65	70	64.9	61.8	3.1									
	SI_188	Residential		65	70	64.6	61.9	2.7									
	SI_189	Residential		65	70	65.3	61.9	3.4									
	SI_190	Residential		65	70	65.3	61.6	3.7									
	SI_191	Recreation		70	70	64.5	60.3	4.2									
	SI_192	Residential		65	70	64.7	60.7	4.0									
	SI_193	Residential		65	70	65.3	60.7	4.6									
	SI_194	Residential		65	70	63.6	60.1	3.5									
	SI_195	Residential		65	70	63.5	59.9	3.6									
	SI_196	Residential		65	70	64.2	60.5	3.7									
	SI_197	Residential		65	70	65.0	61.7	3.3									
	SI_198	Residential		65	70	64.9	61.5	3.4									
	SI_199	Residential		65	70	66.7	61.7	5.0									
	SI_200	Residential		65	70	66.5	61.4	5.1									
	SI_201	Residential		65	70	65.3	60.6	4.7									
	SI_202	Residential		65	70	64.7	60.7	4.0									
	SI_203	Residential		65	70	64.2	60.6	3.6									
	SI_204	Residential		65	70	63.6	59.7	3.9									
	SI_205	Residential		65	70	63.7	59.8	3.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
	SI_206	Residential		65	70	63.7	59.9	3.8									
	SI_207	Residential		65	70	63.8	60.0	3.8									
	SI_208	Residential		65	70	63.9	60.1	3.8									
	SI_209	Residential		65	70	64.0	60.3	3.7									
	SI_210	Residential		65	70	64.1	60.5	3.6									
	SI_211	Residential		65	70	64.2	60.7	3.5									
	SI_212	Residential		65	70	64.4	60.9	3.5									
	SI_213	Residential		65	70	64.4	61.0	3.4									
	SI_214	Residential		65	70	64.4	61.2	3.2									
	SI_215	Residential		65	70	64.4	61.2	3.2									
	SI_216	Residential		65	70	63.9	60.4	3.5									
	SI_217	Residential		65	70	63.9	60.4	3.5									
	SI_218	Residential		65	70	64.2	60.6	3.6									
	SI_219	Residential		65	70	62.9	59.4	3.5									
	SI_220	Residential		65	70	63.0	59.4	3.6									
	SI_221	Residential		65	70	63.0	59.5	3.5									
	SI_222	Residential		65	70	63.1	59.5	3.6									
	SI_223	Residential		65	70	63.2	59.7	3.5									
	SI_224	Residential		65	70	63.3	59.8	3.5									
	SI_225	Residential		65	70	63.4	60.0	3.4									
	SI_226	Residential		65	70	63.7	60.3	3.4									
Wall SI1	SI_227	Residential	Day	65	70	63.6	60.3	3.3	111	Yes	Yes	20	3,927	77,756	$1,690,272	$15,228	Propose to Construct
	SI_228	Residential		65	70	63.8	60.6	3.2									
	SI_229	Residential		65	70	63.5	60.7	2.8									
	SI_230	Residential		65	70	58.8	57.1	1.7									
	SI_231	Residential		65	70	59.3	57.3	2.0									
	SI_232	Residential		65	70	63.3	60.2	3.1									
	SI_233	Residential		65	70	62.4	59.1	3.3									
	SI_234	Residential		65	70	62.4	59.2	3.2									
	SI_235	Residential		65	70	62.6	59.2	3.4									
	SI_236	Residential		65	70	62.6	59.3	3.3									
	SI_237	Residential		65	70	62.6	59.3	3.3									
	SI_238	Residential		65	70	62.7	59.3	3.4									
	SI_239	Residential		65	70	62.9	59.6	3.3									
	SI_240	Residential		65	70	63.0	59.8	3.2									
	SI_241	Residential		65	70	63.1	60.0	3.1									
	SI_242	Residential		65	70	63.2	60.2	3.0									
	SI_243	Residential		65	70	63.0	60.1	2.9									
	SI_244	Residential		65	70	61.0	59.1	1.9									
	SI_245	Residential		65	70	61.1	59.3	1.8									
	SI_246	Residential		65	70	63.5	60.7	2.8									
	SI_247	Residential		65	70	61.9	58.9	3.0									
	SI_248	Residential		65	70	61.9	58.9	3.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
	SI_249	Residential		65	70	61.9	59.0	2.9									
	SI_250	Residential		65	70	62.0	59.0	3.0									
	SI_251	Residential		65	70	62.0	59.0	3.0									
	SI_252	Residential		65	70	62.2	59.0	3.2									
	SI_253	Residential		65	70	62.2	58.9	3.3									
	SI_254	Residential		65	70	62.3	59.1	3.2									
	SI_255	Residential		65	70	62.5	59.3	3.2									
	SI_256	Residential		65	70	62.6	59.6	3.0									
	SI_257	Residential		65	70	62.3	59.7	2.6									
	SI_258	Residential		65	70	59.8	57.0	2.8									
	SI_259	Residential		65	70	60.5	57.4	3.1									
	SI_260	Residential		65	70	62.6	59.7	2.9									
	SI_261	Residential		65	70	61.5	58.8	2.7									
	SI_262	Residential		65	70	61.5	58.9	2.6									
	SI_263	Residential		65	70	61.6	58.9	2.7									
	SI_264	Residential		65	70	61.6	59.0	2.6									
	SI_265	Residential		65	70	61.7	59.0	2.7									
	SI_266	Residential		65	70	61.7	59.0	2.7									
	SI_267	Residential		65	70	61.8	58.9	2.9									
	SI_268	Residential		65	70	61.8	58.6	3.2									
	SI_269	Residential		65	70	61.9	58.8	3.1									
Wall SI1	SI_270	Residential	Day	65	70	62.1	59.1	3.0	111	Yes	Yes	20	3,927	77,756	$1,690,272	$15,228	Propose to Construct
	SI_271	Residential		65	70	61.9	58.9	3.0									
	SI_272	Residential		65	70	60.9	58.5	2.4									
	SI_273	Residential		65	70	61.7	58.8	2.9									
	SI_274	Residential		65	70	63.3	60.5	2.8									
	SI_275	Residential		65	70	71.8	59.6	12.2									
	SI_276	Residential		65	70	70.2	58.0	12.2									
	SI_277	Residential		65	70	69.1	58.2	10.9									
	SI_278	Residential		65	70	68.4	58.5	9.9									
	SI_279	Residential		65	70	68.0	58.8	9.2									
	SI_280	Residential		65	70	66.8	59.0	7.8									
	SI_281	Residential		65	70	67.1	59.8	7.3									
	SI_282	Residential		65	70	67.0	59.5	7.5									
	SI_283	Residential		65	70	66.5	59.5	7.0									
	SI_284	Residential		65	70	66.6	59.7	6.9									
	SI_285	Residential		65	70	66.2	59.4	6.8									
	SI_286	Residential		65	70	66.3	59.6	6.7									
	SI_287	Residential		65	70	66.1	59.5	6.6									
	SI_288	Residential		65	70	66.1	59.5	6.6									
	SI_289	Residential		65	70	66.2	59.7	6.5									
	SI_290	Residential		65	70	66.1	59.9	6.2									
	SI_291	Residential		65	70	65.4	61.3	4.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
	SI_292	Residential		65	70	65.4	61.3	4.1									
	SI_293	Residential		65	70	65.4	61.2	4.2									
	SI_294	Residential		65	70	65.4	61.2	4.2									
	SI_295	Residential		65	70	62.1	60.4	1.7									
	SI_296	Residential		65	70	61.9	60.3	1.6									
	SI_297	Residential		65	70	62.3	59.7	2.6									
	SI_298	Residential		65	70	61.9	60.1	1.8									
	SI_299	Residential		65	70	61.0	59.9	1.1									
	SI_300	Residential		65	70	61.4	59.2	2.2									
	SI_301	Residential		65	70	61.8	60.0	1.8									
	SI_302	Residential		65	70	61.5	60.0	1.5									
	SI_303	Residential		65	70	61.4	59.5	1.9									
	SI_304	Residential		65	70	61.4	59.2	2.2									
	SI_305	Residential		65	70	61.7	59.8	1.9									
	SI_306	Residential		65	70	61.7	59.8	1.9									
	SI_307	Residential		65	70	61.6	59.7	1.9									
	SI_308	Residential		65	70	61.6	59.7	1.9									
	SI_309	Residential		65	70	61.5	59.5	2.0									
	SI_310	Residential		65	70	61.4	59.4	2.0									
	SI_311	Residential		65	70	61.4	59.4	2.0									
	SI_312	Residential		65	70	61.4	59.4	2.0									
Wall SI1	SI_313	Residential	Day	65	70	61.2	59.2	2.0	111	Yes	Yes	20	3,927	77,756	$1,690,272	$15,228	Propose to Construct
	SI_314	Residential		65	70	61.3	59.2	2.1									
	SI_315	Residential		65	70	61.2	59.1	2.1									
	SI_316	Residential		65	70	61.2	59.0	2.2									
	SI_317	Residential		65	70	61.1	58.8	2.3									
	SI_318	Residential		65	70	61.1	58.8	2.3									
	SI_319	Residential		65	70	61.0	58.8	2.2									
	SI_320	Residential		65	70	61.0	58.7	2.3									
	SI_321	Residential		65	70	60.9	58.5	2.4									
	SI_322	Residential		65	70	60.9	58.6	2.3									
	SI_323	Residential		65	70	60.9	58.5	2.4									
	SI_324	Residential		65	70	60.9	58.5	2.4									
	SI_325	Residential		65	70	60.8	58.3	2.5									
	SI_326	Residential		65	70	60.8	58.3	2.5									
	SI_327	Residential		65	70	60.8	58.2	2.6									
	SI_328	Residential		65	70	60.8	58.2	2.6									
	SI_329	Trail		70	70	60.3	58.4	1.9									
	SI_330	Residential		65	70	61.0	59.2	1.8									
	SI_331	Residential		65	70	61.6	59.9	1.7									
	SI_332	Trail		70	70	62.8	60.9	1.9									
	SI_333	Trail		70	70	65.2	62.4	2.8									
	SI_334	Trail		70	70	65.8	64.6	1.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
Wall SI1	SI_335	Trail	Day	70	70	64.7	64.2	0.5	111	Yes	Yes	20	3,927	77,756	$1,690,272	$15,228	Propose to Construct
	SI_336	Trail		70	70	65.4	65.2	0.2									
	SI_1	Residential	Night	55	70	75.5	60.6	14.9	98	Yes	Yes	20	3,927	77,756	$1,690,272	$17,248	Propose to Construct
	SI_2	Residential		55	70	71.2	61.7	9.5									
	SI_3	Residential		55	70	70.3	61.5	8.8									
	SI_4	Residential		55	70	68.7	63.9	4.8									
	SI_5	Residential		55	70	67.6	64.0	3.6									
	SI_6	Residential		55	70	76.1	61.9	14.2									
	SI_7	Residential		55	70	71.9	61.8	10.1									
	SI_8	Residential		55	70	70.1	61.4	8.7									
	SI_9	Residential		55	70	68.5	61.2	7.3									
	SI_10	Residential		55	70	67.1	61.0	6.1									
	SI_11	Residential		55	70	65.9	60.8	5.1									
	SI_12	Residential		55	70	65.0	60.9	4.1									
	SI_13	Residential		55	70	64.1	60.7	3.4									
	SI_14	Residential		55	70	63.4	60.4	3.0									
	SI_15	Residential		55	70	74.6	61.1	13.5									
	SI_16	Residential		55	70	71.5	61.8	9.7									
	SI_17	Residential		55	70	69.4	61.2	8.2									
	SI_18	Residential		55	70	67.9	60.8	7.1									
	SI_19	Residential		55	70	66.7	60.3	6.4									
	SI_20	Residential		55	70	65.5	59.9	5.6									
	SI_21	Residential		55	70	64.6	59.7	4.9									
	SI_22	Residential		55	70	63.9	59.4	4.5									
	SI_23	Residential		55	70	63.1	59.2	3.9									
	SI_24	Residential		55	70	76.1	61.8	14.3									
	SI_25	Residential		55	70	69.0	62.3	6.7									
	SI_26	Residential		55	70	69.0	61.6	7.4									
	SI_27	Residential		55	70	67.8	61.0	6.8									
	SI_28	Residential		55	70	66.6	60.4	6.2									
	SI_29	Residential		55	70	65.4	60.0	5.4									
	SI_30	Residential		55	70	64.3	59.6	4.7									
	SI_31	Residential		55	70	63.6	59.2	4.4									
	SI_32	Residential		55	70	62.7	58.9	3.8									
	SI_33	Residential		55	70	62.2	58.6	3.6									
	SI_34	Residential		55	70	61.6	58.3	3.3									
	SI_35	Residential		55	70	61.1	58.0	3.1									
	SI_36	Residential		55	70	75.0	61.7	13.3									
	SI_37	Residential		55	70	71.2	62.1	9.1									
	SI_38	Residential		55	70	69.0	61.1	7.9									
	SI_39	Residential		55	70	67.7	60.4	7.3									
	SI_40	Residential		55	70	66.2	59.8	6.4									
	SI_41	Residential		55	70	65.1	59.3	5.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
	SI_42	Residential		55	70	64.2	59.0	5.2									
	SI_43	Residential		55	70	63.2	58.7	4.5									
	SI_44	Residential		55	70	62.6	58.4	4.2									
	SI_45	Residential		55	70	61.9	58.2	3.7									
	SI_46	Residential		55	70	61.6	58.0	3.6									
	SI_47	Residential		55	70	74.7	60.9	13.8									
	SI_48	Residential		55	70	70.1	61.3	8.8									
	SI_49	Residential		55	70	68.8	60.8	8.0									
	SI_50	Residential		55	70	67.2	60.2	7.0									
	SI_51	Residential		55	70	65.9	59.6	6.3									
	SI_52	Residential		55	70	64.6	59.1	5.5									
	SI_53	Residential		55	70	63.9	59.0	4.9									
	SI_54	Residential		55	70	63.1	58.7	4.4									
	SI_55	Residential		55	70	62.5	58.4	4.1									
	SI_56	Residential		55	70	61.7	57.8	3.9									
	SI_57	Residential		55	70	61.2	57.5	3.7									
	SI_58	Residential		55	70	60.7	57.2	3.5									
	SI_59	Residential		55	70	73.9	61.3	12.6									
	SI_60	Residential		55	70	73.9	61.3	12.6									
	SI_61	Residential		55	70	70.3	59.8	10.5									
	SI_62	Residential		55	70	70.0	59.8	10.2									
Wall SI1	SI_63	Residential	Night	55	70	68.3	60.2	8.1	98	Yes	Yes	20	3,927	77,756	$1,690,272	$17,248	Propose to Construct
	SI_64	Residential		55	70	68.5	60.3	8.2									
	SI_65	Residential		55	70	67.2	58.9	8.3									
	SI_66	Residential		55	70	67.0	58.9	8.1									
	SI_67	Residential		55	70	65.3	59.1	6.2									
	SI_68	Residential		55	70	65.6	59.1	6.5									
	SI_69	Residential		55	70	64.9	58.0	6.9									
	SI_70	Residential		55	70	64.8	57.9	6.9									
	SI_71	Residential		55	70	62.8	57.3	5.5									
	SI_72	Residential		55	70	63.3	57.4	5.9									
	SI_73	Residential		55	70	63.3	57.3	6.0									
	SI_74	Residential		55	70	63.3	57.4	5.9									
	SI_75	Residential		55	70	63.0	58.7	4.3									
	SI_76	Residential		55	70	63.3	58.7	4.6									
	SI_77	Residential		55	70	63.3	58.7	4.6									
	SI_78	Residential		55	70	63.3	58.6	4.7									
	SI_79	Residential		55	70	62.8	58.5	4.3									
	SI_80	Residential		55	70	62.9	58.5	4.4									
	SI_81	Residential		55	70	62.6	58.4	4.2									
	SI_82	Residential		55	70	62.6	58.3	4.3									
	SI_83	Residential		55	70	61.7	57.7	4.0									
	SI_84	Residential		55	70	61.7	57.8	3.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
	SI_85	Residential		55	70	61.5	57.6	3.9									
	SI_86	Residential		55	70	61.3	57.5	3.8									
	SI_87	Residential		55	70	60.9	57.3	3.6									
	SI_88	Residential		55	70	60.9	57.3	3.6									
	SI_89	Residential		55	70	60.7	57.2	3.5									
	SI_90	Residential		55	70	60.7	57.2	3.5									
	SI_91	Residential		55	70	60.2	57.1	3.1									
	SI_92	Residential		55	70	60.2	57.1	3.1									
	SI_93	Residential		55	70	60.1	57.0	3.1									
	SI_94	Residential		55	70	75.5	62.0	13.5									
	SI_95	Residential		55	70	70.4	59.9	10.5									
	SI_96	Residential		55	70	68.4	59.4	9.0									
	SI_97	Residential		55	70	67.6	59.4	8.2									
	SI_98	Residential		55	70	65.6	58.3	7.3									
	SI_99	Residential		55	70	65.0	58.5	6.5									
	SI_100	Residential		55	70	63.3	57.4	5.9									
	SI_101	Residential		55	70	63.2	58.3	4.9									
	SI_102	Residential		55	70	62.9	58.1	4.8									
	SI_103	Residential		55	70	62.5	57.9	4.6									
	SI_104	Residential		55	70	62.3	58.3	4.0									
	SI_105	Residential		55	70	62.1	58.2	3.9									
Wall SI1	SI_106	Residential	Night	55	70	61.9	58.1	3.8	98	Yes	Yes	20	3,927	77,756	$1,690,272	$17,248	Propose to Construct
	SI_107	Residential		55	70	61.8	58.1	3.7									
	SI_108	Residential		55	70	61.6	57.9	3.7									
	SI_109	Residential		55	70	61.5	57.8	3.7									
	SI_110	Residential		55	70	61.2	57.6	3.6									
	SI_111	Residential		55	70	61.1	57.6	3.5									
	SI_112	Residential		55	70	60.8	57.4	3.4									
	SI_113	Residential		55	70	60.6	57.3	3.3									
	SI_114	Residential		55	70	60.3	57.3	3.0									
	SI_115	Residential		55	70	60.2	57.3	2.9									
	SI_116	Residential		55	70	60.2	57.3	2.9									
	SI_117	Residential		55	70	60.2	57.4	2.8									
	SI_118	Residential		55	70	60.2	57.5	2.7									
	SI_119	Residential		55	70	60.2	57.6	2.6									
	SI_120	Residential		55	70	70.6	60.8	9.8									
	SI_121	Residential		55	70	67.2	59.0	8.2									
	SI_122	Residential		55	70	65.2	58.2	7.0									
	SI_123	Residential		55	70	64.5	59.6	4.9									
	SI_124	Residential		55	70	64.3	59.2	5.1									
	SI_125	Residential		55	70	63.5	58.8	4.7									
	SI_126	Residential		55	70	63.0	58.5	4.5									
	SI_127	Residential		55	70	62.6	58.3	4.3									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level No Noise Barrier	L_{10} Noise Level With Noise Barrier	Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
	SI_128	Residential		55	70	62.2	58.4	3.8									
	SI_129	Residential		55	70	61.9	58.3	3.6									
	SI_130	Residential		55	70	61.7	58.2	3.5									
	SI_131	Residential		55	70	61.4	58.0	3.4									
	SI_132	Residential		55	70	61.3	57.9	3.4									
	SI_133	Residential		55	70	61.1	57.8	3.3									
	SI_134	Residential		55	70	60.8	57.7	3.1									
	SI_135	Residential		55	70	60.7	57.6	3.1									
	SI_136	Residential		55	70	60.5	57.5	3.0									
	SI_137	Residential		55	70	66.8	61.1	5.7									
	SI_138	Residential		55	70	63.1	59.5	3.6									
	SI_139	Residential		55	70	63.8	60.3	3.5									
	SI_140	Residential		55	70	63.8	60.0	3.8									
	SI_141	Residential		55	70	63.6	59.5	4.1									
	SI_142	Residential		55	70	63.3	59.2	4.1									
	SI_143	Residential		55	70	62.9	58.9	4.0									
	SI_144	Residential		55	70	62.6	58.7	3.9									
	SI_145	Residential		55	70	62.4	58.6	3.8									
	SI_146	Residential		55	70	62.1	58.5	3.6									
	SI_147	Residential		55	70	61.8	58.4	3.4									
	SI_148	Residential		55	70	61.5	58.3	3.2									
Wall SI1	SI_149	Residential	Night	55	70	61.3	58.1	3.2	98	Yes	Yes	20	3,927	77,756	$1,690,272	$17,248	Propose to Construct
	SI_150	Residential		55	70	61.0	58.0	3.0									
	SI_151	Residential		55	70	60.9	57.9	3.0									
	SI_152	Residential		55	70	60.7	57.7	3.0									
	SI_153	Residential		55	70	60.5	57.6	2.9									
	SI_154	Residential		55	70	75.7	62.3	13.4									
	SI_155	Residential		55	70	77.9	61.7	16.2									
	SI_156	Residential		55	70	77.7	61.6	16.1									
	SI_157	Residential		55	70	76.3	60.9	15.4									
	SI_158	Residential		55	70	76.8	61.1	15.7									
	SI_159	Residential		55	70	76.5	60.9	15.6									
	SI_160	Residential		55	70	76.0	60.7	15.3									
	SI_161	Residential		55	70	75.5	60.4	15.1									
	SI_162	Residential		55	70	75.0	60.1	14.9									
	SI_163	Residential		55	70	74.9	60.0	14.9									
	SI_164	Residential		55	70	74.6	59.7	14.9									
	SI_165	Residential		55	70	74.0	59.4	14.6									
	SI_166	Residential		55	70	73.7	59.1	14.6									
	SI_167	Residential		55	70	73.4	59.0	14.4									
	SI_168	Residential		55	70	73.3	59.1	14.2									
	SI_169	Residential		55	70	72.8	58.8	14.0									
	SI_170	Residential		55	70	72.7	59.0	13.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SI_171	Residential		55	70	70.1	59.6	10.5									
	SI_172	Residential		55	70	66.1	61.2	4.9									
	SI_173	Residential		55	70	66.1	61.2	4.9									
	SI_174	Residential		55	70	65.9	61.0	4.9									
	SI_175	Residential		55	70	66.1	61.2	4.9									
	SI_176	Residential		55	70	66.0	61.1	4.9									
	SI_177	Residential		55	70	66.0	61.1	4.9									
	SI_178	Residential		55	70	65.9	61.1	4.8									
	SI_179	Residential		55	70	65.7	61.0	4.7									
	SI_180	Residential		55	70	65.5	60.7	4.8									
	SI_181	Residential		55	70	64.1	60.5	3.6									
	SI_182	Residential		55	70	63.8	60.6	3.2									
	SI_183	Residential		55	70	63.4	60.6	2.8									
	SI_184	Residential		55	70	63.3	60.7	2.6									
	SI_185	Residential		55	70	63.3	60.7	2.6									
	SI_186	Residential		55	70	63.5	60.7	2.8									
	SI_187	Residential		55	70	63.5	60.7	2.8									
	SI_188	Residential		55	70	63.3	60.8	2.5									
	SI_189	Residential		55	70	64.2	60.9	3.3									
	SI_190	Residential		55	70	64.0	60.6	3.4									
	SI_191	Recreation		70	70	63.1	59.2	3.9									
Wall SI1	SI_192	Residential	Night	55	70	63.4	59.6	3.8	98	Yes	Yes	20	3,927	77,756	$1,690,272	$17,248	Propose to Construct
	SI_193	Residential		55	70	64.0	59.5	4.5									
	SI_194	Residential		55	70	62.3	58.8	3.5									
	SI_195	Residential		55	70	62.2	58.7	3.5									
	SI_196	Residential		55	70	62.8	59.4	3.4									
	SI_197	Residential		55	70	63.9	60.9	3.0									
	SI_198	Residential		55	70	63.9	60.7	3.2									
	SI_199	Residential		55	70	66.1	60.8	5.3									
	SI_200	Residential		55	70	66.0	60.6	5.4									
	SI_201	Residential		55	70	64.9	60.1	4.8									
	SI_202	Residential		55	70	64.3	60.1	4.2									
	SI_203	Residential		55	70	63.7	60.0	3.7									
	SI_204	Residential		55	70	62.3	58.6	3.7									
	SI_205	Residential		55	70	62.3	58.7	3.6									
	SI_206	Residential		55	70	62.4	58.8	3.6									
	SI_207	Residential		55	70	62.6	59.0	3.6									
	SI_208	Residential		55	70	62.6	59.1	3.5									
	SI_209	Residential		55	70	62.8	59.3	3.5									
	SI_210	Residential		55	70	63.0	59.5	3.5									
	SI_211	Residential		55	70	63.1	59.8	3.3									
	SI_212	Residential		55	70	63.3	60.0	3.3									
	SI_213	Residential		55	70	63.4	60.2	3.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SI_214	Residential		55	70	63.4	60.4	3.0									
	SI_215	Residential		55	70	63.4	60.4	3.0									
	SI_216	Residential		55	70	62.9	59.7	3.2									
	SI_217	Residential		55	70	63.0	59.7	3.3									
	SI_218	Residential		55	70	63.7	60.1	3.6									
	SI_219	Residential		55	70	61.6	58.3	3.3									
	SI_220	Residential		55	70	61.7	58.4	3.3									
	SI_221	Residential		55	70	61.8	58.5	3.3									
	SI_222	Residential		55	70	61.9	58.5	3.4									
	SI_223	Residential		55	70	62.0	58.7	3.3									
	SI_224	Residential		55	70	62.1	58.9	3.2									
	SI_225	Residential		55	70	62.2	59.1	3.1									
	SI_226	Residential		55	70	62.6	59.4	3.2									
	SI_227	Residential		55	70	62.5	59.5	3.0									
	SI_228	Residential		55	70	62.7	59.7	3.0									
	SI_229	Residential		55	70	62.5	59.9	2.6									
	SI_230	Residential		55	70	58.1	56.2	1.9									
	SI_231	Residential		55	70	58.7	56.5	2.2									
	SI_232	Residential		55	70	62.7	59.6	3.1									
	SI_233	Residential		55	70	61.1	58.0	3.1									
	SI_234	Residential		55	70	61.2	58.1	3.1									
Wall SI1	SI_235	Residential	Night	55	70	61.3	58.2	3.1	98	Yes	Yes	20	3,927	77,756	$1,690,272	$17,248	Propose to Construct
	SI_236	Residential		55	70	61.3	58.2	3.1									
	SI_237	Residential		55	70	61.4	58.3	3.1									
	SI_238	Residential		55	70	61.5	58.4	3.1									
	SI_239	Residential		55	70	61.7	58.6	3.1									
	SI_240	Residential		55	70	61.9	58.9	3.0									
	SI_241	Residential		55	70	62.1	59.1	3.0									
	SI_242	Residential		55	70	62.2	59.3	2.9									
	SI_243	Residential		55	70	62.0	59.2	2.8									
	SI_244	Residential		55	70	60.2	58.4	1.8									
	SI_245	Residential		55	70	60.6	58.6	2.0									
	SI_246	Residential		55	70	62.8	59.9	2.9									
	SI_247	Residential		55	70	60.6	57.8	2.8									
	SI_248	Residential		55	70	60.7	57.9	2.8									
	SI_249	Residential		55	70	60.7	57.9	2.8									
	SI_250	Residential		55	70	60.8	58.0	2.8									
	SI_251	Residential		55	70	60.8	58.0	2.8									
	SI_252	Residential		55	70	61.0	58.0	3.0									
	SI_253	Residential		55	70	61.1	58.0	3.1									
	SI_254	Residential		55	70	61.2	58.2	3.0									
	SI_255	Residential		55	70	61.4	58.4	3.0									
	SI_256	Residential		55	70	61.5	58.7	2.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SI_257	Residential		55	70	61.3	58.9	2.4									
	SI_258	Residential		55	70	58.7	55.9	2.8									
	SI_259	Residential		55	70	59.5	56.3	3.2									
	SI_260	Residential		55	70	61.8	58.9	2.9									
	SI_261	Residential		55	70	60.2	57.7	2.5									
	SI_262	Residential		55	70	60.3	57.8	2.5									
	SI_263	Residential		55	70	60.4	57.9	2.5									
	SI_264	Residential		55	70	60.4	57.9	2.5									
	SI_265	Residential		55	70	60.5	57.9	2.6									
	SI_266	Residential		55	70	60.6	57.9	2.7									
	SI_267	Residential		55	70	60.7	57.9	2.8									
	SI_268	Residential		55	70	60.7	57.7	3.0									
	SI_269	Residential		55	70	60.9	57.9	3.0									
	SI_270	Residential		55	70	61.0	58.2	2.8									
	SI_271	Residential		55	70	60.8	58.1	2.7									
	SI_272	Residential		55	70	60.1	57.7	2.4									
	SI_273	Residential		55	70	60.9	58.0	2.9									
	SI_274	Residential		55	70	62.4	59.6	2.8									
	SI_275	Residential		55	70	71.5	58.6	12.9									
	SI_276	Residential		55	70	70.0	57.2	12.8									
	SI_277	Residential		55	70	68.8	57.5	11.3									
Wall SI1	SI_278	Residential	Night	55	70	68.2	57.8	10.4	98	Yes	Yes	20	3,927	77,756	$1,690,272	$17,248	Propose to Construct
	SI_279	Residential		55	70	67.7	58.2	9.5									
	SI_280	Residential		55	70	66.6	58.4	8.2									
	SI_281	Residential		55	70	66.8	59.1	7.7									
	SI_282	Residential		55	70	66.7	58.9	7.8									
	SI_283	Residential		55	70	66.2	58.9	7.3									
	SI_284	Residential		55	70	66.3	59.1	7.2									
	SI_285	Residential		55	70	65.8	58.8	7.0									
	SI_286	Residential		55	70	65.9	58.9	7.0									
	SI_287	Residential		55	70	65.7	58.8	6.9									
	SI_288	Residential		55	70	65.6	58.7	6.9									
	SI_289	Residential		55	70	65.6	58.9	6.7									
	SI_290	Residential		55	70	65.5	58.9	6.6									
	SI_291	Residential		55	70	64.4	60.1	4.3									
	SI_292	Residential		55	70	64.4	60.2	4.2									
	SI_293	Residential		55	70	64.5	60.1	4.4									
	SI_294	Residential		55	70	64.4	60.1	4.3									
	SI_295	Residential		55	70	61.2	59.3	1.9									
	SI_296	Residential		55	70	61.1	59.2	1.9									
	SI_297	Residential		55	70	61.5	58.7	2.8									
	SI_298	Residential		55	70	61.1	59.0	2.1									
	SI_299	Residential		55	70	59.9	58.8	1.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C44 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SI1 in Area SI - West of I-35W between County Road I and US 10 West

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SI_300	Residential		55	70	60.5	58.3	2.2									
	SI_301	Residential		55	70	60.6	58.9	1.7									
	SI_302	Residential		55	70	60.4	58.8	1.6									
	SI_303	Residential		55	70	60.3	58.4	1.9									
	SI_304	Residential		55	70	60.3	58.1	2.2									
	SI_305	Residential		55	70	60.6	58.7	1.9									
	SI_306	Residential		55	70	60.5	58.6	1.9									
	SI_307	Residential		55	70	60.5	58.6	1.9									
	SI_308	Residential		55	70	60.5	58.5	2.0									
	SI_309	Residential		55	70	60.3	58.3	2.0									
	SI_310	Residential		55	70	60.3	58.3	2.0									
	SI_311	Residential		55	70	60.2	58.2	2.0									
	SI_312	Residential		55	70	60.2	58.2	2.0									
	SI_313	Residential		55	70	60.0	58.0	2.0									
	SI_314	Residential		55	70	60.0	58.0	2.0									
	SI_315	Residential		55	70	60.0	57.9	2.1									
	SI_316	Residential		55	70	60.0	57.9	2.1									
	SI_317	Residential		55	70	59.8	57.7	2.1									
Wall SI1	SI_318	Residential	Night	55	70	59.8	57.6	2.2	98	Yes	Yes	20	3,927	77,756	$1,690,272	$17,248	Propose to Construct
	SI_319	Residential		55	70	59.8	57.6	2.2									
	SI_320	Residential		55	70	59.8	57.6	2.2									
	SI_321	Residential		55	70	59.6	57.4	2.2									
	SI_322	Residential		55	70	59.6	57.4	2.2									
	SI_323	Residential		55	70	59.6	57.3	2.3									
	SI_324	Residential		55	70	59.6	57.3	2.3									
	SI_325	Residential		55	70	59.5	57.1	2.4									
	SI_326	Residential		55	70	59.5	57.1	2.4									
	SI_327	Residential		55	70	59.5	57.0	2.5									
	SI_328	Residential		55	70	59.5	57.0	2.5									
	SI_329	Trail		70	70	59.0	57.2	1.8									
	SI_330	Residential		55	70	59.7	58.0	1.7									
	SI_331	Residential		55	70	60.3	58.6	1.7									
	SI_332	Trail		70	70	61.5	59.6	1.9									
	SI_333	Trail		70	70	64.1	61.2	2.9									
	SI_334	Trail		70	70	64.6	63.3	1.3									
	SI_335	Trail		70	70	63.5	62.9	0.6									
	SI_336	Trail		70	70	64.1	63.9	0.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C45
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NI1 in Area NI - East of I-35W between County Road I and 85th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NI1	NI_1	Trail	Day	70	70	76.7	75.4	1.3	6	Yes	Yes	20	4,684	92,896	$1,857,920	$309,653	Not Cost Effective
	NI_2	Trail		70	70	70.7	68.9	1.8									
	NI_3	Trail		70	70	67.6	65.9	1.7									
	NI_4	Trail		70	70	70.0	68.0	2.0									
	NI_5	Trail		70	70	70.2	67.3	2.9									
	NI_6	Trail		70	70	70.6	66.2	4.4									
	NI_7	Trail		70	70	72.8	66.8	6.0									
	NI_8	Trail		70	70	74.5	67.2	7.3									
	NI_9	Trail		70	70	74.1	67.2	6.9									
	NI_10	Trail		70	70	72.6	66.5	6.1									
	NI_11	Trail		70	70	71.5	66.4	5.1									
	NI_12	Trail		70	70	70.5	66.0	4.5									
	NI_13	Trail		70	70	70.2	66.1	4.1									
	NI_14	Trail		70	70	70.0	65.9	4.1									
	NI_15	Trail		70	70	68.6	64.8	3.8									
	NI_16	Trail		70	70	67.7	64.2	3.5									
	NI_17	Trail		70	70	63.5	58.6	4.9									
	NI_18	Trail		70	70	61.7	56.6	5.1									
	NI_19	Trail		70	70	60.5	55.9	4.6									
	NI_20	Trail		70	70	66.5	63.2	3.3									
	NI_21	Residential		65	70	64.6	61.0	3.6									
	NI_22	Residential		65	70	61.9	57.1	4.8									
	NI_23	Residential		65	70	60.8	56.6	4.2									
	NI_24	Trail		70	70	66.8	63.7	3.1									
	NI_25	Residential		65	70	63.6	59.3	4.3									
	NI_26	Residential		65	70	62.2	57.7	4.5									
	NI_27	Residential		65	70	61.2	57.1	4.1									
	NI_28	Trail		70	70	67.0	64.0	3.0									
	NI_29	Residential		65	70	63.5	59.2	4.3									
	NI_30	Residential		65	70	62.0	57.5	4.5									
	NI_31	Residential		65	70	61.0	56.8	4.2									
	NI_32	Trail		70	70	67.4	64.5	2.9									
	NI_33	Residential		65	70	63.5	59.3	4.2									
	NI_34	Trail		70	70	67.8	65.0	2.8									
	NI_35	Residential		65	70	63.9	60.0	3.9									
	NI_36	Residential		65	70	62.4	58.0	4.4									
	NI_37	Residential		65	70	61.3	57.2	4.1									
	NI_38	Trail		70	70	67.7	65.1	2.6									
	NI_39	Trail		70	70	67.6	65.2	2.4									
	NI_40	Trail		70	70	67.2	65.3	1.9									
	NI_41	Trail		70	70	66.2	64.6	1.6									
	NI_1	Trail	Night	70	70	75.8	74.6	1.2	8	Yes	Yes	20	4,684	92,896	$1,857,920	$232,240	Not Cost Effective
	NI_2	Trail		70	70	69.6	67.8	1.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C45 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NI1 in Area NI - East of I-35W between County Road I and 85th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NI_3	Trail		70	70	66.7	65.0	1.7									
	NI_4	Trail		70	70	69.2	67.3	1.9									
	NI_5	Trail		70	70	69.5	66.5	3.0									
	NI_6	Trail		70	70	69.8	65.4	4.4									
	NI_7	Trail		70	70	71.9	66.0	5.9									
	NI_8	Trail		70	70	73.7	66.5	7.2									
	NI_9	Trail		70	70	73.4	66.5	6.9									
	NI_10	Trail		70	70	71.8	65.8	6.0									
	NI_11	Trail		70	70	70.8	65.7	5.1									
	NI_12	Trail		70	70	69.8	65.3	4.5									
	NI_13	Trail		70	70	69.6	65.5	4.1									
	NI_14	Trail		70	70	69.4	65.3	4.1									
	NI_15	Trail		70	70	68.2	64.2	4.0									
	NI_16	Trail		70	70	67.3	63.6	3.7									
	NI_17	Trail		70	70	62.9	57.9	5.0									
	NI_18	Trail		70	70	61.0	55.5	5.5									
	NI_19	Trail		70	70	59.6	54.7	4.9									
	NI_20	Trail		70	70	66.1	62.7	3.4									
	NI_21	Residential		55	70	64.1	60.4	3.7									
Wall NI1	NI_22	Residential	Night	55	70	61.1	56.1	5.0	8	Yes	Yes	20	4,684	92,896	$1,857,920	$232,240	Not Cost Effective
	NI_23	Residential		55	70	60.0	55.4	4.6									
	NI_24	Trail		70	70	66.4	63.2	3.2									
	NI_25	Residential		55	70	63.0	58.6	4.4									
	NI_26	Residential		55	70	61.5	56.8	4.7									
	NI_27	Residential		55	70	60.5	56.0	4.5									
	NI_28	Trail		70	70	66.6	63.5	3.1									
	NI_29	Residential		55	70	62.9	58.5	4.4									
	NI_30	Residential		55	70	61.3	56.5	4.8									
	NI_31	Residential		55	70	60.2	55.8	4.4									
	NI_32	Trail		70	70	67.0	64.0	3.0									
	NI_33	Residential		55	70	63.0	58.6	4.4									
	NI_34	Trail		70	70	67.3	64.5	2.8									
	NI_35	Residential		55	70	63.3	59.3	4.0									
	NI_36	Residential		55	70	61.8	57.1	4.7									
	NI_37	Residential		55	70	60.6	56.2	4.4									
	NI_38	Trail		70	70	67.3	64.5	2.8									
	NI_39	Trail		70	70	67.1	64.7	2.4									
	NI_40	Trail		70	70	66.7	64.7	2.0									
	NI_41	Trail		70	70	65.7	64.0	1.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C46
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall NI1 in Area NI - East of I-35W between County Road I and 85th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NI1	NI_1	Trail	Day	70	70	76.7	75.5	1.2	4	Yes	No	15	4,684	69,936	$1,398,720	N/A	Does Not Meet Noise Reduction Design Goal
	NI_2	Trail		70	70	70.7	69.0	1.7									
	NI_3	Trail		70	70	67.6	66.1	1.5									
	NI_4	Trail		70	70	70.0	68.2	1.8									
	NI_5	Trail		70	70	70.2	67.6	2.6									
	NI_6	Trail		70	70	70.6	66.7	3.9									
	NI_7	Trail		70	70	72.8	67.4	5.4									
	NI_8	Trail		70	70	74.5	67.9	6.6									
	NI_9	Trail		70	70	74.1	68.0	6.1									
	NI_10	Trail		70	70	72.6	67.4	5.2									
	NI_11	Trail		70	70	71.5	67.3	4.2									
	NI_12	Trail		70	70	70.5	66.9	3.6									
	NI_13	Trail		70	70	70.2	66.9	3.3									
	NI_14	Trail		70	70	70.0	66.5	3.5									
	NI_15	Trail		70	70	68.6	65.4	3.2									
	NI_16	Trail		70	70	67.7	64.7	3.0									
	NI_17	Trail		70	70	63.5	59.5	4.0									
	NI_18	Trail		70	70	61.7	58.0	3.7									
	NI_19	Trail		70	70	60.5	57.3	3.2									
	NI_20	Trail		70	70	66.5	63.9	2.6									
	NI_21	Residential		65	70	64.6	61.8	2.8									
	NI_22	Residential		65	70	61.9	58.5	3.4									
	NI_23	Residential		65	70	60.8	58.0	2.8									
	NI_24	Trail		70	70	66.8	64.4	2.4									
	NI_25	Residential		65	70	63.6	60.4	3.2									
	NI_26	Residential		65	70	62.2	59.1	3.1									
	NI_27	Residential		65	70	61.2	58.5	2.7									
	NI_28	Trail		70	70	67.0	64.7	2.3									
	NI_29	Residential		65	70	63.5	60.3	3.2									
	NI_30	Residential		65	70	62.0	58.9	3.1									
	NI_31	Residential		65	70	61.0	58.2	2.8									
	NI_32	Trail		70	70	67.4	65.2	2.2									
	NI_33	Residential		65	70	63.5	60.5	3.0									
	NI_34	Trail		70	70	67.8	65.6	2.2									
	NI_35	Residential		65	70	63.9	60.9	3.0									
	NI_36	Residential		65	70	62.4	59.4	3.0									
	NI_37	Residential		65	70	61.3	58.5	2.8									
	NI_38	Trail		70	70	67.7	65.7	2.0									
	NI_39	Trail		70	70	67.6	65.8	1.8									
	NI_40	Trail		70	70	67.2	65.7	1.5									
	NI_41	Trail		70	70	66.2	65.0	1.2									
	NI_1	Trail	Night	70	70	75.8	74.6	1.2	4	Yes	No	15	4,684	69,936	$1,398,720	N/A	Does Not Meet Noise Reduction Design Goal
	NI_2	Trail		70	70	69.6	67.9	1.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C46 Continued
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall NI1 in Area NI - East of I-35W between County Road I and 85th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NI_3	Trail		70	70	66.7	65.2	1.5									
	NI_4	Trail		70	70	69.2	67.5	1.7									
	NI_5	Trail		70	70	69.5	66.8	2.7									
	NI_6	Trail		70	70	69.8	65.9	3.9									
	NI_7	Trail		70	70	71.9	66.6	5.3									
	NI_8	Trail		70	70	73.7	67.1	6.6									
	NI_9	Trail		70	70	73.4	67.2	6.2									
	NI_10	Trail		70	70	71.8	66.6	5.2									
	NI_11	Trail		70	70	70.8	66.5	4.3									
	NI_12	Trail		70	70	69.8	66.1	3.7									
	NI_13	Trail		70	70	69.6	66.2	3.4									
	NI_14	Trail		70	70	69.4	65.9	3.5									
	NI_15	Trail		70	70	68.2	64.8	3.4									
	NI_16	Trail		70	70	67.3	64.1	3.2									
	NI_17	Trail		70	70	62.9	58.8	4.1									
	NI_18	Trail		70	70	61.0	57.0	4.0									
	NI_19	Trail		70	70	59.6	56.2	3.4									
	NI_20	Trail		70	70	66.1	63.3	2.8									
	NI_21	Residential		55	70	64.1	61.2	2.9									
Wall NI1	NI_22	Residential	Night	55	70	61.1	57.6	3.5	4	Yes	No	15	4,684	69,936	$1,398,720	N/A	Does Not Meet Noise Reduction Design Goal
	NI_23	Residential		55	70	60.0	56.9	3.1									
	NI_24	Trail		70	70	66.4	63.9	2.5									
	NI_25	Residential		55	70	63.0	59.6	3.4									
	NI_26	Residential		55	70	61.5	58.2	3.3									
	NI_27	Residential		55	70	60.5	57.5	3.0									
	NI_28	Trail		70	70	66.6	64.2	2.4									
	NI_29	Residential		55	70	62.9	59.6	3.3									
	NI_30	Residential		55	70	61.3	58.0	3.3									
	NI_31	Residential		55	70	60.2	57.2	3.0									
	NI_32	Trail		70	70	67.0	64.7	2.3									
	NI_33	Residential		55	70	63.0	59.7	3.3									
	NI_34	Trail		70	70	67.3	65.1	2.2									
	NI_35	Residential		55	70	63.3	60.3	3.0									
	NI_36	Residential		55	70	61.8	58.5	3.3									
	NI_37	Residential		55	70	60.6	57.6	3.0									
	NI_38	Trail		70	70	67.3	65.1	2.2									
	NI_39	Trail		70	70	67.1	65.2	1.9									
	NI_40	Trail		70	70	66.7	65.2	1.5									
	NI_41	Trail		70	70	65.7	64.4	1.3									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C47
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NI1 in Area NI - East of I-35W between County Road I and 85th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NI1	NI_6	Trail	Day	70	70	70.6	69.4	1.2	2	Yes	No	20	870	16,616	$332,320	N/A	Does Not Meet Noise Reduction Design Goal
	NI_7	Trail		70	70	72.8	69.8	3.0									
	NI_8	Trail		70	70	74.5	68.7	5.8									
	NI_9	Trail		70	70	74.1	68.3	5.8									
	NI_10	Trail		70	70	72.6	68.8	3.8									
	NI_11	Trail		70	70	71.5	70.3	1.2									
	NI_12	Trail		70	70	70.5	69.9	0.6									
	NI_13	Trail		70	70	70.2	70.0	0.2									
	NI_14	Trail		70	70	70.0	69.8	0.2									
	NI_15	Trail		70	70	68.6	68.5	0.1									
	NI_16	Trail		70	70	67.7	67.6	0.1									
	NI_17	Trail		70	70	63.5	63.3	0.2									
	NI_18	Trail		70	70	61.7	61.5	0.2									
	NI_19	Trail		70	70	60.5	60.2	0.3									
	NI_20	Trail		70	70	66.5	66.5	0.0									
	NI_21	Residential		65	70	64.6	64.5	0.1									
	NI_22	Residential		65	70	61.9	61.7	0.2									
	NI_23	Residential		65	70	60.8	60.6	0.2									
	NI_24	Trail		70	70	66.8	66.8	0.0									
	NI_25	Residential		65	70	63.6	63.5	0.1									
	NI_26	Residential		65	70	62.2	62.1	0.1									
	NI_27	Residential		65	70	61.2	61.1	0.1									
	NI_28	Trail		70	70	67.0	67.0	0.0									
	NI_29	Residential		65	70	63.5	63.4	0.1									
	NI_30	Residential		65	70	62.0	61.9	0.1									
	NI_31	Residential		65	70	61.0	60.8	0.2									
	NI_32	Trail		70	70	67.4	67.4	0.0									
	NI_33	Residential		65	70	63.5	63.5	0.0									
	NI_34	Trail		70	70	67.8	67.7	0.1									
	NI_35	Residential		65	70	63.9	63.9	0.0									
	NI_36	Residential		65	70	62.4	62.4	0.0									
	NI_37	Residential		65	70	61.3	61.2	0.1									
	NI_38	Trail		70	70	67.7	67.7	0.0									
	NI_39	Trail		70	70	67.6	67.6	0.0									
	NI_40	Trail		70	70	67.2	67.1	0.1									
	NI_41	Trail		70	70	66.2	66.1	0.1									
	NI_1	Trail	Night	70	70	75.8	75.8	0.0	2	Yes	No	20	870	16,616	$332,320	N/A	Does Not Meet Noise Reduction Design Goal
	NI_2	Trail		70	70	69.6	69.5	0.1									
	NI_3	Trail		70	70	66.7	66.3	0.4									
	NI_4	Trail		70	70	69.2	68.9	0.3									
	NI_5	Trail		70	70	69.5	68.9	0.6									
	NI_6	Trail		70	70	69.8	68.5	1.3									
	NI_7	Trail		70	70	71.9	69.0	2.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C47 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NI1 in Area NI - East of I-35W between County Road I and 85th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NI1	NI_8	Trail	Night	70	70	73.7	68.0	5.7	2	Yes	No	20	870	16,616	$332,320	N/A	Does Not Meet Noise Reduction Design Goal
	NI_9	Trail		70	70	73.4	67.6	5.8									
	NI_10	Trail		70	70	71.8	68.2	3.6									
	NI_11	Trail		70	70	70.8	69.6	1.2									
	NI_12	Trail		70	70	69.8	69.3	0.5									
	NI_13	Trail		70	70	69.6	69.4	0.2									
	NI_14	Trail		70	70	69.4	69.3	0.1									
	NI_15	Trail		70	70	68.2	68.1	0.1									
	NI_16	Trail		70	70	67.3	67.2	0.1									
	NI_17	Trail		70	70	62.9	62.8	0.1									
	NI_18	Trail		70	70	61.0	60.8	0.2									
	NI_19	Trail		70	70	59.6	59.3	0.3									
	NI_20	Trail		70	70	66.1	66.1	0.0									
	NI_21	Residential		55	70	64.1	64.0	0.1									
	NI_22	Residential		55	70	61.1	61.0	0.1									
	NI_23	Residential		55	70	60.0	59.7	0.3									
	NI_24	Trail		70	70	66.4	66.4	0.0									
	NI_25	Residential		55	70	63.0	62.9	0.1									
	NI_26	Residential		55	70	61.5	61.4	0.1									
	NI_27	Residential		55	70	60.5	60.3	0.2									
	NI_28	Trail		70	70	66.6	66.5	0.1									
	NI_29	Residential		55	70	62.9	62.9	0.0									
	NI_30	Residential		55	70	61.3	61.2	0.1									
	NI_31	Residential		55	70	60.2	60.1	0.1									
	NI_32	Trail		70	70	67.0	67.0	0.0									
	NI_33	Residential		55	70	63.0	62.9	0.1									
	NI_34	Trail		70	70	67.3	67.3	0.0									
	NI_35	Residential		55	70	63.3	63.3	0.0									
	NI_36	Residential		55	70	61.8	61.7	0.1									
	NI_37	Residential		55	70	60.6	60.5	0.1									
	NI_38	Trail		70	70	67.3	67.2	0.1									
	NI_39	Trail		70	70	67.1	67.1	0.0									
	NI_40	Trail		70	70	66.7	66.6	0.1									
	NI_41	Trail		70	70	65.7	65.6	0.1									

Table C48
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NI2 in Area NI - East of I-35W between County Road I and 85th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NI2	NI_42	Hotel	Day	65	75	69.4	65.5	3.9	0	No	No	20	570	10,616	$212,320	N/A	Does Not Meet Noise Reduction Design Goal
	NI_42	Hotel	Night	55	75	68.3	63.1	5.2	1	Yes	No	20	570	10,616	$212,320	N/A	Does Not Meet Noise Reduction Design Goal

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C49
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SJ1 in Area SJ - South of US-10 between Greenfield Park and County Road J

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SJ1	SJ_1	Trail	Day	70	70	65.0	64.4	0.6	16	Yes	Yes	20	1,411	27,436	$548,720	$34,295	Propose to Construct
	SJ_2	Trail		70	70	64.7	64.4	0.3									
	SJ_3	Trail		70	70	63.1	62.8	0.3									
	SJ_4	Residential		65	70	67.9	60.7	7.2									
	SJ_5	Residential		65	70	63.5	58.6	4.9									
	SJ_6	Residential		65	70	61.6	57.5	4.1									
	SJ_7	Residential		65	70	61.8	57.8	4.0									
	SJ_8	Residential		65	70	67.9	60.7	7.2									
	SJ_9	Residential		65	70	71.5	62.4	9.1									
	SJ_10	Residential		65	70	69.3	62.1	7.2									
	SJ_11	Residential		65	70	69.2	62.0	7.2									
	SJ_12	Residential		65	70	68.0	61.6	6.4									
	SJ_13	Residential		65	70	66.0	60.7	5.3									
	SJ_14	Residential		65	70	63.6	59.7	3.9									
	SJ_15	Residential		65	70	61.1	58.7	2.4									
	SJ_16	Residential		65	70	61.3	58.7	2.6									
	SJ_17	Residential		65	70	76.1	64.2	11.9									
	SJ_18	Residential		65	70	75.4	64.1	11.3									
	SJ_19	Residential		65	70	72.2	63.3	8.9									
	SJ_20	Residential		65	70	71.6	62.9	8.7									
	SJ_21	Residential		65	70	70.3	61.9	8.4									
	SJ_22	Residential		65	70	69.0	62.3	6.7									
	SJ_23	Residential		65	70	68.8	62.2	6.6									
	SJ_24	Residential		65	70	68.3	61.6	6.7									
	SJ_25	Residential		65	70	76.5	64.0	12.5									
	SJ_1	Trail	Night	70	70	63.7	63.0	0.7	16	Yes	Yes	20	1,411	27,436	$548,720	$34,295	Propose to Construct
	SJ_2	Trail		70	70	63.3	62.9	0.4									
	SJ_3	Trail		70	70	61.7	61.3	0.4									
	SJ_4	Residential		55	70	66.3	59.1	7.2									
	SJ_5	Residential		55	70	62.0	57.1	4.9									
	SJ_6	Residential		55	70	60.0	55.9	4.1									
	SJ_7	Residential		55	70	60.2	56.2	4.0									
	SJ_8	Residential		55	70	66.3	59.1	7.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C49 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SJ1 in Area SJ - South of US-10 between Greenfield Park and County Road J

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SJ1	SJ_9	Residential	Night	55	70	69.9	60.6	9.3	16	Yes	Yes	20	1411	27436	$548,720	$34,295	Propose to Construct
	SJ_10	Residential		55	70	67.6	60.4	7.2									
	SJ_11	Residential		55	70	67.5	60.3	7.2									
	SJ_12	Residential		55	70	66.4	59.9	6.5									
	SJ_13	Residential		55	70	64.4	58.9	5.5									
	SJ_14	Residential		55	70	62.0	58.0	4.0									
	SJ_15	Residential		55	70	59.4	57.1	2.3									
	SJ_16	Residential		55	70	59.7	57.0	2.7									
	SJ_17	Residential		55	70	74.4	62.5	11.9									
	SJ_18	Residential		55	70	73.7	62.3	11.4									
	SJ_19	Residential		55	70	70.6	61.5	9.1									
	SJ_20	Residential		55	70	69.9	61.1	8.8									
	SJ_21	Residential		55	70	68.7	60.1	8.6									
	SJ_22	Residential		55	70	67.3	60.5	6.8									
	SJ_23	Residential		55	70	67.1	60.4	6.7									
	SJ_24	Residential		55	70	66.7	59.7	7.0									
	SJ_25	Residential		55	70	74.8	62.3	12.5									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C50
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SJ2 in Area SJ - South of US-10 between Greenfield Park and County Road J

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SJ2	SJ_26	Residential	Day	65	70	66.6	65.8	0.8	0	No	No	20	817	15,556	$368,475	N/A	Does Not Meet Noise Reduction Design Goal
	SJ_27	Residential		65	70	63.0	62.1	0.9									
	SJ_28	Residential		65	70	63.1	62.2	0.9									
	SJ_29	Residential		65	70	62.4	61.2	1.2									
	SJ_30	Residential		65	70	62.6	61.1	1.5									
	SJ_31	Residential		65	70	63.0	61.4	1.6									
	SJ_32	Residential		65	70	63.5	61.7	1.8									
	SJ_33	Residential		65	70	64.2	61.9	2.3									
	SJ_34	Residential		65	70	64.5	61.9	2.6									
	SJ_35	Residential		65	70	65.7	63.1	2.6									
	SJ_36	Residential		65	70	66.8	63.3	3.5									
	SJ_37	Residential		65	70	67.0	62.8	4.2									
	SJ_38	Residential		65	70	65.6	62.6	3.0									
	SJ_39	Residential		65	70	66.0	63.9	2.1									
	SJ_40	Residential		65	70	64.9	64.1	0.8									
	SJ_41	Residential		65	70	64.9	64.6	0.3									
	SJ_42	Residential		65	70	59.9	58.5	1.4									
	SJ_43	Residential		65	70	60.3	58.8	1.5									
	SJ_44	Residential		65	70	60.5	58.9	1.6									
	SJ_45	Residential		65	70	61.4	59.4	2.0									
	SJ_46	Residential		65	70	61.5	59.4	2.1									
	SJ_47	Residential		65	70	62.2	59.9	2.3									
	SJ_48	Residential		65	70	62.3	60.0	2.3									
	SJ_49	Residential		65	70	62.2	60.0	2.2									
	SJ_50	Residential		65	70	62.5	60.3	2.2									
	SJ_51	Residential		65	70	62.7	60.6	2.1									
	SJ_52	Residential		65	70	62.7	60.7	2.0									
	SJ_53	Residential		65	70	62.9	61.4	1.5									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C50 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SJ2 in Area SJ - South of US-10 between Greenfield Park and County Road J

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SJ2	SJ_54	Residential	Day	65	70	62.8	61.8	1.0	0	No	No	20	817	15,556	$368,475	N/A	Does Not Meet Noise Reduction Design Goal
	SJ_55	Residential		65	70	62.6	62.0	0.6									
	SJ_56	Residential		65	70	63.4	63.2	0.2									
	SJ_57	Residential		65	70	59.1	57.8	1.3									
	SJ_58	Residential		65	70	58.7	57.4	1.3									
	SJ_59	Residential		65	70	59.1	57.7	1.4									
	SJ_60	Residential		65	70	59.5	58.0	1.5									
	SJ_61	Residential		65	70	60.1	58.5	1.6									
	SJ_62	Residential		65	70	60.4	58.8	1.6									
	SJ_63	Residential		65	70	60.5	59.0	1.5									
	SJ_64	Residential		65	70	60.8	59.3	1.5									
	SJ_65	Residential		65	70	61.0	59.7	1.3									
	SJ_66	Residential		65	70	61.0	59.9	1.1									
	SJ_67	Residential		65	70	61.2	60.4	0.8									
	SJ_68	Residential		65	70	61.4	60.9	0.5									
	SJ_69	Residential		65	70	61.5	61.2	0.3									
	SJ_70	Residential		65	70	62.2	62.1	0.1									
	SJ_71	Residential		65	70	63.0	63.0	0.0									
	SJ_72	Residential		65	70	64.6	64.6	0.0									
	SJ_73	Residential		65	70	63.2	63.1	0.1									
	SJ_74	Residential		65	70	57.0	56.0	1.0									
	SJ_75	Residential		65	70	57.2	56.2	1.0									
	SJ_76	Residential		65	70	57.3	56.4	0.9									
	SJ_77	Residential		65	70	57.6	56.6	1.0									
	SJ_78	Residential		65	70	57.9	56.9	1.0									
	SJ_79	Residential		65	70	58.0	57.0	1.0									
	SJ_80	Residential		65	70	58.2	57.2	1.0									
	SJ_81	Residential		65	70	58.3	57.5	0.8									
	SJ_82	Residential		65	70	58.4	57.7	0.7									
	SJ_83	Residential		65	70	58.7	58.1	0.6									
	SJ_84	Residential		65	70	58.8	58.3	0.5									
	SJ_85	Residential		65	70	59.0	58.6	0.4									
	SJ_86	Residential		65	70	59.3	59.0	0.3									
	SJ_87	Residential		65	70	59.8	59.6	0.2									
	SJ_88	Residential		65	70	60.2	60.1	0.1									
	SJ_89	Residential		65	70	61.1	61.0	0.1									
	SJ_90	Residential		65	70	61.8	61.7	0.1									
	SJ_91	Residential		65	70	62.3	62.2	0.1									
	SJ_26	Residential	Night	55	70	65.0	64.1	0.9	0	No	No	20	817	15,556	$368,475	N/A	Does Not Meet Noise Reduction Design Goal
	SJ_27	Residential		55	70	62.2	61.2	1.0									
	SJ_28	Residential		55	70	62.4	61.3	1.1									
	SJ_29	Residential		55	70	61.4	60.3	1.1									
	SJ_30	Residential		55	70	61.5	60.1	1.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C50 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SJ2 in Area SJ - South of US-10 between Greenfield Park and County Road J

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	SJ_31	Residential		55	70	61.9	60.4	1.5									
	SJ_32	Residential		55	70	62.4	60.8	1.6									
	SJ_33	Residential		55	70	62.9	60.9	2.0									
	SJ_34	Residential		55	70	63.1	60.9	2.2									
	SJ_35	Residential		55	70	64.6	62.3	2.3									
	SJ_36	Residential		55	70	65.5	62.4	3.1									
	SJ_37	Residential		55	70	65.4	61.4	4.0									
	SJ_38	Residential		55	70	63.9	60.9	3.0									
	SJ_39	Residential		55	70	64.6	62.7	1.9									
	SJ_40	Residential		55	70	63.8	63.0	0.8									
	SJ_41	Residential		55	70	64.0	63.6	0.4									
	SJ_42	Residential		55	70	58.2	56.8	1.4									
	SJ_43	Residential		55	70	58.7	57.1	1.6									
	SJ_44	Residential		55	70	58.9	57.2	1.7									
	SJ_45	Residential		55	70	59.7	57.7	2.0									
	SJ_46	Residential		55	70	59.8	57.7	2.1									
	SJ_47	Residential		55	70	60.5	58.2	2.3									
	SJ_48	Residential		55	70	60.7	58.3	2.4									
	SJ_49	Residential		55	70	60.6	58.3	2.3									
	SJ_50	Residential		55	70	60.8	58.6	2.2									
	SJ_51	Residential		55	70	61.0	58.8	2.2									
Wall SJ2	SJ_52	Residential	Night	55	70	61.0	59.0	2.0	0	No	No	20	817	15,556	$368,475	N/A	Does Not Meet Noise Reduction Design Goal
	SJ_53	Residential		55	70	61.2	59.6	1.6									
	SJ_54	Residential		55	70	61.1	60.1	1.0									
	SJ_55	Residential		55	70	61.0	60.4	0.6									
	SJ_56	Residential		55	70	62.1	61.9	0.2									
	SJ_57	Residential		55	70	57.4	56.0	1.4									
	SJ_58	Residential		55	70	57.1	55.7	1.4									
	SJ_59	Residential		55	70	57.5	56.0	1.5									
	SJ_60	Residential		55	70	57.8	56.3	1.5									
	SJ_61	Residential		55	70	58.4	56.7	1.7									
	SJ_62	Residential		55	70	58.7	57.0	1.7									
	SJ_63	Residential		55	70	58.8	57.2	1.6									
	SJ_64	Residential		55	70	59.2	57.5	1.7									
	SJ_65	Residential		55	70	59.3	58.0	1.3									
	SJ_66	Residential		55	70	59.3	58.1	1.2									
	SJ_67	Residential		55	70	59.4	58.6	0.8									
	SJ_68	Residential		55	70	59.6	59.1	0.5									
	SJ_69	Residential		55	70	59.8	59.4	0.4									
	SJ_70	Residential		55	70	60.6	60.5	0.1									
	SJ_71	Residential		55	70	61.8	61.7	0.1									
	SJ_72	Residential		55	70	63.5	63.5	0.0									
	SJ_73	Residential		55	70	62.2	62.1	0.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C50 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SJ2 in Area SJ - South of US-10 between Greenfield Park and County Road J

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SJ2	SJ_74	Residential	Night	55	70	55.3	54.3	1.0	0	No	No	20	817	15,556	$368,475	N/A	Does Not Meet Noise Reduction Design Goal
	SJ_75	Residential		55	70	55.5	54.5	1.0									
	SJ_76	Residential		55	70	55.7	54.6	1.1									
	SJ_77	Residential		55	70	55.9	54.8	1.1									
	SJ_78	Residential		55	70	56.2	55.1	1.1									
	SJ_79	Residential		55	70	56.3	55.2	1.1									
	SJ_80	Residential		55	70	56.5	55.5	1.0									
	SJ_81	Residential		55	70	56.6	55.7	0.9									
	SJ_82	Residential		55	70	56.7	55.9	0.8									
	SJ_83	Residential		55	70	57.0	56.3	0.7									
	SJ_84	Residential		55	70	57.1	56.5	0.6									
	SJ_85	Residential		55	70	57.3	56.8	0.5									
	SJ_86	Residential		55	70	57.6	57.2	0.4									
	SJ_87	Residential		55	70	58.1	57.9	0.2									
	SJ_88	Residential		55	70	58.5	58.3	0.2									
	SJ_89	Residential		55	70	59.4	59.4	0.0									
	SJ_90	Residential		55	70	60.2	60.2	0.0									
	SJ_91	Residential		55	70	60.9	60.8	0.1									

Table C51
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NJ1 in Area NJ - North of US-10 between Greenfield Park and County Road J

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NJ1	NJ_1	Office	Day	70	75	70.8	63.4	7.4	1	Yes	Yes	20	1,449	28,196	$563,920	$563,920	Not Cost Effective
	NJ_1	Office	Night	70	75	69.2	61.7	7.5	1	Yes	Yes	20	1,449	28,196	$563,920	$563,920	Not Cost Effective

Table C52
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall NJ1 in Area NJ - North of US-10 between Greenfield Park and County Road J

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NJ1	NJ_1	Office	Day	70	75	70.8	66.2	4.6	0	No	No	15	1,449	21,411	$428,220	N/A	Does Not Meet Noise Reduction Design Goal
	NJ_1	Office	Night	70	75	69.2	64.4	4.8	0	No	No	15	1,449	21,411	$428,220	N/A	Does Not Meet Noise Reduction Design Goal

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C53
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NJ1 in Area NJ - North of US-10 between Greenfield Park and County Road J

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NJ1	NJ_1	Office	Day	70	75	70.8	68.3	2.5	0	No	No	20	156	2,336	$46,720	N/A	Does Not Meet Noise Reduction Design Goal
	NJ_1	Office	Night	70	75	69.2	66.6	2.6	0	No	No	20	156	2,336	$46,720	N/A	Does Not Meet Noise Reduction Design Goal

Table C54
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SK1 in Area SK - West of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SK1	SK_2	Retail	Day	70	NA	69.1	61.5	7.6	6	Yes	Yes	20	4,122	81,646	$1,632,920	$272,153	Not Cost Effective
	SK_3	Retail		70	NA	69.2	61.4	7.8									
	SK_4	Retail		70	NA	68.5	60.7	7.8									
	SK_5	Office		70	75	68.3	60.2	8.1									
	SK_6	Office		70	75	69.8	61.0	8.8									
	SK_7	Retail		70	NA	69.9	61.7	8.2									
	SK_20	Residential		65	70	63.2	58.6	4.6									
	SK_21	Residential		65	70	63.0	58.4	4.6									
	SK_22	Residential		65	70	62.6	58.5	4.1									
	SK_2	Retail	Night	70	NA	66.1	59.5	6.6	6	Yes	Yes	20	4,122	81,646	$1,632,920	$272,153	Not Cost Effective
	SK_3	Retail		70	NA	66.1	59.5	6.6									
	SK_4	Retail		70	NA	65.4	58.8	6.6									
	SK_5	Office		70	75	65.2	58.2	7.0									
	SK_6	Office		70	75	66.5	59.0	7.5									
	SK_7	Retail		70	NA	66.7	59.7	7.0									
	SK_20	Residential		55	70	61.0	57.0	4.0									
	SK_21	Residential		55	70	60.8	56.7	4.1									
	SK_22	Residential		55	70	60.5	56.9	3.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C55
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SK1 in Area SK - West of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SK1	SK_2	Retail	Day	70	NA	69.1	61.4	7.7	6	Yes	Yes	20	3,302	65,256	$1,305,120	$217,520	Not Cost Effective
	SK_3	Retail		70	NA	69.2	61.4	7.8									
	SK_4	Retail		70	NA	68.5	60.6	7.9									
	SK_5	Office		70	75	68.3	60.1	8.2									
	SK_6	Office		70	75	69.8	61.0	8.8									
	SK_7	Retail		70	NA	69.9	62.0	7.9									
	SK_20	Residential		65	70	63.2	63.2	0.0									
	SK_21	Residential		65	70	63.0	63.0	0.0									
	SK_22	Residential		65	70	62.6	62.6	0.0									
	SK_2	Retail	Night	70	NA	66.1	59.5	6.6	6	Yes	Yes	20	3,302	65,256	$1,305,120	$217,520	Not Cost Effective
	SK_3	Retail		70	NA	66.1	59.4	6.7									
	SK_4	Retail		70	NA	65.4	58.7	6.7									
	SK_5	Office		70	75	65.2	58.2	7.0									
	SK_6	Office		70	75	66.5	59.0	7.5									
	SK_7	Retail		70	NA	66.7	59.9	6.8									
	SK_20	Residential		55	70	61.0	61.0	0.0									
	SK_21	Residential		55	70	60.8	60.8	0.0									
	SK_22	Residential		55	70	60.5	60.4	0.1									

Table C56
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SK1 in Area SK - West of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SK1	SK_2	Retail	Day	70	NA	69.1	63.8	5.3	6	Yes	No	15	3,302	49,206	$984,120	N/A	Does Not Meet Noise Reduction Design Goal
	SK_3	Retail		70	NA	69.2	63.8	5.4									
	SK_4	Retail		70	NA	68.5	63.0	5.5									
	SK_5	Office		70	75	68.3	62.4	5.9									
	SK_6	Office		70	75	69.8	63.3	6.5									
	SK_7	Retail		70	NA	69.9	64.4	5.5									
	SK_2	Retail	Night	70	NA	66.1	61.7	4.4	1	Yes	No	15	3,302	49,206	$984,120	N/A	Does Not Meet Noise Reduction Design Goal
	SK_3	Retail		70	NA	66.1	61.8	4.3									
	SK_4	Retail		70	NA	65.4	61.0	4.4									
	SK_5	Office		70	75	65.2	60.4	4.8									
	SK_6	Office		70	75	66.5	61.2	5.3									
	SK_7	Retail		70	NA	66.7	62.3	4.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C57
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SK1 in Area SK - West of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SK1	SK_2	Retail	Day	70	NA	69.1	64.1	5.0	2	Yes	No	20	652	12,256	$245,120	N/A	Does Not Meet Noise Reduction Design Goal
	SK_3	Retail		70	NA	69.2	62.8	6.4									
	SK_4	Retail		70	NA	68.5	67.9	0.6									
	SK_5	Office		70	75	68.3	68.2	0.1									
	SK_6	Office		70	75	69.8	69.8	0.0									
	SK_7	Retail		70	NA	69.9	69.9	0.0									
	SK_2	Retail	Night	70	NA	66.1	61.7	4.4	1	Yes	No	20	652	12,256	$245,120	N/A	Does Not Meet Noise Reduction Design Goal
	SK_3	Retail		70	NA	66.1	60.6	5.5									
	SK_4	Retail		70	NA	65.4	64.8	0.6									
	SK_5	Office		70	75	65.2	65.1	0.1									
	SK_6	Office		70	75	66.5	66.5	0.0									
	SK_7	Retail		70	NA	66.7	66.7	0.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C58
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SK2 in Area SK - West of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SK2	SK_8	Residential	Day	65	70	67.1	63.1	4.0	6	Yes	No	20	1,147	22,156	$443,120	N/A	Does Not Meet Noise Reduction Design Goal
	SK_9	Residential		65	70	66.9	62.0	4.9									
	SK_10	Residential		65	70	66.2	61.1	5.1									
	SK_11	Residential		65	70	65.8	60.3	5.5									
	SK_12	Residential		65	70	65.4	59.6	5.8									
	SK_13	Residential		65	70	64.9	58.9	6.0									
	SK_14	Residential		65	70	64.4	58.6	5.8									
	SK_15	Residential		65	70	63.7	58.3	5.4									
	SK_16	Residential		65	70	62.9	58.1	4.8									
	SK_17	Residential		65	70	62.4	58.1	4.3									
	SK_18	Residential		65	70	62.0	58.3	3.7									
	SK_19	Residential		65	70	61.4	58.5	2.9									
	SK_8	Residential	Night	55	70	65.0	61.0	4.0	6	Yes	No	20	1,147	22,156	$443,120	N/A	Does Not Meet Noise Reduction Design Goal
	SK_9	Residential		55	70	64.8	59.9	4.9									
	SK_10	Residential		55	70	64.1	59.0	5.1									
	SK_11	Residential		55	70	63.7	58.3	5.4									
	SK_12	Residential		55	70	63.4	57.7	5.7									
	SK_13	Residential		55	70	62.9	57.0	5.9									
	SK_14	Residential		55	70	62.4	56.7	5.7									
	SK_15	Residential		55	70	61.8	56.4	5.4									
	SK_16	Residential		55	70	61.0	56.3	4.7									
	SK_17	Residential		55	70	60.5	56.3	4.2									
	SK_18	Residential		55	70	60.1	56.5	3.6									
	SK_19	Residential		55	70	59.5	56.7	2.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_2	Residential		65	70	75.5	60.2	15.3									
	NK_3	Residential		65	70	72.2	60.0	12.2									
	NK_4	Residential		65	70	70.0	59.0	11.0									
	NK_5	Residential		65	70	69.1	58.4	10.7									
	NK_6	Residential		65	70	68.7	58.0	10.7									
	NK_7	Residential		65	70	68.5	57.7	10.8									
	NK_8	Residential		65	70	67.9	57.1	10.8									
	NK_9	Residential		65	70	67.4	56.9	10.5									
	NK_10	Residential		65	70	66.4	56.6	9.8									
	NK_11	Residential		65	70	65.2	56.3	8.9									
	NK_12	Residential		65	70	64.1	56.1	8.0									
	NK_13	Residential		65	70	75.5	60.4	15.1									
	NK_14	Residential		65	70	75.5	60.4	15.1									
	NK_15	Residential		65	70	75.1	60.5	14.6									
	NK_16	Residential		65	70	75.1	60.6	14.5									
	NK_17	Residential		65	70	74.9	60.7	14.2									
	NK_18	Residential		65	70	75.3	60.6	14.7									
	NK_19	Residential		65	70	74.7	60.8	13.9									
	NK_20	Residential		65	70	74.5	60.9	13.6									
	NK_21	Residential		65	70	74.3	61.0	13.3									
	NK_22	Residential		65	70	66.2	61.0	5.2									
Wall NK1	NK_23	Residential	Day	65	70	66.1	61.0	5.1	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_24	Residential		65	70	66.0	61.0	5.0									
	NK_25	Residential		65	70	65.8	61.0	4.8									
	NK_26	Residential		65	70	65.7	61.0	4.7									
	NK_27	Residential		65	70	65.7	61.0	4.7									
	NK_28	Residential		65	70	65.8	61.0	4.8									
	NK_29	Residential		65	70	66.2	61.0	5.2									
	NK_30	Residential		65	70	66.6	59.9	6.7									
	NK_31	Residential		65	70	67.0	60.2	6.8									
	NK_32	Residential		65	70	64.3	60.5	3.8									
	NK_33	Residential		65	70	63.9	60.4	3.5									
	NK_34	Residential		65	70	63.8	60.4	3.4									
	NK_35	Residential		65	70	63.7	60.4	3.3									
	NK_36	Residential		65	70	63.5	60.3	3.2									
	NK_37	Residential		65	70	63.5	60.2	3.3									
	NK_38	Residential		65	70	63.4	60.2	3.2									
	NK_39	Residential		65	70	63.3	59.9	3.4									
	NK_40	Residential		65	70	62.8	59.1	3.7									
	NK_41	Residential		65	70	64.1	59.3	4.8									
	NK_42	Residential		65	70	63.2	59.5	3.7									
	NK_43	Residential		65	70	63.6	59.5	4.1									
	NK_44	Residential		65	70	63.5	59.6	3.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_45	Residential		65	70	63.3	59.4	3.9									
	NK_46	Residential		65	70	62.9	59.4	3.5									
	NK_47	Residential		65	70	62.6	59.2	3.4									
	NK_48	Residential		65	70	62.0	58.8	3.2									
	NK_49	Residential		65	70	62.3	58.7	3.6									
	NK_50	Residential		65	70	62.2	58.7	3.5									
	NK_51	Residential		65	70	62.0	58.4	3.6									
	NK_52	Residential		65	70	61.9	58.0	3.9									
	NK_53	Residential		65	70	61.5	57.7	3.8									
	NK_54	Residential		65	70	61.1	57.4	3.7									
	NK_55	Residential		65	70	62.0	58.1	3.9									
	NK_56	Residential		65	70	61.2	57.5	3.7									
	NK_57	Residential		65	70	60.9	57.2	3.7									
	NK_58	Residential		65	70	61.8	58.7	3.1									
	NK_59	Residential		65	70	62.1	58.4	3.7									
	NK_60	Residential		65	70	61.9	58.1	3.8									
	NK_61	Residential		65	70	61.8	57.9	3.9									
	NK_62	Residential		65	70	61.5	57.6	3.9									
	NK_63	Residential		65	70	61.2	57.4	3.8									
	NK_64	Residential		65	70	60.8	57.2	3.6									
	NK_65	Residential		65	70	62.3	58.7	3.6									
Wall NK1	NK_66	Residential	Day	65	70	62.3	58.5	3.8	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_67	Residential		65	70	62.2	58.2	4.0									
	NK_68	Residential		65	70	62.0	57.9	4.1									
	NK_69	Residential		65	70	61.7	57.7	4.0									
	NK_70	Residential		65	70	61.4	57.5	3.9									
	NK_71	Residential		65	70	61.1	57.3	3.8									
	NK_72	Residential		65	70	74.3	61.0	13.3									
	NK_73	Residential		65	70	67.7	60.6	7.1									
	NK_74	Residential		65	70	64.8	58.8	6.0									
	NK_75	Residential		65	70	63.2	58.3	4.9									
	NK_76	Residential		65	70	62.9	58.5	4.4									
	NK_77	Residential		65	70	61.8	57.6	4.2									
	NK_78	Residential		65	70	65.4	60.6	4.8									
	NK_79	Residential		65	70	63.6	58.4	5.2									
	NK_80	Residential		65	70	62.7	58.0	4.7									
	NK_81	Residential		65	70	61.9	57.5	4.4									
	NK_82	Residential		65	70	60.9	57.0	3.9									
	NK_83	Residential		65	70	62.1	58.1	4.0									
	NK_84	Residential		65	70	61.4	57.3	4.1									
	NK_85	Residential		65	70	60.0	56.4	3.6									
	NK_86	Residential		65	70	74.8	60.9	13.9									
	NK_87	Residential		65	70	69.3	60.4	8.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_88	Residential		65	70	67.3	60.2	7.1									
	NK_89	Residential		65	70	65.7	59.6	6.1									
	NK_90	Residential		65	70	64.0	58.8	5.2									
	NK_91	Residential		65	70	62.8	58.3	4.5									
	NK_92	Residential		65	70	59.4	57.0	2.4									
	NK_93	Residential		65	70	62.0	57.8	4.2									
	NK_94	Residential		65	70	61.9	57.7	4.2									
	NK_95	Residential		65	70	61.6	57.4	4.2									
	NK_96	Residential		65	70	61.2	57.1	4.1									
	NK_97	Residential		65	70	60.7	56.8	3.9									
	NK_98	Residential		65	70	60.0	56.2	3.8									
	NK_99	Residential		65	70	59.7	56.0	3.7									
	NK_100	Residential		65	70	74.8	60.6	14.2									
	NK_101	Residential		65	70	67.0	59.8	7.2									
	NK_102	Residential		65	70	64.7	59.2	5.5									
	NK_103	Residential		65	70	62.8	58.3	4.5									
	NK_104	Residential		65	70	61.9	58.2	3.7									
	NK_105	Residential		65	70	61.3	57.8	3.5									
	NK_106	Residential		65	70	60.7	57.1	3.6									
	NK_107	Residential		65	70	62.0	58.0	4.0									
	NK_108	Residential		65	70	61.9	57.7	4.2									
Wall NK1	NK_109	Residential	Day	65	70	61.4	57.2	4.2	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_110	Residential		65	70	61.1	57.0	4.1									
	NK_111	Residential		65	70	60.5	56.6	3.9									
	NK_112	Residential		65	70	59.9	56.2	3.7									
	NK_113	Residential		65	70	59.7	56.0	3.7									
	NK_114	Residential		65	70	75.0	60.7	14.3									
	NK_115	Residential		65	70	70.7	60.2	10.5									
	NK_116	Residential		65	70	66.3	59.7	6.6									
	NK_117	Residential		65	70	64.2	59.1	5.1									
	NK_118	Residential		65	70	62.8	58.3	4.5									
	NK_119	Residential		65	70	61.1	57.9	3.2									
	NK_120	Residential		65	70	59.8	57.0	2.8									
	NK_121	Residential		65	70	61.9	58.1	3.8									
	NK_122	Residential		65	70	61.9	57.6	4.3									
	NK_123	Residential		65	70	61.5	57.3	4.2									
	NK_124	Residential		65	70	61.1	57.0	4.1									
	NK_125	Residential		65	70	60.7	56.6	4.1									
	NK_126	Residential		65	70	60.2	56.3	3.9									
	NK_127	Residential		65	70	59.7	56.0	3.7									
	NK_128	Residential		65	70	74.5	60.8	13.7									
	NK_129	Residential		65	70	66.6	59.5	7.1									
	NK_130	Residential		65	70	64.5	59.3	5.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_131	Residential		65	70	63.1	58.3	4.8									
	NK_132	Residential		65	70	61.7	57.5	4.2									
	NK_133	Residential		65	70	60.9	57.1	3.8									
	NK_134	Residential		65	70	60.7	57.0	3.7									
	NK_135	Residential		65	70	61.7	58.0	3.7									
	NK_136	Residential		65	70	61.7	57.6	4.1									
	NK_137	Residential		65	70	61.4	57.3	4.1									
	NK_138	Residential		65	70	61.0	56.9	4.1									
	NK_139	Residential		65	70	60.5	56.5	4.0									
	NK_140	Residential		65	70	60.1	56.2	3.9									
	NK_141	Residential		65	70	59.9	56.0	3.9									
	NK_142	Residential		65	70	74.7	60.5	14.2									
	NK_143	Residential		65	70	71.2	60.0	11.2									
	NK_144	Residential		65	70	66.3	59.6	6.7									
	NK_145	Residential		65	70	64.1	59.0	5.1									
	NK_146	Residential		65	70	62.5	58.2	4.3									
	NK_147	Residential		65	70	61.3	58.0	3.3									
	NK_148	Residential		65	70	60.4	57.5	2.9									
	NK_149	Residential		65	70	61.9	58.0	3.9									
	NK_150	Residential		65	70	61.7	57.4	4.3									
	NK_151	Residential		65	70	61.5	57.2	4.3									
Wall NK1	NK_152	Residential	Day	65	70	61.0	56.8	4.2	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_153	Residential		65	70	60.6	56.5	4.1									
	NK_154	Residential		65	70	60.1	56.2	3.9									
	NK_155	Residential		65	70	59.8	56.0	3.8									
	NK_156	Residential		65	70	74.8	60.7	14.1									
	NK_157	Residential		65	70	66.7	59.5	7.2									
	NK_158	Residential		65	70	64.9	59.1	5.8									
	NK_159	Residential		65	70	63.4	58.3	5.1									
	NK_160	Residential		65	70	62.5	57.8	4.7									
	NK_161	Residential		65	70	61.5	57.7	3.8									
	NK_162	Residential		65	70	61.9	58.4	3.5									
	NK_163	Residential		65	70	62.1	58.2	3.9									
	NK_164	Residential		65	70	61.9	57.5	4.4									
	NK_165	Residential		65	70	61.4	57.1	4.3									
	NK_166	Residential		65	70	61.1	57.0	4.1									
	NK_167	Residential		65	70	60.6	56.5	4.1									
	NK_168	Residential		65	70	60.2	56.2	4.0									
	NK_169	Residential		65	70	59.8	56.0	3.8									
	NK_170	Residential		65	70	73.7	60.4	13.3									
	NK_171	Residential		65	70	71.4	60.1	11.3									
	NK_172	Residential		65	70	66.5	59.3	7.2									
	NK_173	Residential		65	70	64.0	58.8	5.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_174	Residential		65	70	62.7	58.2	4.5									
	NK_175	Residential		65	70	62.1	58.1	4.0									
	NK_176	Residential		65	70	60.6	57.7	2.9									
	NK_177	Residential		65	70	62.1	58.0	4.1									
	NK_178	Residential		65	70	61.6	57.3	4.3									
	NK_179	Residential		65	70	61.6	57.3	4.3									
	NK_180	Residential		65	70	61.1	56.9	4.2									
	NK_181	Residential		65	70	60.8	56.6	4.2									
	NK_182	Residential		65	70	60.2	56.2	4.0									
	NK_183	Residential		65	70	59.7	55.9	3.8									
	NK_184	Residential		65	70	73.8	60.8	13.0									
	NK_185	Residential		65	70	66.9	59.4	7.5									
	NK_186	Residential		65	70	64.5	58.8	5.7									
	NK_187	Residential		65	70	63.2	58.4	4.8									
	NK_188	Residential		65	70	62.1	58.0	4.1									
	NK_189	Residential		65	70	61.4	57.6	3.8									
	NK_190	Residential		65	70	60.8	57.0	3.8									
	NK_191	Residential		65	70	61.7	57.4	4.3									
	NK_192	Residential		65	70	61.6	57.3	4.3									
	NK_193	Residential		65	70	60.9	56.7	4.2									
	NK_194	Office		70	75	60.5	56.5	4.0									
Wall NK1	NK_195	Residential	Day	65	70	60.1	56.1	4.0	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_196	Residential		65	70	59.8	55.9	3.9									
	NK_197	Residential		65	70	74.8	60.7	14.1									
	NK_198	Residential		65	70	70.3	60.0	10.3									
	NK_199	Residential		65	70	66.2	59.4	6.8									
	NK_200	Residential		65	70	64.1	58.8	5.3									
	NK_201	Residential		65	70	63.0	58.3	4.7									
	NK_202	Residential		65	70	61.3	57.7	3.6									
	NK_203	Residential		65	70	60.2	57.1	3.1									
	NK_204	Residential		65	70	62.0	58.0	4.0									
	NK_205	Residential		65	70	61.8	57.5	4.3									
	NK_206	Residential		65	70	61.6	57.2	4.4									
	NK_207	Residential		65	70	61.1	56.9	4.2									
	NK_208	Residential		65	70	60.6	56.5	4.1									
	NK_209	Residential		65	70	60.1	56.2	3.9									
	NK_210	Residential		65	70	59.7	55.9	3.8									
	NK_211	Residential		65	70	73.5	61.0	12.5									
	NK_212	Residential		65	70	66.2	59.4	6.8									
	NK_213	Residential		65	70	64.4	59.0	5.4									
	NK_214	Residential		65	70	63.0	58.4	4.6									
	NK_215	Residential		65	70	62.0	57.8	4.2									
	NK_216	Residential		65	70	61.3	57.7	3.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_217	Residential		65	70	60.8	57.3	3.5									
	NK_218	Residential		65	70	61.6	58.1	3.5									
	NK_219	Residential		65	70	61.7	57.7	4.0									
	NK_220	Residential		65	70	61.4	57.1	4.3									
	NK_221	Residential		65	70	60.9	56.7	4.2									
	NK_222	Residential		65	70	60.5	56.5	4.0									
	NK_223	Residential		65	70	60.1	56.2	3.9									
	NK_224	Residential		65	70	59.6	55.8	3.8									
	NK_225	Residential		65	70	73.9	60.5	13.4									
	NK_226	Residential		65	70	70.1	59.9	10.2									
	NK_227	Residential		65	70	64.2	58.8	5.4									
	NK_228	Residential		65	70	63.0	58.4	4.6									
	NK_229	Residential		65	70	61.3	58.0	3.3									
	NK_230	Residential		65	70	59.9	57.2	2.7									
	NK_231	Residential		65	70	61.7	58.0	3.7									
	NK_232	Residential		65	70	61.8	57.7	4.1									
	NK_233	Residential		65	70	61.6	57.3	4.3									
	NK_234	Residential		65	70	61.1	56.9	4.2									
	NK_235	Residential		65	70	60.7	56.6	4.1									
	NK_236	Residential		65	70	60.1	56.2	3.9									
	NK_237	Residential		65	70	59.7	55.9	3.8									
Wall NK1	NK_238	Residential	Day	65	70	72.7	60.8	11.9	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_239	Residential		65	70	67.1	59.6	7.5									
	NK_240	Residential		65	70	64.7	59.0	5.7									
	NK_241	Residential		65	70	63.0	58.3	4.7									
	NK_242	Residential		65	70	61.9	57.8	4.1									
	NK_243	Residential		65	70	61.1	57.5	3.6									
	NK_244	Residential		65	70	60.5	57.2	3.3									
	NK_245	Residential		65	70	61.9	58.0	3.9									
	NK_246	Residential		65	70	61.7	57.7	4.0									
	NK_247	Residential		65	70	61.3	57.1	4.2									
	NK_248	Residential		65	70	60.9	56.8	4.1									
	NK_249	Residential		65	70	60.6	56.5	4.1									
	NK_250	Residential		65	70	60.2	56.2	4.0									
	NK_251	Residential		65	70	59.8	56.0	3.8									
	NK_252	Residential		65	70	75.0	60.7	14.3									
	NK_253	Residential		65	70	69.8	59.8	10.0									
	NK_254	Residential		65	70	65.7	59.0	6.7									
	NK_255	Residential		65	70	63.7	58.4	5.3									
	NK_256	Residential		65	70	62.2	57.8	4.4									
	NK_257	Residential		65	70	60.3	57.6	2.7									
	NK_258	Residential		65	70	59.7	57.2	2.5									
	NK_259	Residential		65	70	61.6	58.1	3.5									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_260	Residential		65	70	61.7	57.6	4.1									
	NK_261	Residential		65	70	61.6	57.3	4.3									
	NK_262	Residential		65	70	61.2	56.9	4.3									
	NK_263	Residential		65	70	60.7	56.6	4.1									
	NK_264	Residential		65	70	60.1	56.2	3.9									
	NK_265	Residential		65	70	59.7	55.9	3.8									
	NK_266	Residential		65	70	74.4	60.8	13.6									
	NK_267	Residential		65	70	66.5	59.4	7.1									
	NK_268	Residential		65	70	64.5	58.8	5.7									
	NK_269	Residential		65	70	62.9	58.2	4.7									
	NK_270	Residential		65	70	62.0	57.9	4.1									
	NK_271	Residential		65	70	61.1	57.4	3.7									
	NK_272	Residential		65	70	60.6	57.3	3.3									
	NK_273	Residential		65	70	62.0	58.2	3.8									
	NK_274	Residential		65	70	61.8	57.6	4.2									
	NK_275	Residential		65	70	61.4	57.2	4.2									
	NK_276	Residential		65	70	61.3	57.1	4.2									
	NK_277	Residential		65	70	60.8	56.7	4.1									
	NK_278	Residential		65	70	60.2	56.2	4.0									
	NK_279	Residential		65	70	59.7	55.9	3.8									
	NK_280	Residential		65	70	75.1	60.6	14.5									
Wall NK1	NK_281	Residential	Day	65	70	70.6	59.9	10.7	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_282	Residential		65	70	66.0	59.1	6.9									
	NK_283	Residential		65	70	63.7	58.4	5.3									
	NK_284	Residential		65	70	62.6	58.3	4.3									
	NK_285	Residential		65	70	61.2	57.6	3.6									
	NK_286	Residential		65	70	60.3	56.9	3.4									
	NK_287	Residential		65	70	62.2	58.1	4.1									
	NK_288	Residential		65	70	61.7	57.5	4.2									
	NK_289	Residential		65	70	61.5	57.3	4.2									
	NK_290	Residential		65	70	61.2	57.0	4.2									
	NK_291	Residential		65	70	60.7	56.7	4.0									
	NK_292	Residential		65	70	60.2	56.3	3.9									
	NK_293	Residential		65	70	59.7	56.0	3.7									
	NK_294	Residential		65	70	73.1	60.5	12.6									
	NK_295	Residential		65	70	68.2	59.7	8.5									
	NK_296	Residential		65	70	65.2	58.9	6.3									
	NK_297	Residential		65	70	62.9	58.1	4.8									
	NK_298	Residential		65	70	61.8	57.9	3.9									
	NK_299	Residential		65	70	61.2	57.6	3.6									
	NK_300	Residential		65	70	61.4	58.0	3.4									
	NK_301	Residential		65	70	61.9	58.3	3.6									
	NK_302	Residential		65	70	61.8	57.9	3.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_303	Residential		65	70	61.7	57.5	4.2									
	NK_304	Residential		65	70	61.2	57.1	4.1									
	NK_305	Residential		65	70	60.7	56.7	4.0									
	NK_306	Residential		65	70	60.3	56.4	3.9									
	NK_307	Residential		65	70	60.1	56.2	3.9									
	NK_308	Residential		65	70	59.9	56.1	3.8									
	NK_309	Residential		65	70	74.4	61.0	13.4									
	NK_310	Residential		65	70	69.6	60.0	9.6									
	NK_311	Residential		65	70	68.2	59.7	8.5									
	NK_312	Residential		65	70	65.4	58.7	6.7									
	NK_313	Residential		65	70	64.3	58.5	5.8									
	NK_314	Residential		65	70	62.8	58.0	4.8									
	NK_315	Residential		65	70	62.0	58.1	3.9									
	NK_316	Residential		65	70	60.6	57.5	3.1									
	NK_317	Residential		65	70	62.1	58.3	3.8									
	NK_318	Residential		65	70	62.0	57.8	4.2									
	NK_319	Residential		65	70	61.7	57.5	4.2									
	NK_320	Residential		65	70	61.2	57.2	4.0									
	NK_321	Residential		65	70	60.9	56.9	4.0									
	NK_322	Residential		65	70	60.6	56.6	4.0									
	NK_323	Residential		65	70	60.2	56.3	3.9									
Wall NK1	NK_324	Residential	Day	65	70	59.9	56.1	3.8	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_325	Residential		65	70	74.9	61.0	13.9									
	NK_326	Residential		65	70	66.9	60.1	6.8									
	NK_327	Residential		65	70	64.9	59.6	5.3									
	NK_328	Residential		65	70	63.4	58.8	4.6									
	NK_329	Residential		65	70	62.3	58.2	4.1									
	NK_330	Residential		65	70	61.8	58.3	3.5									
	NK_331	Residential		65	70	61.4	58.1	3.3									
	NK_332	Residential		65	70	62.3	58.6	3.7									
	NK_333	Residential		65	70	62.1	58.0	4.1									
	NK_334	Residential		65	70	61.8	57.6	4.2									
	NK_335	Residential		65	70	61.3	57.2	4.1									
	NK_336	Residential		65	70	60.8	56.8	4.0									
	NK_337	Residential		65	70	60.3	56.5	3.8									
	NK_338	Residential		65	70	59.8	56.1	3.7									
	NK_339	Residential		65	70	75.0	61.1	13.9									
	NK_340	Residential		65	70	66.2	59.7	6.5									
	NK_341	Residential		65	70	64.1	58.9	5.2									
	NK_342	Residential		65	70	62.8	58.4	4.4									
	NK_343	Residential		65	70	61.7	57.3	4.4									
	NK_344	Residential		65	70	60.4	57.5	2.9									
	NK_345	Residential		65	70	62.1	58.5	3.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_346	Residential		65	70	62.1	58.1	4.0									
	NK_347	Residential		65	70	61.8	57.7	4.1									
	NK_348	Residential		65	70	61.4	57.4	4.0									
	NK_349	Residential		65	70	60.9	57.0	3.9									
	NK_350	Residential		65	70	60.4	56.6	3.8									
	NK_351	Residential		65	70	60.0	56.3	3.7									
	NK_352	Residential		65	70	74.7	61.2	13.5									
	NK_353	Residential		65	70	67.0	60.2	6.8									
	NK_354	Residential		65	70	64.5	59.6	4.9									
	NK_355	Residential		65	70	63.1	59.0	4.1									
	NK_356	Residential		65	70	62.1	58.6	3.5									
	NK_357	Residential		65	70	61.6	58.6	3.0									
	NK_358	Residential		65	70	61.1	58.1	3.0									
	NK_359	Residential		65	70	62.6	58.8	3.8									
	NK_360	Residential		65	70	62.4	58.4	4.0									
	NK_361	Residential		65	70	62.0	57.9	4.1									
	NK_362	Residential		65	70	61.6	57.6	4.0									
	NK_363	Residential		65	70	61.0	57.1	3.9									
	NK_364	Residential		65	70	60.7	56.9	3.8									
	NK_365	Residential		65	70	60.2	56.5	3.7									
	NK_366	Residential		65	70	73.0	60.7	12.3									
Wall NK1	NK_367	Residential	Day	65	70	69.1	60.3	8.8	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_368	Residential		65	70	63.9	59.2	4.7									
	NK_369	Residential		65	70	62.7	58.6	4.1									
	NK_370	Residential		65	70	61.1	58.4	2.7									
	NK_371	Residential		65	70	62.3	58.7	3.6									
	NK_372	Residential		65	70	62.2	58.3	3.9									
	NK_373	Residential		65	70	61.8	57.8	4.0									
	NK_374	Residential		65	70	61.4	57.4	4.0									
	NK_375	Residential		65	70	75.0	61.3	13.7									
	NK_376	Residential		65	70	67.3	60.0	7.3									
	NK_377	Residential		65	70	65.4	59.8	5.6									
	NK_378	Residential		65	70	63.8	59.6	4.2									
	NK_379	Residential		65	70	62.2	58.8	3.4									
	NK_380	Residential		65	70	61.7	58.4	3.3									
	NK_381	Residential		65	70	62.8	59.0	3.8									
	NK_382	Residential		65	70	62.6	58.6	4.0									
	NK_383	Residential		65	70	62.3	58.2	4.1									
	NK_384	Residential		65	70	61.8	57.8	4.0									
	NK_385	Residential		65	70	75.2	61.3	13.9									
	NK_386	Residential		65	70	67.5	60.1	7.4									
	NK_387	Residential		65	70	64.9	59.9	5.0									
	NK_388	Residential		65	70	63.8	59.6	4.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_389	Residential		65	70	62.4	58.5	3.9									
	NK_390	Residential		65	70	61.1	58.4	2.7									
	NK_391	Residential		65	70	62.5	59.0	3.5									
	NK_392	Residential		65	70	62.3	58.4	3.9									
	NK_393	Residential		65	70	62.0	58.0	4.0									
	NK_394	Residential		65	70	61.6	57.7	3.9									
	NK_395	Residential		65	70	61.2	57.4	3.8									
	NK_396	Residential		65	70	60.8	57.1	3.7									
	NK_397	Residential		65	70	60.3	56.7	3.6									
	NK_398	Residential		65	70	74.9	61.4	13.5									
	NK_399	Residential		65	70	67.5	60.3	7.2									
	NK_400	Residential		65	70	65.7	59.9	5.8									
	NK_401	Residential		65	70	63.4	59.0	4.4									
	NK_402	Residential		65	70	62.2	58.6	3.6									
	NK_403	Residential		65	70	61.5	58.3	3.2									
	NK_404	Residential		65	70	62.6	58.8	3.8									
	NK_405	Residential		65	70	62.5	58.6	3.9									
	NK_406	Residential		65	70	62.4	58.4	4.0									
	NK_407	Residential		65	70	61.9	58.0	3.9									
	NK_408	Residential		65	70	61.4	57.6	3.8									
	NK_409	Residential		65	70	61.0	57.3	3.7									
Wall NK1	NK_410	Residential	Day	65	70	60.5	56.9	3.6	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_411	Residential		65	70	75.3	61.2	14.1									
	NK_412	Residential		65	70	69.8	60.7	9.1									
	NK_413	Residential		65	70	66.1	60.0	6.1									
	NK_414	Residential		65	70	64.1	59.2	4.9									
	NK_415	Residential		65	70	63.1	58.9	4.2									
	NK_416	Residential		65	70	60.9	58.0	2.9									
	NK_417	Residential		65	70	62.8	59.3	3.5									
	NK_418	Residential		65	70	62.6	58.7	3.9									
	NK_419	Residential		65	70	62.2	58.3	3.9									
	NK_420	Residential		65	70	61.8	57.9	3.9									
	NK_421	Residential		65	70	61.4	57.6	3.8									
	NK_422	Residential		65	70	60.6	57.0	3.6									
	NK_423	Residential		65	70	60.3	56.8	3.5									
	NK_424	Residential		65	70	75.0	61.3	13.7									
	NK_425	Residential		65	70	67.9	60.4	7.5									
	NK_426	Residential		65	70	65.7	60.1	5.6									
	NK_427	Residential		65	70	63.9	59.4	4.5									
	NK_428	Residential		65	70	62.8	59.2	3.6									
	NK_429	Residential		65	70	61.9	58.8	3.1									
	NK_430	Residential		65	70	62.7	59.0	3.7									
	NK_431	Residential		65	70	62.4	58.5	3.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_432	Residential		65	70	61.9	58.1	3.8									
	NK_433	Residential		65	70	61.7	57.9	3.8									
	NK_434	Residential		65	70	61.2	57.6	3.6									
	NK_435	Residential		65	70	60.7	57.3	3.4									
	NK_436	Residential		65	70	74.8	61.3	13.5									
	NK_437	Residential		65	70	70.9	60.7	10.2									
	NK_438	Residential		65	70	66.6	60.3	6.3									
	NK_439	Residential		65	70	65.0	59.8	5.2									
	NK_440	Residential		65	70	63.7	59.4	4.3									
	NK_441	Residential		65	70	61.2	58.4	2.8									
	NK_442	Residential		65	70	62.9	59.3	3.6									
	NK_443	Residential		65	70	62.7	58.9	3.8									
	NK_444	Residential		65	70	62.3	58.5	3.8									
	NK_445	Residential		65	70	61.9	58.2	3.7									
	NK_446	Residential		65	70	61.6	58.0	3.6									
	NK_447	Residential		65	70	61.0	57.5	3.5									
	NK_448	Residential		65	70	60.5	57.2	3.3									
	NK_449	Residential		65	70	74.8	61.4	13.4									
	NK_450	Residential		65	70	67.0	60.3	6.7									
	NK_451	Residential		65	70	64.8	59.8	5.0									
	NK_452	Residential		65	70	63.4	59.6	3.8									
Wall NK1	NK_453	Residential	Day	65	70	62.6	59.3	3.3	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_454	Residential		65	70	63.2	59.9	3.3									
	NK_455	Residential		65	70	63.1	59.2	3.9									
	NK_456	Residential		65	70	62.7	58.8	3.9									
	NK_457	Residential		65	70	62.2	58.4	3.8									
	NK_458	Residential		65	70	61.8	58.2	3.6									
	NK_459	Residential		65	70	61.1	57.7	3.4									
	NK_460	Residential		65	70	60.9	57.6	3.3									
	NK_461	Residential		65	70	74.7	61.4	13.3									
	NK_462	Residential		65	70	68.2	60.5	7.7									
	NK_463	Residential		65	70	65.8	60.1	5.7									
	NK_464	Residential		65	70	64.2	59.5	4.7									
	NK_465	Residential		65	70	61.0	58.2	2.8									
	NK_466	Residential		65	70	63.5	60.0	3.5									
	NK_467	Residential		65	70	63.1	59.4	3.7									
	NK_468	Residential		65	70	62.6	58.8	3.8									
	NK_469	Residential		65	70	62.4	58.6	3.8									
	NK_470	Residential		65	70	61.9	58.3	3.6									
	NK_471	Residential		65	70	61.3	57.9	3.4									
	NK_472	Residential		65	70	60.7	57.5	3.2									
	NK_473	Residential		65	70	74.9	61.4	13.5									
	NK_474	Residential		65	70	68.2	60.2	8.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_475	Residential		65	70	65.6	60.0	5.6									
	NK_476	Residential		65	70	63.9	59.8	4.1									
	NK_477	Residential		65	70	63.2	59.5	3.7									
	NK_478	Residential		65	70	63.6	60.2	3.4									
	NK_479	Residential		65	70	63.6	59.8	3.8									
	NK_480	Residential		65	70	63.2	59.4	3.8									
	NK_481	Residential		65	70	62.6	58.9	3.7									
	NK_482	Residential		65	70	62.1	58.6	3.5									
	NK_483	Residential		65	70	61.7	58.4	3.3									
	NK_484	Residential		65	70	61.0	57.9	3.1									
	NK_485	Residential		65	70	74.9	61.5	13.4									
	NK_486	Residential		65	70	71.7	60.6	11.1									
	NK_487	Residential		65	70	67.1	60.2	6.9									
	NK_488	Residential		65	70	64.6	59.7	4.9									
	NK_489	Residential		65	70	63.2	59.2	4.0									
	NK_490	Residential		65	70	63.9	60.4	3.5									
	NK_491	Residential		65	70	63.7	59.8	3.9									
	NK_492	Residential		65	70	63.1	59.4	3.7									
	NK_493	Residential		65	70	62.6	59.0	3.6									
	NK_494	Residential		65	70	62.1	58.7	3.4									
	NK_495	Residential		65	70	61.6	58.5	3.1									
Wall NK1	NK_496	Residential	Day	65	70	61.0	58.1	2.9	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_497	Residential		65	70	74.8	61.5	13.3									
	NK_498	Residential		65	70	67.1	60.3	6.8									
	NK_499	Residential		65	70	64.6	60.0	4.6									
	NK_500	Residential		65	70	64.4	60.6	3.8									
	NK_501	Residential		65	70	64.1	60.3	3.8									
	NK_502	Residential		65	70	63.7	59.8	3.9									
	NK_503	Residential		65	70	62.7	59.2	3.5									
	NK_504	Residential		65	70	62.2	59.0	3.2									
	NK_505	Residential		65	70	61.9	58.9	3.0									
	NK_506	Residential		65	70	61.5	58.7	2.8									
	NK_507	Residential		65	70	61.2	58.5	2.7									
	NK_508	Residential		65	70	74.9	61.5	13.4									
	NK_509	Residential		65	70	68.9	60.7	8.2									
	NK_510	Residential		65	70	66.4	60.6	5.8									
	NK_511	Residential		65	70	64.5	60.2	4.3									
	NK_512	Residential		65	70	64.4	60.7	3.7									
	NK_513	Residential		65	70	64.1	60.2	3.9									
	NK_514	Residential		65	70	63.5	59.8	3.7									
	NK_515	Residential		65	70	63.0	59.5	3.5									
	NK_516	Residential		65	70	62.5	59.3	3.2									
	NK_517	Residential		65	70	61.9	59.1	2.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_518	Residential		65	70	61.5	58.8	2.7									
	NK_519	Residential		65	70	74.1	61.3	12.8									
	NK_520	Residential		65	70	68.8	60.1	8.7									
	NK_521	Residential		65	70	65.7	60.2	5.5									
	NK_522	Residential		65	70	64.5	60.2	4.3									
	NK_523	Residential		65	70	64.8	61.0	3.8									
	NK_524	Residential		65	70	64.3	60.5	3.8									
	NK_525	Residential		65	70	63.6	60.0	3.6									
	NK_526	Residential		65	70	63.2	59.8	3.4									
	NK_527	Residential		65	70	62.6	59.7	2.9									
	NK_528	Residential		65	70	62.2	59.6	2.6									
	NK_529	Residential		65	70	61.8	59.4	2.4									
	NK_530	Residential		65	70	74.5	61.3	13.2									
	NK_531	Residential		65	70	67.9	60.1	7.8									
	NK_532	Residential		65	70	64.1	59.5	4.6									
	NK_533	Residential		65	70	64.5	61.0	3.5									
	NK_534	Residential		65	70	64.1	60.3	3.8									
	NK_535	Residential		65	70	63.7	60.1	3.6									
	NK_536	Residential		65	70	63.2	60.0	3.2									
	NK_537	Residential		65	70	62.7	60.0	2.7									
	NK_538	Residential		65	70	62.3	59.9	2.4									
Wall NK1	NK_539	Residential	Day	65	70	61.9	59.8	2.1	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
	NK_540	Residential		65	70	74.5	61.0	13.5									
	NK_541	Residential		65	70	67.1	60.7	6.4									
	NK_542	Residential		65	70	65.8	60.5	5.3									
	NK_543	Residential		65	70	64.7	60.9	3.8									
	NK_544	Residential		65	70	64.4	60.5	3.9									
	NK_545	Residential		65	70	63.8	60.2	3.6									
	NK_546	Residential		65	70	63.3	60.8	2.5									
	NK_547	Residential		65	70	62.9	61.0	1.9									
	NK_548	Residential		65	70	62.7	61.0	1.7									
	NK_549	Residential		65	70	62.5	60.9	1.6									
	NK_550	Residential		65	70	71.2	60.4	10.8									
	NK_551	Residential		65	70	68.0	60.5	7.5									
	NK_552	Residential		65	70	66.2	60.2	6.0									
	NK_553	Residential		65	70	64.4	60.0	4.4									
	NK_554	Residential		65	70	63.8	59.6	4.2									
	NK_555	Residential		65	70	63.3	59.2	4.1									
	NK_556	Residential		65	70	62.7	58.8	3.9									
	NK_557	Residential		65	70	63.4	61.4	2.0									
	NK_558	Residential		65	70	63.3	61.7	1.6									
	NK_559	Residential		65	70	63.1	61.7	1.4									
	NK_560	Residential		65	70	62.5	61.1	1.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_561	Industrial	Day	80	NA	71.8	66.6	5.2	150	Yes	Yes	20	5,050	100,216	$2,004,320	$13,362	Propose to Construct
Wall NK1	NK_2	Residential	Night	55	70	74.3	58.9	15.4	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_3	Residential		55	70	70.9	58.5	12.4									
	NK_4	Residential		55	70	69.0	57.4	11.6									
	NK_5	Residential		55	70	68.2	56.7	11.5									
	NK_6	Residential		55	70	67.9	56.3	11.6									
	NK_7	Residential		55	70	67.7	56.0	11.7									
	NK_8	Residential		55	70	67.1	55.5	11.6									
	NK_9	Residential		55	70	66.6	55.4	11.2									
	NK_10	Residential		55	70	65.5	55.1	10.4									
	NK_11	Residential		55	70	64.3	54.7	9.6									
	NK_12	Residential		55	70	63.2	54.5	8.7									
	NK_13	Residential		55	70	74.3	59.1	15.2									
	NK_14	Residential		55	70	74.3	59.2	15.1									
	NK_15	Residential		55	70	73.9	59.2	14.7									
	NK_16	Residential		55	70	73.8	59.3	14.5									
	NK_17	Residential		55	70	73.7	59.3	14.4									
	NK_18	Residential		55	70	74.0	59.3	14.7									
	NK_19	Residential		55	70	73.5	59.4	14.1									
	NK_20	Residential		55	70	73.2	59.5	13.7									
	NK_21	Residential		55	70	73.0	59.6	13.4									
	NK_22	Residential		55	70	64.7	59.6	5.1									
	NK_23	Residential		55	70	64.6	59.4	5.2									
	NK_24	Residential		55	70	64.5	59.4	5.1									
	NK_25	Residential		55	70	64.3	59.3	5.0									
	NK_26	Residential		55	70	64.2	59.2	5.0									
	NK_27	Residential		55	70	64.2	59.2	5.0									
	NK_28	Residential		55	70	64.3	59.3	5.0									
	NK_29	Residential		55	70	64.7	59.3	5.4									
	NK_30	Residential		55	70	65.0	58.0	7.0									
	NK_31	Residential		55	70	65.4	58.3	7.1									
	NK_32	Residential		55	70	62.8	59.1	3.7									
	NK_33	Residential		55	70	62.4	58.9	3.5									
	NK_34	Residential		55	70	62.3	58.8	3.5									
	NK_35	Residential		55	70	62.1	58.7	3.4									
	NK_36	Residential		55	70	61.9	58.6	3.3									
	NK_37	Residential		55	70	61.9	58.5	3.4									
	NK_38	Residential		55	70	61.8	58.4	3.4									
	NK_39	Residential		55	70	61.7	58.1	3.6									
	NK_40	Residential		55	70	61.1	57.1	4.0									
	NK_41	Residential		55	70	62.4	57.4	5.0									
	NK_42	Residential		55	70	61.7	58.2	3.5									
	NK_43	Residential		55	70	62.1	58.1	4.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_44	Residential		55	70	62.1	58.1	4.0									
	NK_45	Residential		55	70	61.8	57.9	3.9									
	NK_46	Residential		55	70	61.3	57.7	3.6									
	NK_47	Residential		55	70	61.0	57.5	3.5									
	NK_48	Residential		55	70	60.5	57.5	3.0									
	NK_49	Residential		55	70	60.9	57.3	3.6									
	NK_50	Residential		55	70	60.8	57.3	3.5									
	NK_51	Residential		55	70	60.5	56.9	3.6									
	NK_52	Residential		55	70	60.2	56.4	3.8									
	NK_53	Residential		55	70	59.9	56.1	3.8									
	NK_54	Residential		55	70	59.5	55.9	3.6									
	NK_55	Residential		55	70	60.4	56.7	3.7									
	NK_56	Residential		55	70	59.6	56.0	3.6									
	NK_57	Residential		55	70	59.2	55.6	3.6									
	NK_58	Residential		55	70	60.2	57.0	3.2									
	NK_59	Residential		55	70	60.6	56.7	3.9									
	NK_60	Residential		55	70	60.3	56.5	3.8									
	NK_61	Residential		55	70	60.1	56.2	3.9									
	NK_62	Residential		55	70	59.8	55.9	3.9									
	NK_63	Residential		55	70	59.5	55.7	3.8									
	NK_64	Residential		55	70	59.1	55.5	3.6									
Wall NK1	NK_65	Residential	Night	55	70	60.7	56.9	3.8	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_66	Residential		55	70	60.7	56.7	4.0									
	NK_67	Residential		55	70	60.6	56.4	4.2									
	NK_68	Residential		55	70	60.3	56.1	4.2									
	NK_69	Residential		55	70	60.0	55.9	4.1									
	NK_70	Residential		55	70	59.7	55.7	4.0									
	NK_71	Residential		55	70	59.4	55.5	3.9									
	NK_72	Residential		55	70	73.1	59.6	13.5									
	NK_73	Residential		55	70	66.1	58.8	7.3									
	NK_74	Residential		55	70	63.2	57.1	6.1									
	NK_75	Residential		55	70	61.6	56.5	5.1									
	NK_76	Residential		55	70	61.3	56.7	4.6									
	NK_77	Residential		55	70	60.2	55.8	4.4									
	NK_78	Residential		55	70	63.8	58.8	5.0									
	NK_79	Residential		55	70	62.0	56.6	5.4									
	NK_80	Residential		55	70	61.0	56.1	4.9									
	NK_81	Residential		55	70	60.2	55.6	4.6									
	NK_82	Residential		55	70	59.2	55.1	4.1									
	NK_83	Residential		55	70	60.4	56.2	4.2									
	NK_84	Residential		55	70	59.6	55.4	4.2									
	NK_85	Residential		55	70	58.3	54.5	3.8									
	NK_86	Residential		55	70	73.6	59.5	14.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_87	Residential		55	70	67.9	58.8	9.1									
	NK_88	Residential		55	70	65.8	58.5	7.3									
	NK_89	Residential		55	70	64.1	57.7	6.4									
	NK_90	Residential		55	70	62.4	56.9	5.5									
	NK_91	Residential		55	70	61.1	56.3	4.8									
	NK_92	Residential		55	70	57.8	55.2	2.6									
	NK_93	Residential		55	70	60.3	55.9	4.4									
	NK_94	Residential		55	70	60.2	55.7	4.5									
	NK_95	Residential		55	70	59.8	55.4	4.4									
	NK_96	Residential		55	70	59.4	55.2	4.2									
	NK_97	Residential		55	70	59.0	54.8	4.2									
	NK_98	Residential		55	70	58.2	54.3	3.9									
	NK_99	Residential		55	70	57.9	54.1	3.8									
	NK_100	Residential		55	70	73.5	59.3	14.2									
	NK_101	Residential		55	70	65.4	58.1	7.3									
	NK_102	Residential		55	70	63.1	57.5	5.6									
	NK_103	Residential		55	70	61.1	56.5	4.6									
	NK_104	Residential		55	70	60.3	56.3	4.0									
	NK_105	Residential		55	70	59.6	55.9	3.7									
	NK_106	Residential		55	70	59.0	55.1	3.9									
	NK_107	Residential		55	70	60.3	56.0	4.3									
Wall NK1	NK_108	Residential	Night	55	70	60.2	55.8	4.4	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_109	Residential		55	70	59.6	55.3	4.3									
	NK_110	Residential		55	70	59.3	55.0	4.3									
	NK_111	Residential		55	70	58.7	54.7	4.0									
	NK_112	Residential		55	70	58.1	54.3	3.8									
	NK_113	Residential		55	70	57.9	54.1	3.8									
	NK_114	Residential		55	70	73.7	59.3	14.4									
	NK_115	Residential		55	70	69.2	58.6	10.6									
	NK_116	Residential		55	70	64.7	58.0	6.7									
	NK_117	Residential		55	70	62.5	57.3	5.2									
	NK_118	Residential		55	70	61.1	56.4	4.7									
	NK_119	Residential		55	70	59.5	56.0	3.5									
	NK_120	Residential		55	70	58.1	55.0	3.1									
	NK_121	Residential		55	70	60.2	56.1	4.1									
	NK_122	Residential		55	70	60.2	55.7	4.5									
	NK_123	Residential		55	70	59.7	55.3	4.4									
	NK_124	Residential		55	70	59.3	55.0	4.3									
	NK_125	Residential		55	70	58.9	54.7	4.2									
	NK_126	Residential		55	70	58.4	54.4	4.0									
	NK_127	Residential		55	70	57.9	54.0	3.9									
	NK_128	Residential		55	70	73.2	59.3	13.9									
	NK_129	Residential		55	70	65.1	57.8	7.3									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_130	Residential		55	70	62.9	57.5	5.4									
	NK_131	Residential		55	70	61.4	56.4	5.0									
	NK_132	Residential		55	70	60.1	55.6	4.5									
	NK_133	Residential		55	70	59.2	55.2	4.0									
	NK_134	Residential		55	70	59.0	55.1	3.9									
	NK_135	Residential		55	70	60.0	56.1	3.9									
	NK_136	Residential		55	70	60.0	55.6	4.4									
	NK_137	Residential		55	70	59.7	55.3	4.4									
	NK_138	Residential		55	70	59.2	54.9	4.3									
	NK_139	Residential		55	70	58.7	54.5	4.2									
	NK_140	Residential		55	70	58.2	54.2	4.0									
	NK_141	Residential		55	70	58.0	54.1	3.9									
	NK_142	Residential		55	70	73.4	59.1	14.3									
	NK_143	Residential		55	70	69.8	58.5	11.3									
	NK_144	Residential		55	70	64.7	57.8	6.9									
	NK_145	Residential		55	70	62.5	57.2	5.3									
	NK_146	Residential		55	70	60.8	56.3	4.5									
	NK_147	Residential		55	70	59.6	56.1	3.5									
	NK_148	Residential		55	70	58.7	55.5	3.2									
	NK_149	Residential		55	70	60.2	56.0	4.2									
	NK_150	Residential		55	70	59.9	55.4	4.5									
Wall NK1	NK_151	Residential	Night	55	70	59.8	55.3	4.5	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_152	Residential		55	70	59.2	54.8	4.4									
	NK_153	Residential		55	70	58.8	54.6	4.2									
	NK_154	Residential		55	70	58.3	54.3	4.0									
	NK_155	Residential		55	70	58.0	54.0	4.0									
	NK_156	Residential		55	70	73.6	59.3	14.3									
	NK_157	Residential		55	70	65.2	57.9	7.3									
	NK_158	Residential		55	70	63.3	57.4	5.9									
	NK_159	Residential		55	70	61.7	56.5	5.2									
	NK_160	Residential		55	70	60.8	56.0	4.8									
	NK_161	Residential		55	70	59.8	55.7	4.1									
	NK_162	Residential		55	70	60.2	56.5	3.7									
	NK_163	Residential		55	70	60.4	56.2	4.2									
	NK_164	Residential		55	70	60.1	55.5	4.6									
	NK_165	Residential		55	70	59.7	55.1	4.6									
	NK_166	Residential		55	70	59.3	55.0	4.3									
	NK_167	Residential		55	70	58.8	54.5	4.3									
	NK_168	Residential		55	70	58.4	54.2	4.2									
	NK_169	Residential		55	70	58.0	54.0	4.0									
	NK_170	Residential		55	70	72.4	58.9	13.5									
	NK_171	Residential		55	70	70.0	58.6	11.4									
	NK_172	Residential		55	70	64.9	57.6	7.3									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_173	Residential		55	70	62.4	57.0	5.4									
	NK_174	Residential		55	70	61.0	56.3	4.7									
	NK_175	Residential		55	70	60.4	56.2	4.2									
	NK_176	Residential		55	70	58.9	55.7	3.2									
	NK_177	Residential		55	70	60.4	56.0	4.4									
	NK_178	Residential		55	70	59.9	55.3	4.6									
	NK_179	Residential		55	70	59.8	55.3	4.5									
	NK_180	Residential		55	70	59.3	54.9	4.4									
	NK_181	Residential		55	70	59.0	54.6	4.4									
	NK_182	Residential		55	70	58.4	54.2	4.2									
	NK_183	Residential		55	70	57.9	53.9	4.0									
	NK_184	Residential		55	70	72.5	59.3	13.2									
	NK_185	Residential		55	70	65.3	57.7	7.6									
	NK_186	Residential		55	70	62.9	57.0	5.9									
	NK_187	Residential		55	70	61.6	56.5	5.1									
	NK_188	Residential		55	70	60.4	56.1	4.3									
	NK_189	Residential		55	70	59.7	55.7	4.0									
	NK_190	Residential		55	70	59.1	55.1	4.0									
	NK_191	Residential		55	70	60.0	55.4	4.6									
	NK_192	Residential		55	70	59.8	55.3	4.5									
	NK_193	Residential		55	70	59.1	54.7	4.4									
Wall NK1	NK_194	Office	Night	70	75	58.7	54.5	4.2	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_195	Residential		55	70	58.3	54.1	4.2									
	NK_196	Residential		55	70	58.0	54.0	4.0									
	NK_197	Residential		55	70	73.6	59.3	14.3									
	NK_198	Residential		55	70	68.9	58.4	10.5									
	NK_199	Residential		55	70	64.7	57.6	7.1									
	NK_200	Residential		55	70	62.5	57.0	5.5									
	NK_201	Residential		55	70	61.3	56.5	4.8									
	NK_202	Residential		55	70	59.6	55.8	3.8									
	NK_203	Residential		55	70	58.5	55.2	3.3									
	NK_204	Residential		55	70	60.3	56.0	4.3									
	NK_205	Residential		55	70	60.1	55.5	4.6									
	NK_206	Residential		55	70	59.8	55.2	4.6									
	NK_207	Residential		55	70	59.3	54.8	4.5									
	NK_208	Residential		55	70	58.8	54.5	4.3									
	NK_209	Residential		55	70	58.4	54.2	4.2									
	NK_210	Residential		55	70	57.9	53.9	4.0									
	NK_211	Residential		55	70	72.2	59.5	12.7									
	NK_212	Residential		55	70	64.7	57.8	6.9									
	NK_213	Residential		55	70	62.8	57.3	5.5									
	NK_214	Residential		55	70	61.4	56.6	4.8									
	NK_215	Residential		55	70	60.3	55.9	4.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_216	Residential		55	70	59.6	55.8	3.8									
	NK_217	Residential		55	70	59.1	55.4	3.7									
	NK_218	Residential		55	70	59.9	56.1	3.8									
	NK_219	Residential		55	70	60.0	55.7	4.3									
	NK_220	Residential		55	70	59.6	55.1	4.5									
	NK_221	Residential		55	70	59.1	54.7	4.4									
	NK_222	Residential		55	70	58.7	54.5	4.2									
	NK_223	Residential		55	70	58.3	54.2	4.1									
	NK_224	Residential		55	70	57.8	53.8	4.0									
	NK_225	Residential		55	70	72.6	59.0	13.6									
	NK_226	Residential		55	70	68.6	58.2	10.4									
	NK_227	Residential		55	70	62.6	57.0	5.6									
	NK_228	Residential		55	70	61.3	56.5	4.8									
	NK_229	Residential		55	70	59.6	56.1	3.5									
	NK_230	Residential		55	70	58.2	55.3	2.9									
	NK_231	Residential		55	70	60.0	56.1	3.9									
	NK_232	Residential		55	70	60.1	55.7	4.4									
	NK_233	Residential		55	70	59.9	55.3	4.6									
	NK_234	Residential		55	70	59.4	54.9	4.5									
	NK_235	Residential		55	70	58.9	54.6	4.3									
	NK_236	Residential		55	70	58.3	54.2	4.1									
Wall NK1	NK_237	Residential	Night	55	70	57.9	53.9	4.0	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_238	Residential		55	70	71.3	59.2	12.1									
	NK_239	Residential		55	70	65.5	57.9	7.6									
	NK_240	Residential		55	70	63.1	57.2	5.9									
	NK_241	Residential		55	70	61.4	56.5	4.9									
	NK_242	Residential		55	70	60.3	55.9	4.4									
	NK_243	Residential		55	70	59.5	55.6	3.9									
	NK_244	Residential		55	70	58.8	55.3	3.5									
	NK_245	Residential		55	70	60.2	56.0	4.2									
	NK_246	Residential		55	70	60.1	55.7	4.4									
	NK_247	Residential		55	70	59.6	55.1	4.5									
	NK_248	Residential		55	70	59.1	54.8	4.3									
	NK_249	Residential		55	70	58.8	54.5	4.3									
	NK_250	Residential		55	70	58.4	54.2	4.2									
	NK_251	Residential		55	70	58.0	54.0	4.0									
	NK_252	Residential		55	70	73.8	59.3	14.5									
	NK_253	Residential		55	70	68.3	58.2	10.1									
	NK_254	Residential		55	70	64.1	57.2	6.9									
	NK_255	Residential		55	70	62.1	56.6	5.5									
	NK_256	Residential		55	70	60.5	56.0	4.5									
	NK_257	Residential		55	70	58.7	55.7	3.0									
	NK_258	Residential		55	70	58.0	55.3	2.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_259	Residential		55	70	59.9	56.1	3.8									
	NK_260	Residential		55	70	60.0	55.6	4.4									
	NK_261	Residential		55	70	59.8	55.3	4.5									
	NK_262	Residential		55	70	59.4	54.9	4.5									
	NK_263	Residential		55	70	58.9	54.6	4.3									
	NK_264	Residential		55	70	58.3	54.2	4.1									
	NK_265	Residential		55	70	57.9	53.9	4.0									
	NK_266	Residential		55	70	73.1	59.4	13.7									
	NK_267	Residential		55	70	64.9	57.8	7.1									
	NK_268	Residential		55	70	62.9	57.1	5.8									
	NK_269	Residential		55	70	61.3	56.5	4.8									
	NK_270	Residential		55	70	60.3	56.0	4.3									
	NK_271	Residential		55	70	59.5	55.6	3.9									
	NK_272	Residential		55	70	59.0	55.4	3.6									
	NK_273	Residential		55	70	60.3	56.2	4.1									
	NK_274	Residential		55	70	60.0	55.6	4.4									
	NK_275	Residential		55	70	59.6	55.2	4.4									
	NK_276	Residential		55	70	59.5	55.1	4.4									
	NK_277	Residential		55	70	59.0	54.7	4.3									
	NK_278	Residential		55	70	58.4	54.3	4.1									
	NK_279	Residential		55	70	57.9	53.9	4.0									
Wall NK1	NK_280	Residential	Night	55	70	73.8	59.3	14.5	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_281	Residential		55	70	69.2	58.3	10.9									
	NK_282	Residential		55	70	64.4	57.4	7.0									
	NK_283	Residential		55	70	62.1	56.6	5.5									
	NK_284	Residential		55	70	60.9	56.5	4.4									
	NK_285	Residential		55	70	59.5	55.8	3.7									
	NK_286	Residential		55	70	58.6	55.0	3.6									
	NK_287	Residential		55	70	60.5	56.2	4.3									
	NK_288	Residential		55	70	60.0	55.5	4.5									
	NK_289	Residential		55	70	59.8	55.3	4.5									
	NK_290	Residential		55	70	59.4	55.0	4.4									
	NK_291	Residential		55	70	59.0	54.7	4.3									
	NK_292	Residential		55	70	58.4	54.3	4.1									
	NK_293	Residential		55	70	58.0	54.0	4.0									
	NK_294	Residential		55	70	71.8	59.0	12.8									
	NK_295	Residential		55	70	66.7	58.1	8.6									
	NK_296	Residential		55	70	63.6	57.2	6.4									
	NK_297	Residential		55	70	61.3	56.4	4.9									
	NK_298	Residential		55	70	60.1	56.1	4.0									
	NK_299	Residential		55	70	59.5	55.8	3.7									
	NK_300	Residential		55	70	59.7	56.2	3.5									
	NK_301	Residential		55	70	60.2	56.4	3.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_302	Residential		55	70	60.1	55.9	4.2									
	NK_303	Residential		55	70	59.9	55.6	4.3									
	NK_304	Residential		55	70	59.5	55.1	4.4									
	NK_305	Residential		55	70	58.9	54.7	4.2									
	NK_306	Residential		55	70	58.6	54.4	4.2									
	NK_307	Residential		55	70	58.3	54.3	4.0									
	NK_308	Residential		55	70	58.1	54.1	4.0									
	NK_309	Residential		55	70	73.1	59.6	13.5									
	NK_310	Residential		55	70	68.1	58.4	9.7									
	NK_311	Residential		55	70	66.7	58.1	8.6									
	NK_312	Residential		55	70	63.8	56.9	6.9									
	NK_313	Residential		55	70	62.7	56.8	5.9									
	NK_314	Residential		55	70	61.1	56.2	4.9									
	NK_315	Residential		55	70	60.3	56.2	4.1									
	NK_316	Residential		55	70	59.0	55.6	3.4									
	NK_317	Residential		55	70	60.4	56.3	4.1									
	NK_318	Residential		55	70	60.2	55.8	4.4									
	NK_319	Residential		55	70	60.0	55.5	4.5									
	NK_320	Residential		55	70	59.5	55.2	4.3									
	NK_321	Residential		55	70	59.1	54.9	4.2									
	NK_322	Residential		55	70	58.8	54.7	4.1									
Wall NK1	NK_323	Residential	Night	55	70	58.4	54.4	4.0	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_324	Residential		55	70	58.1	54.2	3.9									
	NK_325	Residential		55	70	73.6	59.6	14.0									
	NK_326	Residential		55	70	65.4	58.5	6.9									
	NK_327	Residential		55	70	63.3	57.9	5.4									
	NK_328	Residential		55	70	61.7	57.1	4.6									
	NK_329	Residential		55	70	60.6	56.4	4.2									
	NK_330	Residential		55	70	60.1	56.5	3.6									
	NK_331	Residential		55	70	59.7	56.2	3.5									
	NK_332	Residential		55	70	60.6	56.6	4.0									
	NK_333	Residential		55	70	60.4	56.1	4.3									
	NK_334	Residential		55	70	60.0	55.6	4.4									
	NK_335	Residential		55	70	59.5	55.2	4.3									
	NK_336	Residential		55	70	59.0	54.8	4.2									
	NK_337	Residential		55	70	58.5	54.5	4.0									
	NK_338	Residential		55	70	58.0	54.1	3.9									
	NK_339	Residential		55	70	73.8	59.7	14.1									
	NK_340	Residential		55	70	64.7	58.0	6.7									
	NK_341	Residential		55	70	62.5	57.2	5.3									
	NK_342	Residential		55	70	61.2	56.6	4.6									
	NK_343	Residential		55	70	60.0	55.5	4.5									
	NK_344	Residential		55	70	58.7	55.7	3.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_345	Residential		55	70	60.4	56.6	3.8									
	NK_346	Residential		55	70	60.4	56.1	4.3									
	NK_347	Residential		55	70	60.1	55.7	4.4									
	NK_348	Residential		55	70	59.7	55.4	4.3									
	NK_349	Residential		55	70	59.2	55.0	4.2									
	NK_350	Residential		55	70	58.7	54.7	4.0									
	NK_351	Residential		55	70	58.2	54.3	3.9									
	NK_352	Residential		55	70	73.5	59.8	13.7									
	NK_353	Residential		55	70	65.5	58.6	6.9									
	NK_354	Residential		55	70	62.9	57.9	5.0									
	NK_355	Residential		55	70	61.4	57.3	4.1									
	NK_356	Residential		55	70	60.4	56.8	3.6									
	NK_357	Residential		55	70	59.9	56.8	3.1									
	NK_358	Residential		55	70	59.4	56.2	3.2									
	NK_359	Residential		55	70	60.9	56.8	4.1									
	NK_360	Residential		55	70	60.7	56.4	4.3									
	NK_361	Residential		55	70	60.3	56.0	4.3									
	NK_362	Residential		55	70	59.9	55.6	4.3									
	NK_363	Residential		55	70	59.3	55.1	4.2									
	NK_364	Residential		55	70	59.0	54.9	4.1									
	NK_365	Residential		55	70	58.4	54.6	3.8									
Wall NK1	NK_366	Residential	Night	55	70	71.7	59.2	12.5	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_367	Residential		55	70	67.6	58.7	8.9									
	NK_368	Residential		55	70	62.3	57.4	4.9									
	NK_369	Residential		55	70	61.1	56.8	4.3									
	NK_370	Residential		55	70	59.5	56.6	2.9									
	NK_371	Residential		55	70	60.7	56.7	4.0									
	NK_372	Residential		55	70	60.5	56.4	4.1									
	NK_373	Residential		55	70	60.1	55.9	4.2									
	NK_374	Residential		55	70	59.7	55.5	4.2									
	NK_375	Residential		55	70	73.8	59.9	13.9									
	NK_376	Residential		55	70	65.9	58.4	7.5									
	NK_377	Residential		55	70	63.8	58.2	5.6									
	NK_378	Residential		55	70	62.3	57.9	4.4									
	NK_379	Residential		55	70	60.6	57.1	3.5									
	NK_380	Residential		55	70	60.0	56.7	3.3									
	NK_381	Residential		55	70	61.1	57.1	4.0									
	NK_382	Residential		55	70	60.9	56.7	4.2									
	NK_383	Residential		55	70	60.6	56.3	4.3									
	NK_384	Residential		55	70	60.1	55.8	4.3									
	NK_385	Residential		55	70	73.9	60.0	13.9									
	NK_386	Residential		55	70	66.0	58.5	7.5									
	NK_387	Residential		55	70	63.4	58.2	5.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_388	Residential		55	70	62.2	57.9	4.3									
	NK_389	Residential		55	70	60.8	56.7	4.1									
	NK_390	Residential		55	70	59.5	56.5	3.0									
	NK_391	Residential		55	70	60.8	57.1	3.7									
	NK_392	Residential		55	70	60.7	56.5	4.2									
	NK_393	Residential		55	70	60.3	56.1	4.2									
	NK_394	Residential		55	70	59.9	55.8	4.1									
	NK_395	Residential		55	70	59.5	55.4	4.1									
	NK_396	Residential		55	70	59.0	55.1	3.9									
	NK_397	Residential		55	70	58.6	54.8	3.8									
	NK_398	Residential		55	70	73.7	60.0	13.7									
	NK_399	Residential		55	70	65.9	58.8	7.1									
	NK_400	Residential		55	70	64.2	58.3	5.9									
	NK_401	Residential		55	70	61.8	57.4	4.4									
	NK_402	Residential		55	70	60.6	56.9	3.7									
	NK_403	Residential		55	70	59.9	56.6	3.3									
	NK_404	Residential		55	70	61.0	56.9	4.1									
	NK_405	Residential		55	70	60.8	56.7	4.1									
	NK_406	Residential		55	70	60.7	56.5	4.2									
	NK_407	Residential		55	70	60.2	56.1	4.1									
	NK_408	Residential		55	70	59.7	55.7	4.0									
Wall NK1	NK_409	Residential	Night	55	70	59.3	55.4	3.9	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_410	Residential		55	70	58.8	55.1	3.7									
	NK_411	Residential		55	70	74.1	59.9	14.2									
	NK_412	Residential		55	70	68.3	59.2	9.1									
	NK_413	Residential		55	70	64.5	58.3	6.2									
	NK_414	Residential		55	70	62.5	57.5	5.0									
	NK_415	Residential		55	70	61.5	57.2	4.3									
	NK_416	Residential		55	70	59.3	56.2	3.1									
	NK_417	Residential		55	70	61.2	57.4	3.8									
	NK_418	Residential		55	70	60.9	56.8	4.1									
	NK_419	Residential		55	70	60.6	56.4	4.2									
	NK_420	Residential		55	70	60.1	56.0	4.1									
	NK_421	Residential		55	70	59.7	55.7	4.0									
	NK_422	Residential		55	70	58.8	55.2	3.6									
	NK_423	Residential		55	70	58.5	55.0	3.5									
	NK_424	Residential		55	70	73.8	59.9	13.9									
	NK_425	Residential		55	70	66.5	58.9	7.6									
	NK_426	Residential		55	70	64.1	58.5	5.6									
	NK_427	Residential		55	70	62.3	57.7	4.6									
	NK_428	Residential		55	70	61.2	57.5	3.7									
	NK_429	Residential		55	70	60.3	57.1	3.2									
	NK_430	Residential		55	70	61.1	57.1	4.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_431	Residential		55	70	60.8	56.6	4.2									
	NK_432	Residential		55	70	60.3	56.2	4.1									
	NK_433	Residential		55	70	60.0	56.1	3.9									
	NK_434	Residential		55	70	59.5	55.7	3.8									
	NK_435	Residential		55	70	59.0	55.4	3.6									
	NK_436	Residential		55	70	73.6	59.9	13.7									
	NK_437	Residential		55	70	69.5	59.2	10.3									
	NK_438	Residential		55	70	65.0	58.7	6.3									
	NK_439	Residential		55	70	63.4	58.2	5.2									
	NK_440	Residential		55	70	62.1	57.7	4.4									
	NK_441	Residential		55	70	59.6	56.6	3.0									
	NK_442	Residential		55	70	61.3	57.5	3.8									
	NK_443	Residential		55	70	61.1	57.1	4.0									
	NK_444	Residential		55	70	60.7	56.6	4.1									
	NK_445	Residential		55	70	60.3	56.3	4.0									
	NK_446	Residential		55	70	59.9	56.1	3.8									
	NK_447	Residential		55	70	59.3	55.7	3.6									
	NK_448	Residential		55	70	58.8	55.4	3.4									
	NK_449	Residential		55	70	73.6	60.1	13.5									
	NK_450	Residential		55	70	65.5	58.8	6.7									
	NK_451	Residential		55	70	63.3	58.3	5.0									
Wall NK1	NK_452	Residential	Night	55	70	61.8	58.0	3.8	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_453	Residential		55	70	61.0	57.6	3.4									
	NK_454	Residential		55	70	61.6	58.1	3.5									
	NK_455	Residential		55	70	61.5	57.4	4.1									
	NK_456	Residential		55	70	61.0	57.0	4.0									
	NK_457	Residential		55	70	60.5	56.6	3.9									
	NK_458	Residential		55	70	60.1	56.4	3.7									
	NK_459	Residential		55	70	59.4	55.9	3.5									
	NK_460	Residential		55	70	59.2	55.8	3.4									
	NK_461	Residential		55	70	73.5	60.1	13.4									
	NK_462	Residential		55	70	66.8	58.9	7.9									
	NK_463	Residential		55	70	64.2	58.5	5.7									
	NK_464	Residential		55	70	62.7	57.9	4.8									
	NK_465	Residential		55	70	59.4	56.4	3.0									
	NK_466	Residential		55	70	62.0	58.2	3.8									
	NK_467	Residential		55	70	61.5	57.5	4.0									
	NK_468	Residential		55	70	60.9	57.0	3.9									
	NK_469	Residential		55	70	60.7	56.8	3.9									
	NK_470	Residential		55	70	60.2	56.5	3.7									
	NK_471	Residential		55	70	59.6	56.1	3.5									
	NK_472	Residential		55	70	59.0	55.7	3.3									
	NK_473	Residential		55	70	73.7	60.1	13.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_474	Residential		55	70	66.8	58.7	8.1									
	NK_475	Residential		55	70	64.1	58.5	5.6									
	NK_476	Residential		55	70	62.4	58.1	4.3									
	NK_477	Residential		55	70	61.7	57.8	3.9									
	NK_478	Residential		55	70	62.1	58.5	3.6									
	NK_479	Residential		55	70	62.0	58.0	4.0									
	NK_480	Residential		55	70	61.6	57.6	4.0									
	NK_481	Residential		55	70	61.0	57.1	3.9									
	NK_482	Residential		55	70	60.5	56.8	3.7									
	NK_483	Residential		55	70	60.0	56.6	3.4									
	NK_484	Residential		55	70	59.3	56.1	3.2									
	NK_485	Residential		55	70	73.7	60.2	13.5									
	NK_486	Residential		55	70	70.5	59.2	11.3									
	NK_487	Residential		55	70	65.6	58.7	6.9									
	NK_488	Residential		55	70	63.1	58.1	5.0									
	NK_489	Residential		55	70	61.6	57.6	4.0									
	NK_490	Residential		55	70	62.4	58.7	3.7									
	NK_491	Residential		55	70	62.1	58.1	4.0									
	NK_492	Residential		55	70	61.6	57.6	4.0									
	NK_493	Residential		55	70	61.0	57.2	3.8									
	NK_494	Residential		55	70	60.5	57.0	3.5									
Wall NK1	NK_495	Residential	Night	55	70	59.9	56.7	3.2	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_496	Residential		55	70	59.3	56.4	2.9									
	NK_497	Residential		55	70	73.6	60.2	13.4									
	NK_498	Residential		55	70	65.7	58.8	6.9									
	NK_499	Residential		55	70	63.1	58.3	4.8									
	NK_500	Residential		55	70	62.9	58.9	4.0									
	NK_501	Residential		55	70	62.6	58.5	4.1									
	NK_502	Residential		55	70	62.1	58.1	4.0									
	NK_503	Residential		55	70	61.1	57.5	3.6									
	NK_504	Residential		55	70	60.6	57.3	3.3									
	NK_505	Residential		55	70	60.3	57.2	3.1									
	NK_506	Residential		55	70	59.9	56.9	3.0									
	NK_507	Residential		55	70	59.5	56.7	2.8									
	NK_508	Residential		55	70	73.8	60.2	13.6									
	NK_509	Residential		55	70	67.6	59.3	8.3									
	NK_510	Residential		55	70	65.1	59.1	6.0									
	NK_511	Residential		55	70	63.1	58.6	4.5									
	NK_512	Residential		55	70	62.9	59.0	3.9									
	NK_513	Residential		55	70	62.5	58.5	4.0									
	NK_514	Residential		55	70	61.9	58.0	3.9									
	NK_515	Residential		55	70	61.4	57.8	3.6									
	NK_516	Residential		55	70	60.9	57.5	3.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NK_517	Residential		55	70	60.3	57.3	3.0									
	NK_518	Residential		55	70	59.8	57.1	2.7									
	NK_519	Residential		55	70	72.9	59.9	13.0									
	NK_520	Residential		55	70	67.4	58.7	8.7									
	NK_521	Residential		55	70	64.3	58.7	5.6									
	NK_522	Residential		55	70	63.1	58.6	4.5									
	NK_523	Residential		55	70	63.3	59.3	4.0									
	NK_524	Residential		55	70	62.8	58.8	4.0									
	NK_525	Residential		55	70	62.0	58.3	3.7									
	NK_526	Residential		55	70	61.6	58.1	3.5									
	NK_527	Residential		55	70	61.0	58.0	3.0									
	NK_528	Residential		55	70	60.6	57.9	2.7									
	NK_529	Residential		55	70	60.2	57.7	2.5									
	NK_530	Residential		55	70	73.4	60.0	13.4									
	NK_531	Residential		55	70	66.6	58.7	7.9									
	NK_532	Residential		55	70	62.7	58.0	4.7									
	NK_533	Residential		55	70	63.1	59.3	3.8									
	NK_534	Residential		55	70	62.6	58.6	4.0									
	NK_535	Residential		55	70	62.2	58.4	3.8									
	NK_536	Residential		55	70	61.6	58.2	3.4									
	NK_537	Residential		55	70	61.2	58.4	2.8									
Wall NK1	NK_538	Residential	Night	55	70	60.7	58.3	2.4	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_539	Residential		55	70	60.3	58.1	2.2									
	NK_540	Residential		55	70	73.4	59.7	13.7									
	NK_541	Residential		55	70	65.8	59.2	6.6									
	NK_542	Residential		55	70	64.4	58.9	5.5									
	NK_543	Residential		55	70	63.2	59.3	3.9									
	NK_544	Residential		55	70	63.0	58.9	4.1									
	NK_545	Residential		55	70	62.3	58.5	3.8									
	NK_546	Residential		55	70	61.7	59.2	2.5									
	NK_547	Residential		55	70	61.4	59.4	2.0									
	NK_548	Residential		55	70	61.1	59.3	1.8									
	NK_549	Residential		55	70	60.9	59.3	1.6									
	NK_550	Residential		55	70	69.9	59.1	10.8									
	NK_551	Residential		55	70	66.7	59.1	7.6									
	NK_552	Residential		55	70	64.8	58.8	6.0									
	NK_553	Residential		55	70	63.0	58.4	4.6									
	NK_554	Residential		55	70	62.4	58.0	4.4									
	NK_555	Residential		55	70	61.8	57.5	4.3									
	NK_556	Residential		55	70	61.2	57.0	4.2									
	NK_557	Residential		55	70	61.9	59.8	2.1									
	NK_558	Residential		55	70	61.7	60.1	1.6									
	NK_559	Residential		55	70	61.5	60.1	1.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C59 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NK1 in Area NK - East of I-35W between Lake Drive and 95th Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NK1	NK_560	Residential	Night	55	70	61.0	59.5	1.5	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct
	NK_561	Industrial	Night	80	NA	70.6	65.3	5.3	162	Yes	Yes	20	5,050	100,216	$2,004,320	$12,372	Propose to Construct

Table C60
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SL1 in Area SL - West of I-35W between 95th Ave NE and Lexington Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SL1	SL_1	Education	Day	65	70	68.1	65.1	3.0	0	No	No	20	377	6,756	$135,120	N/A	Does Not Meet Noise Reduction Design Goal
	SL_1	Education	Night	65	70	65.6	62.9	2.7	0	No	No	20	377	6,756	$135,120	N/A	Does Not Meet Noise Reduction Design Goal

Table C61
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NL1 in Area NL - East of I-35W between 95th Ave NE and Lexington Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NL1	NL_1	Education	Day	65	70	59.6	59.6	0.0	57	Yes	Yes	20	4,185	82,916	$1,658,320	$29,093	Propose to Construct
	NL_2	Residential		65	70	68.5	60.3	8.2									
	NL_3	Residential		65	70	65.8	58.4	7.4									
	NL_4	Residential		65	70	63.4	57.6	5.8									
	NL_5	Residential		65	70	61.0	57.6	3.4									
	NL_6	Residential		65	70	60.0	56.8	3.2									
	NL_7	Residential		65	70	59.1	56.4	2.7									
	NL_8	Residential		65	70	58.8	56.0	2.8									
	NL_9	Residential		65	70	58.2	55.4	2.8									
	NL_10	Residential		65	70	57.9	54.9	3.0									
	NL_11	Residential		65	70	57.5	54.7	2.8									
	NL_12	Residential		65	70	56.6	54.0	2.6									
	NL_13	Residential		65	70	56.2	53.9	2.3									
	NL_14	Residential		65	70	73.1	61.7	11.4									
	NL_15	Residential		65	70	69.6	60.1	9.5									
	NL_16	Residential		65	70	68.3	59.3	9.0									
	NL_17	Residential		65	70	67.2	58.5	8.7									
	NL_18	Residential		65	70	65.8	58.3	7.5									
	NL_19	Residential		65	70	65.4	58.0	7.4									
	NL_20	Residential		65	70	63.2	56.1	7.1									
	NL_21	Residential		65	70	61.7	55.6	6.1									
	NL_22	Residential		65	70	60.4	55.3	5.1									
	NL_23	Residential		65	70	59.4	54.8	4.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C61 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NL1 in Area NL - East of I-35W between 95th Ave NE and Lexington Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NL_24	Residential		65	70	57.7	54.8	2.9									
	NL_25	Residential		65	70	56.9	54.4	2.5									
	NL_26	Residential		65	70	56.7	54.2	2.5									
	NL_27	Residential		65	70	57.1	54.5	2.6									
	NL_28	Residential		65	70	56.6	54.4	2.2									
	NL_29	Residential		65	70	56.8	53.3	3.5									
	NL_30	Residential		65	70	57.7	53.6	4.1									
	NL_31	Residential		65	70	57.5	53.6	3.9									
	NL_32	Residential		65	70	61.9	55.5	6.4									
	NL_33	Residential		65	70	64.8	57.1	7.7									
	NL_34	Residential		65	70	65.3	57.5	7.8									
	NL_35	Residential		65	70	63.9	55.9	8.0									
	NL_36	Residential		65	70	62.1	54.8	7.3									
	NL_37	Residential		65	70	61.7	54.7	7.0									
	NL_38	Residential		65	70	57.9	54.4	3.5									
	NL_39	Residential		65	70	57.9	54.7	3.2									
	NL_40	Residential		65	70	57.4	54.5	2.9									
	NL_41	Residential		65	70	58.9	54.5	4.4									
	NL_42	Residential		65	70	58.5	54.6	3.9									
	NL_43	Residential		65	70	57.7	54.6	3.1									
	NL_44	Residential		65	70	65.4	57.5	7.9									
Wall NL1	NL_45	Residential	Day	65	70	66.2	58.6	7.6	57	Yes	Yes	20	4,185	82,916	$1,658,320	$29,093	Propose to Construct
	NL_46	Residential		65	70	67.9	58.3	9.6									
	NL_47	Residential		65	70	70.9	60.6	10.3									
	NL_48	Residential		65	70	60.2	54.1	6.1									
	NL_49	Residential		65	70	60.5	54.5	6.0									
	NL_50	Residential		65	70	61.2	55.0	6.2									
	NL_51	Residential		65	70	61.9	55.2	6.7									
	NL_52	Residential		65	70	62.7	55.5	7.2									
	NL_53	Residential		65	70	64.7	56.2	8.5									
	NL_54	Residential		65	70	66.0	57.2	8.8									
	NL_55	Residential		65	70	66.6	57.2	9.4									
	NL_56	Trail		70	70	69.9	60.0	9.9									
	NL_57	Trail		70	70	70.5	60.6	9.9									
	NL_58	Trail		70	70	75.6	60.0	15.6									
	NL_59	Trail		70	70	75.3	59.8	15.5									
	NL_60	Trail		70	70	75.0	60.0	15.0									
	NL_61	Trail		70	70	72.5	61.2	11.3									
	NL_62	Trail		70	70	71.6	61.1	10.5									
	NL_63	Trail		70	70	71.2	62.0	9.2									
	NL_64	Trail		70	70	66.6	61.5	5.1									
	NL_65	Trail		70	70	63.9	60.7	3.2									
	NL_66	Residential		65	70	56.7	54.3	2.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C61 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NL1 in Area NL - East of I-35W between 95th Ave NE and Lexington Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NL_67	Residential		65	70	57.0	54.4	2.6									
	NL_68	Residential		65	70	56.3	54.5	1.8									
	NL_69	Residential		65	70	56.6	54.3	2.3									
	NL_70	Residential		65	70	57.9	54.8	3.1									
	NL_71	Residential		65	70	60.9	55.6	5.3									
	NL_72	Residential		65	70	63.2	56.6	6.6									
	NL_73	Residential		65	70	65.3	57.4	7.9									
	NL_74	Residential		65	70	65.0	57.1	7.9									
	NL_75	Residential		65	70	56.7	54.7	2.0									
	NL_76	Residential		65	70	56.5	54.7	1.8									
	NL_77	Residential		65	70	56.7	54.5	2.2									
	NL_78	Residential		65	70	56.8	54.9	1.9									
	NL_79	Residential		65	70	57.0	54.7	2.3									
	NL_80	Residential		65	70	57.1	54.6	2.5									
	NL_81	Residential		65	70	58.6	55.1	3.5									
	NL_82	Residential		65	70	58.7	55.5	3.2									
	NL_83	Residential		65	70	58.5	55.5	3.0									
	NL_84	Residential		65	70	58.0	55.4	2.6									
	NL_85	Residential		65	70	58.1	55.4	2.7									
	NL_86	Residential		65	70	58.5	55.6	2.9									
	NL_87	Residential		65	70	58.0	55.5	2.5									
Wall NL1	NL_88	Residential	Day	65	70	63.8	55.9	7.9	57	Yes	Yes	20	4,185	82,916	$1,658,320	$29,093	Propose to Construct
	NL_89	Residential		65	70	65.1	57.5	7.6									
	NL_90	Residential		65	70	64.8	57.3	7.5									
	NL_91	Residential		65	70	67.7	58.9	8.8									
	NL_92	Residential		65	70	69.5	60.5	9.0									
	NL_93	Residential		65	70	69.6	60.4	9.2									
	NL_94	Residential		65	70	59.2	56.2	3.0									
	NL_95	Residential		65	70	60.0	56.5	3.5									
	NL_96	Residential		65	70	60.7	57.1	3.6									
	NL_97	Residential		65	70	62.2	57.6	4.6									
	NL_98	Residential		65	70	63.9	58.4	5.5									
	NL_99	Trail		70	70	63.0	57.8	5.2									
	NL_100	Trail		70	70	66.4	59.2	7.2									
	NL_101	Trail		70	70	65.6	59.3	6.3									
	NL_102	Trail		70	70	63.8	59.0	4.8									
	NL_103	Residential		65	70	62.5	57.8	4.7									
	NL_104	Residential		65	70	63.6	58.3	5.3									
	NL_105	Residential		65	70	64.6	58.8	5.8									
	NL_106	Residential		65	70	64.5	59.0	5.5									
	NL_107	Residential		65	70	63.6	58.6	5.0									
	NL_108	Residential		65	70	62.5	58.3	4.2									
	NL_109	Residential		65	70	62.1	58.2	3.9									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C61 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NL1 in Area NL - East of I-35W between 95th Ave NE and Lexington Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NL1	NL_110	Residential	Day	65	70	61.7	58.1	3.6	57	Yes	Yes	20	4,185	82,916	$1,658,320	$29,093	Propose to Construct
	NL_111	Residential		65	70	60.0	56.4	3.6									
	NL_112	Residential		65	70	60.8	56.9	3.9									
	NL_113	Residential		65	70	61.6	57.5	4.1									
	NL_114	Residential		65	70	59.4	56.1	3.3									
	NL_115	Residential		65	70	60.1	56.6	3.5									
	NL_116	Residential		65	70	60.8	57.1	3.7									
	NL_117	Residential		65	70	58.7	55.7	3.0									
	NL_118	Residential		65	70	59.3	56.2	3.1									
	NL_119	Residential		65	70	60.0	56.7	3.3									
	NL_1	Education	Night	65	70	58.4	58.4	0.0	57	Yes	Yes	20	4,185	82,916	$1,658,320	$29,093	Propose to Construct
	NL_2	Residential		55	70	67.5	59.1	8.4									
	NL_3	Residential		55	70	64.7	57.0	7.7									
	NL_4	Residential		55	70	62.3	56.2	6.1									
	NL_5	Residential		55	70	59.8	56.2	3.6									
	NL_6	Residential		55	70	58.8	55.5	3.3									
	NL_7	Residential		55	70	57.8	54.9	2.9									
	NL_8	Residential		55	70	57.4	54.5	2.9									
	NL_9	Residential		55	70	56.9	53.8	3.1									
	NL_10	Residential		55	70	56.6	53.4	3.2									
	NL_11	Residential		55	70	56.2	53.1	3.1									
	NL_12	Residential		55	70	55.2	52.4	2.8									
	NL_13	Residential		55	70	54.8	52.3	2.5									
	NL_14	Residential		55	70	72.2	60.7	11.5									
	NL_15	Residential		55	70	68.6	58.8	9.8									
	NL_16	Residential		55	70	67.3	58.0	9.3									
	NL_17	Residential		55	70	66.1	57.1	9.0									
	NL_18	Residential		55	70	64.7	56.9	7.8									
	NL_19	Residential		55	70	64.2	56.5	7.7									
	NL_20	Residential		55	70	61.9	54.5	7.4									
	NL_21	Residential		55	70	60.4	54.0	6.4									
	NL_22	Residential		55	70	59.2	53.8	5.4									
	NL_23	Residential		55	70	58.1	53.3	4.8									
	NL_24	Residential		55	70	56.4	53.3	3.1									
	NL_25	Residential		55	70	55.6	52.8	2.8									
	NL_26	Residential		55	70	55.3	52.6	2.7									
	NL_27	Residential		55	70	55.7	53.0	2.7									
	NL_28	Residential		55	70	55.3	52.8	2.5									
	NL_29	Residential		55	70	55.5	51.9	3.6									
	NL_30	Residential		55	70	56.4	52.2	4.2									
	NL_31	Residential		55	70	56.3	52.3	4.0									
	NL_32	Residential		55	70	60.6	54.0	6.6									
	NL_33	Residential		55	70	63.6	55.5	8.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C61 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NL1 in Area NL - East of I-35W between 95th Ave NE and Lexington Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NL_34	Residential		55	70	64.2	56.0	8.2									
	NL_35	Residential		55	70	62.7	54.4	8.3									
	NL_36	Residential		55	70	60.9	53.2	7.7									
	NL_37	Residential		55	70	60.5	53.1	7.4									
	NL_38	Residential		55	70	56.6	52.9	3.7									
	NL_39	Residential		55	70	56.6	53.1	3.5									
	NL_40	Residential		55	70	56.0	53.0	3.0									
	NL_41	Residential		55	70	57.6	53.0	4.6									
	NL_42	Residential		55	70	57.2	53.2	4.0									
	NL_43	Residential		55	70	56.4	53.0	3.4									
	NL_44	Residential		55	70	64.3	56.0	8.3									
	NL_45	Residential		55	70	65.1	57.2	7.9									
	NL_46	Residential		55	70	66.9	56.9	10.0									
	NL_47	Residential		55	70	70.0	59.4	10.6									
	NL_48	Residential		55	70	59.0	52.5	6.5									
	NL_49	Residential		55	70	59.3	53.0	6.3									
	NL_50	Residential		55	70	60.0	53.5	6.5									
	NL_51	Residential		55	70	60.7	53.8	6.9									
	NL_52	Residential		55	70	61.6	54.0	7.6									
	NL_53	Residential		55	70	63.6	54.7	8.9									
	NL_54	Residential		55	70	64.9	55.8	9.1									
Wall NL1	NL_55	Residential	Night	55	70	65.5	55.8	9.7	57	Yes	Yes	20	4,185	82,916	$1,658,320	$29,093	Propose to Construct
	NL_56	Trail		70	70	68.9	58.7	10.2									
	NL_57	Trail		70	70	69.6	59.4	10.2									
	NL_58	Trail		70	70	74.9	59.2	15.7									
	NL_59	Trail		70	70	74.5	59.0	15.5									
	NL_60	Trail		70	70	74.2	59.2	15.0									
	NL_61	Trail		70	70	71.6	60.2	11.4									
	NL_62	Trail		70	70	70.7	60.1	10.6									
	NL_63	Trail		70	70	70.3	61.0	9.3									
	NL_64	Trail		70	70	65.5	60.5	5.0									
	NL_65	Trail		70	70	62.7	59.5	3.2									
	NL_66	Residential		55	70	55.4	53.0	2.4									
	NL_67	Residential		55	70	55.8	53.1	2.7									
	NL_68	Residential		55	70	55.0	53.3	1.7									
	NL_69	Residential		55	70	55.4	53.0	2.4									
	NL_70	Residential		55	70	56.7	53.4	3.3									
	NL_71	Residential		55	70	59.8	54.2	5.6									
	NL_72	Residential		55	70	62.0	55.2	6.8									
	NL_73	Residential		55	70	64.2	56.0	8.2									
	NL_74	Residential		55	70	63.8	55.7	8.1									
	NL_75	Residential		55	70	55.4	53.2	2.2									
	NL_76	Residential		55	70	55.2	53.2	2.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C61 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NL1 in Area NL - East of I-35W between 95th Ave NE and Lexington Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NL_77	Residential		55	70	55.3	52.9	2.4									
	NL_78	Residential		55	70	55.5	53.4	2.1									
	NL_79	Residential		55	70	55.7	53.3	2.4									
	NL_80	Residential		55	70	55.8	53.1	2.7									
	NL_81	Residential		55	70	57.4	53.8	3.6									
	NL_82	Residential		55	70	57.4	54.1	3.3									
	NL_83	Residential		55	70	57.2	54.0	3.2									
	NL_84	Residential		55	70	56.7	53.9	2.8									
	NL_85	Residential		55	70	56.9	54.1	2.8									
	NL_86	Residential		55	70	57.2	54.2	3.0									
	NL_87	Residential		55	70	56.7	54.1	2.6									
	NL_88	Residential		55	70	62.6	54.5	8.1									
	NL_89	Residential		55	70	64.0	56.1	7.9									
	NL_90	Residential		55	70	63.7	56.0	7.7									
	NL_91	Residential		55	70	66.6	57.6	9.0									
	NL_92	Residential		55	70	68.5	59.3	9.2									
	NL_93	Residential		55	70	68.6	59.2	9.4									
	NL_94	Residential		55	70	58.0	54.9	3.1									
	NL_95	Residential		55	70	58.8	55.3	3.5									
	NL_96	Residential		55	70	59.5	55.8	3.7									
	NL_97	Residential		55	70	61.0	56.3	4.7									
Wall NL1	NL_98	Residential	Night	55	70	62.7	57.1	5.6	57	Yes	Yes	20	4,185	82,916	$1,658,320	$29,093	Propose to Construct
	NL_99	Trail		70	70	61.9	56.6	5.3									
	NL_100	Trail		70	70	65.3	58.0	7.3									
	NL_101	Trail		70	70	64.5	58.0	6.5									
	NL_102	Trail		70	70	62.6	57.7	4.9									
	NL_103	Residential		55	70	61.3	56.5	4.8									
	NL_104	Residential		55	70	62.4	56.9	5.5									
	NL_105	Residential		55	70	63.5	57.5	6.0									
	NL_106	Residential		55	70	63.4	57.6	5.8									
	NL_107	Residential		55	70	62.4	57.3	5.1									
	NL_108	Residential		55	70	61.3	56.9	4.4									
	NL_109	Residential		55	70	60.9	56.9	4.0									
	NL_110	Residential		55	70	60.4	56.7	3.7									
	NL_111	Residential		55	70	58.7	55.0	3.7									
	NL_112	Residential		55	70	59.5	55.5	4.0									
	NL_113	Residential		55	70	60.4	56.1	4.3									
	NL_114	Residential		55	70	58.1	54.7	3.4									
	NL_115	Residential		55	70	58.8	55.2	3.6									
	NL_116	Residential		55	70	59.5	55.6	3.9									
	NL_117	Residential		55	70	57.4	54.3	3.1									
	NL_118	Residential		55	70	58.0	54.8	3.2									
	NL_119	Residential		55	70	58.7	55.3	3.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C62
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NL2 in Area NL - East of I-35W between 95th Ave NE and Lexington Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NL2	NL_120	Retail	Day	70	NA	65.9	59.9	6.0	3	Yes	Yes	20	1,475	28,716	$574,320	$191,440	Not Cost Effective
	NL_121	Restaurant		70	75	72.2	60.5	11.7									
	NL_122	Retail		70	NA	67.0	60.1	6.9									
	NL_120	Retail	Night	70	NA	64.9	58.7	6.2	3	Yes	Yes	20	1,475	28,716	$574,320	$191,440	Not Cost Effective
	NL_121	Restaurant		70	75	71.7	59.8	11.9									
	NL_122	Retail		70	NA	66.3	59.5	6.8									

Table C63
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall NL2 in Area NL - East of I-35W between 95th Ave NE and Lexington Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NL2	NL_120	Retail	Day	70	NA	65.9	61.8	4.1	1	Yes	Yes	15	1,475	21,801	$436,020	$436,020	Not Cost Effective
	NL_121	Restaurant		70	75	72.2	63.3	8.9									
	NL_122	Retail		70	NA	67.0	62.5	4.5									
	NL_120	Retail	Night	70	NA	64.9	60.7	4.2	1	Yes	Yes	15	1,475	21,801	$436,020	$436,020	Not Cost Effective
	NL_121	Restaurant		70	75	71.7	62.7	9.0									
	NL_122	Retail		70	NA	66.3	61.9	4.4									

Table C64
Build Alternative Noise Wall Cost Effectiveness - 10 Foot Noise Wall
Wall NL2 in Area NL - East of I-35W between 95th Ave NE and Lexington Ave NE

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NL2	NL_120	Retail	Day	70	NA	65.9	64.0	1.9	1	Yes	No	10	1,475	14,686	$293,720	N/A	Does Not Meet Noise Reduction Design Goal
	NL_121	Restaurant		70	75	72.2	66.9	5.3									
	NL_122	Retail		70	NA	67.0	64.6	2.4									
	NL_120	Retail	Night	70	NA	64.9	63.0	1.9	1	Yes	No	10	1,475	14,686	$293,720	N/A	Does Not Meet Noise Reduction Design Goal
	NL_121	Restaurant		70	75	71.7	66.3	5.4									
	NL_122	Retail		70	NA	66.3	64.0	2.3									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C65
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SM1 in Area SM - West of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SM1	SM_1	Retail	Day	70	NA	67.5	58.9	8.6	18	Yes	Yes	20	3,390	67,016	$1,340,320	$74,462	Not Cost Effective
	SM_2	Restaurant		70	75	69.7	59.0	10.7									
	SM_3	Restaurant		70	75	72.1	59.5	12.6									
	SM_4	Retail		70	NA	64.0	57.2	6.8									
	SM_5	Restaurant		70	75	70.1	59.8	10.3									
	SM_6	Restaurant		70	75	62.4	55.9	6.5									
	SM_7	Education		65	70	62.5	55.9	6.6									
	SM_8	Office		70	75	62.0	55.5	6.5									
	SM_9	Office		70	75	61.5	55.2	6.3									
	SM_10	Restaurant		70	75	69.8	59.6	10.2									
	SM_11	Education		65	70	65.9	57.4	8.5									
	SM_12	Restaurant		70	75	62.5	56.2	6.3									
	SM_13	Retail		70	NA	62.0	55.9	6.1									
	SM_14	Retail		70	NA	62.1	55.9	6.2									
	SM_15	Restaurant		70	75	61.7	55.7	6.0									
	SM_16	Restaurant		70	75	71.2	60.5	10.7									
	SM_17	Retail		70	NA	71.2	60.0	11.2									
	SM_18	Retail		70	NA	66.6	59.2	7.4									
	SM_1	Retail	Night	70	NA	65.9	57.8	8.1	18	Yes	Yes	20	3,390	67,016	$1,340,320	$74,462	Not Cost Effective
	SM_2	Restaurant		70	75	68.0	57.8	10.2									
	SM_3	Restaurant		70	75	70.3	58.1	12.2									
	SM_4	Retail		70	NA	62.6	56.4	6.2									
	SM_5	Restaurant		70	75	68.3	58.8	9.5									
	SM_6	Restaurant		70	75	60.9	55.0	5.9									
	SM_7	Education		65	70	61.0	55.0	6.0									
	SM_8	Office		70	75	60.6	54.7	5.9									
	SM_9	Office		70	75	60.1	54.5	5.6									
	SM_10	Restaurant		70	75	68.0	58.6	9.4									
	SM_11	Education		65	70	64.4	56.7	7.7									
	SM_12	Restaurant		70	75	61.0	55.4	5.6									
	SM_13	Retail		70	NA	60.6	55.2	5.4									
	SM_14	Retail		70	NA	60.7	55.2	5.5									
	SM_15	Restaurant		70	75	60.4	55.1	5.3									
	SM_16	Restaurant		70	75	69.3	59.5	9.8									
	SM_17	Retail		70	NA	69.4	58.9	10.5									
	SM_18	Retail		70	NA	65.1	58.5	6.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C66
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SM1 in Area SM - West of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SM1	SM_1	Retail	Day	70	NA	67.5	60.3	7.2	8	Yes	Yes	15	3,390	50,526	$1,010,520	$126,315	Not Cost Effective
	SM_2	Restaurant		70	75	69.7	61.1	8.6									
	SM_3	Restaurant		70	75	72.1	62.2	9.9									
	SM_4	Retail		70	NA	64.0	59.2	4.8									
	SM_5	Restaurant		70	75	70.1	62.4	7.7									
	SM_6	Restaurant		70	75	62.4	57.8	4.6									
	SM_7	Education		65	70	62.5	57.6	4.9									
	SM_8	Office		70	75	62.0	57.4	4.6									
	SM_9	Office		70	75	61.5	57.2	4.3									
	SM_10	Restaurant		70	75	69.8	62.2	7.6									
	SM_11	Education		65	70	65.9	60.0	5.9									
	SM_12	Restaurant		70	75	62.5	58.4	4.1									
	SM_13	Retail		70	NA	62.0	58.0	4.0									
	SM_14	Retail		70	NA	62.1	58.0	4.1									
	SM_15	Restaurant		70	75	61.7	57.8	3.9									
	SM_16	Restaurant		70	75	71.2	63.5	7.7									
	SM_17	Retail		70	NA	71.2	62.8	8.4									
	SM_18	Retail		70	NA	66.6	61.7	4.9									
	SM_1	Retail	Night	70	NA	65.9	59.2	6.7	8	Yes	Yes	15	3,390	50,526	$1,010,520	$126,315	Not Cost Effective
	SM_2	Restaurant		70	75	68.0	60.0	8.0									
	SM_3	Restaurant		70	75	70.3	61.0	9.3									
	SM_4	Retail		70	NA	62.6	58.5	4.1									
	SM_5	Restaurant		70	75	68.3	61.4	6.9									
	SM_6	Restaurant		70	75	60.9	56.9	4.0									
	SM_7	Education		65	70	61.0	56.8	4.2									
	SM_8	Office		70	75	60.6	56.5	4.1									
	SM_9	Office		70	75	60.1	56.3	3.8									
	SM_10	Restaurant		70	75	68.0	61.2	6.8									
	SM_11	Education		65	70	64.4	59.2	5.2									
	SM_12	Restaurant		70	75	61.0	57.5	3.5									
	SM_13	Retail		70	NA	60.6	57.2	3.4									
	SM_14	Retail		70	NA	60.7	57.3	3.4									
	SM_15	Restaurant		70	75	60.4	57.1	3.3									
	SM_16	Restaurant		70	75	69.3	62.3	7.0									
	SM_17	Retail		70	NA	69.4	61.6	7.8									
	SM_18	Retail		70	NA	65.1	60.9	4.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C67
Build Alternative Noise Wall Cost Effectiveness - 10 Foot Noise Wall
Wall SM1 in Area SM - West of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SM1	SM_1	Retail	Day	70	NA	67.5	62.2	5.3	3	Yes	No	10	3,390	33,836	$676,720	N/A	Does Not Meet Noise Reduction Design Goal
	SM_2	Restaurant		70	75	69.7	63.9	5.8									
	SM_3	Restaurant		70	75	72.1	65.8	6.3									
	SM_4	Retail		70	NA	64.0	61.8	2.2									
	SM_5	Restaurant		70	75	70.1	65.7	4.4									
	SM_6	Restaurant		70	75	62.4	60.1	2.3									
	SM_7	Education		65	70	62.5	60.0	2.5									
	SM_8	Office		70	75	62.0	59.7	2.3									
	SM_9	Office		70	75	61.5	59.3	2.2									
	SM_10	Restaurant		70	75	69.8	65.5	4.3									
	SM_11	Education		65	70	65.9	62.9	3.0									
	SM_12	Restaurant		70	75	62.5	60.6	1.9									
	SM_13	Retail		70	NA	62.0	60.2	1.8									
	SM_14	Retail		70	NA	62.1	60.3	1.8									
	SM_15	Restaurant		70	75	61.7	60.1	1.6									
	SM_16	Restaurant		70	75	71.2	67.1	4.1									
	SM_17	Retail		70	NA	71.2	66.4	4.8									
	SM_18	Retail		70	NA	66.6	64.4	2.2									
	SM_1	Retail	Night	70	NA	65.9	61.1	4.8	2	Yes	No	10	3,390	33,836	$676,720	N/A	Does Not Meet Noise Reduction Design Goal
	SM_2	Restaurant		70	75	68.0	62.8	5.2									
	SM_3	Restaurant		70	75	70.3	64.6	5.7									
	SM_4	Retail		70	NA	62.6	60.9	1.7									
	SM_5	Restaurant		70	75	68.3	64.5	3.8									
	SM_6	Restaurant		70	75	60.9	59.0	1.9									
	SM_7	Education		65	70	61.0	59.0	2.0									
	SM_8	Office		70	75	60.6	58.7	1.9									
	SM_9	Office		70	75	60.1	58.4	1.7									
	SM_10	Restaurant		70	75	68.0	64.3	3.7									
	SM_11	Education		65	70	64.4	61.9	2.5									
	SM_12	Restaurant		70	75	61.0	59.5	1.5									
	SM_13	Retail		70	NA	60.6	59.2	1.4									
	SM_14	Retail		70	NA	60.7	59.3	1.4									
	SM_15	Restaurant		70	75	60.4	59.1	1.3									
	SM_16	Restaurant		70	75	69.3	65.8	3.5									
	SM_17	Retail		70	NA	69.4	65.0	4.4									
	SM_18	Retail		70	NA	65.1	63.4	1.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C68
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall SM1 in Area SM - West of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SM1	SM_1	Retail	Day	70	NA	67.5	64.4	3.1	10	Yes	Yes	20	1,641	32,036	$640,720	$64,072	Not Cost Effective
	SM_2	Restaurant		70	75	69.7	62.1	7.6									
	SM_3	Restaurant		70	75	72.1	59.8	12.3									
	SM_4	Retail		70	NA	64.0	58.1	5.9									
	SM_5	Restaurant		70	75	70.1	59.9	10.2									
	SM_6	Restaurant		70	75	62.4	56.1	6.3									
	SM_7	Education		65	70	62.5	56.1	6.4									
	SM_8	Office		70	75	62.0	55.8	6.2									
	SM_9	Office		70	75	61.5	55.5	6.0									
	SM_10	Restaurant		70	75	69.8	60.4	9.4									
	SM_11	Education		65	70	65.9	59.8	6.1									
	SM_12	Restaurant		70	75	62.5	58.9	3.6									
	SM_13	Retail		70	NA	62.0	58.6	3.4									
	SM_14	Retail		70	NA	62.1	58.6	3.5									
	SM_15	Restaurant		70	75	61.7	58.4	3.3									
	SM_16	Restaurant		70	75	71.2	70.5	0.7									
	SM_17	Retail		70	NA	71.2	70.9	0.3									
	SM_18	Retail		70	NA	66.6	66.3	0.3									
	SM_1	Retail	Night	70	NA	65.9	62.9	3.0	10	Yes	Yes	20	1,641	32,036	$640,720	$64,072	Not Cost Effective
	SM_2	Restaurant		70	75	68.0	60.6	7.4									
	SM_3	Restaurant		70	75	70.3	58.4	11.9									
	SM_4	Retail		70	NA	62.6	57.2	5.4									
	SM_5	Restaurant		70	75	68.3	58.9	9.4									
	SM_6	Restaurant		70	75	60.9	55.1	5.8									
	SM_7	Education		65	70	61.0	55.1	5.9									
	SM_8	Office		70	75	60.6	54.9	5.7									
	SM_9	Office		70	75	60.1	54.7	5.4									
	SM_10	Restaurant		70	75	68.0	59.1	8.9									
	SM_11	Education		65	70	64.4	58.5	5.9									
	SM_12	Restaurant		70	75	61.0	57.5	3.5									
	SM_13	Retail		70	NA	60.6	57.3	3.3									
	SM_14	Retail		70	NA	60.7	57.3	3.4									
	SM_15	Restaurant		70	75	60.4	57.2	3.2									
	SM_16	Restaurant		70	75	69.3	67.9	1.4									
	SM_17	Retail		70	NA	69.4	68.2	1.2									
	SM_18	Retail		70	NA	65.1	64.0	1.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C69
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall SM1 in Area SM - West of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall SM1	SM_1	Retail	Day	70	NA	67.5	61.9	5.6	7	Yes	Yes	15	2,076	30,816	$616,320	$88,046	Not Cost Effective
	SM_2	Restaurant		70	75	69.7	61.4	8.3									
	SM_3	Restaurant		70	75	72.1	62.3	9.8									
	SM_4	Retail		70	NA	64.0	59.4	4.6									
	SM_5	Restaurant		70	75	70.1	62.4	7.7									
	SM_6	Restaurant		70	75	62.4	57.9	4.5									
	SM_7	Education		65	70	62.5	57.7	4.8									
	SM_8	Office		70	75	62.0	57.4	4.6									
	SM_9	Office		70	75	61.5	57.2	4.3									
	SM_10	Restaurant		70	75	69.8	62.2	7.6									
	SM_11	Education		65	70	65.9	60.1	5.8									
	SM_12	Restaurant		70	75	62.5	58.6	3.9									
	SM_13	Retail		70	NA	62.0	58.2	3.8									
	SM_14	Retail		70	NA	62.1	58.3	3.8									
	SM_15	Restaurant		70	75	61.7	58.1	3.6									
	SM_16	Restaurant		70	75	71.2	64.7	6.5									
	SM_17	Retail		70	NA	71.2	70.9	0.3									
	SM_18	Retail		70	NA	66.6	66.3	0.3									
	SM_1	Retail	Night	70	NA	65.9	60.7	5.2	7	Yes	Yes	15	2,076	30,816	$616,320	$88,046	Not Cost Effective
	SM_2	Restaurant		70	75	68.0	60.3	7.7									
	SM_3	Restaurant		70	75	70.3	61.0	9.3									
	SM_4	Retail		70	NA	62.6	58.6	4.0									
	SM_5	Restaurant		70	75	68.3	61.4	6.9									
	SM_6	Restaurant		70	75	60.9	56.9	4.0									
	SM_7	Education		65	70	61.0	56.9	4.1									
	SM_8	Office		70	75	60.6	56.6	4.0									
	SM_9	Office		70	75	60.1	56.4	3.7									
	SM_10	Restaurant		70	75	68.0	61.2	6.8									
	SM_11	Education		65	70	64.4	59.2	5.2									
	SM_12	Restaurant		70	75	61.0	57.6	3.4									
	SM_13	Retail		70	NA	60.6	57.3	3.3									
	SM_14	Retail		70	NA	60.7	57.4	3.3									
	SM_15	Restaurant		70	75	60.4	57.2	3.2									
	SM_16	Restaurant		70	75	69.3	63.2	6.1									
	SM_17	Retail		70	NA	69.4	68.2	1.2									
	SM_18	Retail		70	NA	65.1	64.0	1.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C70
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NM1 in Area NM - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NM1	NM_2	Recreation	Day	70	70	73.4	62.7	10.7	9	Yes	Yes	20	1,347	26,156	$523,120	$58,124	Not Cost Effective
	NM_3	Recreation		70	70	72.7	63.5	9.2									
	NM_4	Recreation		70	70	70.5	61.9	8.6									
	NM_5	Trail		70	70	69.4	61.5	7.9									
	NM_6	Trail		70	70	68.3	61.5	6.8									
	NM_7	Trail		70	70	67.9	61.6	6.3									
	NM_8	Trail		70	70	67.1	61.9	5.2									
	NM_9	Trail		70	70	65.6	60.5	5.1									
	NM_10	Trail		70	70	66.3	60.6	5.7									
	NM_11	Trail		70	70	63.2	59.2	4.0									
	NM_12	Trail		70	70	63.5	59.4	4.1									
	NM_13	Trail		70	70	63.9	59.5	4.4									
	NM_2	Recreation	Night	70	70	73.4	62.4	11.0	9	Yes	Yes	20	1,347	26,156	$523,120	$58,124	Not Cost Effective
	NM_3	Recreation		70	70	72.5	63.1	9.4									
	NM_4	Recreation		70	70	70.2	61.5	8.7									
	NM_5	Trail		70	70	69.1	61.0	8.1									
	NM_6	Trail		70	70	67.9	60.9	7.0									
	NM_7	Trail		70	70	67.5	61.0	6.5									
	NM_8	Trail		70	70	66.6	61.3	5.3									
	NM_9	Trail		70	70	65.1	59.9	5.2									
	NM_10	Trail		70	70	65.9	59.9	6.0									
	NM_11	Trail		70	70	62.6	58.4	4.2									
	NM_12	Trail		70	70	62.9	58.5	4.4									
	NM_13	Trail		70	70	63.3	58.7	4.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C71
Build Alternative Noise Wall Cost Effectiveness - 15 Foot Noise Wall
Wall NM1 in Area NM - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NM1	NM_2	Recreation	Day	70	70	73.4	65.8	7.6	3	Yes	Yes	15	1,347	19,881	$397,620	$132,540	Not Cost Effective
	NM_3	Recreation		70	70	72.7	67.0	5.7									
	NM_4	Recreation		70	70	70.5	64.7	5.8									
	NM_5	Trail		70	70	69.4	64.5	4.9									
	NM_6	Trail		70	70	68.3	64.5	3.8									
	NM_7	Trail		70	70	67.9	63.8	4.1									
	NM_8	Trail		70	70	67.1	63.9	3.2									
	NM_9	Trail		70	70	65.6	63.0	2.6									
	NM_10	Trail		70	70	66.3	63.2	3.1									
	NM_11	Trail		70	70	63.2	61.4	1.8									
	NM_12	Trail		70	70	63.5	61.6	1.9									
	NM_13	Trail		70	70	63.9	61.9	2.0									
	NM_2	Recreation	Night	70	70	73.4	65.6	7.8	3	Yes	Yes	15	1,347	19,881	$397,620	$132,540	Not Cost Effective
	NM_3	Recreation		70	70	72.5	66.7	5.8									
	NM_4	Recreation		70	70	70.2	64.4	5.8									
	NM_5	Trail		70	70	69.1	64.2	4.9									
	NM_6	Trail		70	70	67.9	64.1	3.8									
	NM_7	Trail		70	70	67.5	63.3	4.2									
	NM_8	Trail		70	70	66.6	63.4	3.2									
	NM_9	Trail		70	70	65.1	62.4	2.7									
	NM_10	Trail		70	70	65.9	62.7	3.2									
	NM_11	Trail		70	70	62.6	60.7	1.9									
	NM_12	Trail		70	70	62.9	61.0	1.9									
	NM_13	Trail		70	70	63.3	61.2	2.1									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C72
Build Alternative Noise Wall Cost Effectiveness - 10 Foot Noise Wall
Wall NM1 in Area NM - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NM1	NM_2	Recreation	Day	70	70	73.4	69.5	3.9	0	No	No	10	1,347	13,406	$268,120	N/A	Does Not Meet Noise Reduction Design Goal
	NM_3	Recreation		70	70	72.7	70.2	2.5									
	NM_4	Recreation		70	70	70.5	67.6	2.9									
	NM_5	Trail		70	70	69.4	67.3	2.1									
	NM_6	Trail		70	70	68.3	67.0	1.3									
	NM_7	Trail		70	70	67.9	66.0	1.9									
	NM_8	Trail		70	70	67.1	65.8	1.3									
	NM_9	Trail		70	70	65.6	64.8	0.8									
	NM_10	Trail		70	70	66.3	65.3	1.0									
	NM_11	Trail		70	70	63.2	62.8	0.4									
	NM_12	Trail		70	70	63.5	63.1	0.4									
	NM_13	Trail		70	70	63.9	63.4	0.5									
	NM_2	Recreation	Night	70	70	73.4	69.4	4.0	0	No	No	10	1,347	13,406	$268,120	N/A	Does Not Meet Noise Reduction Design Goal
	NM_3	Recreation		70	70	72.5	69.8	2.7									
	NM_4	Recreation		70	70	70.2	67.3	2.9									
	NM_5	Trail		70	70	69.1	66.9	2.2									
	NM_6	Trail		70	70	67.9	66.6	1.3									
	NM_7	Trail		70	70	67.5	65.5	2.0									
	NM_8	Trail		70	70	66.6	65.4	1.2									
	NM_9	Trail		70	70	65.1	64.2	0.9									
	NM_10	Trail		70	70	65.9	64.8	1.1									
	NM_11	Trail		70	70	62.6	62.1	0.5									
	NM_12	Trail		70	70	62.9	62.4	0.5									
	NM_13	Trail		70	70	63.3	62.7	0.6									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C73
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NM1 in Area NM - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NM1	NM_2	Recreation	Day	70	70	73.4	67.8	5.6	1	Yes	No	20	312	5,456	$109,120	N/A	Does Not Meet Noise Reduction Design Goal
	NM_3	Recreation		70	70	72.7	69.3	3.4									
	NM_4	Recreation		70	70	70.5	66.1	4.4									
	NM_5	Trail		70	70	69.4	68.9	0.5									
	NM_6	Trail		70	70	68.3	68.1	0.2									
	NM_7	Trail		70	70	67.9	67.9	0.0									
	NM_8	Trail		70	70	67.1	65.6	1.5									
	NM_9	Trail		70	70	65.6	63.9	1.7									
	NM_10	Trail		70	70	66.3	65.3	1.0									
	NM_11	Trail		70	70	63.2	62.3	0.9									
	NM_12	Trail		70	70	63.5	62.8	0.7									
	NM_13	Trail		70	70	63.9	63.5	0.4									
	NM_2	Recreation	Night	70	70	73.4	67.7	5.7	1	Yes	No	20	312	5,456	$109,120	N/A	Does Not Meet Noise Reduction Design Goal
	NM_3	Recreation		70	70	72.5	69.1	3.4									
	NM_4	Recreation		70	70	70.2	65.9	4.3									
	NM_5	Trail		70	70	69.1	68.6	0.5									
	NM_6	Trail		70	70	67.9	67.7	0.2									
	NM_7	Trail		70	70	67.5	67.5	0.0									
	NM_8	Trail		70	70	66.6	65.2	1.4									
	NM_9	Trail		70	70	65.1	63.4	1.7									
	NM_10	Trail		70	70	65.9	64.8	1.1									
	NM_11	Trail		70	70	62.6	61.6	1.0									
	NM_12	Trail		70	70	62.9	62.1	0.8									
	NM_13	Trail		70	70	63.3	62.9	0.4									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C74
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NN1 in Area NN - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NN_1	Residential		65	70	73.5	64.1	9.4									
	NN_2	Residential		65	70	72.6	62.7	9.9									
	NN_3	Residential		65	70	71.5	62.1	9.4									
	NN_4	Residential		65	70	70.6	61.7	8.9									
	NN_5	Residential		65	70	69.9	61.4	8.5									
	NN_6	Residential		65	70	69.2	61.1	8.1									
	NN_7	Residential		65	70	68.5	61.0	7.5									
	NN_8	Residential		65	70	67.9	60.7	7.2									
	NN_9	Residential		65	70	67.1	60.5	6.6									
	NN_10	Residential		65	70	66.7	60.1	6.6									
	NN_11	Residential		65	70	66.9	64.4	2.5									
	NN_12	Residential		65	70	65.1	62.6	2.5									
	NN_13	Residential		65	70	62.8	60.0	2.8									
	NN_14	Residential		65	70	61.5	58.8	2.7									
	NN_15	Residential		65	70	64.5	59.8	4.7									
	NN_16	Residential		65	70	62.9	58.5	4.4									
	NN_17	Residential		65	70	61.4	57.6	3.8									
	NN_18	Residential		65	70	60.5	56.9	3.6									
	NN_19	Residential		65	70	64.3	60.3	4.0									
	NN_20	Residential		65	70	62.8	58.8	4.0									
	NN_21	Residential		65	70	62.4	58.7	3.7									
Wall NN1	NN_22	Residential	Day	65	70	61.8	57.5	4.3	29	Yes	Yes	20	1,681	32,836	$656,720	$22,646	Propose to Construct
	NN_23	Residential		65	70	61.0	57.0	4.0									
	NN_24	Residential		65	70	59.9	56.3	3.6									
	NN_25	Residential		65	70	69.9	59.3	10.6									
	NN_26	Residential		65	70	68.2	59.6	8.6									
	NN_27	Residential		65	70	67.7	58.8	8.9									
	NN_28	Residential		65	70	65.8	60.0	5.8									
	NN_29	Residential		65	70	67.8	59.4	8.4									
	NN_30	Residential		65	70	64.0	57.3	6.7									
	NN_31	Residential		65	70	63.7	57.6	6.1									
	NN_32	Residential		65	70	64.3	58.7	5.6									
	NN_33	Residential		65	70	66.0	58.3	7.7									
	NN_34	Residential		65	70	57.3	57.3	0.0									
	NN_35	Residential		65	70	57.5	57.5	0.0									
	NN_36	Residential		65	70	62.6	56.5	6.1									
	NN_37	Residential		65	70	65.9	59.1	6.8									
	NN_38	Residential		65	70	63.0	56.9	6.1									
	NN_39	Residential		65	70	63.0	56.4	6.6									
	NN_40	Residential		65	70	57.3	55.7	1.6									
	NN_41	Residential		65	70	60.2	55.5	4.7									
	NN_42	Residential		65	70	58.7	57.1	1.6									
	NN_43	Residential		65	70	64.5	59.8	4.7									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C74 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NN1 in Area NN - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NN_44	Residential		65	70	58.2	58.2	0.0									
	NN_45	Residential		65	70	58.1	58.0	0.1									
	NN_46	Residential		65	70	58.4	58.3	0.1									
	NN_47	Residential		65	70	58.2	58.1	0.1									
	NN_48	Residential		65	70	59.0	57.5	1.5									
	NN_49	Residential		65	70	69.2	63.3	5.9									
	NN_50	Residential		65	70	70.5	64.9	5.6									
	NN_51	Residential		65	70	66.2	57.8	8.4									
	NN_52	Residential		65	70	67.7	65.2	2.5									
	NN_53	Residential		65	70	65.3	58.2	7.1									
	NN_54	Residential		65	70	63.0	57.8	5.2									
	NN_55	Residential		65	70	66.0	64.4	1.6									
	NN_56	Residential		65	70	62.4	56.6	5.8									
	NN_57	Residential		65	70	57.0	56.6	0.4									
	NN_58	Residential		65	70	64.4	63.4	1.0									
	NN_59	Residential		65	70	60.6	56.9	3.7									
	NN_60	Residential		65	70	58.9	55.1	3.8									
	NN_61	Residential		65	70	59.0	55.0	4.0									
	NN_62	Residential		65	70	58.6	57.1	1.5									
	NN_63	Residential		65	70	57.3	54.6	2.7									
	NN_64	Residential		65	70	60.8	60.6	0.2									
Wall NN1	NN_65	Residential	Day	65	70	58.9	57.7	1.2	29	Yes	Yes	20	1,681	32,836	$656,720	$22,646	Propose to Construct
	NN_66	Residential		65	70	56.7	56.6	0.1									
	NN_67	Residential		65	70	56.9	56.8	0.1									
	NN_68	Residential		65	70	56.6	56.6	0.0									
	NN_69	Residential		65	70	56.2	56.2	0.0									
	NN_70	Residential		65	70	60.6	60.3	0.3									
	NN_71	Residential		65	70	62.5	60.3	2.2									
	NN_72	Residential		65	70	60.4	57.6	2.8									
	NN_73	Residential		65	70	59.0	55.9	3.1									
	NN_74	Residential		65	70	58.5	55.5	3.0									
	NN_75	Residential		65	70	60.3	59.1	1.2									
	NN_76	Residential		65	70	59.2	57.6	1.6									
	NN_77	Residential		65	70	58.7	56.8	1.9									
	NN_78	Residential		65	70	57.9	56.0	1.9									
	NN_79	Residential		65	70	60.3	59.3	1.0									
	NN_80	Residential		65	70	59.1	58.0	1.1									
	NN_81	Residential		65	70	58.2	56.7	1.5									
	NN_82	Residential		65	70	57.7	56.2	1.5									
	NN_83	Religious		65	70	65.2	65.0	0.2									
	NN_84	Residential		65	70	60.6	59.8	0.8									
	NN_85	Residential		65	70	58.7	57.8	0.9									
	NN_86	Residential		65	70	58.7	57.9	0.8									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C74 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NN1 in Area NN - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NN1	NN_87	Residential	Day	65	70	61.0	60.4	0.6	29	Yes	Yes	20	1,681	32,836	$656,720	$22,646	Propose to Construct
	NN_88	Residential		65	70	61.7	61.1	0.6									
	NN_89	Residential		65	70	59.6	59.1	0.5									
	NN_90	Residential		65	70	59.6	59.1	0.5									
	NN_91	Residential		65	70	61.6	61.1	0.5									
	NN_92	Residential		65	70	61.0	60.7	0.3									
	NN_93	Residential		65	70	58.5	58.1	0.4									
	NN_1	Residential	Night	55	70	73.4	64.0	9.4	29	Yes	Yes	20	1,681	32,836	$656,720	$22,646	Propose to Construct
	NN_2	Residential		55	70	72.4	62.5	9.9									
	NN_3	Residential		55	70	71.3	61.8	9.5									
	NN_4	Residential		55	70	70.4	61.4	9.0									
	NN_5	Residential		55	70	69.6	61.1	8.5									
	NN_6	Residential		55	70	68.9	60.8	8.1									
	NN_7	Residential		55	70	68.1	60.6	7.5									
	NN_8	Residential		55	70	67.5	60.3	7.2									
	NN_9	Residential		55	70	66.7	60.1	6.6									
	NN_10	Residential		55	70	66.3	59.7	6.6									
	NN_11	Residential		55	70	66.4	63.9	2.5									
	NN_12	Residential		55	70	64.6	62.0	2.6									
	NN_13	Residential		55	70	62.2	59.3	2.9									
	NN_14	Residential		55	70	60.9	58.0	2.9									
	NN_15	Residential		55	70	64.0	59.2	4.8									
	NN_16	Residential		55	70	62.3	57.8	4.5									
	NN_17	Residential		55	70	60.8	56.9	3.9									
	NN_18	Residential		55	70	59.8	56.1	3.7									
	NN_19	Residential		55	70	63.9	59.7	4.2									
	NN_20	Residential		55	70	62.3	58.3	4.0									
	NN_21	Residential		55	70	61.9	58.2	3.7									
	NN_22	Residential		55	70	61.2	56.9	4.3									
	NN_23	Residential		55	70	60.4	56.2	4.2									
	NN_24	Residential		55	70	59.3	55.5	3.8									
	NN_25	Residential		55	70	69.7	59.0	10.7									
	NN_26	Residential		55	70	68.0	59.3	8.7									
	NN_27	Residential		55	70	67.4	58.4	9.0									
	NN_28	Residential		55	70	65.5	59.7	5.8									
	NN_29	Residential		55	70	67.4	58.9	8.5									
	NN_30	Residential		55	70	63.6	56.8	6.8									
	NN_31	Residential		55	70	63.4	57.1	6.3									
	NN_32	Residential		55	70	63.9	58.3	5.6									
	NN_33	Residential		55	70	65.6	57.8	7.8									
	NN_34	Residential		55	70	56.8	56.8	0.0									
	NN_35	Residential		55	70	57.1	57.0	0.1									
	NN_36	Residential		55	70	62.1	55.9	6.2									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C74 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NN1 in Area NN - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
	NN_37	Residential		55	70	65.5	58.5	7.0									
	NN_38	Residential		55	70	62.5	56.3	6.2									
	NN_39	Residential		55	70	62.5	55.7	6.8									
	NN_40	Residential		55	70	56.8	55.1	1.7									
	NN_41	Residential		55	70	59.7	54.8	4.9									
	NN_42	Residential		55	70	58.3	56.6	1.7									
	NN_43	Residential		55	70	64.1	59.2	4.9									
	NN_44	Residential		55	70	57.8	57.8	0.0									
	NN_45	Residential		55	70	57.7	57.6	0.1									
	NN_46	Residential		55	70	58.0	57.9	0.1									
	NN_47	Residential		55	70	57.8	57.7	0.1									
	NN_48	Residential		55	70	58.5	57.0	1.5									
	NN_49	Residential		55	70	69.0	63.1	5.9									
	NN_50	Residential		55	70	70.2	64.7	5.5									
	NN_51	Residential		55	70	65.9	57.4	8.5									
	NN_52	Residential		55	70	67.3	64.8	2.5									
	NN_53	Residential		55	70	64.9	57.7	7.2									
	NN_54	Residential		55	70	62.5	57.3	5.2									
	NN_55	Residential		55	70	65.6	64.0	1.6									
	NN_56	Residential		55	70	61.9	56.1	5.8									
	NN_57	Residential		55	70	56.5	56.1	0.4									
Wall NN1	NN_58	Residential	Night	55	70	64.0	62.9	1.1	29	Yes	Yes	20	1,681	32,836	$656,720	$22,646	Propose to Construct
	NN_59	Residential		55	70	60.1	56.3	3.8									
	NN_60	Residential		55	70	58.3	54.5	3.8									
	NN_61	Residential		55	70	58.4	54.3	4.1									
	NN_62	Residential		55	70	58.0	56.5	1.5									
	NN_63	Residential		55	70	56.8	53.9	2.9									
	NN_64	Residential		55	70	60.3	60.0	0.3									
	NN_65	Residential		55	70	58.4	57.2	1.2									
	NN_66	Residential		55	70	56.2	56.2	0.0									
	NN_67	Residential		55	70	56.4	56.4	0.0									
	NN_68	Residential		55	70	56.2	56.2	0.0									
	NN_69	Residential		55	70	55.8	55.8	0.0									
	NN_70	Residential		55	70	60.1	59.8	0.3									
	NN_71	Residential		55	70	62.0	59.7	2.3									
	NN_72	Residential		55	70	59.8	57.0	2.8									
	NN_73	Residential		55	70	58.3	55.2	3.1									
	NN_74	Residential		55	70	57.8	54.7	3.1									
	NN_75	Residential		55	70	59.8	58.6	1.2									
	NN_76	Residential		55	70	58.6	57.1	1.5									
	NN_77	Residential		55	70	58.1	56.2	1.9									
	NN_78	Residential		55	70	57.3	55.3	2.0									
	NN_79	Residential		55	70	59.8	58.8	1.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C74 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NN1 in Area NN - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NN1	NN_80	Residential	Night	55	70	58.6	57.4	1.2	29	Yes	Yes	20	1,681	32,836	$656,720	$22,646	Propose to Construct
	NN_81	Residential		55	70	57.6	56.1	1.5									
	NN_82	Residential		55	70	57.1	55.4	1.7									
	NN_83	Religious		65	70	64.7	64.5	0.2									
	NN_84	Residential		55	70	60.2	59.4	0.8									
	NN_85	Residential		55	70	58.2	57.2	1.0									
	NN_86	Residential		55	70	58.2	57.4	0.8									
	NN_87	Residential		55	70	60.6	59.9	0.7									
	NN_88	Residential		55	70	61.2	60.6	0.6									
	NN_89	Residential		55	70	59.1	58.6	0.5									
	NN_90	Residential		55	70	59.1	58.6	0.5									
	NN_91	Residential		55	70	61.1	60.6	0.5									
	NN_92	Residential		55	70	60.6	60.2	0.4									
	NN_93	Residential		55	70	58.0	57.6	0.4									

Table C75
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NN2 in Area NN - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NN2	NN_49	Residential	Day	65	70	69.2	68.6	0.6	2	Yes	No	20	1,361	26,436	$528,720	NA	Does Not Meet Noise Reduction Design Goal
	NN_50	Residential		65	70	70.5	68.8	1.7									
	NN_51	Residential		65	70	66.2	66.2	0.0									
	NN_52	Residential		65	70	67.7	63.4	4.3									
	NN_53	Residential		65	70	65.3	65.3	0.0									
	NN_54	Residential		65	70	63.0	62.9	0.1									
	NN_55	Residential		65	70	66.0	61.1	4.9									
	NN_56	Residential		65	70	62.4	62.4	0.0									
	NN_57	Residential		65	70	57.0	57.0	0.0									
	NN_58	Residential		65	70	64.4	59.1	5.3									
	NN_59	Residential		65	70	60.6	60.6	0.0									
	NN_60	Residential		65	70	58.9	58.8	0.1									
	NN_61	Residential		65	70	59.0	59.0	0.0									
	NN_62	Residential		65	70	58.6	57.5	1.1									
	NN_63	Residential		65	70	57.3	57.3	0.0									
	NN_64	Residential		65	70	60.8	57.4	3.4									
	NN_65	Residential		65	70	58.9	58.9	0.0									
	NN_66	Residential		65	70	56.7	56.7	0.0									
	NN_67	Residential		65	70	56.9	56.9	0.0									
	NN_68	Residential		65	70	56.6	56.6	0.0									
	NN_69	Residential		65	70	56.2	56.2	0.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C75 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NN2 in Area NN - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NN2	NN_70	Residential	Day	65	70	60.6	57.2	3.4	2	Yes	No	20	1,361	26,436	$528,720	NA	Does Not Meet Noise Reduction Design Goal
	NN_71	Residential		65	70	62.5	62.3	0.2									
	NN_72	Residential		65	70	60.4	60.1	0.3									
	NN_73	Residential		65	70	59.0	58.6	0.4									
	NN_74	Residential		65	70	58.5	58.1	0.4									
	NN_75	Residential		65	70	60.3	59.7	0.6									
	NN_76	Residential		65	70	59.2	58.6	0.6									
	NN_77	Residential		65	70	58.7	58.1	0.6									
	NN_78	Residential		65	70	57.9	57.2	0.7									
	NN_79	Residential		65	70	60.3	59.4	0.9									
	NN_80	Residential		65	70	59.1	58.2	0.9									
	NN_81	Residential		65	70	58.2	57.2	1.0									
	NN_82	Residential		65	70	57.7	56.8	0.9									
	NN_83	Religious		65	70	65.2	59.0	6.2									
	NN_84	Residential		65	70	60.6	59.2	1.4									
	NN_85	Residential		65	70	58.7	57.4	1.3									
	NN_86	Residential		65	70	58.7	57.2	1.5									
	NN_87	Residential		65	70	61.0	59.4	1.6									
	NN_88	Residential		65	70	61.7	59.9	1.8									
	NN_89	Residential		65	70	59.6	58.0	1.6									
	NN_90	Residential		65	70	59.6	57.9	1.7									
	NN_91	Residential		65	70	61.6	59.8	1.8									
	NN_92	Residential		65	70	61.0	59.3	1.7									
	NN_93	Residential		65	70	58.5	56.9	1.6									
	NN_49	Residential	Night	55	70	69.0	68.3	0.7	2	Yes	No	20	1,361	26,436	$528,720	NA	Does Not Meet Noise Reduction Design Goal
	NN_50	Residential		55	70	70.2	68.5	1.7									
	NN_51	Residential		55	70	65.9	65.9	0.0									
	NN_52	Residential		55	70	67.3	63.0	4.3									
	NN_53	Residential		55	70	64.9	64.9	0.0									
	NN_54	Residential		55	70	62.5	62.5	0.0									
	NN_55	Residential		55	70	65.6	60.6	5.0									
	NN_56	Residential		55	70	61.9	61.9	0.0									
	NN_57	Residential		55	70	56.5	56.5	0.0									
	NN_58	Residential		55	70	64.0	58.6	5.4									
	NN_59	Residential		55	70	60.1	60.1	0.0									
	NN_60	Residential		55	70	58.3	58.3	0.0									
	NN_61	Residential		55	70	58.4	58.4	0.0									
	NN_62	Residential		55	70	58.0	56.9	1.1									
	NN_63	Residential		55	70	56.8	56.8	0.0									
	NN_64	Residential		55	70	60.3	56.9	3.4									
	NN_65	Residential		55	70	58.4	58.4	0.0									
	NN_66	Residential		55	70	56.2	56.2	0.0									
	NN_67	Residential		55	70	56.4	56.4	0.0									

*Note: Barrier area incorporates wall tapers at both ends.

Noise Level Comparison	
XX	Exceeds MN State Standards
XX	Exceeds MN Standard and FHWA Abatement Criteria
XX	Approaches or Exceeds FHWA Noise Abatement Criteria

Table C75 Continued
Build Alternative Noise Wall Cost Effectiveness - 20 Foot Noise Wall
Wall NN2 in Area NN - East of I-35W between Lexington Ave NE and Sunset Ave

Noise Barrier	Receptor	Land Use	Time (Day or Night)	State Standard (dBA)	FHWA Abatement Criteria (dBA)	L_{10} Noise Level		Noise reduction (dBA)	Total Benefited Receptors	Acoustically Effective	Design goal reduction ≥7 dBA	Height of Barrier (ft)	Length of Barrier (ft)	Barrier Area (sq ft)*	Total cost of Barrier ($20/sq ft)	Cost Per Benefited Receptor	Noise Wall Results
						No Noise Barrier	With Noise Barrier										
Wall NN2	NN_68	Residential	Night	55	70	56.2	56.2	0.0	2	Yes	No	20	1,361	26,436	$528,720	NA	Does Not Meet Noise Reduction Design Goal
	NN_69	Residential		55	70	55.8	55.8	0.0									
	NN_70	Residential		55	70	60.1	56.7	3.4									
	NN_71	Residential		55	70	62.0	61.8	0.2									
	NN_72	Residential		55	70	59.8	59.6	0.2									
	NN_73	Residential		55	70	58.3	57.9	0.4									
	NN_74	Residential		55	70	57.8	57.4	0.4									
	NN_75	Residential		55	70	59.8	59.3	0.5									
	NN_76	Residential		55	70	58.6	58.0	0.6									
	NN_77	Residential		55	70	58.1	57.5	0.6									
	NN_78	Residential		55	70	57.3	56.5	0.8									
	NN_79	Residential		55	70	59.8	58.9	0.9									
	NN_80	Residential		55	70	58.6	57.7	0.9									
	NN_81	Residential		55	70	57.6	56.5	1.1									
	NN_82	Residential		55	70	57.1	56.1	1.0									
	NN_83	Religious		65	70	64.7	58.4	6.3									
	NN_84	Residential		55	70	60.2	58.7	1.5									
	NN_85	Residential		55	70	58.2	56.9	1.3									
	NN_86	Residential		55	70	58.2	56.7	1.5									
	NN_87	Residential		55	70	60.6	58.9	1.7									
	NN_88	Residential		55	70	61.2	59.4	1.8									
	NN_89	Residential		55	70	59.1	57.5	1.6									
	NN_90	Residential		55	70	59.1	57.4	1.7									
	NN_91	Residential		55	70	61.1	59.3	1.8									
	NN_92	Residential		55	70	60.6	58.8	1.8									
	NN_93	Residential		55	70	58.0	56.4	1.6									

*Note: Barrier area incorporates wall tapers at both ends.